MENTORING RELATIONSHIPS IN ACADEME: AN EXAMINATION OF UNDERREPRESENTED RACIAL MINORITIES’ GRADUATE SCHOOL EXPERIENCE

by

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ABSTRACT OF THE DISSERTATION
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Recent research has provided evidence that underrepresented racial minorities receive substantially less support than their White and Asian counterparts from academic advisors. This presents a critical issue: beyond providing custodial duties, advisors are also known to supply their current and former students with intangible support such as advocacy, coaching, and ongoing support in graduate school and in their early careers. Hence, in order to better understand how to retain a diverse faculty in the professoriate, I examine the circumstances in which an advisor is likely to take on a mentoring role in the advising relationship, i.e., one that extends beyond their custodial duties, for White and Asian versus for underrepresented racial minority doctoral students. In doing so, I extend the mentoring literature, showing that, in the context of academia, the progression of mentorship through distinct stages (i.e., initiation, cultivation, and separation or redefinition) cannot be understood without considering what takes place in the early stages of the relationship through graduate school and into the first academic job of the advisee. To better understand the behavioral processes that define the progression of advising relationships, I use a multi-method design including in-depth interviews, a survey, and the construction of a database of research publications conducted jointly by
junior faculty members and their former dissertation advisors in the context of a business school setting. In examining the development and transformation of the relationship between the advisee and advisor, I shed light on underrepresented racial minorities’ career progression in the academic pipeline.
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I am filled with so much gratitude to be in this current space of defending my dissertation. In fall 2015, I started my first semester of enrollment at Rutgers University. However, the beginning of this journey started with my ancestors believing in a higher power, God, and instilling His greatness in each generation. As I reflect on my personal lineage, I give praise to God for the sacrifices and courageous spirit that has been passed down by each generation, from my late paternal great grandparents, James and Mary Thornton, and maternal great grandparents, Robert and Jerusha Palmer; grandmothers, Brenda Green and late Karen Simmons; and an abundance of elders who consistently filled my cup in more ways than one.

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CHAPTER 1: INTRODUCTION

It is assumed that having mentors is important for success in any field and this is true as well in academia. Ideally, mentors can serve as trusted and experienced advisors who are able to provide their protégés with support to help navigate and advance their careers (Kram, 1983, 1985; Levinson et al., 1978). However, similar to the corporate arena, underrepresented racial minorities (i.e., Blacks/African Americans, Hispanic/Latinx, and Native Americans) are less likely to be found in senior roles in academe. Recent data published by the American Association of University Professors highlights the disparities that continue to exist for underrepresented racial minorities. Despite making up approximately 33% of the U.S. population, underrepresented racial minorities continue to occupy only about 13% of all full-time faculty positions, whereas Whites (non-Hispanic) makeup 61% of the U.S. population and occupy approximately 76% of faculty roles, and Asians make up slightly over 6% of the U.S. population and hold about 11% of faculty roles (American Association of University Professors, 2020). Despite entering doctoral programs at disproportionate rates (National Center Education Statistics, 2021), underrepresented racial minority doctoral students face challenges to their doing well because, unlike White and Asian students, underrepresented racial minority students are not partnered with a senior advisor who takes a vested interest in their careers by teaching them the rules of the game and supporting the development of their careers (Noy and Ray, 2012; Minefee et al., 2018).

Graduate school functions on an apprenticeship model, which requires that senior faculty members socialize their doctoral students and help them develop the skills for success in the academy. As an apprentice, doctoral students learn the art of research,
writing, and publishing through hands-on experience with their advisors (Sinclair et al., 2014). In addition to performing custodial duties, such as signing off on documents at each milestone, dissertation advisors may serve as mentors by providing extended support, serving as co-authors, providing connections to networks, and helping with job market preparation (Merriam et al., 1987; Green and Bauer, 1995; Williamson and Cable, 2003; Curtin et al., 2016). Simply stated, advisors often have the power and influence to help usher early-academics into a full-time, tenure-track position. Depending on the quality of the relationship, advisors can serve as essential actors in a junior faculty member’s career, but that does not always happen. Some relationships may end once the dissertation is successfully defended or soon after. There is a lack of knowledge about the factors that contribute to the relationship between advisors and graduate students being transformed from a more custodial relationship to a mentoring one.

