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**Using Mentoring Enactment Theory to Explore the
Doctoral Student-Faculty Member Mentoring Relationship**

Daniel H. Mansson

Dissertation

Submitted to the Eberly College of Arts and Sciences
at
West Virginia University

in partial fulfillment of the requirements
for the degree of

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in
Communication Studies

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2011

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maintenance, relational characteristics, relational uncertainty

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ABSTRACT

Using Mentoring Enactment Theory to Explore the Doctoral Student-Faculty Member Mentoring Relationship

Daniel H. Mansson

The purpose of this dissertation was threefold. The first purpose was to examine the advisor-advisee mentoring relationship using Mentoring Enactment Theory (Kalbfleisch, 2002). The second purpose was to examine the relationship between advisees' use of relational maintenance behaviors and their own and their advisors' reports of relational characteristics (i.e., liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality). The third purpose was to examine the extent to which advisees' relational uncertainty with their advisors was related to their use of relational maintenance behaviors and their advisors' provision of career support and psychosocial support. The results of Principal Component Analyses, Pearson correlations, and MANOVAs indicate that advisors and advisees have similar perceptions of what behaviors advisees engage in to maintain their advisor-advisee mentoring relationships. These behaviors are: appreciation, courtesy (advisees only), tasks, goals, protection (advisors only), and humor. Advisees' use of these relational maintenance behaviors generally is related positively their own reports of relational characteristics and received mentoring support from their advisors, but advisees' use of relational maintenance behaviors is not related negatively to their relational uncertainty. Similarly, advisors' reports of their advisees' use of relational maintenance behaviors generally are related positively to their own reports of relational characteristics. The results indicate further that the sex composition of the advisor-advisee dyad has minimal impact on advisees' use of relational maintenance behaviors and advisors' provision of career support and psychosocial support for their advisees.

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CHAPTER I

Introduction

Attrition has been an enduring problem among graduate students (Bowen & Rudenstein, 1992). In fact, roughly 50 percent of doctoral students do not successfully complete their programs of study (Lovitts, 2001). One reason doctoral students do not complete their academic programs is because they are not involved in well-developed and satisfying mentoring relationships (Golde, 2005). Mentoring, which is defined as a nurturing process in which a more skilled and more experienced person (i.e., mentor) serves as a role model, teaches, sponsors, and encourages a less skilled and less experienced person (i.e., protégé) to advance the protégé's personal and career development (Anderson & Shannon, 1988), is essential for graduate student success (Myers & Martin, 2008). Not only are graduate students who are mentored academically confident, productive, and committed to their careers (Hollingsworth & Fassinger, 2002; Kelly & Schweitzer, 1999; Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000), but they also earn higher grades and complete their graduate programs (Dixon-Reeves, 2003; Kelly & Schweitzer, 1999).

In graduate school, doctoral students are involved in a variety of mentoring relationships with their peers, their professors, and departmental staff members (Luna & Cullen, 1998; Myers, 1995), none of which is more important than the advisor-advisee relationship (Foss & Foss, 2008). The goals of the advisor-advisee relationship are to enable graduate students to complete their academic programs (Hepper & Hepper, 2003), prepare them for their future careers as college instructors (Gaff, 2002), and obtain employment (Dixon-Reeves, 2003). Once the advisor-advisee relationship matures, it can evolve into a mentoring relationship (Crookston, 1972; Monsour & Corman, 1991). In fact, advisees often expect their advisors to serve as mentors (Winston & Polkosnik, 1984). As such, researchers

examining the advisor-advisee relationship have focused on the extent to which advisor provision of mentoring support is related to factors that contribute to these goals, such as advisee initiation of mentoring relationships, research efficacy, research productivity, career commitment, and on-time degree completion (Cavendish, 2007; Green & Bauer, 1995; Hollingsworth & Fassinger, 2002; Myers, 1995).

Central to the achievement of these positive advisee outcomes, however, are advisees' communicative attempts to maintain productive and satisfying relationships with their advisors (Foss & Foss, 2008). The use of communicative attempts to maintain relationships, also known as relational maintenance behaviors (Dindia & Canary, 1993), is associated positively with several relational characteristics that motivate relational partners to maintain their relationships (Stafford, 2003). However, the use of relational maintenance behaviors is associated negatively with relational uncertainty (Dainton & Aylor, 2001), which may discourage relational partners to maintain their relationships (Dainton, 2003b).

The use of relational maintenance behaviors in mentoring relationships, such as the advisor-advisee relationship, may be examined by Kalbfleisch's (2002) Mentoring Enactment Theory (MET). Thus, the purposes of this dissertation are to explore the advisor-advisee mentoring relationship using MET and to examine the extent to which advisees' use of relational maintenance behaviors with their advisors is related to their relational characteristics, their advisors' relational characteristics, and their relational uncertainty associated with their relationship with their advisors.

To reach this end, this chapter has four parts. In the first part, the relevant mentoring literature is reviewed with an emphasis on mentoring relationships in academic contexts. In the second part, the propositions forwarded in MET (Kalbfleisch, 2002) are identified and explained. In the third part, the relevant relational maintenance research is reviewed with an

emphasis on relational maintenance behaviors in workplace contexts. In the fourth part, the rationale for this dissertation is provided, which includes the proposal of fourteen hypotheses and three research questions.

Mentoring Relationships

The concept of mentoring is rooted in ancient Greek mythology (Buell, 2004; Hill, Bahniuk, & Dobos, 1989). Mentoring has served a pivotal role in both social and professional contexts for thousands of years (Ragins & Kram, 2007) and is considered to be an interdisciplinary relationship (i.e., it spans across numerous academic disciplines and organizational contexts; Eby, Allen, Evans, Nig, & DiBois, 2008) that is of utmost importance to young adults' personal and professional development (Levinson, Darrow, Klein, Levinson, & McKee, 1978). In academia, mentoring relationships are associated positively with student (i.e., protégé) academic satisfaction, motivation (Jones, 2008), and learning outcomes (Waldeck, 2007) whereas mentoring relationships in business contexts are associated positively with protégé career involvement (Noe, 1988a), organizational commitment (Payne & Huffman, 2005), job and career satisfaction, promotions, and annual salary (Allen, Eby, Poteat, Lentz, & Lima, 2004).

To explore further the importance of mentoring relationships, the following sections offer a review of mentoring conceptualizations, the stages through which mentoring relationships progress, the different types of mentoring relationships, and the role of mentor-protégé sex composition. Next, mentoring relationships in different contexts are explored with an emphasis on academic mentoring relationships, including protégés' identification and initiation of mentoring relationships and the mentor-protégé communicative behaviors used in ongoing mentoring relationships.

Conceptualizing Mentoring

In a review of the conceptualizations of the term “mentoring,” Anderson and Shannon (1988) concluded that most conceptualizations utilized in empirical studies lack specificity. For instance, Kram (1988) conceptualized mentoring as a “relationship between a young adult and an older, more experienced adult that helps the younger individual navigate the adult world and the world of work” (p. 2), and Levinson et al. (1978) conceptualized mentoring as a complex and developmental relationship that exists between a more experienced person and a less experienced person. Kalbfleisch and Davies (1993) conceptualized mentoring relationships as a senior employee guiding and helping a junior employee whereas Hill, Bahniuk, and Dobos (1989) conceptualized mentoring as a “communication relationship in which a senior person supports, tutors, guides, and facilitates a junior person’s career development” (p. 15). Central to these four conceptualizations is the notion that communication inherently plays an integral role in the mentoring relationship (Hill, Bahniuk, & Dobos; Hill, Bahniuk, Dobos, & Rouner, 1989; Kalbfleisch, 2002, 2007). These conceptualizations imply further that mentoring relationships are dyadic (i.e., a mentor and a protégé), developmental (i.e., enhance protégé knowledge and skills), and intended to advance the protégé’s career (Kram, 1983, 1988; Kram & Isabella, 1985).

To advance the careers of protégés, mentors provide their protégés with career mentoring and psychosocial mentoring support (Kram, 1983). *Career mentoring* refers to mentor behaviors intended to advance the protégé’s career development and includes “sponsorship, coaching, protection, exposure-and-visibility, and challenging work assignments” (p. 613). *Psychosocial mentoring* refers to mentor behaviors intended to enhance the protégé’s confidence and self-perceived effectiveness and includes “role modeling, acceptance-and-confirmation, [and] counseling” (p. 614). Subsequent mentoring

research has reinforced Kram's identification of career and psychosocial mentoring support (e.g., Dreher & Ash, 1990; Noe, 1988a; Ragins & McFarlin, 1990; Scandura, 1992). Hill and her colleagues (1989) argued, however, that psychosocial mentoring support includes both collegial social and collegial task support. *Collegial social support* refers to behaviors enacted by the mentor in an effort to integrate the protégé in the workplace and to develop personal relationships with coworkers whereas *collegial task support* is task-oriented and includes working on collaborative projects and engaging in information sharing (Hill, Bahniuk, & Dobos, 1989; Hill, Bahniuk, Dobos, & Rouner, 1989).

Regardless of the functions that mentors provide, mentors are considered to serve as role models who enhance protégé confidence, reinforce the mentor-protégé relationship, and advance protégé career development (Kram, 1988; Noe, 1988a; Rose, 2003). They do so by expressing acceptance, empathy, and respect for protégés; they also assign tasks to protégés, collaborate with protégés, and teach protégés new skills and technical procedures. Moreover, mentors maintain a personal relationship with protégés by sharing personal information and problems, socializing with protégés, and listening to protégés' problems in a respectful manner that instills relationship trust and value (Dreher & Ash, 1990; Hill, Bahniuk, & Dobos, 1989; Hill, Bahniuk, Dobos, & Rouner, 1989; Scandura, 1992).

Nevertheless, the mentor's provision of resources largely depends on mentor-protégé integration (Kram, 1983). Similar to other personal relationships (e.g., friendships), mentoring relationships develop gradually over a period of time (Kalbfleisch, 2002) ranging from one to seven years (Kram; P-Sontag, Vappie, & Wanberg, 2007). During this time, mentoring relationships progress through various relational phases that are indicative of mentor-protégé integration (Kram).

Stages of Mentoring Relationships

In an exploratory qualitative study, Kram (1983) forwarded a conceptual model of mentoring relationships. She identified four phases through which mentoring relationships progress: initiation, cultivation, separation, and redefinition. During the *initiation phase*, which lasts roughly one year, the protégé begins to admire and respect a more experienced organizational member as a result of the mentor's competence and ability to guide and support the protégé. The protégé actively presents himself or herself as a competent and pleasant coworker whom the senior employee may view favorably. If the mentor recognizes the protégé's attempts to project competence, the mentor is likely to develop positive expectations about the protégé's abilities and therefore offer initial support to the protégé. As a result of the mentor's initial support, the protégé develops expectations of the mentor's future provision of support. Based on these favorable expectations, a mentoring relationship may be initiated (Kram) by either the mentor or the protégé (Kalbfleisch, 2002, 2007).

During the *cultivation phase*, which lasts between two and five years, the mentor and protégé test the relationship expectations established in the initiation phase. The mentor generally begins to engage in career mentoring (e.g., coaching, sponsorship) based upon his or her rank and experience; once this mentoring function begins, the mentor then begins to engage in psychosocial mentoring. Dependent largely on the establishment of relationship trust and intimacy, this function ranges from relatively impersonal mentor behaviors such as modeling and acceptance to more personal behaviors such as mentor attempts to develop a close friendship with the protégé and offer counseling when needed. Thus, mentor competence and relationship closeness with the protégé tend to increase the mentor's provision of career and psychosocial mentoring. Moreover, both the mentor and the protégé begin to benefit from their relationship in this phase. The mentor experiences personal

satisfaction whereas the protégé learns the skills taught by the mentor to achieve professional success; the protégé also becomes more self-confident and positive about his or her ability to advance professionally (Kram, 1983, 1988; Kram & Isabella, 1985).

During the *separation phase*, which lasts between six months and two years, the mentor and the protégé reassess the need for a continued mentoring relationship as the protégé becomes less dependent on the mentor. This phase is characterized by both structural separation and psychological separation. *Structural separation* refers to decreased mentor provision of career support whereas *psychological separation* refers to reduced mentor provision of psychosocial support. However, the timing of the separation phase is imperative for continued protégé career success. If mentors reduce the provision of career mentoring prematurely, protégés may experience anxiety and uncertainty and question their ability to perform required tasks. Conversely, if mentors reduce the provision of psychosocial mentoring before they reduce the provision of career mentoring, the positive relational affect developed in the cultivation stage decreases and may result in relationship dissatisfaction and resentment in the redefinition phase (Kram, 1983, 1988).

During the *redefinition phase*, which may last indefinitely, the nature of the relationship transitions from a mentoring relationship to a peer or friendship relationship. However, it is not uncommon for mentors to continue to provide occasional support to their protégés as they often take pride in their protégés' career success. The positive relational affect created during the cultivation phase, as well as the protégé's appreciation for the mentor's support, motivate the protégé to continue the relationship with the former mentor. This phase also is characterized by a sense of mutual mentor and protégé pride and satisfaction. The protégé becomes confident in his or her skills and continues to advance professionally. To the mentor, the protégé's career success serves as evidence of relationship

effectiveness and that important knowledge and skills were learned by the protégé (Kram, 1983, 1988).

As such, these four stages describe the initiation and development of informal mentoring relationships. However, mentoring relationships also may be formal (Noe, 1988a; Ragins & Cotton, 1999; Tepper, 1995). Two elements that distinguish formal mentoring relationships from informal mentoring relationships are the initiation process and the duration of the relationship (Ragins & Cotton).

Formal Versus Informal Mentoring Relationships

Formal mentoring relationships, also referred to as company sponsored mentoring programs (Allen et al., 2008), span over a specific time period, typically lasting one year and are initiated when a younger, less experienced employee is matched with an older, more experienced employee (P-Sontag et al., 2007). Thus, organizations in which employees do not voluntarily elect to develop mentoring relationships often initiate formal mentoring relationships through administrator-assigned matching, choice-based matching, or assessment-based matching (Blake-Beard, O'Neill, & McGowan, 2007). *Administrator-assigned matching* occurs when organizational leaders match a mentor and a protégé to meet a specific workplace goal. *Choice-based matching* involves protégés selecting mentors, mentors selecting protégés, or mentors and protégés mutually selecting each other without any organizational influence or direction. Using choice-based matching may be in the organization's best interest because these relationships tend to affect positively relationship effectiveness and protégé program satisfaction (Allen, Eby, & Lentz, 2006). *Assessment-based matching* involves a series of mentor and protégé personality evaluations to ensure an adequate mentor-protégé personality match (Blake-Beard et al.). For example, when mentors are perceived to be open, helpful, empathic, non-confrontational, or humorous, protégés

perceive these mentors as supportive and credible; they also are more willing to become mentors themselves (Allen, 2003; Punyanunt-Carter & Wrench, 2008; Wrench & Punyanunt-Carter, 2005).

Informal mentoring relationships, which last between three and seven years (Kram, 1983), tend to develop as a result of mentor and protégé mutual interest (Baugh & Fagenson-Eland, 2007). Unlike formal mentoring relationships in which mentors and protégés are matched or assigned, informal mentoring relationships develop when a more experienced organizational member voluntarily assumes responsibility of a younger organizational newcomer. Informal mentoring relationships are related positively to protégé feelings of workplace connection and ownership (Schrodt, Cawyer, & Sanders, 2003), productivity, income, and promotions (Hill, Bahniuk, & Dobos, 1989). Protégés involved in informal mentoring relationships tend to be more satisfied with their mentoring relationships and they receive more career support and psychosocial support from their mentors than protégés who are involved in formal mentoring relationships (Ragins & Cotton, 1999).

Mentor and protégé sex appears to affect the mentoring relationship differently in formal and informal relationships. Some studies indicate that male and female protégés receive equal amounts of mentoring support (Dreher & Ash, 1990; Turban & Dougherty, 1994); however, when comparing the amount of support received in formal and informal mentoring relationships, women receive less support than men from their mentors in formal mentoring relationships, but female and male protégés receive equal amounts of support in informal mentoring relationships (Ragins & Cotton, 1999). Similarly, the results obtained in studies examining the type of support male and female protégés receive from their mentors are contradictory. For instance, in a study of primarily (i.e., 78%) male mentors, Burke (1984) found that mentors tend to provide psychosocial support to female protégés and

instrumental (i.e., career) support to male protégés. In a study of predominantly (i.e., 77%) female protégés, Koberg, Boss, Chappell, and Ringer (1994) concluded that men receive more career mentoring support than women whereas Ragins and McFarlin (1990) found minimal differences between male and female protégés' reports of received mentoring support. Nonetheless, in a factor analysis study using data obtained from five previous studies of both male and female protégés (i.e., the proportion of males ranged from 29-61%), Tepper, Shaffer, and Tepper (1996) concluded that men and women report that they receive similar mentoring support.

Moreover, the effects of mentor sex are inconsistent. Ragins and McFarlin (1990) found that male and female mentors provide equal amounts of career and psychosocial mentoring support to their protégés. Conversely, Burke found that female mentors provide more psychosocial support than male mentors and Ragins and Cotton (1991) found that protégés with male mentors experienced more rapid promotions than protégés with female mentors; however, Ragin and Cotton's results largely indicate that mentor-protégé sex composition did not affect the amount of career support and psychosocial support protégés receive from their mentors.

The mixed results obtained in studies examining sex differences in mentoring relationships may be due to several factors. For instance, women are less likely than men to initiate mentoring relationships (Ragins & Cotton, 1991). Not surprisingly, then, men are more likely than women to be involved in formal mentoring relationships; thus, men may receive more mentoring support than women in formal mentoring relationships (Ragins & Cotton, 1999). Conversely, the changing characteristics of the American workforce (i.e., the proportion of women active in the workforce is continuously increasing; Bureau of Labor Statistics, 2000) may contribute to an increased sensitivity to the role of women in

professional organizations; thus, the results obtained in several studies examining sex differences in mentoring relationships may differ from those obtained in more recent studies (Dreher & Ash, 1990).

The type of profession in which mentoring relationships are examined also may impact the results of studies examining sex differences (Ragins & Cotton, 1999). Specifically, Ragins and Cotton argued that engineering jobs tend to be male dominated, nursing jobs tend to be female dominated, and an equal number of men and women work in journalism. Additionally, the statistical analyses utilized by researchers to examine sex differences in mentoring relationships may impact their results (Koberg et al., 1994). Koberg and her colleagues argued that organizational variables (e.g., hierarchical position, tenure) are related closely to the amount of support protégés receive from their mentors and should therefore be controlled for when examining sex differences. Controlling for organizational tenure may be of particular importance because men report greater organizational tenure than women (Ragins & Cotton) and both organizational rank (Koberg et al.) and tenure (Ragins & McFarlin, 1990) are associated positively with received mentoring support. As such, several factors affect the mentoring process, including the type (i.e., formal or informal) and the context (i.e., type of organization) of the relationship (Ragins & Cotton).

Mentoring Contexts

Researchers have examined mentoring relationships in multiple contexts, including academia (Hodge, 1997; Jones, 2008, Kerssen-Griep, Trees, & Hess, 2008; Mortenson, 2006; Myers, 1995; Punyanunt-Carter & Wrench, 2008; Waldeck, 2007; Wrench & Punyanunt-Carter, 2005), business (Mullen & Noe, 1999; Noe, 1988a, 1988b; Ragins & Scandura, 1999), healthcare (Kalbfleisch & Bach, 1998; Teherani & Shekarchian, 2008), and law enforcement (Murphy, 2006), among others. To illustrate the breadth of mentoring research,

Baugh and Fagenson-Eland (2007) noted that a search for *mentoring* in the PsychInfo database generated more than 1,000 publication citations. Nevertheless, the bulk of mentoring research is conducted in academic and business contexts (Allen et al., 2008). Mentoring research in academia spans a broad spectrum of relational dyads across a multitude of academic disciplines at both the undergraduate and the graduate level (Alvarez, Blume, Cervantes, & Thomas, 2009; Kerssen-Griep et al.; McKay & Estrella, 2008; Poteat, Schockley, & Allen, 2009; Punyanunt-Carter & Wrench). At the undergraduate level, students often perceive instructors who provide them with advice and support both in-class and out-of-class as mentors (Jones; Mortenson; Waldeck). These types of instructor mentoring support are associated positively with several desirable student outcomes, including enhanced student satisfaction and motivation (Jones), increased student learning (Waldeck), and improved student adjustment to the college experience (McKay & Estrella).

At the graduate level, the mentoring relationship may be the most important relationship in which students are involved (Myers & Martin, 2008). Unlike the instructor-undergraduate student relationship, the instructor-graduate student relationship assumes the characteristics of a traditional mentoring relationship (Monsour & Corman, 1991). These studies provide insight into how graduate students identify mentors and initiate mentoring relationships (Myers, 1995; Waldeck et al., 1997), the turning points graduate students identify during their initial socialization into the academy (Bullis & Bach, 1989), mentor-protégé interactions in developed relationships (Wrench & Punyanunt), student research productivity (Cronan-Hillix et al., 1986; Gelso, Mallinckrodt, & Judge, 1996; Hollingsworth & Fassinger, 2002; Jensen, Martin, & Arthur, 2000; Paglis, Green & Bauer, 2006), mentor satisfaction (Hauer, Teherani, Dechet, & Aagaard, 2005), perceptions of mentors (Punyanunt-Carter & Wrench, 2008; Wrench & Punyanunt-Carter, 2005), and the role of

race (Hall & Allen, 1982)) and mentor-protégé sex (Kjerulff & Blood, 1973) as well as the likelihood of former protégés becoming mentors themselves (Busch, 1985).

Graduate students use a variety of methods to identify and select faculty members as mentors. Waldeck et al. (1997) identified seven methods: ensure contact, search for similar interests, seek counsel, appeal, provide work assistance, present a competent self, and some assume it will just happen. *Ensure contact* refers to attempts made by students to expose themselves to faculty members by enrolling in their courses or by frequently interacting with the faculty members. *Search for similarity* refers to students' attempts to discover shared personal and professional interests with faculty members. Students *seek counsel* from faculty members by asking for advice about how to manage their professional/academic and personal lives. *Appeal* refers to overt requests students make to a faculty member to initiate a mentoring relationship. *Providing work assistance* includes students volunteering to serve as a faculty member's teaching or research assistant. To *present a competent self*, students strive to excel in class or work to influence positively the faculty member's perception of them. To *assume it will just happen* refers to a naturally evolving relationship that neither the faculty member nor the student overtly initiates (Waldeck et al.). In a study of graduate teaching assistants, Myers (1995) found that at the end of the first semester in graduate school, 80% of the graduate teaching assistants who were surveyed reported being involved in mentoring relationships with professors, peers, advisors, friends, or other students. Protégés reported selecting their mentors based on mentor-protégé similarities, their knowledge of the mentor, third party matching, or mentor communication skills (Myers).

Bullis and Bach (1989) conducted two interviews with first-year masters' and doctoral students to explore the turning points that influence their initiation of mentoring relationships. They identified eight turning points: academic recognition, perceived

similarities, mutual confirmation, advising, personal bonding, relational clashes, relational evolution, and relational decline. *Academic recognition* refers to students acknowledging a professor's research and/or teaching abilities. *Perceived similarities* include shared research methodologies and interest between students and faculty members as well as compatible personalities and attitudes. *Mutual confirmation* involves a faculty member's expressed support or concern in response to students' requests for help. *Advising* consists not only of plan of study advice, but also students' requests for a faculty member to serve as a committee chair. *Personal bonding* refers to students and faculty members engaging in extracurricular activities such as playing sports together or interacting at social events. *Relational clashes* refer to events that influence students' perceptions of faculty members negatively, such as faculty members being moody or too authoritative. *Relational evolution* is not characterized by any specific event but rather suggests that the instructor-student relationship evolves over time as a result of increased exposure and interactions. *Relational decline* refers to unintentionally decreased student interactions with the faculty member.

Once the mentoring relationship is initiated, the most important functions of the mentor are to provide guidance and to be supportive (Cronan-Hillix et al., 1986). However, graduate students also expect their mentors to be collegial and involved (Schlosser, Knox, Moskovitz, & Hill, 2003), dedicated and loyal, honest and genuine, and empathic and compassionate (Cronan-Hillix et al.). These mentor behaviors are invaluable to graduate students as they facilitate students' socialization into the academic department (Austin, 2002; Myers, 1998; Myers & Martin, 2008), retention, on-time program and dissertation completion (Dixon-Reeves, 2003; Golde, 2005; Hepper & Hepper, 2003; Madsen, 1993; Mauch & Birch, 1993), and enhance their perceptions of the academic climate (Kelly & Schweitzer, 1999) as well as their attitudes towards graduate school (Lyons & Scroggins,

1990). These mentor behaviors also enable students to develop a career strategy, expand their professional network, and obtain employment (Dixon-Reeves). It is not surprising, then, that protégés who receive support from their mentors are satisfied with their mentoring relationships (Cavendish, 2007).

Although several researchers (e.g., Cavendish, 2007; Jones, 2008; Allen et al., 2004) have examined protégé satisfaction, the bulk of extant mentoring research focuses on the initiation and development of both informal and formal mentoring relationships, the type of support mentors provide their protégés, the role of mentor-protégé sex composition, and several protégé outcomes (e.g., motivation, learning, productivity). To date, however, mentoring scholars have largely neglected to theoretically explain and predict the communicative behaviors enacted by mentors and protégés (Allen et al., 2008). One exception is Mentoring Enactment Theory (Kalbfleisch, 2002).

Mentoring Enactment Theory

Mentoring Enactment Theory (MET; Kalbfleisch, 2002) seeks to explain what motivates individuals to enter into mentoring relationships, how they express interest in initiating mentoring relationships, and why mentoring relationships are maintained and repaired. Thus, MET proposes that communication is pivotal in the initiation, maintenance, and repair of mentoring relationships (Kalbfleisch, 2002, 2007). Kalbfleisch (2002) conceptualized mentoring as an interpersonal relationship between a mentor and a protégé. At the heart of the mentoring relationship is a human connection between the mentor and the protégé, both of whom are committed to personal and professional success. Considered to be employees who have experienced professional success, mentors are motivated to coach, teach, nurture, support, and care for a protégé due to feelings of altruism, societal and organizational expectations, or a general desire to perform good deeds. Protégés, conversely,

are considered to be less experienced employees who, in order to achieve personal success, possess the desire and potential to learn the skills taught by mentors (Kalbfleisch, 2002, 2007). Typically, there are fewer available mentors than there are protégés seeking mentors. This discrepancy results in a power imbalance, with the mentor being more powerful than the protégé (Kalbfleisch, 2000, 2002, 2007; Kalbfleisch & Davies, 1993).

Based on the above conceptualization of mentoring relationships, Kalbfleisch (2002) offered nine propositions to guide mentoring research. The first five propositions focus on the initiation of mentoring relationships by differentiating between mentors' and protégés' attempts to initiate mentoring relationships. The remaining four propositions focus on communicative behaviors in ongoing mentoring relationships. Three of these propositions focus on the differences between mentors' and protégés' communicative attempts to maintain and repair their relationships and one proposition differentiates between female and male protégés' communicative behaviors in ongoing mentoring relationships.