Much of the basis for our understanding of the advisor-advisee relationship comes from the literature on mentor-protégé relationships (Green and Bauer, 1995). Kram (1983, 1985) identified four distinct stages through which mentoring relationships might advance: initiation, cultivation, separation, and redefinition. These relationships vary in content, but not all relationships progress through all four proposed stages. Initiation represents a period of development of ideas of the other, particularly for the protégé wherein they embody a favorable identification with their mentor. A more in-depth relationship develops in the cultivation stage during which psychosocial and career functions begin to emerge. Separation represents the structural and potential psychological changes that are likely to occur given the relinquishing of hierarchical roles. Alternatively, redefinition characterizes the relationship when it becomes a peer-
based friendship. In this paper, I argue that while the literature has suggested four distinct stages, there may only be three in that the last two are alternatives to each other. Especially in the context of academic advising relationships: initiation, cultivation, and separation or redefinition. During the initiation and cultivation stages, both the advisor and advisee are able to assess the merit of the relationship and determine whether it is worth continuing. As I explore later in my research, not all advising relationships are able to advance into the redefinition stage, and this may be especially true for underrepresented racial minority doctoral students who are likely to experience additional challenges in their programs.

Although advising relationships in graduate schools are likely to take on a different structure than traditional mentoring relationships found in a corporate setting, there are also areas of alignment, such as shared goals and objectives. During the inception of their relationship, the student and dissertation advisor are often partnered together based on compatible research interests, sometimes by the department, but often in mutual negotiations. Although the advisor and the advisee may share a mutual interest, the relationship is formalized based on the rules of the doctoral program. For example, doctoral advisors have formal responsibilities, such as serving as dissertation chair and providing the department with progress reports. These responsibilities of the advisor may or may not develop into a mentoring relationship with the student. Whether or not it does so depends on a number of factors associated with the experience of both the advisor and the advisee during the earlier stages of the relationship. It is expected that advisors provide their advisees with adequate training to successfully join their disciplinary research communities (Curtin et al., 2016). However, these relationships are reciprocal in
nature, and factors such as initial role performance, perceived competence, and access to developmental opportunities are likely to impact the dynamics in which the advisee and advisor may or may not advance into a mentoring relationship.

Research has shown that factors such as institutional norms, biases, and discriminatory practices are likely to impact underrepresented racial minority doctoral students’ experiences (Noy and Ray, 2012; Minefee et al., 2018). These issues may emerge during the recruitment and retention process and become especially apparent after the early stages of the advisee’s academic career (Noy and Ray, 2012; Minefee et al., 2018). For instance, Milkman et al. (2015) brought attention to the discriminatory practices and biases that are more likely to occur in business schools than in other academic fields. In their study, business faculty members were found to be significantly more responsive to potential White male applicants seeking mentorship than they were to all other categories of students (Milkman et al., 2015). Additionally, Minefee et al. (2018) found that these differences in treatment continued during the doctoral training phase. In their study, underrepresented racial minority doctoral students in business schools felt that they were being excluded by receiving discriminatory evaluations and being made to feel that they were not a good “fit” for their programs. Hence, it is clear that demographic factors, such as race or ethnicity, influence the level of support that underrepresented racial minority doctoral students receive while pursuing their doctorate degrees. Further, a recent report revealed only modest increases in the representation of underrepresented racial minority students in doctoral programs over the last decade. Specifically, the proportion of doctorates awarded to Blacks/African Americans increased from 6% in 2010 to only 7% in 2019; and the proportion awarded to Latinx students had risen from
6% in 2010 to only 8% in 2019 (National Science Foundation, 2019). Although these percentages represent marginal increases, the data suggest that underrepresented racial minority graduate students are not receiving guidance from senior advisors who show a vested interest in their career success.