The first proposition states that protégés' requests to initiate a mentoring relationship are likely rejected by the mentors in initial (i.e., the first) mentor-protégé interactions (Kalbfleisch, 2002). Because mentor-protégé relational trust has not been established, agreeing to initiate a mentoring relationship in initial mentor-protégé interactions is indicative of a premature mentor relational commitment. Similar to friendship and romantic relationships, mentoring relationships develop gradually over a period of time rather than as a result of sudden requests (Kalbfleisch; Kram, 1983). By noting that requests such as "Will you be my romantic partner?" or "I love you" statements in romantic relationships and "Will you be my best friend?" statements in friendships are likely to be rejected by the receiver in initial interactions, Kalbfleisch argued that protégés' requests to initiate a mentoring

relationship during initial mentor-protégé interactions such as “Will you be my mentor?” also are rejected by the mentors (Kalbfleisch).

The second proposition states that protégés’ requests for help on a specific task are more likely to be accepted by mentors than requests to initiate a mentoring relationship in initial mentor-protégé interactions (Kalbfleisch, 2002). Agreeing to assist a younger and less experienced person with a single task does not constitute a mentoring relationship and is not indicative of a relational commitment; it is therefore associated with fewer mentor risks and costs than accepting a request to initiate a mentoring relationship. This proposition also is based on the conceptualization of mentoring relationships as interpersonal relationships that develop over time. By agreeing to aid a potential protégé on a single task, mentors have the opportunity to get to know the potential protégé, which may establish mentor-protégé trust (Kalbfleisch, 2002, 2007; Kalbfleisch & Eckley, 2003).

The third proposition states that protégés’ requests to initiate a mentoring relationship during initial mentor-protégé interactions are likely accepted when the mentors have previously agreed with a third party, such as a supervisor, to serve as mentors (Kalbfleisch, 2002). This proposition implies that the likelihood of mentors accepting requests by protégés to initiate a mentoring relationship is dependent on the nature of the mentoring relationship (i.e., informal or formal mentoring). In informal mentoring relationships, the mentors have not agreed previously to serve as mentors, nor are they required by organizational or departmental guidelines to serve as mentors. However, protégés’ requests to initiate formal mentoring relationships, in which the mentors previously have agreed to serve as mentors or are required to do so by organizational guidelines, are more likely to be accepted during initial interactions than protégés’ requests to initiate informal mentoring relationships (Kalbfleisch)

The fourth proposition states that offers made by mentors to initiate a mentoring relationship are likely to be accepted by the protégés (Kalbfleisch, 2002). Although protégés initiate most informal mentoring relationships, mentors initiate some mentoring relationships (Kalbfleisch, 2002, 2007) due to perceived protégé competence (Kram, 1983, 1988). Because there are fewer available mentors than there are protégés seeking mentors, the competition for mentors may become stiff, and because protégés desire to be involved in mentoring relationships (Cronan-Hillix et al., 1986) as they benefit from the skills taught by the mentors, they are likely to accept mentors' requests to initiate a relationship (Kalbfleisch, 2002).

The fifth proposition states that offers made by mentors to assist protégés on a specific task are likely to be accepted by the protégés (Kalbfleisch, 2002). Because protégés desire to learn the skills taught by mentors and to develop mentoring relationships, they perceive mentors' requests for help or assistance on a specific task as opportunities to learn and to project competence, thus improving their chances of developing future mentoring relationships. Therefore, protégés are likely to accept mentors' requests for help or assistance (Kalbfleisch).

The sixth proposition states that protégés are more likely than mentors to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships (Kalbfleisch, 2002). Similar to other interpersonal relationships, mentoring relationships involve conflicts, fights, and jealousy. Kalbfleisch (1997) claimed that mentor-protégé conflicts often arise when mentors disagree with their protégés, embarrass their protégés, project negativity, or make demanding requests for protégé help. Because protégés have more to lose than mentors if the mentoring relationships are terminated, protégés are more likely than mentors to communicate to maintain the relationship and to resolve mentor-

protégé conflicts (Kalbfleisch, 2002). This proposition was supported further by Kalbfleisch and Eckley (2003), who found that protégés were more likely than mentors to communicatively maintain their relationships.

The seventh proposition states that the closer the mentors are linked to their protégés' career success, the more likely their protégés are to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships (Kalbfleisch, 2002). Mentors become more invested in their protégés over time and generally provide more career and psychosocial support for their protégés as their relationships progress (Kram, 1983, 1988). Thus, protégés become increasingly more dependent on their mentors as their relationship progress. Consequently, protégés' communicative attempts to initiate, maintain, and repair their mentoring relationships should increase as the mentors become invested in their protégés (Kalbfleisch). Not surprisingly, Cavendish (2007) found that when mentors provide career and psychosocial support, protégés actively communicate to maintain their mentoring relationships.

The eighth proposition states that female protégés are more likely than male protégés to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships (Kalbfleisch, 2002). Because most mentors are men and mentors prefer same-sex protégés, male protégés are more likely than female protégés to be involved in mentoring relationships (Kalbfleisch, 2000). Moreover, women find it more difficult to initiate mentoring relationships than men (Ragins & Cotton, 1991). Based on these findings, Kalbfleisch (2002) implicitly adopted a Social Exchange perspective by arguing that that there are fewer possible mentors available to women than men because most mentors are men. Thus, mentoring relationships may be more valued by female than male protégés. Consequently, women are more likely than men to communicatively maintain and repair

their mentoring relationships (Kalbfleisch, 2002). This proposition was supported further by Kalbfleisch and Eckley (2003) who found that female protégés engage in more communicative behaviors designed to maintain their mentoring relationships than male protégés.

The ninth proposition states that the more invested the mentors are in their protégés, the more likely they are to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships (Kalbfleisch, 2002). Mentors often take pride in their protégés and they experience personal satisfaction as the relationship progresses. As such, mentors become more committed to their relationships over time (Kalbfleisch & Davies, 1993; Kram, 1983, 1988), especially given the costs (e.g., time, personal and professional conflicts with the protégé) that mentors incur within the mentoring relationship. Thus, the more invested mentors are in their protégés' career development, the more likely they are to communicatively maintain and repair their relationships with their protégés (Kalbfleisch). Considering that mentors' provision of support increases as they become invested in their protégés (Kram, 1983), Cavendish's (2007) findings that mentors' provision of career and psychosocial support are related positively to their communicative attempts to maintain the mentor-protégé relationship support this proposition.

MET provides a useful framework for communication scholars to examine mentoring relationships as interpersonal relationships. Interpersonal relationships, such as mentor-protégé relationships (Kalbfleisch, 2000), become stable when the relational partners reach minimal agreement of what they desire from the relationship; however, even in stable relationships, the level of intimacy fluctuates slightly as a result of brief relational conflicts (Wilmot, 1981). As such, interpersonal relationships "are subject to wear-and-tear, friction, and strain" (Kaplan, 1976, p. 106). Consequently, most of the relational partners'

communicative behaviors serve to maintain their relationships as opposed to develop or terminate the relationship (Dindia, 2003; Dindia & Baxter, 1987; Duck, 1988).

Relational Maintenance

Relational maintenance behaviors, which are defined as “communication messages and behaviors used to preserve an acceptable and lasting relational state” (Waldron, 1991, p. 289), are used to keep a relationship in existence, to keep a relationship in a specified state or condition, to keep a relationship in satisfactory condition, and to keep a relationship in repair (Dindia & Canary, 1993). To keep a relationship in existence suggests that the relationship continues to exist and therefore will not terminate. To keep a relationship in a specified state or condition implies that the current relationship intimacy level and important relationship qualities are sustained. To keep a relationship in satisfactory condition suggests that the relationship remains mutually satisfactory for both partners. To keep a relationship in repair refers to not only maintaining a healthy and functional relationship condition, but also to manage relationship problems (Dindia & Canary). To achieve these goals, relational partners enact a variety of relational maintenance behaviors (Dindia, 2003).

Stafford and Canary (1991) developed a taxonomy of maintenance behaviors that individuals enact to sustain their romantic relationships, which are assurances, networks, openness, positivity, and tasks. *Assurances* involves expressed commitment and willingness to remain in the relationship. *Networks* refers to shared friends and familial groups in which both relational partners are involved. *Openness* involves overt and direct discussions about the relationship. *Positivity* refers to cheerful and optimistic communication with a relational partner. *Tasks* includes the everyday responsibilities and chores relational partners face. Stafford, Dainton, and Haas (2000) concluded that advice and conflict management also serve to maintain romantic relationships. *Advice* involves providing relational partners with

social support, such as offering opinions and suggestions. *Conflict management* refers to resolving conflicts in a patient and considerate manner (Canary & Stafford, 1992; Stafford & Canary; Stafford et al.).

These relational maintenance behaviors may be enacted strategically or routinely (Stafford et al., 2000). Strategic relational maintenance behaviors are used consciously and intentionally with the purpose to sustain the relationship (Stafford et al.) and the use of strategic relational maintenance behaviors is therefore considered a skill that is largely a function of an individual's communication competence (Duck, 1988). Routinely enacted relational maintenance behaviors may be intentional, but are not performed with the goal to maintain the relationship. Instead, routine behaviors often become a part of the relational partners' communication repertoire while still maintaining the relationship (Dainton & Stafford, 1993; Duck; Stafford et al.).

Although the relational maintenance behaviors identified by Stafford and her colleagues were used originally to examine the use of relational maintenance behaviors in cross-sex romantic relationships (Canary & Stafford, 1992), they also have been applied successfully in same-sex romantic relationships (Haas & Stafford, 2005) and family relationships (Serewicz, Dickson, Morrison, & Poole, 2007). Researchers also have identified several additional relational maintenance behaviors that are unique to specific relational contexts such as sibling relationships (Myers & Weber, 2004) and friendships (Guerrero & Chavez, 2005; Johnson, 2001; Messman, Canary, & Hause, 2000). Collectively, these relational maintenance behaviors include anti-social behaviors, avoidance of negativity, confirmation, escape, flirtation, humor, instrumental and emotional social support, joint activities, and verbal aggression (Johnson; Guerrero & Chavez; Myers & Weber). Thus,

relational maintenance behaviors may be either pro-social or anti-social (Dainton & Gross, 2008) and vary across relational contexts (Canary, Stafford, Hause &, Wallace, 1993).

To date, researchers have explored the use of relational maintenance behaviors across a variety of communication contexts, including romantic/marital relationships (Stafford & Canary, 1991; Stafford et al., 2000), sibling relationships (Myers & Members of COM 200, 2001), parent-child relationships (Myers & Glover, 2007), grandparent-grandchild relationships (Mansson, Myers &, Turner, 2010), and friendships (Guerrero & Chavez, 2005; Messman, Canary, & Hause, 2000). These studies focused primarily on the association between individuals' use of relational maintenance behaviors and their own or their partners' perceived relational characteristics (e.g., control mutuality, partner liking, partner trust, relational commitment, and relational satisfaction; Stafford, 2003). *Control mutuality* is defined as the degree to which relational partners agree mutually on who maintains control and makes relational decisions (Stafford & Canary). *Partner liking* is defined as the degree to which individuals admire their relational partner and includes both positive affect and respect (Rubin, 1970, 1973). *Partner trust* is defined as the degree to which individuals perceive that they can depend on their relational partners in unknown and risky situations (Wheeless & Grotz, 1977). *Relationship commitment* is defined as the degree to which individuals intend to continue the relationship (Canary & Stafford, 1994). *Relationship satisfaction* is defined as individuals' general contentment with their relationships (Canary & Spitzberg, 1989).

In addition to examining the association between the use of relational maintenance behaviors and relational characteristics, researchers (e.g., Dailey, Hampel, & Roberts, 2010; Dainton, 2003a; Dainton & Aylor, 2001) also have examined the association between relational partners' use of relational maintenance behaviors and uncertainty. According to Knobloch and Solomon (1999), individuals may experience three types of uncertainty: self,

partner, and relationship. *Self uncertainty* refers to individuals' inability to describe, explain, or predict their own attitudes or behaviors, *partner uncertainty* refers to individuals' inability to describe, explain or predict their relational partners' attitudes or behaviors, and *relationship uncertainty* refers to individuals' doubts about the status and the future of the relationship (Knobloch, 2008; Knobloch & Solomon, 1999, 2002). Knobloch and Solomon concluded that self and partner uncertainty includes *desire* (i.e., feelings and commitment), *evaluation* (i.e., value and definition), and *goals* (i.e., future objectives of the relationship) whereas relationship uncertainty includes *behavioral norms* (i.e., un/acceptable behaviors), *mutuality* (i.e., emotional reciprocity), *definition* (i.e., current status), and *future* (i.e., long-term outcomes).

Recent studies (e.g., Afifi & Weiner, 2004; Solomon & Knobloch, 2001) suggest that uncertainty may ebb and flow throughout interpersonal relationships. However, in established relationships, the nature of uncertainty likely changes from self and partner to relationship uncertainty (Afifi & Reichert, 1996; Dainton, 2003a; Knobloch & Solomon, 1999). Thus, extant relational maintenance research consistently focuses on the association between relationship uncertainty (as opposed to self and partner uncertainty) and the use of relational maintenance behaviors in established relationships. These studies establish clearly a negative relationship between relational uncertainty and the use of relational maintenance behaviors in romantic relationships (Dailey et al., 2010; Dainton; Dainton & Aylor, 2001) and cross-sex friendships, although these findings are less conclusive (Weger & Emmett, 2009).

A separate, yet related, body of research focuses on the use of relational maintenance behaviors in workplace relationships. Workplace relationships are multifaceted as they involve both work/task-related and social/interpersonal interactions (Albrecht & Hall, 1991;

Henderson & Argyle, 1986). Workplace relationships become stable when the goals and rules that govern the relationships are agreed upon mutually by its participants (Henderson & Argyle). Thus, several studies have examined supervisor-subordinate relational maintenance tactics, hereinafter referred to as relational maintenance behaviors (e.g., Kaplan, 1976, 1978; Waldron 1991) and communicative rules (Henderson & Argyle) that serve to stabilize and maintain workplace relationships (Lee & Jablin, 1995). Scholars (Ayres, 1983; Lee & Jablin; Tepper, 1995; Waldron; Waldron & Hunt, 1992) have identified additional maintenance behaviors enacted by subordinates to maintain their relationships with their supervisors.

The first study to examine relational maintenance behaviors in the workplace was conducted by Ayres (1983), who deductively identified three relational stability behaviors utilized to maintain stable relationships with friends, acquaintances, and coworkers. These three behaviors are avoidance, balance, and direct behaviors. *Avoidance behaviors* refer to intentionally ignoring communicative behaviors that may alter the relationship status, including attempts to prevent the relationship from escalating or deteriorating. *Balance behaviors* refer to communicative behaviors intended to maintain the amount of emotional and instrumental support at a steady level, thus preventing the relationship from escalating or deteriorating. *Direct behaviors* refer to overt statements indicating that the current relationship status is desirable and that escalation and/or deterioration is/are not desired. Although Shea and Pearson (1986) confirmed these factors, Ayres' taxonomy has been subject to criticism (Waldron, 2003) because the factors were derived deductively rather than inductively.

To address this concern, Waldron (1991) conducted an exploratory study in which he inductively generated 51 behaviors used by subordinates to maintain their relationships with their supervisors. Utilizing both open-ended surveys and focus groups, participants were

asked to describe “the things they did and said that functioned to maintain, stabilize, or prevent deterioration of their relationships with their current...or past supervisors” (p. 294). The results of a factor analysis revealed four types of subordinate relational maintenance behaviors: personal, contractual, regulative, and direct behaviors. Waldron and Hunt (1992) confirmed these relational maintenance behaviors and developed a four-factor instrument to assess subordinates’ use of relational maintenance behaviors. *Personal behaviors* are attempts made by subordinates to communicate informally with their supervisors, such as joking, engaging in self-disclosure, or discussing shared supervisor-subordinate experiences. *Contractual behaviors* are subordinates’ communicative attempts to conform to role requirements by following rules, seeking advice, and accepting criticism. *Regulative behaviors* refer to subordinates’ use of defensive communicative behaviors to manage impressions by limiting the amount, and controlling the type, of information shared with their supervisors. *Direct behaviors* refer to subordinates’ overtly stated expectations about the relationship, including discussions about the relationship status and injustices (Waldron, 1991, 2003; Waldron & Hunt). Tepper (1995) identified an additional type of relational maintenance behavior, which is extra-contractual. *Extra-contractual behaviors* are subordinates’ attempts to establish challenging goals and to exceed their supervisors’ expectations (Tepper).

Lee and Jablin (1995) then identified several additional communicative behaviors used by subordinates to maintain their relationships with their supervisors. These relational maintenance behaviors are avoidance, circumspetiveness, creating closeness, deception/distortion, direct/open approach, direct conversational refocus, indirect conversational refocus, openness, positive regard, procrastination, restrained expressiveness, self-promotion, small talk, and supportiveness. *Avoidance* refers to subordinates limiting

physical and conversational encounters with their supervisors. *Circumspectiveness* refers to subordinates communicating carefully to avoid criticizing their supervisors. *Creating closeness* refers to intimate conversations intended to develop a psychologically close friendships. *Deception/distortion* involves masking relational dissatisfaction. *Direct/open approach* is characterized by subordinates' attempts to explicitly express concerns about their relationships.

Direct conversational refocus refers to explicit attempts to alter conversation topics whereas *indirect conversational refocus* are implicit attempts to alter conversation topics. *Openness* involves overt expressions of thoughts, opinions, and emotions. *Positive regard* involves subordinates' attempts to project a positive attitude and the use of politeness. *Procrastination* refers to intentionally delaying or postponing interactions with supervisors. *Restrained expressiveness* involves attempts to neutralize expressions of anxiety and/or enthusiasm. *Self-promotion* is characterized as positive impression management by attempts to be perceived favorably and to express previous work-related success. *Small talk* refers to casual everyday conversations. *Supportiveness* involves encouragement and expressed interest (Lee, 1997, 1998a, 1998b; Lee & Jablin). The use of these behaviors suggests that subordinates manage both positive and negative emotions when interacting with their supervisors, which serves not only to facilitate task accomplishment but also to stabilize and sustain the relationship (Waldron, 1994, 1999, 2000).

Subordinates tend to consciously select specific behaviors to maintain their relationships with their supervisors based on their perceptions of their relationship status (Lee, 1998a, 1998b; Lee & Jablin, 1995). To maintain escalating relationships (i.e., unwanted increased relationship closeness), subordinates rely primarily on the avoidance, indirect conversational refocus, direct conversational refocus, openness, and procrastination relational

maintenance behaviors. In deteriorating relationships (i.e., unwanted decreased relationship closeness), subordinates use the direct/open, creating closeness, deception/distortion, circumspectiveness, and self-promotion relational maintenance behaviors to maintain their supervisor-subordinate relationships. In routine relationships (i.e., desirable relationship closeness), subordinates primarily rely on the avoidance, supportiveness, positive regard, restrained expression, and small talk relational maintenance behaviors to maintain their relationships with their supervisors (Lee, 1998a). Thus, these relational maintenance behaviors are enacted to keep the relationship at specific state or condition as discussed by Dindia and Canary (1993).

Several other factors are associated with subordinates' use of relational maintenance behaviors with their supervisors. Subordinates' relational maintenance efficacy, perceived relationship quality (i.e., high quality relationships versus low quality relationships; Lee, 1998a, 1998b), supervisors' provision of resources, subordinate rank (Waldron, 1991), and satisfaction with supervisors (Waldron & Hunt, 1992) are associated positively with subordinates' use of various relational maintenance behaviors in escalating, deteriorating, and routine relationships. In escalating relationships, subordinates who are efficacious and perceive the supervisor-subordinate relationship as competitive avoid interactions with their supervisors or attempt to directly and indirectly refocus their conversations with their supervisors more frequently than subordinates who are less efficacious or those who perceive the relationship as cooperative (Lee, 1998a, 1998b). Similarly, Ayres (1983) found that unwanted attempts to advance a relationship typically result in the other person avoiding interactions in an effort to stabilize the relationship.

Conversely, in deteriorating relationships, efficacious subordinates who perceive the supervisor-subordinate relationship as cooperative rely more on creating closeness but rely

less on deception/distortion and self-promoting maintenance behaviors than subordinates who are less efficacious or perceive the relationship as competitive (Lee, 1998a, 1998b); they also use more balance behaviors (Ayres, 1983). Highly efficacious subordinates who are involved in cooperative supervisor-subordinate relationships also tend to engage in less avoidance, but more supportiveness, positive regard, and small talk to maintain routine supervisor-subordinate relationships than subordinates who are less efficacious or perceive the relationship as competitive. In routine relationships, however, efficacious subordinates who perceive the supervisor-subordinate relationship as cooperative rely more on supportiveness, positive regard, and small talk but rely less on avoidance than subordinates who are less efficacious or perceive the relationship as competitive (Lee, 1988a, 1988b).

Moreover, to maintain their relationships with their supervisors, higher ranked subordinates and subordinates involved in informal mentoring relationships use the direct and extra-contractual relational maintenance behaviors more, but they use the regulative and contractual relational maintenance behaviors less than lower ranked subordinates or subordinates involved in formal mentoring relationships (Tepper, 1995). Not surprisingly, then, subordinates who receive career and psychosocial mentoring support from their supervisors maintain the supervisor-subordinate relationship by exceeding their supervisors' expectations (i.e., extra-contractual behaviors); they also attempt to develop close personal relationships (i.e., personal behaviors) by openly expressing relationship expectations (i.e., direct behaviors) and limiting their defensive communication (i.e., regulative behaviors) when interacting with their supervisors (Tepper).

Rationale

The purpose of this dissertation is threefold. The first purpose is to examine doctoral students' use of relational maintenance behaviors with their advisors using MET

(Kalbfleisch, 2002). Because the focus of this study is placed on graduate students and faculty members who already are involved in ongoing mentoring relationships, the first five propositions forwarded in MET that focus on the initiation of mentoring relationships will not be tested. Moreover, because it is the advisees' responsibility to maintain positive relationships with their advisors (Foss & Foss, 2008), students are more likely than faculty members to engage in communicative behaviors designed to maintain student-faculty member relationship (Kalbfleisch & Eckley, 2003). Thus, this dissertation will not test the sixth and the ninth propositions that focus on mentors' tendencies to maintain their mentoring relationships. Instead, this dissertation is guided by the seventh and eighth propositions forwarded in MET that focus specifically on protégés' tendencies to maintain their mentoring relationships. This focus was chosen because protégés who are involved in ongoing mentoring relationships not only depend on their mentors to achieve professional success (Kram, 1983) but also are more likely to communicatively maintain their mentoring relationships than mentors (Kalbfleisch; Kalbfleisch & Eckley).

A precursor to test MET in the advisor-advisee mentoring relationship is to identify the communicative behaviors advisees use to maintain their advisor-advisee mentoring relationships. As a review of the mentoring research indicates, the advisor-advisee mentoring relationship is vital to graduate students' academic success (Applegate, Darling, Sprague, Nyquist, & Andersen, 1997; Cavendish, 2007; Dixon-Reeves, 2003; Golde, 2005; Madsen, 1993; Mauch & Birch, 1993). It is not surprising, then, that mentoring researchers have examined how graduate students identify mentors and initiate mentoring relationships (Bullis & Bach, 1989; Myers, 1995; Waldeck et al., 1997) as well as the positive outcomes associated with received mentoring support (Cronan-Hillix et al., 1986; Gelso et al., 1996; Hollingsworth & Fassinger, 2002). For the advisor-advisee mentoring relationship to be

sustained, however, it is necessary that the advisees communicatively maintain their relationships with their advisors (Foss & Foss, 2008). Moreover, advisees who maintain positive relationships with their advisors complete their academic programs on time (Maher, Ford, & Thompson, 2004) and receive mentoring support from their advisors (Green & Bauer, 1995).

To date, however, researchers have neglected to explore the communicative behaviors used by advisees to maintain their advisor-advisee mentoring relationships. Moreover, the literature suggests that the type of relational maintenance behaviors used to sustain interpersonal relationships varies across relational contexts (e.g., Lee & Jablin, 1995; Myers & Weber, 2004; Stafford & Canary, 1991; Waldron & Hunt, 1992). Hawkins (1991) identified three differences that distinguish the advisor-advisee relationship from other interpersonal relationships. First, the advisor is of higher departmental status than the advisee. Second, advisees may be fearful of negative performance evaluations. Third, advisees are aware that their academic success depends largely on their attempts to establish and maintain a positive relationship with their advisor. Thus, advisor-advisee interactions differ greatly from interactions in other interpersonal relationships (e.g., romantic relationships, friendships) in which status differences and performance evaluations are not applicable. Therefore, the behaviors used by advisees to maintain their advisor-advisee relationships should differ from the behaviors used to maintain other interpersonal relationships. Thus, the following research question is posed:

RQ1: What do advisees say and do to maintain their mentoring relationships (i.e., relational maintenance behaviors) with their advisors?

The first three hypotheses test the seventh proposition of MET, which states that the closer mentors are linked to their protégés' career success, the more likely protégés are to

maintain their mentoring relationships (Kalbfleisch, 2002). Two interrelated factors indicate how closely mentors are linked to their protégés' career success: relationship duration (i.e., time) and provision of both career support and psychosocial support (Kram, 1983, 1988). Over time, mentors who increase their provision of career support and psychosocial support become more closely linked to their protégés' career success (Kalbfleisch; Kram, 1983) and they also take pride in their protégés' career success (Kram, 1983). When mentors provide career support to their protégés, the protégés learn skills; when mentors provide psychosocial support to their protégés, the protégés perceive their mentoring relationships favorably. As such, MET posits that the more closely linked the mentors are to their protégés' career success, the more likely the protégés are to maintain their mentoring relationships. Thus, to test the seventh proposition of MET, the following hypotheses are posited:

- H1: The longer the advisors and advisees have been involved in their mentoring relationship, the more frequently advisees will use relational maintenance behaviors with their advisors.
- H2: Advisees' self-reported use of relational maintenance behaviors with their advisors will be related directly to their advisors' reports of providing career support and psychosocial support to their advisees.
- H3: Advisees' self-reported use of relational maintenance behaviors with their advisors will be related directly to their own reports of receiving career support and psychosocial support from their advisors.

The fourth and fifth hypotheses test the eighth proposition of MET, which states that female protégés are more likely than male protégés to communicatively maintain their mentoring relationships (Kalbfleisch, 2002). Ragins and Cotton (1991) argued that there are three reasons why researchers should continue to examine sex differences in mentoring

relationships. First, in the absence of female mentors, women may be hesitant to initiate mentoring relationships with male mentors out of fear that the mentor and/or other organizational members will perceive it as a sexual advance. Second, traditional sex roles suggest that men take an active role whereas women take a passive role in relationship initiation. Third, women have fewer opportunities than men to develop mentoring relationships because they are involved in fewer social and workplace groups than men. These reasons for examining sex differences in mentoring relationships are grounded in the notion that most mentors are men and that mentors prefer same-sex protégés (Kalbfleisch, 2000, 2002). Consequently, it is more difficult for women than men to find same-sex mentors and to initiate mentoring relationships, which also makes ongoing mentoring relationships more valuable to female than male protégés (Kalbfleisch, 2000, 2002; Ragins & Cotton). Therefore, it is proposed that female protégés will be more likely than male protégés to use behaviors designed to maintain their mentoring relationships (Kalbfleisch, 2002). Thus, to test the eighth proposition of MET, the following hypotheses are posited:

H4: Female advisees will use relational maintenance behaviors with their advisors more frequently than male advisees.