To better understand the factors that contribute to the progression of the advisor and advisee relationship over the course of a doctoral program, it is helpful to draw on the research on mentoring. The literature has shown that mentoring relationships frequently go through different stages (Kram, 1983, 1985; Chao, 1997). Because of the unique characteristics of doctoral programs, the advisor-advisee relationship may be affected differently than in other contexts. Much of the research on mentoring has focused on what happens at each stage of mentoring relationships and their associated outcomes (Kram, 1983, 1985; Chao, 1997; Bouquillon et al., 2005; Wu et al., 2012), but much less attention has been given to how relationships develop and transform over time. Specifically, there is a lack of understanding of how and why mentoring relationships end or are transformed as the circumstances change for either the mentor or the protégé, or in this case, the advisor and the advisee. For example, some relationships may fade away, some may become negative or dysfunctional (Ragins and Scandura, 1997), while others may transition into lifelong supportive relationships. Undoubtedly, the duration of a relationship heavily depends on the quality of engagement and interaction between the parties as the relationship develops. Although previous literature has focused on the initiation (Scandura and Williams, 2001; Hu et al., 2008) and separation stages (Ragins and Scandura, 1997) of a mentoring relationship, the transition from the initiation to the cultivation stage and then from cultivation to either separation or redefinition has
received less empirical attention, especially as it relates to the career progression of underrepresented racial minorities in such relationships.

I argue that the early stages of the mentoring relationship constitute a critical period because they enable advisors to assess the value of the relationship in their view as they evaluate whether the advisee meets their role expectations and performance goals (Graen and Scandura, 1987; Graen and Uhl-Bien, 1995). The advisee’s initial role performance leads to an early assessment from the advisor. In turn, this assessment influences the advisors’ perceptions of the advisees’ competence that then may determine whether the advisor offers more developmental experiences, including participation in joint research and publications. Thus, whether the advisor’s evaluation early in the relationship is favorable or unfavorable is likely to determine whether the advisor takes on the role of a mentor, meaning lending support beyond custodial duties and even eventually becoming a peer and friend. Consequently, given the formal power and influence that exist for many advisors, they have the ability to shape their advisees’ careers upon graduation, provided that the advisee is perceived as someone in whom it is worthwhile to invest time and resources.

Hence, this research contributes to the mentoring literature by examining the behavioral processes that characterize the dynamics and progression of advising relationships in doctoral programs. In doing so, I examine the development and either transformation or ending of advising relationships, with special attention given to the initiation and cultivation stages. This research is explored in a business school setting, by examining the current relationship status of junior faculty members with their former
dissertation advisors. A multi-method design is employed to investigate the following research questions:

1) How does the initial role performance of doctoral students affect the advisor-advisee interactions at subsequent stages of the relationship?

2) How important are developmental opportunities provided by academic advisors for the success of doctoral students?

3) What are favorable strategies for underrepresented racial minority advisees and their advisors to pursue in advising relationships as they change over time?

Exploring these complex questions will allow me to identify the mechanisms that lead to favorable or unfavorable mentoring relationships over time and provide some insight into the best strategies for doctoral students to develop satisfying relationships with their advisors at the outset of their careers.

I argue that examining the initial stages of the academic pipeline, especially the development and transformation of the advisor and advisee relationship in the early years of the doctoral program, may shed light on what happens to underrepresented racial minorities’ career progression. Furthermore, I extend the current literature by addressing the dynamics whereby advisors may take on extra-role behaviors by not only providing support in the form of advice, but also potentially becoming a mentor by assisting in their advisees’ career advancement through shared publications. In the mentoring literature, this would be equivalent to differentiating between mentorship and sponsorship (DiTomaso and Palmer, 2017). A mentor is sometimes defined as someone who gives advice, while a sponsor is defined as someone who uses his or her social capital to further their protégé’s career (Hewlett, 2013; DiTomaso and Palmer, 2017; Smith, 2021).
Although in the mentoring literature, the roles of mentor and sponsor are thought of as distinct, I am using the terms interchangeably for the purposes of this study. That is, I am defining taking on the role of a mentor as going beyond the more custodial role of dissertation chair to someone who makes an effort to facilitate and develop the advisee’s career goals. Although the advisor serves as the primary focal figure for most graduate students, advisees may also develop relationships with faculty members other than their advisors in order to gain necessary guidance and support in their fields in order to advance their careers (de Janasz and Sullivan, 2003).

The next chapter provides an overview of the research literature on developmental relationships and the challenges that are often present for underrepresented racial minorities in a graduate school context. In Chapter 3, I introduce my quantitative study and present the results and analyses of the survey and co-authorship database. Chapter 4 provides the insights derived from my qualitative study, including a discussion of the methods, results, and analyses of the interviews I conducted. Finally, Chapter 5 provides a summary and discussion of both the theoretical and practical implications of the study, the limitations, and future research directions.
CHAPTER 2: LITERATURE REVIEW

Success in any field requires the support of people who can help new entrants learn how to do the job and especially how to navigate unwritten rules about what is expected and likely to be rewarded. Those who are new to a field must be trained, and that is especially true when performing the job is not a straightforward process but requires both practice and judgment. One of the key determinants of professional success has often been access to training and to the support of those who are established in their fields. In such circumstances, skilled professionals do not have to actively keep people out in order to affect who has access to the field. They only need to withhold or withdraw their active support to impede the progress of those who still need to learn what and how to do the job. Thus, in professional fields, there is a great deal of emphasis on having people to help connect neophytes to training and to others in the field who can help build their skills and their reputations. Without this kind of help and connection, it is unlikely that new entrants will be able to successfully navigate their careers.

Doctoral programs are especially noteworthy in this respect. Graduate students need to learn both content and how to apply it in the development of their own research. Because there are no fixed rules about what constitutes a contribution to the research literature, doctoral students need to be guided through the development of their research questions, their research procedures, and how to put the pieces together in such a way that their written work will be recognized and accepted in the field. At minimum, most doctoral students need a good working relationship with their dissertation advisors, but they also need support and opportunities that will help them develop their research skills and reputations. Such support will help connect them to others who are interested in and
do similar work. In this chapter, I discuss the need for doctoral students to have both social and instrumental support from others, for them to develop relationships with their advisors that help them establish their careers, and I outline the stages through which doctoral programs evolve that set expectations and create pathways for students to succeed or to derail. As is the case for those entering corporate careers, it is not enough to just do what you are told or to do everything right. One needs more than that to succeed, because the tasks at hand require the ability to develop skills and a reputation as someone with promise who will add value to the relationships of which they are a part and to the field at large.

_Social Capital_

Social capital is defined as the set of social relationships that lead to productive benefits (Coleman, 1990; Burt, 1997; Adler and Kwon, 2002). One usually speaks of social capital in terms of having ties to people who have a sense of obligation to you and from which you can ask for favors or for support. To succeed in academic careers, one needs to develop social capital, i.e., relationships with people who can help with both the development of skills and with reputation. Because minority group members from Black/African American, Hispanic/Latinx, and Native American backgrounds are less likely to be represented in senior-level roles in the academy compared to their White and Asian counterparts, they are likely to have less access to social capital resources that can support their career mobility (Elliot, 1999; Lin, 2001). Consequently, underrepresented minority group members are often dependent on those in the majority to access or borrow social capital (Burt, 1997, 1998; Ibarra, 1993,1995; Stoloff et al., 1999). Given this subordinate and more tentative structural position for underrepresented racial minorities,
they often perceive a lack of support in their efforts to reach senior-level positions (Hancock et al., 2021). Specifically, for underrepresented racial minorities, who are disadvantaged in areas of leadership advancement, social capital connections help to develop their capabilities and opportunities by increasing their access to information, organizational resources, and career sponsorship (Elliot, 1999; Seibert et al., 2001). Access to social capital can positively impact underrepresented racial minorities’ career trajectories.