H5: Advisors will report that their female advisees use relational maintenance behaviors with them more frequently than their male advisees.

Additional mentoring research exploring sex differences (e.g., Burke, 1984; Ragins & Cotton, 1991) has examined (a) the differences between male and female mentors' provision of both career support and psychosocial support and (b) whether mentors' provision of both career support and psychosocial support for their protégés is dependent on the sex composition of the mentor-protégé dyad. The results of these studies, however, are inconclusive. Kurtz-Costes, Heinke, and Ulku-Steiner (2006) found that protégés perceive

female mentors as less supportive than male mentors. However, Burke (1984) found that female mentors provide more psychosocial support than male mentors and female protégés have been found to receive more psychosocial support, but less career support, than male protégés regardless of mentor sex (Burke; Koberg et al., 1994; Locke & Williams, 2000). There also is evidence that indicates that male and female protégés receive equal amounts of career support and psychosocial support from their mentors (Dreher & Ash, 1990; Kelly & Schweitzer, 1999; Tepper et al., 1996; Ulku-Steiner, Kurtz-Costes, & Kinlaw, 2000; Wilde & Schau, 1985). To explore further the possibility that mentors' provision of both career support and psychosocial support is dependent on mentor and protégé sex, the following research questions are posed:

RQ2: What differences exist between male and female advisors' self-reports of providing career support and psychosocial support to their male and female advisees?

RQ3: What differences exist between male and female advisees' reports of career support and psychosocial support received from their male and female advisors?

Regardless of the advisor-advisee sex composition, one of the most important functions of advisors is to teach their advisees to conduct research (Applegate et al., 1997). Not surprisingly, then, researchers (e.g., Cronan-Hillix et al., 1986; Hollingsworth & Fassinger, 2002; Paglis et al., 2006) have concluded that advisors' provision of both career support and psychosocial support is associated positively with advisees' research productivity (e.g., convention papers, journal publications). However, these studies rely exclusively on advisees' reports of received mentoring support. Thus, to corroborate these findings, the following hypotheses are posited:

- H6: Advisees' self-reports of their research productivity will be related directly to their own reports of receiving career support and psychosocial support from their advisors.
- H7: Advisees' self-reports of their research productivity will be related directly to their advisors' reports of providing career support and psychosocial support to their advisees.

The second purpose of this dissertation is to examine the relationship between advisees' use of relational maintenance behaviors and both their own and their advisors' perceived relational characteristics. Extant relational maintenance research indicates that the use of relational maintenance behaviors is essential in interpersonal relationships (Canary et al., 2002) as failure to maintain interpersonal relationships often leads to relational de-escalation or termination (Guerrero, Eloy, & Wabnuk, 1993). Conversely, the use of relational maintenance behaviors generally is associated positively with several desirable relational characteristics that motivate relational partners to maintain their relationships (Canary et al.). Across relational contexts, five relational characteristics that motivate relational partners to sustain their relationships are control mutuality, partner liking, partner trust, relational commitment, and relational satisfaction (Canary & Stafford, 1994; Canary et al.; Dainton & Stafford, 2000; Myers & Glover, 2007; Myers & Weber, 2004; Stafford & Canary, 1991, 2006; Weigel & Ballard-Reisch, 1999, 2001).

In mentoring relationships, researchers have focused almost exclusively on the extent to which advisors' provision of both career support and psychosocial support is related to advisees' relational satisfaction, perceived relational quality, and work commitment (Cavendish, 2007; Green & Bauer, 1995; Ulku-Steiner et al., 2000). Although these advisee outcomes are related positively to advisees' on-time degree completion (Cavendish), several

additional advisor-advisee relational characteristics have been associated with graduate students' academic success. Specifically, advisees are concerned with being liked by their advisors (Luna & Cullen, 1998); some doctoral students even discontinue their graduate programs because they do not like their advisors whereas other doctoral students discontinue their academic programs because they are dissatisfied with their advisor-advisee communication (Golde, 1998) or they are dissatisfied with the advisor-advisee relationship (Golde, 2005). Additionally, advisees desire to establish advisor-advisee trust (Luna & Cullen) and they expect their advisors to be honest, genuine, loyal, and reliable (Cronan-Hillix et al., 1986; Luna & Cullen); they also desire to establish mutual advisor-advisee respect (Lovitts, 2001).

Advisees' academic success also has been linked to both the advisors' and advisees' work commitment. Advisees' work commitment, which is dependent largely on advisors' provision of mentoring support and collaboration with their advisees (Green & Bauer, 1995; Ulku-Steiner et al., 2000), facilitates advisees' degree completion (Maher et al., 2004). Advisees who are committed to their work also report greater academic self-concept, self-esteem, and research productivity (Paglis et al., 2006; Ulku-Steiner et al.). Conversely, a lack of advisors' work commitment (e.g., being inaccessible; Barnes, Williams & Archer, 2010) in some cases causes doctoral students to discontinue their academic programs (Golde, 2000).

As such, the relational characteristics that uphold the advisor-advisee relationship are similar to the relational characteristics that uphold other interpersonal relationships, including control mutuality, partner liking, partner trust, and relational satisfaction (see p.223 for definitions). However, communication satisfaction and work commitment also appear to be essential components in the advisor-advisee relationship. *Communication satisfaction* is

defined as the positive affect individuals receive from a communicative event that fulfilled expectations (Hecht, 1978). *Work commitment* is defined as the degree to which individuals identify with and are devoted to maintain membership in their department/organization (McGee & Ford, 1987). These, and in some cases additional yet similar relational characteristics, are fundamental factors that sustain interpersonal relationships (Canary, 2003; Canary & Stafford, 1994). In fact, relational characteristics contribute to relational interdependence, stability, and relational resilience (Canary et al., 2002; Stafford & Canary, 1991). Based on the positive association that has been established between the use of relational maintenance behaviors and relational characteristics across relational contexts (Canary et al.; Stafford & Canary, 1991, 2006), the following hypotheses are posited:

- H8: Advisees' self-reported use of relational maintenance behaviors with their advisors will be related directly to their own reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisors.
- H9: Advisees' self-reported use of relational maintenance behaviors with their advisors will be related directly to their advisors' reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees.
- H10: Advisors' reports of their advisees' use of relational maintenance behaviors will be related directly to their own reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees.

The third purpose of this dissertation is to examine the extent to which advisees' relational uncertainty with their advisors is associated with their own use of relational

maintenance behaviors with their advisors and their advisors' provision of both career support and psychosocial support. Relational uncertainty can be detrimental to interpersonal relationships (Dainton, 2003b) as it limits the amount of topics relational partners discuss (Afifi & Burgoon, 1996) and may prevent relational partners from developing and restoring relational intimacy (Emmers & Canary, 1996). Previous relational maintenance research (Dailey et al., 2010; Dainton, 2003a; Dainton & Aylor, 2001), albeit in different relational contexts, indicates that individuals who are uncertain about their relationships tend to be reluctant to use relational maintenance behaviors. In mentoring relationships, protégés' uncertainty may be a function of their mentors' provision of both career support and psychosocial support. Moreover, mentors' provision of career support and psychosocial support indicates relational interest and commitment, which may limit protégés' relational uncertainty (Kram, 1983). Thus, to test these ideas, the following hypotheses are posited:

- H11: Advisees' self-reported use of relational maintenance behaviors with their advisors will be related negatively to their own reports of relational uncertainty with their advisors.
- H12: Advisors' reports of their advisees' use of relational maintenance behaviors will be related negatively to their advisees' reports of relational uncertainty with their advisors.
- H13: Advisees' reports of received career support and psychosocial support from their advisors will be related negatively to their own reports of relational uncertainty with their advisors.
- H14: Advisors' self-reported provision of career support and psychosocial support for their advisees will be related negatively to their advisees' reports of relational uncertainty with their advisors.

Summary

The purpose of this proposed dissertation is threefold. First, this purpose is to examine doctoral students' use of relational maintenance behaviors with their advisors using MET. Central to MET is that protégés maintain their mentoring relationships. As such, this dissertation identifies the behaviors advisees use to maintain their advisor-advisee mentoring relationships. The second purpose of this dissertation is to examine the relationship between advisees' use of relational maintenance behaviors and the relational characteristics (i.e., liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality) that uphold the advisor-advisee relationship. The third purpose of this dissertation is to examine the extent to which advisees' relational uncertainty with their advisors is related to their use of relational maintenance behaviors and their advisors' provision or career support and psychosocial support.

CHAPTER II

Methodology

Overview

To test the fourteen hypotheses and to explore the three research questions, this dissertation was conducted in three phases. In Phase One, the relational maintenance behaviors used by doctoral students to maintain their advisor-advisee mentoring relationships were identified. In Phase Two, these behaviors were used to develop a measure to assess advisees' use of relational maintenance with their advisors. In Phase Three, this measure was used to examine the advisor-advisee relationship using MET (Kalbfleisch, 2002) and to examine the role relational characteristics and relational uncertainty play in the context of advisor-advisee mentoring relationships.

Phase One

Participants

Following the sample size utilized by Myers and Weber (2004) to develop a measure of siblings' use of relational maintenance behaviors, the participants ($N = 50$; 16 males, 34 females) in this phase were doctoral students enrolled in communication studies programs recruited from several different universities. The participants had been enrolled in their current academic program between 10 and 72 months ($M = 28.00$, $SD = 14.08$) and they ranged in age from 24 to 64 years ($M = 30.22$, $SD = 8.63$). To qualify for participation in this phase, participants had to (a) be enrolled as a full-time doctoral student and (b) have a faculty advisor. Masters degree students were excluded from participation in all three phases of this dissertation because advisor-advisee relationships at the doctoral level assume more characteristics of a traditional mentoring relationship than advisor-advisee relationships at the

Masters degree level (Kelly & Schweitzer, 1999). The participants provided a host of demographic data detailed in Table 1.

Sampling

A snowball (i.e., network) sampling technique was utilized in this phase. Snowball sampling is a nonprobability sampling technique in which the initial participants, who are members of the researcher's social and professional networks, help the researcher identify and recruit additional participants who qualify for participation (Granovetter, 1976). The researcher's friends and acquaintances who were enrolled in doctoral programs around the country, although not at West Virginia University, were contacted via an e-mail message and asked to participate in this phase.

Procedures

This phase aimed to identify inductively the behaviors advisees use to maintain their advisor-advisee mentoring relationships. Data collection for this phase was conducted online via SurveyMonkey (see Appendix A). To recruit participants for this phase, an e-mail message (see Appendix B) was sent to potential participants who were not enrolled at West Virginia University. The e-mail message (a) introduced the researcher, (b) introduced the study, (c) identified the inclusion criteria, (d) asked the participants to complete an anonymous online questionnaire by clicking on the hyperlink found at the end of the e-mail message, and (e) asked the participants to forward the e-mail message to at least two of their friends or acquaintances who qualify for participation in this phase.

In addition to a standard cover letter (see Appendix C), the online questionnaire (see Appendix A) included two parts. In the first part, the participants were asked to provide general demographic data. In the second part, the participants were asked to provide as many responses as possible in reference to two questions adapted from Stafford and Canary (1991).

Table 1

Phase One Demographic Data

Variables			
1. Sex	Males (32%)	Females (68%)	
2. Age	Range (24-64)	$M = 30.22$	$SD = 14.08$
3. Degree*	Ph.D. (98%)	Ed.D. (0%)	
4. ABD status*	Yes (28%)	No (70%)	
5. Months in program	Range (10-72)	$M = 28.00$	$SD = 14.08$
6. Interest	Teaching (54%)	Research (46%)	
7. Funded*	Yes (92%)	No (4%)	
7a. Teaching assistantship	Yes (86%)	No (14%)	
7b. Research assistantship	Yes (48%)	No (52%)	
7c. Academic fellowship	Yes (16%)	No (84%)	
7d. Other	Yes (8%)	No (92%)	
8. Funding tied to advisor*	Yes (16%)	No (82%)	
9. Initiated relationship*	Student (60%)	Advisor (14%)	Dept. (24%)
10. Advisor sex	Males (62%)	Females (38%)	
11. Advisor rank	Asst. Prof. (24%)	Assoc. Prof. (28%)	Full Prof. (48%)
12. Months in relationship	Range (3-120)	$M = 26.04$	$SD = 20.26$
12. Changed advisor	Yes (20%)	No (80%)	
12a. Number of previous advisors if changed	Range (1-2)	$M = 1.20$	$SD = .42$

Note. Variables marked with * = missing cases.

The first question asked the participants “What do you say to maintain a positive relationship with your advisor?” and the second question asked the participants “What do you do to maintain a positive relationship with your advisor?”. In accordance with Stafford et al. (2000), the following instructions were provided: “Do not list things that you think you should do or things that you did at one time but no longer do. That is, think about the everyday and occasional things you currently say and do in your relationship with your advisor. Remember that what you say and do to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently.”

The participants provided a total of 156 responses to the question “What do you say to maintain a positive relationship with your advisor?” and they provided a total of 164 responses to the question “What do you do to maintain a positive relationship with your advisor?”. These 320 responses were compiled on a master list and duplicate responses were deleted, resulting in 169 retained items. Although the researcher did not add any additional items, the items were rephrased to enhance grammatical and structural consistency among the 169 items, which were used in phase two of this dissertation.

Phase Two

Participants

Following McCroskey and Young’s (1979) recommendations for factor analysis, the participants ($N = 208$; 40 males, 168 females)¹ in this phase were doctoral students enrolled in a variety of academic programs² (68% communication studies programs) recruited from several different universities. The participants had been enrolled in their current academic program between one and 96 months ($M = 31.83$, $SD = 20.73$) and they ranged in age from 23 to 60 years ($M = 31.35$, $SD = 7.62$). To qualify for participation in this phase, the

participants had to (a) be enrolled as a full-time doctoral student, (b) have a faculty advisor, and (c) have not participated in Phase One. The participants provided a host of demographic data detailed in Table 2.

Sampling

In accordance with previous studies examining the advisor-advisee mentoring relationship (Cavendish, 2007; Wrench & Punyanunt-Carter, 2005), a volunteer sampling technique was used in this phase. Volunteer sampling is a nonprobability sampling technique in which the participants freely elect to participate (Widerman, 1999). Specifically, the participants were recruited electronically via the CRTNET (Communication Research and Theory Network) listserv.

Procedures

This phase aimed to develop a measure to assess advisees' use of relational maintenance behaviors with their advisors. Data collection for this phase was conducted online via SurveyMonkey. To recruit participants for this phase, an e-mail announcement (see Appendix D) was sent to CRTNET subscribers. The e-mail announcement (a) introduced the researcher, (b) introduced the study, (c) identified the inclusion criteria, and (d) asked the participants to complete an anonymous online questionnaire by clicking on the hyperlink found at the end of the e-mail announcement.

In addition to a standard cover letter (see Appendix E), the online questionnaire (see Appendix F) included two parts. In the first part, the participants were asked to provide general demographic data. In the second part, the participants were instructed to complete a questionnaire consisting of the 169 items identified in Phase One based on Stafford et al.'s (2000) instructions: "Please indicate the extent to which each of the following statements accurately reflects the way that you maintain your relationship with your advisor. Do not

Table 2

Phase Two Demographic Data

Variables			
1. Sex	Males (19.2%)	Females (80.8%)	
2. Age	Range (23-60)	$M = 31.35$	$SD = 7.62$
3. Degree*	Ph.D. (99.5%)	Ed.D. (0%)	
4. ABD status*	Yes (41.3%)	No (56.3%)	
5. Months in program	Range (1-96)	$M = 31.83$	$SD = 20.73$
6. Interest*	Teaching (40.9%)	Research (58.2%)	
7. Funded	Yes (93.3%)	No (6.7%)	
7a. Teaching assistantship	Yes (71.6%)	No (28.4%)	
7b. Research assistantship	Yes (46.6%)	No (53.4%)	
7c. Academic fellowship	Yes (19.7%)	No (80.3%)	
7d. Other	Yes (9.1%)	No (90.9%)	
8. Funding tied to advisor*	Yes (17.3%)	No (81.7%)	
9. Initiated relationship	Student (75%)	Advisor (12%)	Dept. (13%)
10. Advisor sex	Males (52.9%)	Females (47.1%)	
11. Advisor rank*	Asst. Prof. (16.3%)	Assoc. Prof. (30.3%)	Full Prof. (52.4%)
12. Months in relationship	Range (1-96)	$M = 26.22$	$SD = 19.62$
12. Changed advisor	Yes (32.7%)	No (67.3%)	
12a. Number of previous advisors if changed	Range (1-4)	$M = 1.18$	$SD = .49$

Note. Variables marked with * = missing cases.

indicate agreement with things that you think you should do or with things that you did at one time but no longer do. That is, think about the everyday things you currently do in your relationship with your advisor. Remember that what you say and do to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently.” Adhering to previous relational maintenance scale development studies (Myers & Weber, 2004; Waldron, 1991), responses were solicited on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7).

Data Analysis

To reduce the number of items, all items that failed to reach a 5.0 inter-item mean (Myers & Weber, 2004) were eliminated from future analyses, resulting in 93 retained items. To explore the factor structure of advisees’ use of relational maintenance behaviors with their advisors, a series of three principal component analyses with orthogonal varimax rotation was performed (Stevens, 2002). The orthogonal rotation was chosen because extant relational maintenance research in the workplace indicates that individuals use a wide variety of unrelated relational maintenance behaviors, ranging from avoidance to creating closeness (Lee & Jablin, 1995). A scree test was used to determine the number of factors (George & Mallery, 2007). To be considered a factor, the factor should (a) have a minimum eigenvalue of 1.0, (b) account for at least 5% of the variance, (c) have two or more items with primary factor loadings of .60 or greater and no secondary factor loadings greater than .40, and (d) not contain any items that cross-loaded on another factor. Items that failed to meet these criteria were eliminated (Field, 2005; McCroskey & Young, 1979; Stevens). In the first principal component analysis (PCA), 67 items failed meet the loading criteria, resulting in 26 retained items. In the second PCA, one item failed to meet the loading criteria, resulting in 25 retained items. In the third PCA, all 25 items met the loading criteria, resulting in a 25-item,

six-factor solution that accounted for 68.58% of the total variance. In examining the items included in each factor, the six factors were labeled appreciation, tasks, protection, courtesy, humor, and goals. Table 3 contains the factor loadings and Table 4 contains the mean, standard deviation, reliability coefficient, variance accounted for, and eigenvalue for each factor. The Kaiser-Meyer-Olkin measure of sampling adequacy was .82 and the Bartlett's test of sphericity was significant [$\chi^2(300) = 2806.22, p < .001$], indicating that the sample size was adequate to conduct principal component analyses.

The *appreciation* factor refers to advisees' expressed excitement and enjoyment about working with their advisors. The *tasks* factor refers to advisees' efforts to complete assigned duties and requests in a timely manner. The *protection* factor refers to advisees' attempts to uphold a positive reputation of their advisors. The *courtesy* factor refers to advisees' attempts to be respectful and polite toward their advisors. The *humor* factor refers to advisees' use of humor and laughter with their advisors. The *goals* factor refers to advisees' discussions about their future academic and professional plans with their advisors.

Phase Three

Participants

The participants ($N = 519$; 227 males, 290 females, 2 participants who failed to report their sex) in this phase were doctoral students and advisors enrolled or employed in a variety of academic programs³ (19% communication programs) recruited from several different universities. The doctoral students ($n = 378$; 148 males, 230 females)⁴ had been enrolled in their current academic program between one and 100 months ($M = 33.20, SD = 20.87$) and they ranged in age from 22 to 62 years ($M = 30.88, SD = 7.08$). The advisors ($n = 141$; 79 males, 60 females, 2 participants who failed to report their sex)⁵ had been employed at their current university between one and 40 years ($M = 13.22, SD = 9.55$) and they ranged in age

Table 3

Rotated Factor Loadings for Advisees' Use of Relational Maintenance Behaviors

	Appreciation	Tasks	Protection	Courtesy	Humor	Goals
1.	<u>.77</u>	.08	.01	.13	.15	.17
2.	<u>.79</u>	.03	.18	.14	.04	.19
3.	<u>.82</u>	.08	-.03	.12	.06	.08
4.	<u>.75</u>	.15	.09	.06	.04	.12
5.	<u>.75</u>	.09	.29	-.05	.19	.12
6.	<u>.77</u>	.09	.35	.01	.12	.12
7.	.17	<u>.77</u>	.06	.10	.08	.03
8.	.05	<u>.82</u>	.13	.06	.02	.12
9.	-.03	<u>.67</u>	.16	.26	.07	-.07
10.	.05	<u>.82</u>	.10	.10	.05	.12
11.	.18	<u>.80</u>	.00	.07	.01	.03
12.	.23	.07	<u>.70</u>	.02	.22	.28
13.	.05	.22	<u>.79</u>	.19	-.04	.11
14.	.21	.04	<u>.67</u>	-.01	.32	.18
15.	.21	.14	<u>.80</u>	.17	-.08	-.01
16.	.10	.18	.29	<u>.78</u>	.02	.02
17.	.12	.30	.18	<u>.75</u>	.13	.08
18.	.08	.05	.06	<u>.82</u>	.13	-.06
19.	.08	.10	-.11	<u>.72</u>	-.26	-.01
20.	.15	.05	.07	.10	<u>.83</u>	.06
21.	.12	.10	.07	-.05	<u>.82</u>	.09
22.	.12	.07	.07	-.02	<u>.71</u>	.28
23.	.24	.01	.05	.01	.24	<u>.70</u>
24.	.26	.10	.18	.02	.10	<u>.79</u>
25.	.15	.10	.18	-.03	.10	<u>.87</u>

Note. Primary loadings are bolded and underlined. See items 96-120 in Appendix I.

Table 4

Rotated Factor Information

Factors	<i>M</i>	<i>SD</i>	<i>a</i>	<i>Variance Accounted For</i>	<i>Eigenvalue</i>
1. Appreciation	31.41	6.95	.90	16.19	4.05
2. Tasks	30.08	3.83	.86	13.17	3.29
3. Protection	22.12	4.59	.80	10.66	2.66
4. Courtesy	25.28	2.45	.78	10.40	2.60
5. Humor	17.10	2.98	.77	9.15	2.29
6. Goals	16.54	3.28	.81	9.01	2.25

from 29 to 78 years ($M = 49.34$, $SD = 10.89$). For advisees to qualify for participation, they had to (a) be enrolled as a full-time doctoral student, (b) have a faculty advisor, and (c) not have participated in Phase One or Phase Two. For faculty members to qualify for participation, they had to (a) be a graduate faculty member and (b) serve as the advisor to a doctoral student. The participants provided a host of demographic data detailed in Table 5 (i.e., doctoral students) and Table 6 (i.e., advisors).

Sampling

Three sampling techniques were used in this phase. First, a convenience volunteer sampling technique was utilized by surveying doctoral students and graduate faculty members at West Virginia University. (Only one doctoral student from communication studies participated in this study.) Convenience volunteer sampling is a nonprobability sampling technique in which the researcher surveys individuals who are easily accessible to him or her and who freely elect to participate (Andrist, Arias, Nucatola, Kaumitz, Musselman, Reiter, et al., 2004; Wiederma, 2004). Second, a snowball sampling technique was used as described in Phase One. Third, a volunteer sampling technique was used as described in Phase Two.

Procedures

This phase aimed to explore the advisor-advisee mentoring relationship using the seventh and eighth propositions forwarded in MET (Kalbfleisch, 2002) and to examine the role relational characteristics and relational uncertainty play in the context of advisor-advisee mentoring relationships. The data were initially collected using a paper-and-pencil questionnaire. To recruit participants for this phase, the researcher visited the academic departments⁶ at West Virginia University that offer Ph.D. and Ed.D. programs and asked for

Table 5

Phase Three Doctoral Student Demographic Data

Variables			
1. Sex	Males (39.2%)	Females (60.8%)	
2. Age	Range (22-62)	$M = 30.88$	$SD = 7.08$
3. Degree	Ph.D. (94.4%)	Ed.D. (5.6%)	
4. ABD status*	Yes (39.7%)	No (49.7%)	
5. Months in program	Range (1-100)	$M = 33.20$	$SD = 20.86$
6. Interest*	Teaching (36.2%)	Research (59.5%)	
7. Funded*	Yes (89.4%)	No (10.3%)	
7a. Teaching assistantship	Yes (50%)	No (50%)	
7b. Research assistantship	Yes (42.3%)	No (57.7%)	
7c. Academic fellowship	Yes (25.9%)	No (74.1%)	
7d. Other	Yes (13%)	No (87%)	
8. Funding tied to advisor*	Yes (25.9%)	No (70.9%)	
9. Initiated relationship*	Student (63.8%)	Advisor (15.9%)	Dept. (19.3%)
10. Advisor sex*	Males (60.7%)	Females (38.9%)	
11. Advisor rank*	Asst. Prof. (17.5%)	Assoc. Prof. (29.6%)	Full Prof. (50.5%)
12. Months in relationship	Range (1-144)	$M = 29.51$	$SD = 21.26$
12. Changed advisor	Yes (19.6%)	No (80.4%)	
12a. Number of previous advisors if changed	Range (1-10)	$M = 1.36$	$SD = 1.16$

Note. Variables marked with * = missing cases.

Table 6

Phase Three Faculty Member Demographic Data

Variables

1. Sex*	Males (56%)	Females (42.6%)	
2. Age	Range (29-78)	$M = 49.34$	$SD = 10.89$
3. Interest*	Teaching (22.7%)	Research (69.5%)	
4. Years at current university	Range (1-40)	$M = 13.22$	$SD = 9.55$
5. Number of previous advisees	Range (1-108)	$M = 12.05$	$SD = 14.32$
6. Years of advising experience	Range (1-42)	$M = 13.75$	$SD = 10.66$

Note. Variables marked with * = missing cases.

permission to distribute a package of research materials placed in manila folders to all of the doctoral students enrolled in each department.

The research materials package included a letter to the doctoral student, a questionnaire for the doctoral student with an addressed campus return envelope, and a questionnaire for the doctoral student's advisor with an addressed campus return envelope. The campus return envelopes were addressed to the researcher's campus mailing address. Returned questionnaires were mailed to the researcher's home address by a faculty member in the Department of Communication Studies at West Virginia University.

The letter (see Appendix G) to the doctoral students (a) introduced the researcher, (b) introduced the study, (c) identified the inclusion criteria, (d), asked the participants to complete and return an anonymous questionnaire, and (e) asked the participants to give the advisor questionnaire to their advisors. In addition to a standard cover letter (see Appendix H), the doctoral students' questionnaire (see Appendix I) included two parts. In the first part, the participants were asked to provide general demographic data. In the second part, the participants were asked to complete a series of instruments in reference to their relationships with their advisors.

In addition to a standard cover letter (see Appendix J), the advisors' questionnaire (see Appendix K) included two parts. In the first part, the participants were asked to provide general demographic data. In the second part, the participants were asked to complete a series of instruments in reference to their relationships with their advisee who gave them the questionnaire. To match the advisors' and the advisees' returned questionnaires, each pair (i.e., advisor and advisee) of questionnaires was assigned matching code numbers marked in the lower right-hand corner of the questionnaires. Because the return rate is often low when researchers rely on the participants to return completed questionnaires via regular mail

(Kaplowitz, Hadlock, & Levine, 2004), a follow-up e-mail message (see Appendix L) was sent to all doctoral students at West Virginia University one week after the questionnaires were distributed and then once more after one additional week.