Social capital is often divided into two types, bonding social capital and bridging social capital. Bonding social capital involves creating stronger ties within one’s community; however, bridging social capital involves creating networks that extend beyond an individual’s community and connecting to groups with whom one otherwise may not have been connected (Granovetter, 1973; 1985; Putnam, 2000; Adler and Kwon; 2002). Bonding social capital leads to perpetuating the status quo by only creating opportunities for those who are already part of the group, and this can lead to less access for members of minority groups. For this reason, bridging social capital is thought of as more important for supporting career progression for underrepresented racial minorities in academic contexts (Putnam, 2000).

Social capital may be gained from different types of relationships, including sponsors, mentors, networks, role models, and coaches (Seibert et al., 2001). A sponsor is someone who provides opportunity, a mentor is someone who provides advice, a network is a connection to someone who might be able to help, a role model is someone you might want to emulate, and a coach is someone who can help develop your skills (DiTomaso and Palmer, 2017). These roles differ in their levels of engagement and in
terms of what contributions they make to career development, but they may all be
embodied in an advisor if the relationship is strengthened over the course of a doctoral
program. Advisors can serve as role models (i.e., as an example of how to be a productive
scholar), but it is perhaps even more important that advisors give advice, provide
opportunity, and coach their advisees so that advisees can develop research skills and
learn to navigate the publication process. Advisors may also help connect their students
with others through networking, which may help embed the student in a community of
scholars with shared interests or even perhaps lead to co-authorship opportunities. As
advisees advance in their careers, however, they should develop their own networks and
their own research reputations, but it is often the connection with the advisor that helps
solidify these relationships. Importantly, social capital is an investment from which one
can expect a return, and because of this, it is also often assumed to be reciprocal. Hence,
receiving help also requires the advisee to add value to the relationship. Being perceived
as doing so is likely a contributing factor in determining whether the relationship between
the advisor and the advisee is likely to transition into the separation or redefinition stage
as the student progresses through his or her doctoral program.

Mentoring Literature

Although the social capital literature identifies distinct social roles in the
connections that people make with others to enhance their careers, the most common way
that these relationships are discussed is with regard to mentors. Hence, I am using the
term “mentor” to encompass all of the types of social capital that helps support career
development. The term “mentor” can be traced to Greek mythology in Homer’s Odyssey,
wherein Odysseus’s trusted advisor, Mentor, provided support, guidance, and protection
to Odysseus’s son, Telemachus, while Odysseus was away during the Trojan War. In current usage, mentoring is characterized in the management and career literature as a developmental relationship in which a senior-level employee provides support and advice to a junior-level employee who has less experience in the field (Kram 1983, 1985).

Ideally, mentors serve as trusted and experienced advisors who are able to provide their protégés with both instrumental and psychosocial support (Levinson et al., 1978; Kram, 1983, 1985). Instrumental support includes providing protégés assistance with the socialization process and information on how to fulfill work role demands, whereas psychosocial support includes connecting with protégés on interpersonal and emotional levels (Kram, 1985). For the purpose of this dissertation, I draw from multiple sources (Kram, 1983; Dreher and Cox, 1996; Haggard et al., 2011) to define mentoring as a reciprocal relationship wherein a more experienced, senior-level individual (the advisor) takes an active interest in developing a less experienced, junior-level individual’s (the advisee) career through instrumental and interpersonal development and support.

Although the term mentor has evolved to also include peers, called peer mentoring, and even junior-level employees, called reverse mentoring, my dissertation will focus on the hierarchical relationship of a more senior advisor with a more junior advisee.

Mentoring has frequently been studied in the context of a corporate or an academic setting. Past studies have indicated that mentoring has the potential to lead to favorable outcomes for the organization, the mentor, and the protégé. In both business and academia, research has found that mentoring relationships may enable organizations to retain valued employees (Murray, 2001; Carr et al., 2003; Kreitner and Kinicki, 2004) and to uncover a diverse pipeline of talent (Dobbin and Kalev, 2016). Mentors or
advisors themselves often receive intrinsic benefits from mentoring such as gratification and fulfillment in the development of their protégés’ careers (Murray, 2001). In addition, mentors or advisors can enhance their department’s reputation by being known for developing high-performing junior-level faculty (Kram, 1985; Ragins and Scandura, 1994). As a result of mentoring relationships, protégés often receive favorable career outcomes such as increased career satisfaction, greater organizational success, and better job performance (Allen et al., 2004; Underhill, 2006; Kammeyer-Mueller and Judge, 2008).