Because only 64 doctoral students and 24 advisors returned their completed questionnaires, a decision was made to collect additional data online via SurveyMonkey using both a volunteer sampling technique and a snowball sampling technique. A recruitment e-mail message was sent to CRTNET subscribers, to graduate program coordinators, to the researcher's friends and acquaintances, and to students, faculty members, and administrators suggested by members of the researcher's professional network. With the exception of three modifications, the recruitment e-mail message sent to the online participants was the same as the letter (see Appendix H) sent to participants completing the paper-and-pencil version. These modifications were (a) the inclusion of a due date, (b) a hyperlink to the online survey, and (c) new instructions for how to ask their advisors to participate. Specifically, the doctoral students were informed that "At the end of the survey, you will find a preformatted e-mail message. Please copy and paste this message and send it to your advisor. The e-mail message asks your advisor to participate in this study as well." To boost the number of advisors who participated in this dissertation, a decision was made to also reverse the recruitment strategy by soliciting advisors first who in turn asked their advisees to participate. The same recruitment e-mail message was sent to faculty members at West Virginia University and to CRTNET subscribers. All additional procedures remained consistent with the previously described online data collection procedures.

Two modifications were made to the advisor and the advisee versions on the online surveys. First, both the advisors and advisors were asked to identify their current university in order to explore potential differences among participants attending or working at different

universities. Second, to match the advisors' and the advisees' questionnaires, the advisors were asked to write their own initials followed by their advisee's initial. The advisees were asked to write their advisor's initials followed by their own initials. Both the advisors and the advisees were informed that their initials were only going to be used to match their surveys with their advisor/advisee and that they would not be used for any other purpose.

Instrumentation

Both the advisors and the advisees completed the Academic Mentoring Behaviors Scale (Schrodt et al., 2003), the Mentoring and Communication Support Scale (Hill, Bahniuk, Dobos, & Rouner, 1989), the Liking Scale (Frymier, 1994), the Student Communication Satisfaction Scale (Goodboy, Martin, & Bolkan, 2009), the Relational Satisfaction Scale (Canary & Spitzberg, 1989), the Individualized Trust Scale (Wheless & Gortz, 1977), the Affective Commitment Scale (Meyer & Allen, 1984), the Measure of Control Mutuality (Canary & Spitzberg), the Relational Uncertainty Scale (Knobloch & Solomon, 1999), and the Advisee Relational Maintenance Scale developed for the purpose of this dissertation. Time (i.e., relationship duration) was measured by asking the participants to respond to the question: "How many months have you been involved in your current advisor-advisee relationship?" Additionally, advisees also completed the Research Productivity Measure (Kahn & Scott, 1997). Cronbach's coefficient alphas, means, and standard deviations of each instrument are presented in Table 7.

The Academic Mentoring Behaviors Scale (see items 1-15 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 15-item, five-factor instrument intended to measure protégés' reports of their mentors' provision of *research assistance* (items 1-4), *protection* (items 5-8), *collegiality* (items 9 and 10), *promotion* (items 11-13), and *friendship* (items 14 and 15). On the advisee version, each item was rephrased to

Table 7

Phase Three Cronbach Coefficient Alphas, Means, and Standard Deviations

Variable	Advisees			Advisors		
	α	M	SD	α	M	SD
AMBS - Research assistance	.82	16.01	3.20	.80	16.84	3.01
AMBS - Protection	.84	14.85	3.11	.79	16.01	2.90
AMBS - Collegiality	.70	5.32	2.21	.69	5.66	1.82
AMBS - Promotion	.83	11.65	2.60	.76	13.00	1.67
AMBS - Friendship	.88	8.67	1.87	.49	9.34	.87
MCSS - Career mentoring	.90	23.59	5.88	.79	25.51	4.36
MCSS - Collegial social support	.75	13.41	3.21	.73	13.09	2.89
MCSS - Collegial task support	.81	14.90	3.49	.62	15.39	2.54
Liking	.93	60.64	9.62	.90	64.00	5.59
Communication satisfaction	.94	45.07	10.09	.74	36.34	3.81
Relational satisfaction	.72	12.11	1.66	.56	18.11	2.20
Trust	.96	66.31	10.69	.90	69.29	6.02
Affective Commitment	.66	32.24	8.49	.90	37.59	11.40
Control mutuality	.79	26.00	9.25	.80	33.97	4.59
RUS - Behavioral norms	.84	20.30	2.52	.90	21.19	3.04
RUS - Mutuality	.94	17.93	4.71	.92	19.28	3.04
RUS - Definition	.91	14.16	3.27	.90	15.25	2.25
RUS - Future	.78	20.51	3.29	.87	20.96	2.93
ARMS - Courtesy	.85	23.23	10.59			
ARMS - Appreciation	.86	18.47	8.74	.94	31.69	7.53
ARMS - Tasks	.79	16.44	7.96	.92	29.97	4.59
ARMS - Goals	.80	12.25	6.36	.86	17.75	3.02
ARMS - Humor	.70	8.59	4.49	.88	11.85	2.31
ARMS - Protection				.84	20.07	3.76
Research productivity	.73	17.78	14.02			

Note. AMBS = Academic Mentoring Behaviors Scale. MCSS = Mentoring and Communication Support Scale. RUS = Relational Uncertainty Scale. ARMS = Advisee Relational Maintenance Scale. Some data are missing because the ARMS had different factor solutions in the advisor and advisee samples and the research productivity measure was only completed by advisees.

reflect the advisees' reports of received mentoring support from their advisors (e.g., "My advisor offers assistance with publications and creative activities" and "My advisor frequently works on research projects and/or participates in creative activities with me"). On the advisor version, each item was rephrased to reflect the advisors' self-reported provision of mentoring support for their advisees (e.g., "I offer my advisee assistance with publications and creative activities" and "I frequently work on research projects and/or participate in creative activities with my advisee"). Responses were solicited on a 5-point Likert-type scale ranging from *strongly disagree* (1) to *strongly agree* (5). Previous reliability coefficients ranging from .65 to .82 have been reported for the five subscales (Schrodt et al., 2003).

The Mentoring and Communication Support Scale (see items 16-30 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 15-item, three-factor instrument that is intended to measure protégés' reports of their mentors' provision of *career mentoring* (items 1-7), *collegial social support* (items 8-11), and *collegial task support* (items 12-15). This scale was developed to assess supportive communication in academic contexts, but it also has been used in organizational contexts (Bahniuk, Dobos, & Hill, 1990) with an additional factor (i.e., coaching) emerging. On the advisee version, each item was rephrased to reflect the advisees' reports of received mentoring support from their advisors (e.g., "My advisor frequently devotes extra time and consideration to me" and "My advisor places me in important assignments or positions"). On the advisor version, each item was rephrased to reflect the advisors' self-reported provision of mentoring support for their advisees (e.g., "I frequently devote extra time and consideration to my advisee" and "I place my advisee in important assignments or positions"). Responses were solicited on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). Previous reliability coefficients ranging from .65 to .88 have been reported for the three subscales used in

academic contexts (Hill, Bahniuk, & Dobos, 1989; Hill, Bahniuk, Dobos, & Rouner, 1989; Myers, 1998).

The Liking Scale (see items 31-40 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 10-item, unidimensional instrument intended to measure the extent to which the respondents like their relational partners. This scale has been used successfully in the academic context to examine the student-instructor relationship by Frymier (1994). The advisees were asked to complete the scale in reference to the statement “In my opinion, my advisor is...” The advisors were asked to complete the scale in reference to the statement “In my opinion, my advisee is...” Sample bipolar adjective pairs include “Likable/Dislikable” and “Kind/Unkind.” Responses were solicited on a 7-point semantic differential scale. Previous reliability coefficients of .92 and .93 have been reported for this scale (Frymier).

The Student Communication Satisfaction Scale (see items 41-48 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is an 8-item, unidimensional instrument intended to measure the extent to which the respondents are satisfied with their student-instructor communicative encounters. This scale has been used successfully in the academic context to examine the student-instructor relationship by Goodboy et al. (2009). On the advisee version, each item was rephrased to reflect the advisees’ perceived communication satisfaction with their advisors (e.g., “My communication with my advisor feels satisfying” and “My advisor fulfills my expectations when I talk to him/her”). On the advisor version, each item was rephrased to reflect the advisors’ perceived communication satisfaction with their advisees (e.g., “My communication with my advisee feels satisfying” and “My advisee fulfills my expectations when I talk to him/her”). Responses were solicited on a 7-point Likert scale ranging from

strongly disagree (1) to *strongly agree* (7). Previous reliability coefficients ranging from .93 to .98 have been reported for this scale (Goodboy et al.).

The Relational Satisfaction Scale (see items 49-51 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 3-item, unidimensional instrument intended to measure the extent to which the respondents are satisfied with their relationships. This scale has been used successfully in previous relational maintenance research to examine romantic couples by Canary, Weger, and Stafford (1991). On the advisee version, each item was rephrased to reflect the advisees' perceived relational satisfaction with their advisors (e.g., "I am satisfied with my relationship with my advisor" and "My relationship with my advisor is rewarding"). On the advisor version, each item was rephrased to reflect the advisors' perceived relational satisfaction with their advisees (e.g., "I am satisfied with my relationship with my advisee" and "My relationship with my advisee is rewarding"). Responses were solicited on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Previous reliability coefficients of .75 and .90 have been reported for this scale (Canary & Spitzberg, 1989; Canary et al.).

The Individualized Trust Scale (see items 52-66 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 15-item, unidimensional instrument intended to measure the extent to which the respondents trust their relational partners. This scale has been used successfully in the academic context to examine the student-instructor relationship by Wooten and McCroskey (1996). The advisees were asked to complete the scale in reference to the statement "In my opinion, my advisor is...". The advisors were asked to complete the scale in reference to the statement "In my opinion, my advisee is...". Sample bipolar adjective pairs include "Honest/Dishonest" and "Candid/Deceptive." Responses were solicited on a 5-point semantic differential scale. Previous reliability

coefficients ranging from .92 to .94 have been reported for this scale (Jaasma & Koper, 1999; Wheelless, 1984; Wheelless & Grotz, 1977).

The Affective Commitment Scale (see items 67-74 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is an 8-item, unidimensional instrument intended to measure the extent to which the respondents are committed to maintain organizational membership. This scale has been used successfully in the academic context to examine the doctoral student-faculty member mentoring relationship by Green and Bauer (1995). Because both the advisors and the advisees reported on their work commitment, the advisors and the advisees completed identical versions of this scale. The word “organization” was replaced with the word “department” in each statement to more accurately reflect the academic context. Sample items include “I do not feel a strong sense of belonging to my department” (reverse coded) and “This department has a great deal of personal meaning to me.” Responses were solicited on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Previous reliability coefficients ranging from .84 to .98 have been reported for this scale (McGee & Ford, 1987; Meyer & Allen, 1984).

The Measure of Control Mutuality (see items 75-80 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 6-item, unidimensional instrument intended to measure the extent to which the respondents agree on who influences whom in the relationship. This scale has been used successfully in previous relational maintenance research to examine marital couples by Canary and Stafford (1992). The advisees were asked to complete the scale in reference to the statement “In my relationship with my advisor...”. The advisors were asked to complete the scale in reference to the statement “In my relationship with my advisee...”. Sample items include “We agree on what we can expect from each other” and “We both have an equal say.” Responses were solicited on a 7-point

Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Previous reliability coefficients ranging from .85 to .89 have been reported for this scale (Canary & Stafford; Canary et al., 1991; Myers & Glover, 2007).

The Relational Uncertainty Scale (see items 81-95 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 16-item, four-factor instrument intended to measure the extent to which the respondents are uncertain about the *behavioral norms* (items 1-4), the *mutuality* (items 5-8), the *definition* (items 9-11), and the *future* (items 12-15) of the relationship. This scale has been used successfully to examine the association between relational uncertainty and relational maintenance in interpersonal contexts (Dailey et al., 2010; Dainton, 2003a). In this dissertation, two modifications were made. First, one statement (i.e., whether or not this is a romantic or platonic relationship) was eliminated as it is not relevant to the advisor-advisee relationship. Second, the statements were modified slightly. On the advisee version, each statement was rephrased to reflect the advisees' relational uncertainty with their advisors (e.g., "How you can and cannot behave around your advisor" and "How you and your advisor view this relationship"). On the advisor version, each statement was rephrased to reflect the advisors' relational uncertainty with their advisees (e.g., "How you can and cannot behave around your advisee" and "How you and your advisee view this relationship"). Responses were solicited on a 6-point Likert-type scale ranging from *completely or almost completely uncertain* (1) to *completely or almost completely certain* (6). Previous reliability coefficients ranging from .73 to .91 have been reported for the four factors of this scale (Dailey et al.; Knobloch & Solomon, 1999).

The Advisee Relational Maintenance Scale (see items 96-120 on Part II of Appendix I and K for the advisee and the advisor versions, respectively) is a 25-item, 6-factor instrument intended to measure advisees' use of *appreciation* (items 1-6), *tasks* (items 7-11), *protection*

(items 12-15), *courtesy* (items 16-29), *humor* (items 20-22), and *goals* (items 23-25) relational maintenance behaviors. On the advisee version, each item was phrased to reflect the advisees' use of these relational maintenance behaviors (e.g., "I tell my advisor that I am happy about working with him/her" and "I am polite toward my advisor"). On the advisor version, each item was rephrased to reflect the advisors' perceptions of their advisees' use of relational maintenance behaviors (e.g., "My advisee tells me that s/he is happy about working with me" and "My advisee is polite toward me"). Responses were solicited on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). In Phase Two of this dissertation, reliability coefficients ranging from .77 to .90 were obtained for the six factors of this scale.

To examine if the factor structure of the ARMS remained consistent from Phase Two, principal component analyses were used for both the advisee and advisor sample. For the advisees, two PCAs were performed. In the first PCA, six items failed to meet the loading criteria, resulting in 19 retained items. The second PCA resulted in a 19-item, five factor solution that accounted for 67.08% of the total variance (see Table 8). Factor 1, *courtesy* (eigenvalue = 3.29, $\alpha = .85$, $M = 23.23$, $SD = 10.59$), consisted of five items (items 14, 16, 17, 18, and 19) and accounted for 17.29% of the variance. Factor 2, *appreciation* (eigenvalue = 3.24, $\alpha = .86$, $M = 18.47$, $SD = 8.74$), consisted of five items (items 1, 2, 4, 5 and 6) and accounted for 17.03% of the variance. Factor 3, *tasks* (eigenvalue = 2.50, $\alpha = .79$, $M = 16.44$, $SD = 7.96$), consisted of four items (items 7, 8, 10, and 11) and accounted for 13.17% of the variance. Factor 4, *goals* (eigenvalue = 2.17, $\alpha = .80$, $M = 12.25$, $SD = 6.36$), consisted of three items (items 23-25) and accounted for 11.42% of the variance. Factor 5, *humor* (eigenvalue = 1.55, $\alpha = .70$, $M = 8.59$, $SD = 4.49$), consisted of two items (items 20 and 21), and accounted for 8.18% of the variance.

Table 8

Final Rotated Advisee Factor Loadings for the Advisee Relational Maintenance Scale

	Courtesy	Appreciation	Tasks	Goals	Humor
1.	.06	<u>.72</u>	.21	.05	.26
2.	.07	<u>.82</u>	.16	.06	.15
3.					
4.	.21	<u>.63</u>	.23	.19	-.05
5.	.13	.80	.01	.27	.02
6.	.19	<u>.84</u>	.06	.13	-.04
7.	.21	.20	<u>.63</u>	.20	-.08
8.	.10	.12	<u>.76</u>	.09	.15
9.					
10.	.11	.07	<u>.81</u>	.05	.14
11.	.29	.15	<u>.76</u>	.14	.05
12.					
13.					
14.	<u>.60</u>	.25	.16	.05	.21
15.					
16.	<u>.81</u>	.13	.16	.10	.11
17.	<u>.83</u>	.11	.16	.17	.10
18.	<u>.83</u>	.06	.16	.16	.01
19.	<u>.70</u>	.13	.12	.10	.11
20.	.28	.06	.13	.13	<u>.80</u>
21.	.11	.13	.08	.30	<u>.78</u>
22.					
23.	.17	.16	.18	<u>.71</u>	.24
24.	.16	.18	.16	<u>.78</u>	.11
25.	.15	.22	.08	<u>.82</u>	.12

Note. Items missing loadings were dropped in the first PCA. Primary loadings are bolded and underlined. See items 96-120 in Appendix I.

For the advisors, three PCAs were performed. In the first PCA, four items failed to meet the loading criteria, resulting in 21 retained items. In the second PCA, all items met the loading criteria. However, one item (item 17) was dropped due to poor conceptual fit. The third PCA resulted in a 20-item, five-factor solution that accounted for 77.93% of the total variance (see Table 9). Factor 1, *appreciation* (eigenvalue = 4.74, $\alpha = .94$, $M = 31.69$, $SD = 7.53$), consisted of six items (items 1-6) and accounted for 23.72% of the variance. Factor 2, *tasks* (eigenvalue = 3.84, $\alpha = .92$, $M = 29.97$, $SD = 4.59$), consisted of five items (items 7-11) and accounted for 19.21% of the variance. Factor 3, *protection* (eigenvalue = 2.73, $\alpha = .84$, $M = 20.07$, $SD = 3.76$), consisted of four items (items 12-15) and accounted for 13.62% of the variance. Factor 4, *goals* (eigenvalue = 2.45, $\alpha = .86$, $M = 17.75$, $SD = 3.02$), consisted of three items (items 23-25) and accounted for 12.23% of the variance. Factor 5, *humor* (eigenvalue = 1.83, $\alpha = .88$, $M = 11.85$, $SD = 2.31$), consisted of two items (items 20 and 21) and accounted for 9.15% of the variance.

The Research Productivity Measure (see items 121-128 on Part II of Appendix I) a 9-item, two-factor instrument intended to measure the respondents' *past* (items 1, 2, 3, 5, and 7) and *present* (items 4 and 6) involvement in research-related activities. This scale was not completed by the advisors. This scale has been used successfully in previous academic mentoring research (Hollingsworth & Fassinger, 2002). The advisees were asked to complete the scale in reference to the statement "While in your current advisor-advisee relationship...". Sample items include "How many articles have you submitted to refereed journals?" and "How many presentations have you made at local, regional, or national conventions?". In this dissertation, two modifications were made. First, an abbreviated seven-item version was used to remain consistent in the response format and to avoid skewness (Kahn & Scott, 1997). Thus, two items were eliminated that assess current research

Table 9

Final Advisor Factor Loadings for the Advisee Relational Maintenance Scale

	Appreciation	Tasks	Protection	Goals	Humor
1.	<u>.84</u>	.06	.25	.14	-.04
2.	<u>.84</u>	.03	.18	.21	.05
3.	<u>.79</u>	.19	.14	.17	.13
4.	<u>.79</u>	.13	.19	.24	.17
5.	<u>.87</u>	.17	.09	.13	.13
6.	<u>.87</u>	.20	.17	.20	.15
7.	.09	<u>.84</u>	.13	.02	.07
8.	.14	<u>.90</u>	.16	.04	.09
9.	.07	<u>.73</u>	.06	.27	.00
10.	.12	<u>.85</u>	.18	.09	.00
11.	.20	<u>.87</u>	.17	.03	.01
12.	.34	.19	<u>.72</u>	.22	.11
13.	.20	.13	<u>.71</u>	.29	.04
14.	.12	.15	<u>.75</u>	.03	.10
15.	.19	.20	<u>.85</u>	.08	.04
16.					
17.					
18.					
19.					
20.	.16	.11	.10	.12	<u>.92</u>
21.	.17	-.01	.11	.28	<u>.88</u>
22.					
23.	.31	.13	.17	<u>.76</u>	.17
24.	.24	.13	.15	<u>.84</u>	.14
25.	.30	.11	.20	<u>.80</u>	.18

Note. Items missing loadings were dropped in either the first or second PCAs. Primary loadings are bolded and underlined. See items 96-120 in Appendix K.

involvement using a dichotomous response format (i.e., yes or no). Second, responses were solicited using a zero to infinity response format and summed to create a single composite measure (Hollingsworth & Fassinger). A previous reliability coefficient of .75 has been reported for the summed scale (Hollingsworth & Fassinger).

Data Analysis

Even though a total of 378 doctoral students and 141 faculty members completed the survey, only 83 of the doctoral students' surveys could be matched with their advisors' surveys. Thus, all analyses used to test the hypotheses and to explore the research questions were conducted using the advisor-advisee ($n = 83$) matched data. The sex composition dyads were coded into four groups: male advisor-male advisee ($n = 25$), male advisor-female advisee ($n = 26$), female advisor-female advisee ($n = 25$), and female advisor-male advisee ($n = 7$).

The first, second, and third hypotheses test the seventh proposition forwarded in MET. To test these hypotheses, three Pearson correlations were performed. In the first correlation, which was performed to test the first hypothesis, advisees' self-reported use of relational maintenance behaviors with their advisors was correlated with their own reports of relationship duration (i.e., number of months). In the second correlation, which was performed to test the second hypothesis, advisees' self-reported use of relational maintenance behaviors was correlated with their advisors' reports of providing career support and psychosocial support to their advisees. In the third correlation, which was performed to test the third hypothesis, advisees' self-reported use of relational maintenance behaviors with their advisors was correlated with their own reports of receiving career support and psychosocial support from their advisors.

The fourth and fifth hypotheses test the eighth proposition forwarded in MET. To test these hypotheses, two multivariate analyses of variance (MANOVAs) were used. Advisee sex was coded (i.e., 1 = males, $n = 32$; 2 = females, $n = 51$). In the first MANOVA, which was performed to test the fourth hypothesis, advisees' sex served as the independent variable and their self-reported use of relational maintenance behaviors with their advisors served as the dependent variables. In the second MANOVA, which was performed to test the fifth hypothesis, advisees' sex served as the independent variable and advisors' reports of their advisees' use of relational maintenance behaviors with them served as the dependent variables. Because there were only two groups (i.e., males and females), no post hoc test was needed. For MANOVAs that revealed significant differences between males and females, the means for the two groups were compared to determine group differences.

The second and third research questions explore the possibility that advisors' provision of both career support and psychosocial support for their advisees is dependent on the sex composition of the advisor-advisee dyad. To test these research questions, two multivariate analyses of variance (MANOVAs) were used. Advisor-advisee sex composition was coded (i.e., male-advisor-male advisee = 1, $n = 25$; male advisor-female advisee = 2, $n = 26$; female advisor-female advisee = 3, $n = 25$; female advisor-male advisee = 4, $n = 7$). In the first MANOVA, which was performed to explore research question two, advisor-advisee sex composition served as the independent variable and advisors' self-reports of providing career support and psychosocial support for their advisees served as the dependent variables. In the second MANOVA, which was performed to explore research question three, advisor-advisee sex composition served as the independent variable and advisees' reports of career support and psychosocial support received from their advisors served as the dependent

variables. Because there were four groups, post-hoc Bonferroni tests were performed to examine group differences.

The sixth and seventh hypotheses test the relationship between advisees' research productivity and received career support and psychosocial support from their advisors. To test these hypotheses, two Pearson correlations were performed. In the first correlation, which was performed to test hypothesis six, advisees' self-reported research productivity was correlated with their own reports of received career and psychosocial mentoring support from their advisors. In the second correlation, which was performed to test hypothesis seven, advisees' self-reported research productivity was correlated with their advisors' reports career and psychosocial mentoring support provided for their advisees.

The eighth, ninth, and tenth hypotheses test the relationship between advisees' use of relational maintenance behaviors with their advisors and (a) their own reports of relational characteristics and (b) their advisors' reports of relational characteristics. To test these hypotheses, three Pearson correlations were performed. In the first correlation, which was performed to test hypothesis eight, advisees' self-reported use of relational maintenance behaviors with their advisors was correlated with their own reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisors. In the second correlation, which was performed to test hypothesis nine, advisees' self-reported use of relational maintenance behaviors with their advisors was correlated with their advisors' reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees. In the third correlation, which was performed to test hypothesis ten, advisors' reports of their advisees' use of relational maintenance behaviors were correlated with their own reports of liking, communication

satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees.

The eleventh, twelfth, thirteenth, and fourteenth hypotheses test the relationship between advisees' relational uncertainty with their advisors and (a) their use of relational maintenance behaviors, and (b) received career support and psychosocial support from their advisors. To test these hypotheses, four Pearson correlations were performed. In the first correlation, which was performed to test hypothesis eleven, advisees' self-reported use of relational maintenance behaviors with their advisors was correlated with their own reports of relational uncertainty with their advisors. In the second correlation, which was performed to test hypothesis twelve, advisors' reports of their advisees' use of relational maintenance behaviors were correlated with their advisees' self-reported relational uncertainty with their advisors. In the third correlation, which was performed to test hypothesis thirteen, advisees' self-reported relational uncertainty with their advisors was correlated with their own reports of received mentoring support from their advisors. In the fourth correlation, which was performed to test hypothesis fourteen advisors' self-reported provision of mentoring support for their advisees was correlated with their advisees' self-reported relational uncertainty with their advisors.

Summary

The methodology was conducted in three phases. Phase One sought to identify inductively the behaviors used by advisees to maintain their advisor-advisee mentoring relationships. Phase Two sought to develop a measure to assess advisees' use of relational maintenance behaviors with their advisors, which included a series of principal component analyses using orthogonal varimax rotation. Phase Three sought to (a) examine the advisor-advisee mentoring relationship using MET (Kalbfleisch, 2002), (b) explore the possibility

that advisors' provision of mentoring support differs based on the sex composition of the advisor-advisee dyad, and (c) examine the extent to which advisees' use of relational maintenance behaviors with their advisors is related to their own and their advisors' reports of relational characteristics and relational uncertainty. To that end, Pearson correlations and MANOVAs were performed. The results are presented in Chapter III.

CHAPTER III

Results

In this chapter, the results of a series of Pearson correlations and MANOVAs were conducted to explore the three research questions and to test the fourteen hypotheses are presented. For ease of interpretation, each result is presented singly. Considering the large number of correlational analyses conducted in this dissertation, the significance level was set at .01 for the Pearson correlations. Moreover, due to the low number of advisor-advisee dyads ($n = 83$), the results presented in this chapter should be interpreted with caution.

Research Question One

The first research question inquired about what advisees say and do to maintain their mentoring relationships with their advisors. As identified in chapter two, the results of the principal component factor analyses of advisees' self-reported use of relational maintenance behaviors with their advisors revealed a five-factor solution: courtesy, appreciation, tasks, goals, and humor. The results of the principal component factor analyses of advisors' reports of their advisees' use of relational maintenance behaviors revealed a five-factor solution: appreciation, tasks, protection, goals, and humor.

To explore further the extent to which advisees use these five relational maintenance behaviors to sustain their advisor-advisee relationships, a post-hoc comparison of the mean scores was conducted using a series of one-sample t -tests. The results revealed that advisees use courtesy more frequently than tasks, $t(82) = 2.13, p < .05$; humor, $t(82) = 3.17, p < .01$; goals, $t(82) = 3.94, p < .001$; and appreciation, $t(82) = 5.29, p < .001$. Advisees use tasks more frequently than appreciation, $t(82) = 2.98, p < .01$, and humor more frequently than appreciation, $t(82) = 2.03, p < .05$. No other differences in use were found.

Hypothesis One

The first hypothesis posited that the longer the advisees had been involved in their mentoring relationships with their advisors, the more frequently they would use relational maintenance behaviors with their advisors. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 10) did not reveal any significant positive relationships between relationship duration and advisees' use of relational maintenance behaviors.

Hypothesis Two

The second hypothesis posited that advisees' self-reported use of relational maintenance behaviors with their advisors would be related directly to their advisors' reports of providing career support and psychosocial support to their advisees. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 11) revealed one significant positive relationship out of 40 possible relationships in that advisees' use of tasks relational maintenance behaviors was related positively to their advisors' reports of providing research assistance, $r = .30, p < .01$.

Hypothesis Three

The third hypothesis posited that advisees' self-reported use of relational maintenance behaviors with their advisors would be related directly to their own reports of receiving career support and psychosocial support from their advisors. This hypothesis was partially supported. The results of Pearson correlational analyses (see Table 12) revealed 15 significant positive relationships out of 40 possible relationships.

Advisees' use of the courtesy relational maintenance behavior was related positively to their own reports of received research assistance ($r = .30, p < .01$), friendship ($r = .32, p < .01$), career support ($r = .37, p < .01$), and collegial task ($r = .36, p < .01$). Advisees' use of

Table 10

Correlation Matrix of Relationship Duration and Advisees' Use of Relational Maintenance Behaviors

Variable	1	2	3	4	5
1. Relationship Duration	--				
2. Courtesy	-.02	--			
3. Appreciation	-.09	.34**	--		
4. Tasks	.06	.55 [^]	.28	--	
5. Goals	-.05	.31**	.40 [^]	.37**	--
6. Humor	.04	.30**	.27	.19	.39 [^]

Note. ** $p < .01$. [^] $p < .001$.

Table 11

Correlations Between Advisee' Use of Relational Maintenance Behaviors and Their Advisors' Provision of Mentoring Support

	RA	PT	CL	PR	FR	CA	CS	CT
1. Courtesy	.15	.04	-.05	.01	.14	-.13	.02	-.03
2. Appreciation	-.01	.02	-.01	.16	.08	.05	.04	-.02
3. Tasks	.30**	.01	-.10	.24	.22	.03	.06	.15
4. Goals	.08	-.05	-.12	.05	.13	-.02	-.02	-.04
5. Humor	-.09	.08	-.02	.09	.02	-.08	-.04	-.20

Note. RA = research assistance, PT = protection, CL = collegiality, PR = promotion, FR = friendship, CA = career mentoring, CS = collegial social, CT = collegial task. ** $p < .01$.

Table 12

Correlations Between Advisees' Use of Relational Maintenance Behaviors and Their Own Reports of Received Mentoring Support From Their Advisors

	RA	PT	CL	PR	FR	CA	CS	CT
1. Courtesy	.30**	.16	.08	.21	.32**	.37**	.19	.36**
2. Appreciation	.28	.16	.20	.33**	.35**	.32**	.33**	.39**
3. Tasks	.19	.14	.04	.10	.11	.21	.16	.20
4. Goals	.23	.07	.06	.29**	.26	.31**	.34**	.33**
5. Humor	.28	.14	.18	.14	.22	.25	.33**	.37^

Note. RA = research assistance, PT = protection, CL = collegiality, PR = promotion, FR = friendship, CA = career mentoring, CS = collegial social, CT = collegial task. ** $p < .01$. ^ $p < .001$.

the appreciation relational maintenance behavior was related positively to their own reports of received promotion ($r = .33, p < .01$), friendship ($r = .35, p < .01$), career support ($r = .32, p < .01$), collegial social support ($r = .33, p < .01$), and collegial task support ($r = .39, p < .01$). Advisees' use of the goals relational maintenance behavior was related positively to their own reports of received promotion ($r = .29, p < .01$), career support ($r = .31, p < .01$), collegial social support ($r = .34, p < .01$), and collegial task support ($r = .33, p < .01$). Advisees' use of the humor relational maintenance behavior was related positively to their own reports of collegial social support ($r = .33, p < .01$) and collegial task support ($r = .37, p < .001$) received from their advisors.

Hypothesis Four

The fourth hypothesis posited that female ($n = 51$) advisees would report that they use relational maintenance behaviors with their advisors more frequently than male advisees ($n = 32$). This hypothesis was not supported. The results of a MANOVA (see Table 13) did not reveal a significant model, *Wilk's A* = .94, $F(5, 76) = .90, p = .48, \eta^2 = .06, \text{power} = .31$.

Hypothesis Five

The fifth hypothesis posited that advisors would report that their female advisees ($n = 51$) use relational maintenance behaviors with them more frequently than their male advisees ($n = 32$). This hypothesis was not supported. The results of a MANOVA (see Table 14) did not reveal a significant model, *Wilk's A* = .90, $F(5, 59) = 1.36, p = .26, \eta^2 = .10, \text{power} = .44$.

Research Question Two

The second research question inquired about what differences exist between male and female advisors' self-reports of providing career support and psychosocial support to their male and female advisees (sex composition: male advisors-male advisee, $n = 25$; male advisor-female advisee, $n = 26$; female advisor-female advisee, $n = 25$; and female

Table 13

Male and Female Advisees' Self-reported Use of Relational Maintenance Behaviors

	Males		Females		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Courtesy	22.81	10.11	25.05	8.64	1.65	.02
2. Appreciation	17.41	6.82	19.72	9.11	1.52	.02
3. Tasks	17.22	7.99	18.22	7.85	.31	.00
4. Goals	11.91	6.32	12.46	5.99	.16	.00
5. Humor	8.88	3.38	8.14	4.25	.69	.01

Table 14

Advisors' Reports of Male and Female Advisees' Use of Relational Maintenance Behaviors

	Males		Females		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Protection	19.09	3.22	19.74	4.01	.45	.01
2. Appreciation	28.65	6.14	31.52	6.34	2.10	.03
3. Tasks	27.87	4.83	30.26	3.98	4.61*	.07
4. Goals	16.61	4.19	17.88	2.73	2.19	.03
5. Humor	10.22	2.50	10.95	2.24	1.47	.02

Note. * $p < .05$.

advisor-male advisee, $n = 7$). The results of a MANOVA (see Table 15) did not reveal a significant model, $Wilk's A = .68$, $F(24, 168) = 1.00$, $p = .46$, $\eta^2 = .12$, power = .76.

A second MANOVA was conducted to examine the differences between male ($n = 86$) and female ($n = 55$) advisors' reports of providing career support and psychosocial support for their advisees regardless of advisee sex. The results (see Table 16) did not reveal a significant model, $Wilk's A = .83$, $F(8, 68) = 1.52$, $p = .17$, $\eta^2 = .17$, power = .62.

Research Question Three

The third research question inquired about what differences exist between male and female advisees' reports of career support and psychosocial support received from their male and female advisors (sex composition: male advisors-male advisee, $n = 25$; male advisor-female advisee, $n = 26$; female advisor-female advisee, $n = 25$; and female advisor-male advisee, $n = 7$). The results of a MANOVA (see Table 17) revealed a significant model, $Wilk's A = .56$, $F(24, 183) = 1.68$, $p < .05$, $\eta^2 = .18$, power = .97, with a significant univariate effect found for collegiality, $F(3, 70) = 3.19$, $p < .05$, $\eta^2 = .12$, power = .71. Post-hoc Bonferroni analyses indicated that male advisees who have male advisors receive more collegiality support ($M = 6.26$, $SD = 1.89$) than female advisees who have female advisors ($M = 4.50$, $SD = 1.89$).

A second MANOVA was conducted to examine the differences between male ($n = 32$) and female advisees' ($n = 51$) reports of received career support and psychosocial support from their advisors regardless of advisor sex. The results (see Table 18) revealed a significant model, $Wilk's A = .78$, $F(8, 60) = 2.33$, $p < .05$, $\eta^2 = .22$, power = .85, with a significant univariate effect found for collegiality, $F(1, 72) = 4.55$, $p < .05$, $\eta^2 = .06$, power = .56. A comparison of means indicated that male advisees receive more collegiality support ($M = 5.92$, $SD = 1.86$) from their advisors than female advisees ($M = 4.87$, $SD = 2.19$).

Table 15

Advisors' Self-reported Provision of Mentoring Support to Their Male and Female Advisee

	Condition 1		Condition 2		Condition 3		Condition 4		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Research assistance	16.90	3.84	17.48	2.60	15.63	2.87	18.20	1.79	1.70	.07
2. Protection	15.55	3.30	16.00	2.63	16.36	2.34	17.40	3.58	.67	.03
3. Collegiality	6.20	2.09	5.84	1.74	5.42	1.26	4.00	1.58	2.38	.10
4. Promotion	13.30	1.52	12.96	1.43	12.53	1.71	13.80	.84	1.37	.06
5. Friendship	9.30	.92	9.32	.80	9.21	.92	9.80	.45	.63	.03
6. Career mentoring	26.00	4.59	25.36	4.79	25.16	4.10	24.40	3.21	.22	.01
7. Collegial social	13.80	3.43	12.92	3.12	13.39	2.19	12.40	3.05	.47	.02
8. Collegial Task	15.55	2.86	16.04	2.33	14.68	2.33	16.20	1.79	1.21	.05

Note. Condition 1 = Male Advisor & Male Advisee, Condition 2 = Male Advisor & Female Advisee, Condition 3 = Female Advisor & Female Advisee, Condition 4 = Female Advisor & Male Advisee.

Table 16

Male and Female Advisors' Provision of Mentoring Support Regardless of Advisee Sex

	Males		Females		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Research assistance	17.22	3.18	16.17	2.85	1.85	.03
2. Protection	15.80	2.92	16.58	2.59	1.22	.02
3. Collegiality	6.00	1.89	5.12	1.43	3.92	.06
4. Promotion	13.11	1.47	12.79	1.64	.68	.01
5. Friendship	9.31	.85	9.33	.87	.01	.00
6. Career mentoring	25.64	4.66	25.00	3.88	.33	.01
7. Collegial social	13.31	3.25	13.17	2.35	.04	.00
8. Collegial task	15.62	2.57	15.00	2.28	1.73	.03

Table 17

Male and Female Advisees' Reports of Received Mentoring Support From Their Male and Female Advisors

	Condition 1		Condition 2		Condition 3		Condition 4		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Research assistance	15.96	3.32	16.79	2.45	15.23	3.64	16.40	2.41	.99	.04
2. Protection	13.83	2.55	15.67	2.63	14.73	4.05	14.00	1.87	1.50	.06
3. Collegiality	6.27	1.89	5.21	2.41	4.50	1.90	4.40	.55	3.19*	.12
4. Promotion	11.65	2.46	11.50	2.77	11.54	2.28	12.20	1.10	.12	.01
5. Friendship	8.47	1.50	9.08	1.61	8.45	2.34	9.40	.89	.86	.04
6. Career mentoring	22.61	5.52	25.13	5.19	23.18	7.00	23.20	2.28	.82	.03
7. Collegial social	13.39	2.52	13.25	3.14	13.18	3.92	14.80	2.49	.37	.02
8. Collegial Task	14.78	2.84	16.29	2.42	13.86	4.38	15.00	2.44	2.19	.09

Note. Condition 1 = Male Advisor & Male Advisee, Condition 2 = Male Advisor & Female Advisee, Condition 3 = Female Advisor & Female Advisee, Condition 4 = Female Advisor & Male Advisee. * $p < .05$.

Table 18

Male and Female Advisees' Reports of Received Mentoring Support From Their Advisors

	Males		Females		<i>F</i>	η^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
1. Research assistance	16.04	3.14	16.04	3.14	.00	.00
2. Protection	13.86	2.41	15.21	3.38	3.45	.05
3. Collegiality	5.93	1.86	4.87	2.19	4.55*	.06
4. Promotion	11.75	2.27	11.52	2.51	.15	.00
5. Friendship	8.64	1.45	8.78	2.00	.10	.00
6. Career mentoring	22.71	5.09	24.20	6.17	1.14	.02
7. Collegial social	13.64	2.53	13.22	3.50	.31	.00
8. Collegial task	14.82	2.74	15.13	3.67	.15	.00

Note. * $p < .05$.

Hypothesis Six

The sixth hypothesis posited that advisees' self-reported research productivity would be related directly to their own reports of career support and psychosocial support received from their advisors. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 19) revealed one significant positive relationship out of eight possible relationships in that advisees' self-reported research productivity was related positively to their own reports of received collegial social support from their advisors, $r = .29, p < .01$.

Hypothesis Seven

The seventh hypothesis posited that advisees' self-reported research productivity would be related directly to their advisors' reports of providing career support and psychosocial support to their advisees. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 20) did not reveal any significant positive relationships. One significant negative relationship was found between advisees' self-reported research productivity and their advisors' reports of providing research assistance, $r = -.38, p < .01$.

Hypothesis Eight

The eighth hypothesis posited that advisees' self-reported use of relational maintenance behaviors with their advisors would be related directly to their own reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisors. This hypothesis was partially supported. The results of Pearson correlational analyses (see Table 21) revealed 15 significant positive relationships out of 30 possible relationships.

Advisees' self-reported use of the courtesy relational maintenance behavior was related positively to their own reports of liking ($r = .45, p < .001$), communication

Table 19

Correlations Between Advisees' Self-reported Research Productivity and Their Own Reports of Received Mentoring Support From Their Advisors

	RA	PT	CL	PR	FR	CA	CS	CT
Research productivity	.08	.16	.17	.13	.08	.22	.29**	.11

Note. RA = research assistance, PT = protection, CL = collegiality, PR = promotion, FR = friendship, CA = career mentoring, CS = collegial social, CT = collegial task. ** $p < .01$.

Table 20

Correlations Between Advisees' Self-reported Research Productivity and Their Advisors' Reports of Providing Mentoring Support To Their Advisees

	RA	PT	CL	PR	FR	CA	CS	CT
Research productivity	-.38 [^]	.09	.13	.06	.05	.29	.26	-.17

Note. RA = research assistance, PT = protection, CL = collegiality, PR = promotion, FR = friendship, CA = career mentoring, CS = collegial social, CT = collegial task. [^] $p < .001$.

Table 21

Correlations Between Advisees' Self-reported Use of Relational Maintenance Behaviors and Their Own Reports of Relational Characteristics

	L	CS	RS	T	AC	CM
1. Courtesy	.43 [^]	.37**	.40 [^]	.38**	.17	.63 [^]
2. Appreciation	.37**	.40 [^]	.34**	.32**	.33**	.53 [^]
3. Tasks	.19	.15	.29	.14	.06	.55 [^]
4. Goals	.25	.30**	.26	.26*	.21	.45 [^]
5. Humor	.28	.27	.27	.25	.26	.37 [^]

Note. L = Liking, CS = Communication Satisfaction, RS = Relational Satisfaction, T = Trust, AC = Affective Commitment, and CM = Control Mutuality. ** $p < .01$. [^] $p < .001$.

satisfaction ($r = .37, p < .01$), relational satisfaction ($r = .40, p < .001$), trust ($r = .38, p < .01$), and control mutuality ($r = .63, p < .001$). Advisees' self-reported use of the appreciation relational maintenance behavior was related positively to their own reports of liking ($r = .37, p < .01$), communication satisfaction ($r = .40, p < .001$), relational satisfaction ($r = .34, p < .01$), trust ($r = .32, p < .01$), work commitment ($r = .33, p < .01$), and control mutuality ($r = .52, p < .001$). Advisees' self-reported use of the tasks relational maintenance behavior was related positively to their own reports of control mutuality ($r = .55, p < .001$). Advisees' self-reported use of the goals relational maintenance behavior was related positively to their own reports of communication satisfaction ($r = .30, p < .01$) and control mutuality ($r = .45, p < .001$). Advisees' self-reported use of the humor relational maintenance behavior was related positively to their own reports control mutuality ($r = .37, p < .001$).

Hypothesis Nine

The ninth hypothesis posited that advisees' self-reported use of relational maintenance behaviors with their advisors would be related directly to their advisors' reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 22) did not reveal any significant positive relationships.

Hypothesis Ten

The tenth hypothesis posited that advisors' reports of their advisees' use of relational maintenance behaviors would be related directly to their own reports of liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality with their advisees. This hypothesis was partially supported. The results of Pearson

Table 22

Correlations Between Advisees' Self-reported Use of Relational Maintenance Behaviors and Their Advisors' Reports of Relational Characteristics

	L	CS	RS	T	AC	CM
1. Courtesy	.00	.03	.01	.03	.03	.04
2. Appreciation	.20	.17	.18	.16	.05	.15
3. Tasks	-.03	.12	-.01	.02	.06	.01
4. Goals	.11	.10	-.03	.10	.01	.09
5. Humor	.00	.04	-.04	.09	.15	.04

Note. L = Liking, CS = Communication Satisfaction, RS = Relational Satisfaction, T = Trust, AC = Affective Commitment, and CM = Control Mutuality.

correlational analyses (see Table 23) revealed 22 significant positive relationships out of 30 possible relationships.

Advisors' reports of their advisees' use of the appreciation relational maintenance behavior were related positively to their own reports of liking ($r = .36, p < .01$), communication satisfaction ($r = .39, p < .01$), relational satisfaction ($r = .41, p < .001$), work commitment ($r = .30, p < .01$), and control mutuality ($r = .44, p < .001$). Advisors' reports of their advisees' use of the tasks relational maintenance behavior were related positively to their own reports of liking ($r = .58, p < .001$), communication satisfaction ($r = .66, p < .001$), relational satisfaction ($r = .57, p < .001$), trust ($r = .59, p < .001$), and control mutuality ($r = .58, p < .001$). Advisors' reports of their advisees' use of the protection relational maintenance behavior were related positively to their own reports of communication satisfaction ($r = .45, p < .001$), relational satisfaction ($r = .44, p < .001$), and control mutuality ($r = .44, p < .001$).

Advisors' reports of their advisees' use of the goals relational maintenance behavior were related positively to their own reports of liking ($r = .33, p < .01$), communication satisfaction ($r = .42, p < .01$), relational satisfaction ($r = .34, p < .01$), trust ($r = .34, p < .01$), and control mutuality ($r = .44, p < .001$). Advisors' reports of their advisees' use of the humor relational maintenance behavior were related positively to their own reports of liking ($r = .49, p < .001$), communication satisfaction ($r = .43, p < .001$), trust ($r = .38, p < .01$), and control mutuality ($r = .44, p < .01$).

Hypothesis Eleven

The eleventh hypothesis posited that advisees' self-reported use of relational maintenance behaviors with their advisors would be related negatively to their own reports of relational uncertainty with their advisors. This hypothesis was not supported. The results of

Table 23

Correlations Between Advisors' Reports of Their Advisees' Use of Relational Maintenance Behaviors and Their Own Reports of Relational Characteristics

	L	CS	RS	T	AC	CM
1. Appreciation	.36**	.39**	.41 [^]	.23	.30**	.44 [^]
2. Tasks	.58 [^]	.66 [^]	.57 [^]	.59 [^]	.10	.58 [^]
3. Protection	.27	.45 [^]	.44 [^]	.27	.05	.44 [^]
4. Goals	.33**	.42 [^]	.34**	.34**	.07	.44 [^]
5. Humor	.49 [^]	.43 [^]	.29	.38**	.25	.44 [^]

Note. L = Liking, CS = Communication Satisfaction, RS = Relational Satisfaction, T = Trust, AC = Affective Commitment, and CM = Control Mutuality. ** $p < .01$. [^] $p < .001$.

Pearson correlational analyses (see Table 24) revealed one significant negative relationship out of 20 possible relationships. Advisees' self-reported use of the courtesy relational maintenance behavior was related negatively to their own reports of the behavioral norms of the relationship, $r = -.43, p < .001$.

Hypothesis Twelve

The twelfth hypothesis posited that advisors' reports of their advisees' use of relational maintenance behaviors would be related negatively to their advisees' reports of relational uncertainty with their advisors. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 25) did not reveal any significant negative relationships.

Hypothesis Thirteen

The thirteenth hypothesis posited that advisees' reports of received career support and psychosocial support from their advisors would be related negatively to their own reports of relational uncertainty with their advisors. This hypothesis was partially supported. The results of Pearson correlational analyses (see Table 26) revealed 25 significant negative relationships out of 32 possible relationships.

Advisees' reports of received research assistance from their advisors was related negatively to their own reports of the behavioral norms ($r = -.29, p < .01$), the mutuality ($r = -.46, p < .001$), the definition ($r = -.45, p < .001$), and the future ($r = -.41, p < .001$) of the relationship. Advisees' reports of received protection support from their advisors was related negatively to their own reports of the behavioral norms ($r = -.30, p < .01$), the mutuality ($r = -.36, p < .001$), the definition ($r = -.32, p < .01$), and the future ($r = -.33, p < .01$) of the relationship. Advisees' reports of received collegiality support from their advisors was

Table 24

Correlations Between Advisees' Self-reported Use of Relational Maintenance Behaviors and Their Own Reports of Relational Uncertainty

	Behavioral Norms	Mutuality	Definition	Future
1. Courtesy	-.43 [^]	-.14	-.15	-.19
2. Appreciation	-.24	-.23	-.24	-.04
3. Tasks	-.21	-.23	-.20	-.17
4. Goals	-.08	-.04	-.06	-.12
5. Humor	-.10	.01	.03	-.13

Note. [^] $p < .001$.

Table 25

Correlations Between Advisors' Reports of Their Advisees' Use of Relational Maintenance Behaviors and Their Advisees' Reports of Relational Uncertainty

	Behavioral Norms	Mutuality	Definition	Future
1. Appreciation	-.18	-.28	-.29	-.19
2. Tasks	.04	-.19	-.20	-.04
3. Protection	-.09	-.08	-.09	.03
4. Goals	.05	-.03	-.07	-.13
5. Humor	-.07	-.01	-.08	-.15

Table 26

Correlations Between Advisees' Reports of Received Mentoring Support and Their Own Reports of Relational Uncertainty

	Behavioral Norms	Mutuality	Definition	Future
1. Research assistance	-.29**	-.46 [^]	-.45 [^]	-.41 [^]
2. Protection	-.30**	-.36 [^]	-.32**	-.33**
3. Collegiality	-.14	-.31**	-.33**	-.11
4. Promotion	-.28	-.34**	-.37 [^]	-.27
5. Friendship	-.38**	-.54 [^]	-.60 [^]	-.26
6. Career mentoring	-.33**	-.43 [^]	-.47 [^]	-.40 [^]
7. Collegial social	-.22	-.45 [^]	-.40 [^]	-.28
8. Collegial task	-.30**	-.48 [^]	-.40 [^]	-.29**

Note. ** $p < .01$. [^] $p < .001$.

related negatively to their own reports of the mutuality ($r = -.31, p < .01$) and the definition ($r = -.33, p < .01$) of the relationship. Advisees' reports of received promotion from their advisors was related negatively to their own reports of the mutuality ($r = -.34, p < .01$) and the definition ($r = -.37, p < .01$) of the relationship.

Advisees' reports of received friendship support from their advisors was related negatively to their own reports of the behavioral norms ($r = -.38, p < .01$), the mutuality ($r = -.54, p < .001$), and the definition ($r = -.60, p < .001$) of the relationship. Advisees' reports of received career support from their advisors was related negatively to their own reports of the behavioral norms ($r = -.33, p < .01$), the mutuality ($r = -.43, p < .001$), the definition ($r = -.47, p < .001$), and the future ($r = -.40, p < .001$) of the relationship. Advisees' reports of received collegial social support from their advisors was related negatively to their own reports of the mutuality ($r = -.45, p < .001$) and the definition ($r = -.40, p < .001$) of the relationship. Advisees' reports of received collegial task support from their advisors was related negatively to their own reports of the behavioral norms ($r = -.30, p < .01$), the mutuality ($r = -.48, p < .001$), the definition ($r = -.40, p < .001$), and the future ($r = -.29, p < .01$) of the relationship.

Hypothesis Fourteen

The fourteenth hypothesis posited that advisors' self-reported provision of career support and psychosocial support for their advisees would be related negatively to their advisees' reports of relational uncertainty with their advisors. This hypothesis was not supported. The results of Pearson correlational analyses (see Table 27) did not reveal any significant negative relationships.

Table 27

Correlations Between Advisors' Self-reported Provision of Mentoring Support and Their Advisees' Reports of Relational Uncertainty

	Behavioral Norms	Mutuality	Definition	Future
1. Research assistance	.08	-.09	-.16	-.07
2. Protection	-.06	-.06	-.08	-.03
3. Collegiality	-.10	-.15	-.20	-.01
4. Promotion	.04	-.06	-.08	-.01
5. Friendship	-.16	-.17	-.14	-.01
6. Career mentoring	-.17	-.14	-.12	-.05
7. Collegial social	-.08	-.07	-.18	.00
8. Collegial task	.05	-.05	-.05	.15

Summary

The results obtained in this chapter, which were based on both advisors' and advisees' reports of their mentoring relationships, indicate that advisors and advisees have similar perceptions of what behaviors advisees engage in to maintain their advisor-advisee mentoring relationships. Advisees reported that they use appreciation, courtesy, tasks, goals, and humor behaviors whereas advisors reported that their advisees use appreciation, protection, tasks, goals, and humor behaviors to maintain their advisor-advisee relationships. Advisees' use of these relational maintenance behaviors generally is related positively to their own reports of relational characteristics and received career support and psychosocial support from their advisors, but their use of relational maintenance behaviors is not associated negatively with their relational uncertainty. Similarly, advisors' reports of their advisees' use of relational maintenance behaviors generally are related positively to their own reports of relational characteristics. However, similar correlations were not obtained when analyzing the matched data. Finally, the results indicate that advisees' research productivity is not associated with received mentoring support from their advisors and that the sex composition of the advisor-advisee dyad has minimal impact on advisees' use of relational maintenance behaviors and advisors' provision of career support and psychosocial support for their advisees.

CHAPTER IV

Discussion

There were three purposes of this dissertation. The first purpose was to examine advisees' use of relational maintenance behaviors with their advisors through the lens of the seventh and eighth propositions forwarded in Mentoring Enactment Theory (MET; Kalbfleisch, 2002), which required the development of a new instrument to assess advisees' use of relational maintenance behaviors with their advisors. The second purpose was to examine the extent to which advisees' use of relational maintenance behaviors was associated with their own and their advisors' reports of relational characteristics (i.e., liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality). The third purpose was to examine the extent to which advisees' relational uncertainty was associated with their use of relational maintenance behaviors and their advisors' provision of mentoring support. To address these three purposes, this chapter begins with a discussion centered around the research questions and hypotheses, followed by the implications of the findings, the limitations of this study, and future directions for research.

Research Question # 1

This dissertation included three research questions and fourteen hypotheses. Central to exploring the research questions and testing the hypotheses, however, was the development of a measure to assess advisees' use of relational maintenance behaviors with their advisors (i.e., research question # 1). The Advisee Relational Maintenance Scale (ARMS) was developed inductively by generating a pool of items that were factor analyzed using a series of principal component analyses with orthogonal varimax rotation. The results indicated that advisees use appreciation, courtesy, humor, goals, and tasks behaviors to

maintain their advisor-advisee mentoring relationships. *Appreciation* refers to advisees' expressions of excitement and enjoyment about the advisor-advisee relationship. *Courtesy* refers to advisees' attempts to be respectful and polite toward their advisors. *Humor* refers to advisees' use of humor and laughter with their advisors. *Goals* refers to advisees' consulting their advisors about their future academic and professional plans. *Tasks* refers to advisees' efforts to complete assigned duties and requests in a timely manner.

The development of the ARMS fills a considerable void in the advisor-advisee literature. For more than four decades, scholars have argued rightfully that the quality of the advisor-advisee relationship is important to advisees' academic success while neglecting to examine how these relationships are maintained. The development of this typology is an important precursor to advance extant relational maintenance and advisor-advisee research because the use of relational maintenance behaviors varies across relational contexts (Canary et al., 1993) and the advisor-advisee relationship is different from other interpersonal relationships (Hawkins, 1991). Not surprisingly, then, the relational maintenance behaviors identified in this study are different from previously identified relational maintenance behaviors used to sustain friendships (Guerrero & Chavez, 2005; Johnson, 2001), romantic relationships (Canary & Stafford, 1992; Stafford & Canary, 1991; Stafford et al., 2000), sibling relationships (Myers & Weber, 2004), and superior-subordinate relationships (Lee & Jablin, 1995; Waldron & Hunt, 1992).

Similar to Canary and Stafford's (1991) taxonomy, the relational maintenance behaviors identified in this study are inherently positive and do not include avoidance or antisocial relational maintenance behaviors identified in previous studies (Ayres, 1983; Guerrero & Chavez, 2005; Myers & Weber, 2004). This identification may be due to the instructions given to participants, which asked them to identify what they say and do to

maintain positive relationships with their advisors. The positive nature of the behaviors used by advisees to maintain their advisor-advisee relationships is undoubtedly advantageous to advisees as the quality of relationships is determined largely by the quality of the relational partners' communication (Dindia, 2003). Another possible explanation for the absence of avoidance and antisocial behaviors is the power inequality present in the advisor-advisee relationship (Hawkins, 1991). Because advisees depend on their advisors to complete their academic programs, it is possible that advisees refrain from using avoidance and antisocial behaviors in fear of causing relational turmoil with their advisors and thus jeopardizing their academic careers. This refraining may be of particular importance to advisees as the inability to maintain high quality advisor-advisee relationships has been associated with advisees' failure to complete their academic programs (Golde, 2005). Thus, the fact that advisees do not use avoidance or antisocial behaviors to maintain their advisor-advisee mentoring relationships should be perceived favorably.

Hypotheses 1-3

To contribute further to the advisor-advisee research, this dissertation sought to first examine if the extent to which advisees' use of these relational maintenance behaviors can be explained by the seventh and eighth propositions forwarded in MET (Kalbfleisch, 2002). The seventh proposition states that the closer the mentors are linked to their protégés' career success, the more likely their protégés are to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships. Thus, it was hypothesized that advisees' use of relational maintenance behaviors would be related positively to relationship duration (i.e., hypothesis # 1), their advisors' self-reported provision of career support and psychosocial support to their advisees (i.e., hypothesis # 2), and the advisees' own reports of career support and psychosocial support received from their advisors (i.e.,

hypothesis # 3). However, only the third hypothesis was partially supported in that significant relationships were found only between advisees' use of relational maintenance behaviors and their own reports of received career support and psychosocial support from their advisors. Advisees' use of the appreciation relational maintenance behavior was most closely associated with received mentoring support from their advisors followed by their use of the courtesy, goals, and humor relational maintenance behaviors, respectively. Surprisingly, advisees' use of the tasks relational maintenance behaviors was not associated with their reports of received mentoring support from the advisors. These results provide partial support for the seventh proposition of MET in the context of advisor-advisee relationship.

In examining these findings, it is possible that advisees' use of relational maintenance behaviors may have been influenced by the type of mentoring relationship in which they were involved. Buell (2004) classified academic mentoring relationships into four types: cloning, nurturing, friendship, and apprenticeship. *The cloning model* is characterized by controlling mentors who attempt to duplicate themselves with limited regards for their protégés' feelings, *the nurturing model* is similar to parent-child relationships in which the mentors provide a safe and open environment that encourages their protégés to explore new areas without being fearful of mentor rejection, *the friendship model* is characterized as a peer-mentoring relationship in which the mentors and their protégés collaborate in a non-hierarchical manner, and *the apprentice model* refers to protégés working "under" their mentors whereby the mentors have limited interest in developing personal relationships with their protégés.

Buell argued that of these four types, protégés are more satisfied with nurturing and friendship mentoring relationships than with cloning and apprentice mentoring relationships.

While the type of mentoring relationship in which advisors and advisees participated was not gathered in this dissertation, it is possible that relationship type does affect advisees' use of relational maintenance behaviors with their advisors. Students who are involved in nurturing and friendship mentoring relationships often perceive their mentors as helpful, encouraging, and emphatic (Buell), which are some of the characteristics advisees seek in their advisors (Cronan-Hillix et al., 1986; Schlosser et al., 2003). Thus, it is possible that advisees who are involved in nurturing and friendship mentoring relationships use relational maintenance behaviors more frequently with their advisors than advisees who are involved in cloning and apprentice mentoring relationships. To test this idea, future research examining whether advisees' use of relational maintenance behaviors can be explained by the type of advisor-advisee mentoring relationships in which they are involved is warranted.

In a similar vein, advisees' use of relational maintenance behaviors with their advisors may be more closely associated with their perceptions of the quality of their advisor-advisee relationship than relationship duration. Extant relational maintenance research in the organizational context indicates that the use of relational maintenance behaviors is associated positively with relationship quality (Lee, 1998a, 1998b), but not with relationship duration (Waldron & Hunt, 1992). Similar findings were reported by Kjerulff and Blood (1973) who concluded that advisees who were involved in high quality (i.e., interesting, stimulating, and casual) advisor-advisee relationships interacted frequently with their advisors. Moreover, advisees' reports of advisor-advisee relationship quality and satisfaction is a function of their advisors' provision of career support and psychosocial support (Cavendish, 2007), which may explain the positive relationships obtained between advisees' use of relational maintenance behaviors and their reports of mentoring support received from their advisors.

Hypotheses 4 and 5

The eighth proposition forwarded in MET states that female protégés are more likely than male protégés to direct their communicative behaviors toward initiating, maintaining, and repairing their mentoring relationships (Kalbfleisch, 2002). Thus, it was hypothesized that female advisees would report that they use relational maintenance behaviors more frequently than male advisees (i.e., hypothesis # 4) and that advisors would report that their female advisees use relational maintenance behaviors more frequently than their male advisees (i.e., hypothesis # 5). However, neither hypothesis was supported as no significant differences were found between male and female advisees' use of relational maintenance behaviors. These results do not provide support the eighth proposition of MET in the context of advisor-advisee relationships.

Central to the eighth proposition of MET are the assumptions that it is more difficult for women than men to initiate mentoring relationships, that women are less likely than men to be involved in mentoring relationships, and that women therefore are more inclined than men to maintain their mentoring relationships once the relationships are initiated. In academia, however, researchers have concluded that male and female doctoral students are equally likely to have a mentor (Cronan-Hillix et al., 1986; Lyons & Scroggins, 1990). Similarly, in this investigation, male and female doctoral students were equally likely to initiate their mentoring relationships, $\chi^2(2, N = 82) = .20, p = .91$. Given these similarities in male and female doctoral students' mentoring experiences, it is not surprising that they are equally likely to maintain their advisor-advisee relationships, as the results of this dissertation indicate.

The inherent positive nature of the behaviors used by advisees to maintain their advisor-advisee relationships may have made some female advisees reluctant to enact these

behaviors. Ragins and Cotton (1991) proposed that female protégés limit their interactions with male mentors because they fear that their communicative behaviors may be interpreted as sexual advances by their mentors or other departmental members. Similarly, Gilbert, Gallessich, and Evans (1983) suggested that the possibility of mentoring relationships becoming sexual may make female doctoral students reluctant to interact with male faculty members. In this dissertation, 51% ($n = 26$) of the female advisees had male advisors. Thus, it is possible that some female advisees involved in cross-sex mentoring relationships may have limited their advisor-advisee interactions to avoid being misinterpreted by their advisors or other departmental members. Instead, female advisees often seek support from other graduate students rather than their advisors (Kjeruff & Blood, 1973).

Research Questions 2 and 3

To explore further the role of advisor-advisee sex composition, two research questions were posed that inquired about the differences that exist between male and female advisors' self-reports of providing mentoring support to their male and female advisees (i.e., research question # 2) and the differences that exist between male and female advisees' reports of received mentoring support from their male and female advisors (i.e., research question # 3). The results indicated that male and female advisors perceived themselves as equally supportive of their male and female advisees, although male advisees who had male advisors reported that they received more collegiality support than female advisees who had female advisors. These findings corroborate previous mentoring research in the academic context (Busch, 1985; Cronan-Hillix et al., 1986; Green & Bauer, 1995; Kelly & Schweitzer, 1999; Lyons & Scroggins, 1990; Schlosser et al., 2003; Wilde & Schau, 1995), which suggest that male and female graduate students receive similar amounts of mentoring support from their advisors. Considering the positive outcomes associated with received mentoring

support, the lack of significant differences gathered in this dissertation should be viewed favorably because it suggests that male and female advisees are likely to benefit equally from their advisor-advisee mentoring relationships.

The mentoring literature is indicative of several possible explanations for why male and female advisors provide equal amounts of mentoring support for their advisees. One possible explanation is simply that male and female mentors report similar costs (e.g., time, energy) and rewards (e.g., increased status, friendship) associated with being mentors (Ragins & Scandura, 1994). In academia, faculty members view their mentoring relationships with graduate students as mutually beneficial, they find it fulfilling to be a part of their graduate students' academic and intellectual growth, and they stay abreast of new research when they are involved in mentoring relationships (Busch, 1985). Moreover, both men and women strive to achieve positions in which they have the ability to influence others (Wood, 1997). As such, it is possible that male and female advisors provide equal amounts of mentoring support to their advisees because they seek to attain the benefits of being mentors and to achieve a position which enables them to influence graduate students.

It also is possible that female advisors' provision of mentoring support to their advisees is equal to male advisors' provision of mentoring support to their advisees because female advisors are conforming to departmental expectations and culture. Workplace cultures often are masculine (Berryman-Fink, 1997) and it is not uncommon for female employees to enact masculine behaviors to assimilate themselves into a workplace (Kirchmeyer & Bullin, 1997; Wood, 1997). Thus, because providing mentoring support traditionally has been considered a masculine behavior (Ragins & Cotton, 1991; Ragins & McFarlin, 1990), it is not unlikely that some female advisors provide mentoring support to their advisees, in part, to conform to departmental expectations and norms.

Another possible explanation for the lack of sex differences in advisors' provision of mentoring support to their advisees is that advisors' provision of support is a function of their rank and experiences in mentoring doctoral students rather than their biological sex. Previous research (Fagenson-Eland, Marks, & Amendola, 1997) indicates that highly experienced mentors provide more career support to their protégés than less experienced mentors. In this dissertation, male and female advisors were of similar rank (i.e., assistant, associate, and full professors; $\chi^2(2, N = 82) = .12, p = .94$) and reported similar experiences (i.e., number of previous advisees and years of experience; *Wilk's Λ* = .95, $F(2, 77) = 2.22, p = .12, \eta^2 = .05$, power = .44) advising doctoral students, which may explain why male and female advisors reported that they provide similar amounts of mentoring support to their advisees.

Hypotheses 8-10

Because advisees' academic success is dependent largely on their ability to maintain high quality relationships with their advisors (Foss & Foss, 2008; Golde, 2000, 2005), this dissertation also sought to examine the relationship between advisees' use of relational maintenance behaviors and a series of relational characteristics (i.e., liking, communication satisfaction, relational satisfaction, trust, work commitment, and control mutuality) that are indicative of relational quality. It was hypothesized that advisees' self-reported use of relational maintenance behaviors would be related positively to their own (hypothesis # 8) and their advisors' (hypothesis # 9) reports of relational characteristics, and that advisors' reports of their advisees' use of relational maintenance behaviors would be related positively to the advisors' reports of relational characteristics (i.e., hypothesis # 10). However, only hypotheses eight and ten were supported.

In support of hypothesis eight, the results indicate that (a) advisees' use of the appreciation relational maintenance behavior was related positively to all six relational

characteristics; (b) advisees' use of the courtesy relational maintenance behavior was related positively to five of the six relational characteristics (the exception being work commitment); (c) advisees' use of the goals relational maintenance behavior was related positively to communication satisfaction, trust, and control mutuality; and (d) advisees' use of both the tasks and the humor relational maintenance behaviors was related positively to control mutuality. In support of hypothesis ten, advisors' reports of their (a) advisees' use of the tasks and the goals relational maintenance behaviors was related positively to five of the six relational characteristics (the exception being work commitment); (b) advisees' use of the appreciation relational maintenance behavior was related positively to five of the six relational characteristics (the exception being trust); (c) advisees' use of the humor relational maintenance behavior was related positively to four of the six relational characteristics (the exceptions being relational satisfaction and work commitment); and (d) advisees' use of the protection relational maintenance behavior was related positively to communication satisfaction, relational satisfaction, and work commitment.

Although these results corroborate the findings reported in previous relational maintenance studies in the context of romantic relationships (Canary et al., 2002; Stafford & Canary, 1991, 2006), the positive association that exists between the use of relational maintenance behaviors and relational characteristics may be of particular importance to the advisor-advisee relationship. Advisees who maintain positive advisor-advisee relationships may appease their advisors, prevent relationship conflicts, and motivate their advisors to sustain their involvement in mentoring them (Kalbfleisch, 1997); they also are likely to learn new skills and to assimilate themselves into the department (Kalbfleisch & Eckley, 2003). This not only is important to doctoral students' degree completion, but also to their future professional careers because advisors help their advisees expand their professional networks

and publish their research as the advisees transition from doctoral students to junior faculty members (Dixon-Reeves, 2003; Golde, 2005; Roloff, 2011). However, relatively little is known about the extent to which advisees' efforts to maintain positive relationships with their advisors while in graduate school affect their future professional careers and the quality of their advisor-advisee relationships after they graduate. To fill this void, researchers should consider conducting longitudinal studies that examine the lifespan of the advisor-advisee mentoring relationship.

While in their graduate programs, however, maintaining positive advisor-advisee relationships may not only appease advisors and prevent relational conflicts, but it also appear to be in advisees' best interests because the more frequently advisees reported that they used relational maintenance behaviors, the more mentoring support they received from their advisors (i.e., hypothesis # 3). Doctoral students who receive mentoring support are able to effectively socialize themselves into their academic departments (Myers, 1998; Myers & Martin, 2008) and complete their dissertations (Golde, 2005; Hepper & Hepper, 2003; Madsen, 1993). Conversely, advisees' failure to communicatively maintain positive relationships with their advisors may be frustrating to the advisor and result in decreased advisor feedback (Foss & Foss), relational turmoil (Kalbfleisch, 1997), or even relational termination (Golde, 2005), which in some cases prevent advisees from completing their academic programs (Golde, 2000). Thus, advisees' use of relational maintenance behaviors with their advisors may have profound effects on not only their current academic progress, but also their future professional careers.

Hypotheses 6 and 7

Another important part of doctoral students' academic and professional success is their ability to publish their research (Roloff, 2011). Advisors' provision of mentoring

support has been found to enhance doctoral students' self-perceived research efficacy (Cavendish, 2007). Thus, it was hypothesized that advisees' self-reported research productivity would be related positively to their own reports of received career support and psychosocial support from their advisors (i.e., hypothesis # 6) and to their advisors' self-reported provision of career support and psychosocial support to their advisees (i.e., hypothesis # 7). The results did not provide support for these hypotheses. Contrary to hypothesis seven, a negative relationship was found between advisees' self-reported research productivity and their advisors' reports of providing research assistance to their advisees.

Based on these findings, it is possible that advisees' research productivity is a function of their attitudes toward conducting research and their research self-efficacy rather than received mentoring support from their advisors. In support of this possibility, the results of a two-year longitudinal study conducted by Green and Bauer (1995) indicate that doctoral students' reports of received mentoring support from their advisors are not associated with their research productivity. However, Gelso et al. (1996) found that doctoral students who receive high levels of mentoring support from faculty members develop positive attitudes toward conducting research and perceive themselves as capable researchers. The results obtained by both Gelso et al. and Green and Bauer were corroborated by Kahn and Scott (1997) who concluded that doctoral students' research productivity is associated closely with their research self-efficacy and interest in conducting research whereas doctoral students' reports of received mentoring support are not related to their research productivity.

The advisor-advisee literature is indicative of two alternative explanations for the lack of positive relationships between advisees' research productivity and received mentoring support from their advisors. The first explanation resides in the fact that the participants in this dissertation represented 47 subject areas. In some disciplines, research productivity is not

relevant or expected (Green & Bauer, 1995), which may have affected the relationship between received mentoring support and research productivity. Second, it is possible that advisees' research productivity may be dependent on specific types of mentoring support not examined in this dissertation such as advisors teaching their advisees about research design, methodological approaches, and programmatic research (Gelso et al., 1996). In fact, Jensen et al. (2000) suggested that novice researchers, both at the undergraduate and graduate level, need to be mentored throughout the entire process of preparing a research manuscript. When mentors provide positive reinforcement and teach their advisees about the statistical procedures and research designs needed to complete a research manuscript, graduate students develop positive attitudes toward conducting research and report high levels of research self-efficacy (Gelso et al.). Thus, future research is needed to determine the types of mentoring support that are most closely associated with graduate students' research productivity and research self-efficacy as well as the possibility that research self-efficacy mediates the relationship between received mentoring support and research productivity.

The negative relationship obtained between advisees' self-reported research productivity and their advisors' provision of research assistance is initially perplexing. However, it is possible that advisees with low research productivity may receive high levels of research assistance from their advisors in order to enhance their research productivity. Conversely, advisees with high research productivity may receive low levels of research assistance from their advisors because they already are capable of conducting research.

Hypotheses 11-14

Graduate school is a time of uncertainty (Anderson & Swazey, 1998). Doctoral students question their abilities, their decisions to enroll in graduate school (Austin, 2002), and the nature and expectations of their advisor-advisee relationships (Foss & Foss, 2008).

To extend these questions, a series of hypotheses focusing on advisees' relational uncertainty with their advisors was posited. It was hypothesized that advisees' self-reported use of relational maintenance behaviors (i.e., hypothesis # 11) and advisors' reports of their advisees' use of relational maintenance behaviors (i.e., hypothesis # 12) would be related negatively to advisees' relational uncertainty. The results did not provide support for these hypotheses. The only significant finding was a negative relationship between advisees' self-reported use of the courtesy relational maintenance behavior and their behavioral norms uncertainty.

Although these results do not provide support for the association between advisees' use of relational maintenance behaviors and their relational uncertainty with their advisors, previous studies, albeit in different relational contexts (Dailey et al., 2010; Dainton, 2003a; Weger & Emmett, 2009), have established a link between relational uncertainty and the use of relational maintenance behaviors. One possible explanation why the results obtained in this dissertation differ from previous investigations is due to the relationship type. Unlike other interpersonal relationships (e.g., friendships, romantic relationships), the advisor-advisee relationship is a work-related relationship in which it is possible that relational uncertainty is inherent due to advisees' fear of negative performance evaluations and the level of advisor-advisee relationship formality (Hawkins, 1991). Moreover, doctoral students continuously learn about their departmental roles throughout their graduate programs (Austin, 2002); they also have to negotiate relational expectations with their advisors (Hepper & Hepper, 2003) and their advisors determine their degree completion (Foss & Foss, 2008). Together, these characteristics suggest that advisees' relational uncertainty may be relatively consistent throughout the advisor-advisee relationship, which may explain the limited association found between advisees' use of relational maintenance behaviors and

their relational uncertainty. As such, the role of relational uncertainty appears to be different in the advisor-advisee relationship than in other interpersonal relationships in which relational uncertainty tends to ebb and flow (Afifi & Weiner, 2004; Solomon & Knobloch, 2001).

In an effort to develop a more complete understanding of advisees' relational uncertainty with their advisors, it also was hypothesized that advisees' reports of received career support and psychosocial support from their advisors (i.e., hypothesis # 13) and advisors' self-reported provision of career support and psychosocial support for their advisees (i.e., hypothesis # 14) would be related negatively to advisees' reports of relational uncertainty with their advisors. The results provided partial support for hypothesis 13, but did not support hypothesis 14. In accordance with hypothesis 13, advisees' reports of their advisors' provision of research assistance, protection, friendship, career support, and collegial task support were related negatively to all four dimensions of relational uncertainty (i.e., mutuality, behavioral norms, definition, and future) whereas advisees' reports of received collegiality, promotion, and collegial social support were related negatively to advisees' mutuality and definition uncertainty. Contrary to hypothesis 14, no significant negative relationships were found between advisors' self-reported provision of mentoring support and their advisees' relational uncertainty.

The negative relationships that exist between advisees' relational uncertainty and their reports of received mentoring support from their advisors corroborate seminal mentoring research. Kram (1983, 1988) argued that mentors' provision of career support and psychosocial support is indicative of their interest in their protégés and their commitment to the mentor-protégé relationship. She also suggested that when protégés receive career support and psychosocial support from their mentors, the protégés develop favorable

attitudes toward their mentors and the mentoring relationship. As such, it is not surprising that advisees who receive high levels of career support and psychosocial support from their advisors report low levels of relational uncertainty. Conversely, it is somewhat perplexing, that no significant negative relationships exist between advisors' self-reported provision of mentoring support and their advisees' relational uncertainty. One possible explanation is that advisors may have inflated their self-reported provision of career support and psychosocial support to their advisees due to social desirability biases as advisors are aware that they are expected to provide mentoring support to their advisees (Green & Bauer, 1995). It also is possible that advisors are more aware of their provision of mentoring support than their advisees. For instance, it seems likely that advisors may encourage other faculty members to collaborate with their advisees in order to enhance their advisees' research productivity. Moreover, advisees expect to receive mentoring support from their advisors (Green & Bauer). Thus, advisees' expectations of their advisor-advisee mentoring relationships are likely violated when their advisors fail to provide them with mentoring support, which may explain the negative association that exists between advisees' reports of received mentoring support and their relational uncertainty.

Implications

The results discussed in the previous sections are indicative of both practical and theoretical implications. In terms of practical implications for advisees, the identification of the five relational maintenance behaviors (i.e., appreciation, courtesy, humor, goals, and tasks) serves as a framework for appropriate strategies that they can enact to sustain their advisor-advisee mentoring relationships. Being appreciative, courteous, humorous, completing assigned tasks, and discussing their goals are appropriate behaviors in which advisees should engage. When advisees use these relational maintenance behaviors, their

advisors have positive perceptions of them and their relationships; they also provide their advisees with both career support and psychosocial support. Thus, because the advisor-advisee mentoring relationship is important to doctoral students' academic success (i.e., retention, on-time degree completion, and dissertation completion; Cavendish, 2007; Hepper & Hepper, 2003; Golde, 2005), advisees should use these relational maintenance behaviors to maintain positive relationships with their advisors. Specifically, advisees should use the appreciation and courtesy relational maintenance behaviors as they are generally most closely associated with their advisors' provision of mentoring support and relational characteristics.

In terms of practical implications for advisors, the negative association found between advisees' reports of received mentoring support from their advisors and advisees' relational uncertainty bolsters the importance of advisors' provision of mentoring support to their advisees. Because relational uncertainty may discourage individuals from maintaining their relationships (Dindia, 2003b), doctoral students who experience relational uncertainty may terminate their advisor-advisee relationship, which in many cases prevents doctoral students from completing their academic programs (Golde, 2005). To reduce doctoral students' uncertainty associated with their advisor-advisee relationships, advisors should provide mentoring support to their advisees. Advisors' provision of research assistance, protection, friendship, career support, and collegial task support may be of particular importance as these types of mentoring support are most closely associated with advisees' relational uncertainty. The different types of mentoring support provided by advisors that are associated with their advisees' relational uncertainty corroborates Kram's (1983, 1998) claim that effective mentors provide their protégés with both career support and psychosocial support.

The results obtained in this dissertation also are suggestive of theoretical implications for MET. Partial support was found for one (i.e., hypothesis 3) of the three hypotheses (i.e., hypotheses 1-3) that tested the seventh proposition and no support was found for the two hypotheses (i.e., hypotheses 4 and 5) that tested the eighth proposition. However, these findings may be due to methodological limitations such as the limited number of advisor-advisee dyads ($n = 83$) that participated and the possibility that relationship duration is not a valid indicator of how closely linked advisors are to their advisees' career success. In fact, an examination of the mean scores of male and female advisees' self-reported use of relational maintenance behaviors with their advisors indicate that female advisees reported slightly higher mean scores for four of the five relational maintenance behaviors (the exception being humor), which does provide some support for MET's utility in the context of advisor-advisee mentoring relationships.

To examine further MET's utility in the advisor-advisee mentoring relationship, researchers should consider testing the propositions that are based, in part, on the assumption that most mentors are males and that mentors prefer same sex protégés. In this dissertation, approximately 60% of the advisees reported that they had a male advisor, which supports a fundamental assumption of MET. To extend this idea and to provide a rationale for MET's utility in the context of advisor-advisee mentoring relationships, future research exploring whether advisors prefer same sex or opposite advisees is warranted. This may be of particular importance in the academic context because most (i.e., 60%) of the advisees who participated in this dissertation were females.

Additional theoretical tests of MET may provide researchers with practical implications for doctoral students to consider when initiating their advisor-advisee mentoring relationships. The theory posits that mentors are likely to accept requests made by protégés to

initiate a mentoring relationship when the mentors have favorable past experiences of working with the protégés (Kalbfleisch, 2002, 2007). In academia, doctoral students' decision to ask a particular faculty member to serve as their advisor is a major part of their educational careers (Hepper & Hepper, 2003). Thus, testing the propositions forwarded in MET that focus on the initiation phase of mentoring relationships may identify practical implications for advisees to consider when initiating their advisor-advisee relationship. Moreover, the positive relationships that exist between advisees' use of relational maintenance behaviors and their advisors' reports of relational characteristics intuitively suggest that doctoral students' requests to initiate an advisor-advisee mentoring relationship are likely to be accepted by the advisor when the students have engaged in appreciation, courtesy, tasks, goals, and humor relational maintenance behaviors with their potential advisors prior to initiating a mentoring relationship. Considering these ideas, MET offers a useful framework to guide future advisor-advisee mentoring research.

Limitations

This dissertation is subject to four limitations. The first limitation is that only 83 advisor-advisee surveys could be matched with certainty even though 378 doctoral students and 141 faculty members completed the entire survey. For the online participants, the surveys were matched using the advisors' initials followed by the advisees' initials. Despite statements in the cover letter that guaranteed anonymity, it is possible that some of the participants who failed to provide this information were concerned that their identity would be discovered.

Consequently, the relatively low number of matched surveys undoubtedly affected the MANOVA analyses used to address the hypotheses and research questions that focused the extent to which advisors' provision of mentoring support and advisees' use of relational

maintenance behaviors were dependent on the sex composition of the advisor-advisee dyad. To explore these research questions and to test these hypotheses, the participants were coded into four groups: male advisor-male advisee ($n = 25$), male advisor-female advisee ($n = 26$), female advisor-female advisee ($n = 25$), and female advisor-male advisee ($n = 7$). Given the small number of female advisor-male advisee dyads, the MANOVA analyses in which advisor-advisee sex composition served as the independent fixed factor should be interpreted with caution. For instance, when examining male and female advisees' reports of received mentoring support from their male and female advisors, a statistically significant difference were found only between male advisees with male advisors ($M = 6.26$, $SD = 1.89$) and female advisees with female advisors ($M = 4.50$, $SD = 1.90$), even though male advisees with female advisors ($M = 4.40$, $SD = .55$) reported that they receive even less collegiality support than female advisees with female advisors.

The second limitation is that the advisee participants were not asked to indicate how frequently they interacted with their advisors, if they were enrolled in an online program or in a traditional on-campus program, and the channels (e.g., e-mail messages, in-person) they used to communicate with their advisors. In terms of advisor-advisee interaction frequency, it seems likely that doctoral students who are pursuing STEM degrees may spend a significant amount of time conducting laboratory experiments with their advisors, which may increase their frequency of advisor-advisee interactions. Conversely, doctoral students pursuing liberal arts degrees are likely to spend most of their time reading and writing independently, which may decrease their frequency of advisor-advisee interaction.

Similarly, the type of program in which doctoral students are enrolled and the channels through which they interact with their advisors may be of particular importance when assessing their own use of relational maintenance behaviors and their advisors'

provision of mentoring support as the enactment of these behaviors generally requires face-to-face interactions between advisors and advisees. Thus, it is possible that doctoral students enrolled in online programs use relational maintenance behaviors less frequently or receive less mentoring support from their advisors than doctoral students enrolled in traditional on-campus programs. It also is possible that doctoral students enrolled in online programs use different types of relational maintenance behaviors with their advisors than doctoral students enrolled in on-campus programs. As previous relational maintenance studies (Johnson, 2001; Johnson, Haigh, Becker, Craig, & Wigley, 2008) indicate, individuals involved in long-distance relationships rely on different relational maintenance behaviors and use relational maintenance behaviors to a different extent than individuals involved in geographically close relationships. Similar findings may be found in the advisor-advisee relationship when examining the differences between doctoral students enrolled in online programs and doctoral students enrolled in traditional on-campus programs.

In fact, in this dissertation, two participants expressed concerns about their participation due to their enrollment in online doctoral programs. One participant suggested that an item should be added that asked respondents to identify the type of program (i.e., online or on-campus) in which they were enrolled as this participant believed that program type may affect advisors' and advisees' communicative behaviors whereas another participant stated that because some questions did not pertain to students enrolled in online programs, these questions were not answered.

The type of program in which doctoral students are enrolled may impact the channels through which they interact with their advisors such that students enrolled in online programs are likely to engage in mediated (e.g., e-mail, phone) interactions with their advisors whereas students enrolled in traditional on-campus programs may interact face-to-face with their

advisors. However, the channels through which advisees interact with their advisors also may be a function of trait-like characteristics and the reason for why advisees interact with their advisors. Recent research conducted by Keaten and Kelly (2008) indicates that students who perceive themselves as competent e-mail users generally develop positive attitudes toward using e-mail and consequently often rely on e-mail as a communication channel. Similarly, Kelly, Keaten, Hazel, and Williams (2010) found that reticent students who experience feelings of anxiety and inability to organize their thoughts in face-to-face interactions generally have positive attitudes toward Instant Messaging (IM) and therefore often rely on IM as a communication channel. However, the studies conducted by Kelly and her colleagues indicate further that when faced with a difficult personal situation, most people prefer traditional face-to-face interactions. Considering these findings, examining the extent to which advisors' and advisees' communicative behaviors differ based on interaction frequency, program type, and communication channels is warranted in future research endeavors.

The third limitation is that the data were collected primarily using self-report measures. Self-reports are subject to social-desirability biases (SDB; King & Bruner, 2000), and social-deceptive responses (i.e., honest, "but overly favorable self-presentations;" Fisher & Katz, 2000, p. 109), and they may be intrusive to the participants (Stayman & Aaker, 1993). However, online data collection tends to reduce SDB (Kreuter, Presser, & Tourangeau, 2008). To reduce SDB further, De Jong, Pieters, and Fox (2010) suggested that researchers should randomize the survey items whereas King and Bruner recommended that social science scholars include a SDB measure (e.g., Marlowe-Crowne Social Desirability Scale) and examine the extent to which this scale is correlated with the other scales used in survey research. Because approximately 25% of the participants completed the paper-and-

pencil version of the survey, it is possible that these participants' responses may have been influenced by SDB to a greater extent than the participants completing the online version of the survey. In fact, doctoral students who completed the paper-and-pencil version of the survey reported higher means scores on several variables than doctoral students who completed the online version of the survey.⁷ Thus, it may have been advantageous to this dissertation if the data were collected online solely.

The fourth limitation is the low Cronbach alpha coefficients obtained for advisors' relational satisfaction (i.e., .56), their self-reported provision of friendship ($\alpha = .49$) and collegial task support ($\alpha = .62$) to their advisees. Boyle and Harrison (1981) argued that low scale reliabilities may be due to (a) an insufficient number of items or (b) the wording of the items. Each of these instruments consisted of three or four items, which may have contributed to the low Cronbach alpha coefficients. In this dissertation, Moreover, because the mentoring instruments (i.e., Academic Mentoring Behavior Scale and Mentoring and Communication Support Scale) were developed to assess protégés' reports of their mentors' provision of mentoring support (i.e., other-reports), each item was rephrased to reflect advisors' reports of providing mentoring support (i.e., self-reports) to their advisees, which may have further contributed to the low reliabilities.

Future Directions

The results obtained in this dissertation, in conjunction with extant mentoring and relational maintenance research, are indicative of the need for additional research examining the use of relational maintenance behaviors in advisor-advisee mentoring relationships. The first step in extending this line of research is to examine the validity of the Advisee Relational Maintenance Scale (ARMS). Although the ARMS was developed inductively, which establishes content validity (Cronbach & Meehl, 1995; Waldron, 2003), additional

research examining the concurrent validity and construct validity of this instrument is warranted (Cronbach & Meehl).

Concurrent validity refers to the extent to which an instrument is correlated in a logical manner to other established instruments (Cronbach & Meehl, 1995; Kerlinger, 1986). One way to establish concurrent validity of the ARMS is to examine its relationship to the Advisor Working Alliance Inventory (AWAI) developed by Schlosser and Gelso (2001) and the Ideal Mentor Scale (IMS) developed by Rose (2003). The AWA consists of three factors (i.e., rapport, apprenticeship, and identification-individuation) used to assess the connection established between doctoral students and their advisors while working together. In their scale-development study, Schlosser and Gelso found that doctoral students who reported high scores on the AWA perceive their advisors as experts, trustworthy, and attractive. The IMS consists of three factors (i.e., integrity, guidance, and relationship) that doctoral students consider to be important characteristics of their mentors. Thus, it is likely that doctoral students' reports on the ARMS will be related positively to their reports on the AWA and the IMS.

Construct validity refers to the extent to which scores on an instrument can be predicted by theoretically driven hypotheses or underlying psychological constructs such as personality traits (Cronbach & Meehl, 1995; Kerlinger, 1986). One possible theoretical framework that can be used to examine the construct validity of the ARMS is Equity Theory. Previous relational maintenance studies (Messman et al., 2000; Stafford & Canary, 2006; Volg-Bauer et al., 1999) in friendships, marital relationships, and parent-child relationships, respectively, indicate that individuals who are involved in equitable relationships enact relational maintenance behaviors more frequently than individuals who are involved in inequitable relationships. As such, the construct validity of the ARMS can be assessed by

examining if advisees who are involved in more equitable mentoring relationships use relational maintenance behaviors more frequently than advisees who are involved less equitable mentoring relationships. In this dissertation, one doctoral student included a note along with the completed questionnaire which stated that the participant's advisor had submitted the student's work for publication without including the student as an author, which suggests that this student would likely perceive the advisor-advisee relationship as inequitable. Not surprisingly, this participant also reported low scores on the ARMS.

In terms of psychological constructs, communication apprehension consistently has been associated negatively with individuals' tendencies to communicate across relational contexts (Barraclough, Christophel, & McCroskey, 1988; Lucchetti, Powers, & Love, 2002; Martin & Myers, 2006; Martin, Valencic, & Heisel, 2002; Wheelless, 1984; McCroskey & Richmond, 1977) whereas communication competence has been associated positively with individuals' tendencies to communicate across relational contexts (Lee, 1988a, 1988b; Martin, Byrnes, & Myers, 2009; Sallinen-Kuparinen, McCroskey, & Richmond, 1991; Teven, Richmond, McCroskey & McCroskey, 2010), including academic mentoring relationships (Hawkins, 1991; Kalbfleisch & Davies, 1993). Thus, graduate students' scores on the ARMS should be related negatively to their reports of communication apprehension but related positively to their reports of communication competence, and may be one way in which construct validity of the ARMS can be established.

In addition to validating the ARMS, researchers also may consider examining the scale's utility in research utilizing samples of Masters degree students. In this dissertation, several participants indicated that their current advisor-advisee mentoring relationships began while they pursued their Masters degrees. It is therefore possible that Masters degree students' ability to develop and maintain positive relationships with their academic advisors

may influence their decisions to pursue a doctoral degree, their attitudes toward their academic careers, and their commitment to complete their degrees. In fact, graduate students' socialization into their academic career begins at the Masters level and continues throughout their doctoral education (Austin, 2002). Similarly, Green and Bauer (1995) found that second year doctoral students' academic commitment is best predicted by the level of commitment they reported when first starting their doctoral programs (i.e., after they had completed their Master degrees). Moreover, because both Masters degree students and doctoral students depend on their advisors and go through similar educational experiences (i.e., coursework, comprehensive exams, theses/dissertations; Girves & Wemmerus, 1988), it seems likely that Masters degree students also rely on the appreciation, courtesy, tasks, goals, and humor relational maintenance behaviors to sustain their advisor-advisee mentoring relationships. To explore these ideas, researchers should not only examine whether Masters degree students' use these relational maintenance behaviors with their advisors, but also the extent to which their use of relational maintenance affects their attitudes toward their academic careers and their abilities to socialize themselves into their academic departments.

Another potential area for future research may be to examine how advisees' use of relational maintenance behaviors with their advisors changes once they complete their doctoral degrees. Upon graduation, or shortly thereafter, the nature of the advisor-advisee relationship is likely to transition from the cultivation phase of the mentoring relationship to the separation and redefinition phases of mentoring relationships as discussed by Kram (1983). During the separation phase, mentors gradually reduce their provision of mentoring support to their protégés. Given the positive relationship that exists between advisees' use of relational maintenance behaviors and their perceptions of received mentoring support from their advisors, it is possible that advisees' use of the relational maintenance behaviors

identified in this this dissertation decrease during this phase of the relationship. During the redefinition phase, the mentoring relationship generally becomes a peer or friendship relationship with reduced power inequalities, which suggests that advisees may now rely on different types of relational maintenance behaviors to sustain their former advisor-advisee relationships. Nevertheless, it may be in the advisees' best interest to maintain their former advisor-advisee mentoring relationships as they begin their professional careers because junior faculty members who receive mentoring support generally are active researchers (Hill, Bahniuk, & Dobos, 1989). In fact, Roloff (2011) suggested that doctoral students often continue to publish with their advisors after they graduate.

Conclusion

During the past four decades, a continuously growing body of mentoring research has emerged. These studies have focused almost exclusively on the positive outcomes associated with doctoral students' involvement in mentoring relationships while neglecting to examine how these relationships are maintained. To address this concern, this dissertation sought to identify the relational behaviors (i.e., appreciation, courtesy, goals, tasks, and humor) used by advisees to maintain their advisor-advisee mentoring relationships. Advisees who use these behaviors report that their advisors provide them with mentoring support and both the advisors and the advisees report favorable perceptions of their involvement in a mentoring relationship. As such, advisees' use of relational maintenance behaviors not only sustains their advisor-advisee mentoring relationship but it also appeases their advisors, both of which are important aspects of successful mentoring relationships (Foss & Foss, 2008; Kalbfleisch, 1997).

NOTES

1. A total of 289 participants began to complete the survey. However, 81 of these participants failed to complete the entire survey and were therefore eliminated from all analyses. Thus, only the data provided by the 208 participants who completed the entire survey were analyzed.

2. Participants represented six academic departments. In descending order, these academic departments were Communication Studies ($n = 141$), Psychology ($n = 32$), Sociology ($n = 14$), Counseling ($n = 11$), Education ($n = 4$), and Public Health ($n = 1$).

3. Participants represented 47 academic departments. In descending order, these academic departments were Communication ($n = 72$), Psychology ($n = 38$), Leadership and Educational Leadership ($n = 30$), English ($n = 24$), Engineering ($n = 19$), Biology ($n = 14$), Anthropology ($n = 11$), Geography & Geology ($n = 9$), Nursing ($n = 9$), Social Work ($n = 9$), Forestry ($n = 8$), Agriculture ($n = 8$), Political Science ($n = 7$), Medicine ($n = 7$), Pharmacy & Pharmacology ($n = 6$), History ($n = 6$), Education ($n = 6$), Linguistics ($n = 6$), Horticulture ($n = 5$), Sociology ($n = 5$), Speech & Hearing ($n = 4$), Chemistry ($n = 4$), Computer Science ($n = 4$), Animal Science ($n = 4$), Comparative Studies ($n = 4$), Natural Resources ($n = 4$), Math ($n = 4$), Human Resource Education ($n = 3$), Journalism ($n = 3$), Wildlife & Fishery ($n = 3$), Physics ($n = 3$), Zoology ($n = 3$), Nutrition ($n = 3$), Business & Economics ($n = 3$), Women's Studies ($n = 2$), Slavic Languages ($n = 2$), Genetics ($n = 2$), Neuroscience ($n = 2$), Physical Education ($n = 2$), Advertising & Public Relations ($n = 2$), Music ($n = 2$), German ($n = 2$), Kinesiology ($n = 1$), Romance Languages ($n = 1$), TV, Film, & Radio ($n = 1$), Environmental Science ($n = 1$), and Philosophy ($n = 1$).

4. A total of 503 doctoral students began to complete the survey. However, 125 of these participants failed to complete the entire survey and were therefore eliminated from all analyses. Thus, only the data provided by the 378 participants who completed the entire survey were analyzed.

5. A total of 186 faculty members began to complete the survey. However, 45 of these participants failed to complete the entire survey and were therefore eliminated from all analyses. Thus, only the data provided by the 141 participants who completed the entire survey were analyzed.

6. The departments in which surveys were distributed at West Virginia University were: Aerospace and Mechanical Engineering, Agricultural Sciences, Anatomy, Biochemistry and Molecular Biology, Biology, Cancer Cell Biology, Cellular and Integrative Physiology, Chemical Engineering, Chemistry, Civil Engineering, Communication Studies, Computer Science and Electrical Engineering, Counseling Psychology, Curriculum and Instruction, Economics, Educational Leadership, Educational Psychology, Geography and Geology, English, Genetics, History, Immunology and Microbiology, Industrial Engineering, Instructional Design Technology, Kinesiology, Mathematics, Music, Neuroscience, Nursing, Occupational Safety and Health, Petroleum and Natural Gas, Pharmaceutical Science, Pharmacology, Physics, Physiology, Political Science, Psychology, Public Health Science, Reproductive Physiology, Resource Management and Sustainability, Special Education, and Sports and Exercise Physiology.

7. A MANOVA was conducted to determine if there were any differences between doctoral students who completed the online survey versus doctoral students who completed the paper-and-pencil (PAP) survey. The results revealed a significant model, *Wilk's Λ* = .28, $F(24, 40) = 4.22$, $p < .001$, $\eta^2 = .72$, power = 1.00. Univariate effects were found for control mutuality, $F(1, 63) = 38.10$, $p < .001$, $\eta^2 = .38$ power = 1.00, with participants completing the PAP version ($M = 30.05$, $SD = 3.98$) reporting higher mean scores than participants competing the online version ($M = 23.44$, $SD = 7.95$); courtesy, $F(1, 63) = 24.65$, $p < .001$, $\eta^2 = .28$, power = .99, with participants completing the PAP version ($M = 31.85$, $SD = 2.18$) reporting higher mean scores than participants competing the online version ($M = 20.82$, $SD = 9.79$); appreciation, $F(1, 63) = 14.72$, $p < .01$, $\eta^2 = .19$, power = .97, with participants completing the PAP version ($M = 24.45$, $SD = 7.49$) reporting higher mean scores than participants competing the online version ($M = 16.89$, $SD = 7.27$); tasks, $F(1, 63) = 22.99$, $p < .001$, $\eta^2 = .27$, power = 1.00, with participants completing the PAP version ($M = 23.40$, $SD = 3.66$) reporting higher mean scores than participants competing the online version ($M = 14.91$, $SD = 7.51$); goals, $F(1, 63) = 14.48$, $p < .001$, $\eta^2 = .19$, power = .96, with participants completing the PAP version ($M = 16.56$, $SD = 4.83$) reporting higher mean scores than participants competing the online version ($M = 10.76$, $SD = 5.96$); and humor $F(1, 63) = 21.11$, $p < .001$, $\eta^2 = .26$, power = 1.00, with participants completing the PAP version ($M = 11.25$, $SD = 2.81$) reporting higher mean scores than participants competing the online version ($M = 7.11$, $SD = 3.56$). A second MANOVA was conducted to determine if there were any differences between faculty members who completed the online survey versus faculty members who completed the PAP survey. The results did not reveal a significant model, *Wilk's Λ* = .61, $F(18, 30) = 1.06$, $p = .44$, $\eta^2 = .39$, power = .55.

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APPENDICIES

Appendix A: Phase One Questionnaire

Part I

Instructions: Please provide your answers to the following demographic questions by clicking the option that most accurately describes you or by typing your answers in the provided textbox.

1. I am a Male Female
2. How old are you? _____
3. Through which department will you earn your degree? _____
4. I am a(n) Ph.D. student Ed.D. student
5. How many months have you been enrolled in this program? _____
6. Are you currently ABD? Yes No
7. Do you receive funding to support your graduate studies? Yes No

If you answered “Yes” to the previous question, please check all of the following that applies to you.

- Teaching assistantship
 - Research assistantship
 - Academic fellowship
 - Other, please specify _____
8. Is your funding tied to your advisor? Yes No
 9. My primary interest is Teaching Research
 10. My advisor is a Male Female
 11. My advisor is a(n) Assistant Professor Associate Professor Full Professor
 12. How many months have you been involved in your current advisor-advisee relationship?
 13. Who initiated this advisor-advisee relationship? I did My advisor My department
 14. Have you changed advisors at any time during your doctoral program? Yes No
- If you answered “Yes” to the previous question, how many previous advisors have you had while in this program? ____

Part II

Instructions: In this part you are asked to answer two questions that focus on what you say and do to maintain a positive relationship with your advisor. For each question, please write as many answers as possible in the textbox provided. Do not list things that you think you should say and do or things that you said or did at one time but no longer say or do. That is, think about the everyday and occasional things you currently say and do in your relationship with your advisor. Remember that what you say and do to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently.

Question 1

What do you **say** to maintain a positive relationship with your advisor?

Question 2

What do you **do** to maintain a positive relationship with your advisor?

Appendix B: Phase One Recruitment E-mail

Dear Doctoral Student:

My name is Daniel H. Mansson and I am a doctoral candidate in the Department of Communication Studies at West Virginia University. I am working on my dissertation in which I plan to examine doctoral students' use of relational maintenance behaviors with their advisors.

I realize that you are very busy, but I would really appreciate your participation in this study. Participation will take approximately 10 minutes and it is anonymous. This is a voluntary research study and West Virginia University's Institutional Review Board (IRB) has acknowledgement of this study on file.

To qualify for participation, you must (a) be a full-time doctoral student and (b) have a faculty advisor.

To participate, please click on the hyperlink at the end of this e-mail message.

Please forward this e-mail message to at least two of your friends or acquaintances who qualify for participation in this study.

If you have any questions about this study, please do not hesitate to contact me.

Thank you for your participation.

Click here to participate (Insert hyperlink)

Sincerely,

Daniel H. Mansson
108 Armstrong Hall, P.O. 6293
Department of Communication Studies
West Virginia University
Morgantown, WV 26506-6293
(304) 293-3905 (office)
dmansson@mix.wvu.edu

Appendix C: Phase One Cover Letter



Dear Participant:

You are being asked to participate in this research study conducted by Principal Investigator Dr. Scott A. Myers and Co-Investigator Daniel H. Mansson in the Department of Communication Studies at West Virginia University. This is a professional study in which doctoral students' use of relational maintenance behaviors with their academic advisors will be examined. You must 18 years old or older, be enrolled as a full-time doctoral student, and have a faculty advisor to participate in the study.

Participation in study is anonymous. Do not enter your name anywhere on the online questionnaire or identify yourself in any way (other than the demographic information included in the questionnaire) to ensure that you remain anonymous. Please complete the questionnaire independently and **be sure to read the instructions for each section carefully and answer all questions to the best of your ability**. There is no right or wrong answer. You may skip certain questions if you want and you may stop completing the questionnaire at any time without fear of penalty. Your actual performance in this study or your refusal to participate or withdrawal from this study will in no way affect your class standing, grades, job status, or status in any athletic or other activity associated with your university. There are no known risks associated with participation in this study. It should take approximately 10 minutes to complete this questionnaire. If at any time, you feel that completing this questionnaire will cause physical or psychological discomfort or pain, please don't complete the questionnaire.

If you would like more information about this research project, feel free to contact the Principal Investigator Dr. Scott A. Myers or the Co-Investigator Daniel H. Mansson at 304-293-3905 or by e-mail. This study has been acknowledged by West Virginia University's Institutional Review Board and assigned the tracking number, H # 22567.

Thank you for your participation.

Sincerely,

Scott A. Myers, Ph.D.
Principal Investigator
smyers@mail.wvu.edu

Daniel H. Mansson
Co-Investigator
dmansson@mix.wvu.edu

Appendix D: Phase Two CRTNET Recruitment Announcement

Dear Doctoral Student:

My name is Daniel H. Mansson and I am a doctoral candidate in the Department of Communication Studies at West Virginia University. I am working on my dissertation in which I plan to examine doctoral students' use of relational maintenance behaviors with their advisors.

I realize that you are very busy, but I would really appreciate your participation in this study. Participation will take approximately 10 minutes and it is anonymous. This is a voluntary research study and West Virginia University's Institutional Review Board (IRB) has acknowledgement of this study on file.

To qualify for participation, you must (a) be a full-time doctoral student, (b) have a faculty advisor, and (c) have not participated in the first part of this study in which the participants received a recruitment e-mail message directly from me or from one of their friends/acquaintances.

To participate, please click on the hyperlink at the end of this announcement.

If you have any questions regarding this study, please do not hesitate to contact me.

Thank you for your participation.

Click here to participate: www.surveymonkey.com/s/advisees

Sincerely,

Daniel H. Mansson
108 Armstrong Hall, P.O. 6293
Department of Communication Studies
West Virginia University
Morgantown, WV 26506-6293
(304) 293-3905 (office)
dmansson@mix.wvu.edu

Appendix E: Phase Two Cover Letter



Dear Participant:

You are being asked to participate in this research study conducted by Principal Investigator Dr. Scott A. Myers and Co-Investigator Daniel H. Mansson in the Department of Communication Studies at West Virginia University. This is a professional study in which doctoral students' use of relational maintenance behaviors with their academic advisors will be examined. You must 18 years old or older, be enrolled as a full-time doctoral student, have a faculty advisor, and have not participated in the first part of this study in order to participate in the study.

Participation in study is anonymous. Do not enter your name anywhere on the online questionnaire or identify yourself in any way (other than the demographic information included in the questionnaire) to ensure that you remain anonymous. Please complete the questionnaire independently and **be sure to read the instructions for each section carefully and answer all questions to the best of your ability**. There is no right or wrong answer. You may skip certain questions if you want and you may stop completing the questionnaire at any time without fear of penalty. Your actual performance in this study or your refusal to participate or withdrawal from this study will in no way affect your class standing, grades, job status, or status in any athletic or other activity associated with your university. There are no known risks associated with participation in this study. It should take approximately 10 minutes to complete this questionnaire. If at any time, you feel that completing this questionnaire will cause physical or psychological discomfort or pain, please don't complete the questionnaire.

If you would like more information about this research project, feel free to contact the Principal Investigator Dr. Scott A. Myers or the Co-Investigator Daniel H. Mansson at 304-293-3905 or by e-mail. This study has been acknowledged by West Virginia University's Institutional Review Board and assigned the tracking number, H # 22567.

Thank you for your participation.

Sincerely,

Scott A. Myers, Ph.D.
Principal Investigator
smyers@mail.wvu.edu

Daniel H. Mansson
Co-Investigator
dmansson@mix.wvu.edu

Appendix F: Phase Two Questionnaire

Part I

Instructions: Please provide your answers to the following demographic questions by clicking the option that most accurately describes you or by typing your answers in the provided textbox.

1. I am a Male Female
2. How old are you? _____
3. Through which department will you earn your degree? _____
4. I am a(n) Ph.D. student Ed.D. student
5. How many months have you been enrolled in this program? _____
6. Are you currently ABD? Yes No
7. Do you receive funding to support your graduate studies? Yes No

If you answered “Yes” to the previous question, please check all of the following that applies to you.

- Teaching assistantship
 - Research assistantship
 - Academic fellowship
 - Other, please specify _____
8. Is your funding tied to your advisor? Yes No
 9. My primary interest is Teaching Research
 10. My advisor is a Male Female
 11. My advisor is a(n) Assistant Professor Associate Professor Full Professor
 12. How many months have you been involved in your current advisor-advisee relationship?
 13. Who initiated this advisor-advisee relationship? I did My advisor My department
 14. Have you changed advisors at any time during your doctoral program? Yes No
- If you answered “Yes” to the previous question, how many previous advisors have you had while in this program? _____

Part II

Instructions: The following statements describe things that doctoral students might say and do to maintain their relationships with their advisors. Please indicate the extent to which each of the following statements accurately reflects the way that you maintain your relationship with your advisor. Do not indicate agreement with things that you think you should do or with things that you did at one time but no longer do. That is, think about the everyday things you currently say and do in your relationship with your advisor. Remember that what you say and do to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently.

Each behavior retained from phase one was listed followed by the response format as exemplified below.

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Somewhat Disagree
- 4 = Neither Agree nor Disagree
- 5 = Somewhat Agree
- 6 = Agree
- 7 – Strongly Agree

Appendix G: Phase Three Recruitment Letter to Doctoral Students

Dear Doctoral Student:

My name is Daniel H. Mansson and I am a doctoral candidate in the Department of Communication Studies at West Virginia University. I am working on my dissertation in which I plan to examine doctoral students' use of relational maintenance behaviors with their advisors.

I realize that you are very busy, but I would really appreciate your participation in this study, which will take roughly 20 minutes. Participation is anonymous. This is a voluntary research study and West Virginia University's Institutional Review Board (IRB) has acknowledgement of this study on file.

To qualify for participation, you must (a) be a full-time doctoral student, (b) have a faculty advisor, and (c) have not participated in the first or second part of this study which were conducted online via SurveyMonkey.

Attached you will find two questionnaires. The first is titled "Student Version" and the second is titled "Faculty Member Version." Please complete the questionnaire titled "Student Version" and return to Daniel H. Mansson via campus mail using the addressed return envelope attached to the questionnaire.

Please give the questionnaire titled "Faculty Member Version" to you advisor and ask him/her to please complete the questionnaire and return to Daniel H. Mansson via campus mail using the addressed return envelope attached to the questionnaire.

If you have any questions regarding this study, please do not hesitate to contact me.

Thank you for your participation.

Sincerely,

Daniel H. Mansson
108 Armstrong Hall, P.O. 6293
Department of Communication Studies
West Virginia University
Morgantown, WV 26506-6293
(304) 293-3905 (office)
dmansson@mix.wvu.edu

Appendix H: Phase Three Doctoral Student Cover Letter



Dear Doctoral Student:

You are being asked to participate in this study conducted by Principal Investigator Dr. Scott A. Myers and Co-Investigator Daniel H. Mansson in the Department of Communication Studies at West Virginia University. This is a professional study in which the advisor-advisee relationship between graduate faculty members and doctoral students will be examined. You must 18 years old or older, be enrolled as a full-time doctoral student, have a faculty advisor, and have not participated in the first or second part of this study in order to participate. Please complete the questionnaire in reference to your relationship with your advisor and return your completed questionnaire via campus mail using the prepaid and addressed return envelope. This cover letter is yours to keep and should not be returned with the questionnaire.

Participation in study is anonymous. Do not enter your name anywhere on the online questionnaire or identify yourself in any way (other than the demographic information included in the questionnaire) to ensure that you remain anonymous. Please complete the questionnaire independently and **be sure to read the instructions for each section carefully and answer all questions to the best of your ability**. There is no right or wrong answer. You may skip certain questions if you want and you may stop completing the questionnaire at any time without fear of penalty. Your actual performance in this study or your refusal to participate or withdrawal from this study will in no way affect your class standing, grades, job status, or status in any athletic or other activity associated with your university. There are no known risks associated with participation in this study. It should take approximately 20 minutes to complete this questionnaire. If at any time, you feel that completing this questionnaire will cause physical or psychological discomfort or pain, please don't complete the questionnaire.

If you would like more information about this research project, feel free to contact the Principal Investigator Dr. Scott A. Myers or the Co-Investigator Daniel H. Mansson at 304-293-3905 or by e-mail. This study has been acknowledged by West Virginia University's Institutional Review Board and assigned the tracking number, H # 22707.

Thank you for your participation.

Sincerely,

Scott A. Myers, Ph.D.
Principal Investigator
smyers@mail.wvu.edu

Daniel H. Mansson
Co-Investigator
dmansson@mix.wvu.edu

Appendix I: Phase Three Doctoral Student Questionnaire

Part I

Instructions: Please provide your answers to the following demographic questions by checking the option that most accurately describes you or by writing your answers on the lines provided.

1. I am a Male Female
2. How old are you? _____
3. Through which department will you earn your degree? _____
4. I am a(n) Ph.D. student Ed.D. student
5. How many months have you been enrolled in this program? _____
6. Are you currently ABD? Yes No
7. Do you receive funding to support your graduate studies? Yes No

If you answered “Yes” to the previous question, please check all of the following that applies to you.

- Teaching assistantship
 - Research assistantship
 - Academic fellowship
 - Other, please specify _____
8. Is your funding tied to your advisor? Yes No
 9. My primary interest is Teaching Research
 10. After graduation, my goal is to become a faculty member at a college/university. Yes No
 11. My advisor is a Male Female
 12. My advisor is a(n) Assistant Professor Associate Professor Full Professor
 13. How many months have you been involved in your current advisor-advisee relationship?
 14. Who initiated this advisor-advisee relationship? I did My advisor My department
 15. Have you changed advisors at any time during your doctoral program? Yes No
- If you answered “Yes” to the previous question, how many previous advisors have you had while in this program? _____

Part II

Instructions: For each of the following scales, please read the instructions and descriptions provided in the grey boxes carefully and follow the response format indicated for each scale. Complete all scales in reference to your relationship with your advisor.

Instructions and description: The following items focus on the type and amount of mentoring support your advisor provides you. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = neither agree nor disagree
 4 = agree
 5 = strongly agree

- ___ 1. My advisor offers assistance with publications and creative activities.
- ___ 2. My advisor helps me to be more visible within my academic discipline.
- ___ 3. My advisor frequently works on research projects and/or participates in creative activities with me.
- ___ 4. My advisor frequently edits my work and helps me prepare manuscripts for presentation and publication.
- ___ 5. My advisor uses her/his influence within the department for my benefit.
- ___ 6. When necessary, my advisor “runs interference” on my behalf.
- ___ 7. My advisor protects me from situations or individuals that could have a negative impact on my career.
- ___ 8. My advisor protects me from individuals who attempt to damage my academic progress.
- ___ 9. My advisor and I frequently socialize together outside of the work environment.
- ___ 10. My advisor and I frequently socialize together (e.g., have lunch, coffee breaks, social conversation) during work hours.
- ___ 11. My advisor suggests specific strategies for achieving my career goals.
- ___ 12. My advisor explains (i.e., helps me learn about) the political realities of working in my intended future career.
- ___ 13. My advisor offers specific advice about how to advance my career after I graduate.
- ___ 14. My advisor provides support and encouragement.
- ___ 15. My advisor is someone I can trust.

- ___ 16. My advisor has placed me in important assignments or positions.
- ___ 17. My advisor frequently devotes extra time and consideration to me.
- ___ 18. My advisor has shown a parental-like interest in me and my career.
- ___ 19. I receive special attention from my advisor.
- ___ 20. My advisor has taught me the informal rules of the department.
- ___ 21. My advisor has taught me strategies for influencing other departmental members.
- ___ 22. My advisor has coached me about office politics.
- ___ 23. My advisor and I are friends as well as coworkers.
- ___ 24. My advisor frequently listens to my personal problems.
- ___ 25. My advisor shares confidences with me.
- ___ 26. My advisor frequently provides me with constructive criticism.
- ___ 27. My advisor assists me in accomplishing assigned tasks.
- ___ 28. My advisor frequently provides me with compliments and positive feedback.
- ___ 29. My advisor and I work jointly on major projects or studies.
- ___ 30. My advisor and I frequently share ideas with each other.

Instructions and description: The following items focus on the how much you like your advisor. For each word pair, please circle the number that most accurately describes your perception of your advisor.

In my opinion, my advisor is...

31. Likable	7	6	5	4	3	2	1	Dislikable
32. Interesting	7	6	5	4	3	2	1	Boring
33. Friendly	7	6	5	4	3	2	1	Unfriendly
34. Pleasant	7	6	5	4	3	2	1	Unpleasant
35. Sincere	7	6	5	4	3	2	1	Phony
36. Thoughtful	7	6	5	4	3	2	1	Thoughtless
37. Kind	7	6	5	4	3	2	1	Unkind
38. Courteous	7	6	5	4	3	2	1	Rude
39. Humorous	7	6	5	4	3	2	1	Humorless
40. Respectable	7	6	5	4	3	2	1	Not respectable

Instructions and description: The following items focus on how satisfied you are with your interactions with your advisor and how satisfied you are with your relationship with your advisor. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = somewhat disagree
 4 = neither agree nor disagree
 5 = somewhat agree
 6 = agree
 7 = strongly agree

- ___ 41. My communication with my advisor feels satisfying.
- ___ 42. I dislike talking to my advisor.
- ___ 43. I am not satisfied after talking with my advisor.
- ___ 44. Talking with my advisor leaves me feeling like I accomplished something.
- ___ 45. My advisor fulfills my expectations when I talk to him/her.
- ___ 46. My conversations with my advisor are worthwhile.
- ___ 47. When I talk to my advisor, my conversations are rewarding.
- ___ 48. My advisor makes an effort to satisfy the concerns I have when I talk to him/her.
- ___ 49. I am satisfied with my relationship with my advisor.
- ___ 50. My relationship with my advisor is rewarding.
- ___ 51. I would not want to do anything that would hurt my relationship with my advisor.

Instructions and description: The following items focus on how much you trust your advisor. For each word pair, please circle the number that most accurately describes your perception of your advisor.

In my opinion, my advisor is...

- | | | | | | | |
|------------------|---|---|---|---|---|---------------|
| 52. Trustworthy | 5 | 4 | 3 | 2 | 1 | Untrustworthy |
| 53. Trustful | 5 | 4 | 3 | 2 | 1 | Distrustful |
| 54. Confidential | 5 | 4 | 3 | 2 | 1 | Divulging |
| 55. Benevolent | 5 | 4 | 3 | 2 | 1 | Exploitive |

56. Safe	5	4	3	2	1	Dangerous
57. Candid	5	4	3	2	1	Deceptive
58. Not deceitful	5	4	3	2	1	Deceitful
59. Straight-forward	5	4	3	2	1	Tricky
60. Respectful	5	4	3	2	1	Disrespectful
61. Considerate	5	4	3	2	1	Inconsiderate
62. Honest	5	4	3	2	1	Dishonest
63. Reliable	5	4	3	2	1	Unreliable
64. Faithful	5	4	3	2	1	Unfaithful
65. Sincere	5	4	3	2	1	Insincere
66. Careful	5	4	3	2	1	Careless

Instructions and description: The following items focus on your level of work commitment. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = somewhat disagree
 4 = neither agree nor disagree
 5 = somewhat agree
 6 = agree
 7 = strongly agree

- ___ 67. I do not feel a strong sense of belonging to my department.
- ___ 68. I do not feel “emotionally attached” to my department.
- ___ 69. My department has a great deal of personal meaning to me.
- ___ 70. I do not feel like I am “part of the family” in my department.
- ___ 71. I would be very happy to spend the rest of my career in this department.
- ___ 72. I enjoy discussing my department with people outside of it.
- ___ 73. I really feel as if this department’s problems are my own.
- ___ 74. I think I could easily become as attached to another department as I am to this one.

Instructions and description: The following items focus on how well you and your advisor agree on who makes decisions in your relationship. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
- 2 = disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = agree
- 7 = strongly agree

In my relationship with my advisor...

___ 75. Both of us are satisfied with the way we handle decisions between us.

___ 76. We agree on what we can expect from one another.

___ 77. We are attentive to each other's comments.

___ 78. We both have an equal say.

___ 79. We are cooperative with each other.

___ 80. I feel like my advisor ignores my feelings and opinions.

Instructions and description: The following items focus on how certain you are about your relationship with your advisor. Using the scale below, please write your answer to each question.

- 1 = completely or almost completely uncertain
- 2 = mostly uncertain
- 3 = slightly more uncertain than certain
- 4 = slightly more certain than uncertain
- 5 = mostly certain
- 6 = completely or almost completely certain

___ 81. What you can or cannot say to each other?

___ 82. The boundaries for appropriate and/or appropriate behavior?

___ 83. The norms for this relationship?

___ 84. How you can and cannot behave around your advisor?

___ 85. Whether you and your advisor feel the same way about each other?

___ 86. How you and your advisor view this relationship?

___ 87. Whether or not your advisor likes you as much as you like him or her.

___ 88. The current status of the relationship?

- ___ 89. The definition of this relationship?
- ___ 90. How you and your advisor would describe the relationship?
- ___ 91. The state of this relationship at this time?
- ___ 92. Whether or not you and your advisor will stay together?
- ___ 93. The future of the relationship?
- ___ 94. Whether or not this relationship will end soon?
- ___ 95. Where this relationship is going?

Instructions and description: The following items describe things that doctoral students might say and do to maintain their relationships with their advisors. Please indicate the extent to which each of the following statements accurately reflects the way that you maintain your relationship with your advisor. Do not indicate agreement with things that you think you should do or with things that you did at one time but no longer do. That is, think about the everyday things you currently say and do in your relationship with your advisor. Remember that what you say and do to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently. Using the response format below, please mark your answers in the blank space provided.

- 1 = Strongly Disagree
 2 = Disagree
 3 = Somewhat Disagree
 4 = Neither Agree nor Disagree
 5 = Somewhat Agree
 6 = Agree
 7 = Strongly Agree

- ___ 96. I tell my advisor that I am excited about working with him/her.
- ___ 97. I tell my advisor that I am happy about working with him/her.
- ___ 98. I tell my advisor that his/her opinions matter to me.
- ___ 99. I tell my advisor that I trust his/ her guidance.
- ___ 100. I tell my advisor that I really like having him/her as my advisor.
- ___ 101. I tell my advisor that I enjoy working with him/her.
- ___ 102. I work hard on the tasks my advisor assigns me.
- ___ 103. I fulfill my advisor's requests in a timely manner.
- ___ 104. I do not lie or make promises to my advisor that I cannot keep.
- ___ 105. I meet my advisor's deadlines.
- ___ 106. I make sure I diligently complete the projects my advisor assigns me.
- ___ 107. I speak well of my advisor to other faculty members.

- ___ 108. I avoid gossiping about my advisor.
- ___ 109. I defend my advisor when others complain about him/her.
- ___ 110. I avoid criticizing my advisor to other students.
- ___ 111. I am respectful toward my advisor.
- ___ 112. I am considerate toward my advisor.
- ___ 113. I am polite toward my advisor.
- ___ 114. I am professional when talking with my advisor.
- ___ 115. I laugh around my advisor.
- ___ 116. I use humor when talking with my advisor.
- ___ 117. I socialize with my advisor at department parties.
- ___ 118. I ask my advisor for advice and feedback on my future plans.
- ___ 119. I talk to my advisor about what I consider are realistic goals within the program.
- ___ 120. I talk to my advisor about what I consider are realistic goals after I leave the program.

Instructions and description: The following items focus on your research productivity while in your current advisor-advisor relationship. Write your answer to each question in the space provided.

While in your current advisor-advisee relationship...

121. How many published manuscripts (either empirical or otherwise) have you authored or coauthored in a refereed journal? (include manuscripts in press)
122. How many unpublished empirical manuscripts have you authored or coauthored (not including your thesis or dissertation)?
123. How many articles have you submitted to refereed journals?
124. How many manuscripts are you currently in the process of preparing to submit for publication (i.e., writing the manuscript)?
125. How many presentations have you made at local, regional, or national conventions?
126. How many presentations are you currently in the process of preparing to submit for presentation (i.e., writing an abstract)?
127. How many local, regional, or national research conventions have you attended?

Thank you for participating

Appendix J: Phase Three Faculty Member Cover Letter



Dear Faculty Member:

You are being asked to participate in this study conducted by Principal Investigator Dr. Scott A. Myers and Co-Investigator Daniel H. Mansson in the Department of Communication Studies at West Virginia University. This is a professional study in which the advisor-advisee relationship between graduate faculty members and doctoral students will be examined. You must 18 years old or older, be a graduate faculty member, and serve as advisor to the student who gave you this questionnaire in order to participate in the study. Please complete the questionnaire in reference to your relationship with the student who gave you this questionnaire and return your completed questionnaire via campus mail using the prepaid and addressed return envelope. This cover letter is yours to keep and should not be returned with the questionnaire.

Participation in study is anonymous. Do not enter your name anywhere on the online questionnaire or identify yourself in any way (other than the demographic information included in the questionnaire) to ensure that you remain anonymous. Please complete the questionnaire independently and **be sure to read the instructions for each section carefully and answer all questions to the best of your ability**. There is no right or wrong answer. You may skip certain questions if you want and you may stop completing the questionnaire at any time without fear of penalty. Your actual performance in this study or your refusal to participate or withdrawal from this study will in no way affect your class standing, grades, job status, or status in any athletic or other activity associated with your university. There are no known risks associated with participation in this study. It should take approximately 20 minutes to complete this questionnaire. If at any time, you feel that completing this questionnaire will cause physical or psychological discomfort or pain, please don't complete the questionnaire.

If you would like more information about this research project, feel free to contact the Principal Investigator Dr. Scott A. Myers or the Co-Investigator Daniel H. Mansson at 304-293-3905 or by e-mail. This study has been acknowledged by West Virginia University's Institutional Review Board and assigned the tracking number, H # 22707.

Thank you for your participation.

Sincerely,

Scott A. Myers, Ph.D.
Principal Investigator
smyers@mail.wvu.edu

Daniel H. Mansson
Co-Investigator
dmansson@mix.wvu.edu

Appendix K: Phase Three Faculty Member Questionnaire

Part I

Instructions: Please provide your answers to the following demographic questions by checking the option that most accurately describes you or by writing your answers on the lines provided.

1. I am a Male Female
2. How old are you? _____
3. My primary interest is Teaching Research
4. How long have you been employed as a faculty member at West Virginia University? ____
5. For how many doctoral students have you served as the advisor? _____
6. How many years of experience do you have advising doctoral students? _____

Part II

Instructions: For each of the following scales, please read the instructions and description carefully and follow the response format indicated for each scale. Complete all scales in reference to your relationship with your advisee who gave you this questionnaire..

Instruction and description: The following items focus on the type and amount of mentoring support you provide to your advisee. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = neither agree nor disagree
 4 = agree
 5 = strongly agree

- ____ 1. I offer my advisee assistance with publications and creative activities.
- ____ 2. I help my advisee to be more visible within his/her academic discipline.
- ____ 3. I frequently work on research projects and/or participate in creative activities with my advisee.
- ____ 4. I frequently edit my advisee's work and help him/her prepare manuscripts for presentation and publication.

- 5. I use my influence within the department for my advisee's benefit.
- 6.. When necessary, I "run interference" on my advisee's behalf.
- 7. I protect my advisee from situations or individuals that could have a negative impact on his/her career.
- 8. I protect my advisee from individuals who attempt to damage his/her academic progress.
- 9. I frequently socialize with my advisee outside of the work environment.
- 10. I frequently socialize with my advisee (e.g., have lunch, coffee breaks, social conversation) during work hours.
- 11. I suggest specific strategies for my advisee to achieve his/her career goals.
- 12. I explain (i.e., help him/her learn about) the political realities of working in his/her intended future career.
- 13. I offer my advisee specific advice to advance his/her future career.
- 14. I provide support and encouragement to my advisee.
- 15. My advisee can trust me.
- 16. I have placed my advisee in important assignments or positions.
- 17. I frequently devote extra time and consideration to my advisee.
- 18. I have shown a parental-like interest in my advisee and his/her career.
- 19. I devote special attention to my advisee.
- 20. I have taught my advisee the informal rules of the department.
- 21. I have taught my advisee strategies for influencing other departmental members.
- 22. I have coached my advisee about office politics.
- 23. My advisee and I are friends as well as coworkers.
- 24. I frequently listen to my advisee's personal problems.
- 25. I share confidences with my advisee.
- 26 I frequently provide my advisee with constructive criticism.
- 27. I assist my advisee in accomplishing assigned tasks
- 28. I frequently provide my advisee with compliments and positive feedback.
- 29.. My advisee and I work jointly on major projects or studies.
- 30. My advisee and I frequently share ideas with each other.

Instructions and description: The following items focus on the how much you like your advisee. For each word pair, please circle the number that most accurately describes your perception of your advisee.

In my opinion, my advisee is...

31. Likable	7	6	5	4	3	2	1	Dislikable
32. Interesting	7	6	5	4	3	2	1	Boring
33. Friendly	7	6	5	4	3	2	1	Unfriendly
34. Pleasant	7	6	5	4	3	2	1	Unpleasant
35. Sincere	7	6	5	4	3	2	1	Phony
36. Thoughtful	7	6	5	4	3	2	1	Thoughtless
37. Kind	7	6	5	4	3	2	1	Unkind
38. Courteous	7	6	5	4	3	2	1	Rude
39. Humorous	7	6	5	4	3	2	1	Humorless
40. Respectable	7	6	5	4	3	2	1	Not respectable

Instructions and description: The following items focus on how satisfied you are with your interactions with your advisee and how satisfied you are with your relationship with your advisee. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
- 2 = disagree
- 3 = somewhat disagree
- 4 = neither agree nor disagree
- 5 = somewhat agree
- 6 = agree
- 7 = strongly agree

___ 41. My communication with my advisee feels satisfying.

___ 42. I dislike talking to my advisee.

___ 43. I am not satisfied after talking with my advisee.

___ 44. Talking with my advisee leaves me feeling like I accomplished something.

___ 45. My advisee fulfills my expectations when I talk to him/her.

___ 46. My conversations with my advisee are worthwhile.

- ___ 47. When I talk to my advisee, my conversations are rewarding.
- ___ 48. My advisee makes an effort to satisfy the concerns I have when I talk to him/her.
- ___ 49. I am satisfied with my relationship with my advisee.
- ___ 50. My relationship with my advisee is rewarding.
- ___ 51. I would not want to do anything that would hurt my relationship with my advisee.

Instructions and description: The following items focus on how much you trust your advisee. For each word pair, please circle the number that most accurately describes your perception of your advisee.

In my opinion, my advisee is...

52. Trustworthy	5	4	3	2	1	Untrustworthy
53. Trustful	5	4	3	2	1	Distrustful
54. Confidential	5	4	3	2	1	Divulging
55. Benevolent	5	4	3	2	1	Exploitive
56. Safe	5	4	3	2	1	Dangerous
57. Candid	5	4	3	2	1	Deceptive
58. Not deceitful	5	4	3	2	1	Deceitful
59. Straight-forward	5	4	3	2	1	Tricky
60. Respectful	5	4	3	2	1	Disrespectful
61. Considerate	5	4	3	2	1	Inconsiderate
62. Honest	5	4	3	2	1	Dishonest
63. Reliable	5	4	3	2	1	Unreliable
64. Faithful	5	4	3	2	1	Unfaithful
65. Sincere	5	4	3	2	1	Insincere
66. Careful	5	4	3	2	1	Careless

Instructions and description: The following items focus on your level of work commitment. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = somewhat disagree
 4 = neither agree nor disagree
 5 = somewhat agree
 6 = agree
 7 = strongly agree

- ___ 67. I do not feel a strong sense of belonging to my department.
- ___ 68. I do not feel “emotionally attached” to my department.
- ___ 69. My department has a great deal of personal meaning to me.
- ___ 70. I do not feel like I am “part of the family” in my department.
- ___ 71. I would be very happy to spend the rest of my career in this department.
- ___ 72. I enjoy discussing my department with people outside of it.
- ___ 73. I really feel as if this department’s problems are my own.
- ___ 74. I think I could easily become as attached to another department as I am to this one.

Instructions and description: The following items focus on how well you and your advisee agree on who makes decisions in your relationship. Based on the response format below, please write your answer to each statement on the blank line to the left of each statement.

- 1 = strongly disagree
 2 = disagree
 3 = somewhat disagree
 4 = neither agree nor disagree
 5 = somewhat agree
 6 = agree
 7 = strongly agree

In my relationship with my advisee...

- ___ 75. Both of us are satisfied with the way we handle decisions between us.
- ___ 76. We agree on what we can expect from one another.
- ___ 77. We are attentive to each other’s comments.
- ___ 78. We both have an equal say.
- ___ 79. We are cooperative with each other.
- ___ 80. I feel like my advisee ignores my feelings and opinions.

Instructions and description: The following items focus on how certain you are about your relationship with your advisee. Using the scale below, please write your answer to each question in the space provided.

- 1 = completely or almost completely uncertain
2 = mostly uncertain
3 = slightly more uncertain than certain
4 = slightly more certain than uncertain
5 = mostly certain
6 = completely or almost completely certain

___ 81. What you can or cannot say to each other?

___ 82. The boundaries for appropriate and/or appropriate behavior?

___ 83. The norms for this relationship?

___ 84. How you can and cannot behave around your advisee?

___ 85. Whether you and your advisee feel the same way about each other?

___ 86. How you and your advisee view this relationship?

___ 87. Whether or not your advisee likes you as much as you like him or her.

___ 88. The current status of the relationship?

___ 89. The definition of this relationship?

___ 90. How you and your advisee would describe the relationship?

___ 91. The state of this relationship at this time?

___ 92. Whether or not you and your advisee will stay together?

___ 93. The future of the relationship?

___ 94. Whether or not this relationship will end soon?

___ 95. Where this relationship is going?

Instructions and description: The following items describe things that doctoral students might say and do to maintain their relationships with their advisors. Please indicate the extent to which each of the following statements accurately reflects the way your advisee maintains your advisor-advisee relationship. Do not indicate agreement with things that you think he/she should do or with things that he/she did at one time but no longer does. That is, think about the everyday things he/she currently says and does in your relationship. Remember that what he/she says and does to maintain your relationship can involve mundane or routine aspects of day-to-day life as well as strategic or intentional aspects that occur less frequently. Using the response format below, please mark your answers in the blank space prided next to each statement.

- 1 = Strongly Disagree
 2 = Disagree
 3 = Somewhat Disagree
 4 = Neither Agree nor Disagree
 5 = Somewhat Agree
 6 = Agree
 7 = Strongly Agree

96. My advisee tells me that s/he is excited about working with me.
97. My advisee tells me that s/he is happy about working with me.
98. My advisee tells me that my opinions matter to him/her.
99. My advisee tells me that s/he trusts my guidance.
100. My advisee tells me that s/he really likes having me as his/her advisor.
101. My advisee tells me that s/he enjoys working with me.
102. My advisee works hard on the tasks I assigns him/her.
103. My advisee fulfills my requests in a timely manner.
104. My advisee does not lie or make promises to me that s/he cannot keep.
105. My advisee meets my deadlines.
106. My advisee makes sure s/he diligently completes the projects I assign him/her.
107. My advisee speaks well of me to other faculty members.
108. My advisee avoids gossiping about me.
109. My advisee defends me when others complain about me.
110. My advisee avoids criticizing me to other students.
111. My advisee is respectful toward me.
112. My advisee is considerate toward me.
113. My advisee is polite toward me.

- 114. My advisee is professional when talking with me.
- 115. My advisee laughs around me.
- 116. My advisee uses humor when talking with me.
- 117. My advisee socializes with me at department parties.
- 118. My advisee asks me for advice and feedback on his/her future plans.
- 119. My advisee talks to me about what s/he considers are realistic goals within the program.
- 120. My advisee talks to me about what s/he considers are realistic goals after s/he leaves the program.

Thank you for participating

Appendix L: Phase Three Follow-Up E-Mail Message to Doctoral Students

Dear Doctoral Student:

My name is Daniel H. Mansson and I am a doctoral candidate in the Department of Communication Studies at West Virginia University. I am working on my dissertation in which I plan to examine doctoral students' use of relational maintenance behaviors with their advisors.

Approximately one/two week(s) ago you received a package of research materials in your campus mailbox including a questionnaire for you and a questionnaire for your advisor. If you have not yet returned your completed questionnaire, please take a moment and to do so. Also, please encourage your advisor to complete and return his/her version of the questionnaire. This is a voluntary research study and West Virginia University's Institutional Review Board (IRB) has acknowledgement of this study on file.

I realize that you are very busy, but I would really appreciate your participation in this study, Participation will take roughly 20 minutes and it is anonymous. Participation in this study is anonymous.

If you need new copies of the questionnaires or if you have any questions regarding this study, please do not hesitate to contact me via e-mail or telephone.

Thank you for your participation.

Sincerely,

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