The prevalent distinction in the mentoring literature between a mentor who can provide support and a sponsor who can provide career advancement opportunities is important when thinking about academic careers as well (DiTomaso and Palmer, 2017; Smith, 2021), although in this study, I am merging the two roles into the concept of a mentor. A productive relationship for a doctoral student requires an active use of the advisors’ social capital, which is likely to occur if advisors believe in their advisees’ potential and performance. Because publication is the currency in academia and impacts the doctoral student’s initial job placement, advisees not only need advice, but they also need access and exposure to the research and publication process. As such, to be successful, advisees need to work with advisors who are able to coach them and provide them with access to developmental opportunities that lead to potential publications in reputable journal outlets. This is especially important for underrepresented racial minority doctoral students who are less likely to receive sponsorship in support of their career advancement (Ibarra, 2019; Smith, 2021).
Advisor-Advisee Relationship

The mentoring literature talks about supervisor career mentoring as “a transformational activity involving a mutual commitment by mentor and protege to the latter’s long-term development, as a personal, extra-organizational investment in the protege by the mentor, and as the changing of the protege by the mentor, accomplished by the sharing of values, knowledge, experience, and so forth” (Scandura and Schriesheim, 1994, p. 1589). Essentially, supervisor career mentoring examines the extent to which supervisors provide mentoring functions, such as instrumental and psychosocial support, to their subordinates (Scandura and Schriesheim, 1994; Green and Bauer, 1995; Paglis, Green, and Bauer, 2006). Much like the supervisor’s role in socializing and developing their new subordinates in a corporate setting, the faculty advisor plays a central role in training their doctoral students in their field of study.

One essential component of the relationship between doctoral students and their advisors in an academic setting that is not highlighted in the current mentoring literature is the research and publication process that is unique to the graduate-level academic mentoring experience (Paglis, Green, and Bauer, 2006). Although it may be viewed as a component of instrumental support, helping with the development of research skills and collaboration are critical functions of the graduate school apprenticeship model. Advisors are encouraged to take an active role in teaching their advisees the research process, including but not limited to helping them formulate interesting research questions, collect and analyze data, draw conclusions, and write up publishable manuscripts. This process requires advisors to actively oversee and engage in their advisees’ doctoral journey by coaching them and providing continuous constructive feedback on how they can improve
their skills. Importantly, it often involves *showing* them how rather than *telling* them how. As previously iterated, this process is especially important, as it may lay the foundation for creating the advisee’s research identity and research pipeline.

*The Apprenticeship Model*

Doctoral programs work on an apprenticeship model, meaning that those who have succeeded work closely with those who are just starting to help them understand the norms within the field and the way to do the work. Because there are no rules as such that can be followed to successfully produce a publishable paper, developing publishable research often involves a series of iterations in which drafts are produced, feedback is given, revisions are made, and then a new draft is provided. Of course, there are standards and acceptable ways to do different types of research projects. For the purpose of a tenure-track position, quality research is supposed to build on existing research that makes a new contribution to the field. In that regard, research is something that has not been done before, whether in the formulation of the research question(s), in the collection of new data, or in the approach to analysis and interpretation. Working with an advisor to learn how to conduct publishable research is a very long process that often involves multiple rounds of negative feedback before the work meets acceptable standards and can be sent out for blind review. The review process itself often involves multiple rounds of revisions before a paper may be accepted for publication. Doctoral programs are about learning how to conduct research that leads to an acceptance in a reputable academic journal and which will be noted and cited by others in the field as a contribution. Getting to that point, a doctoral program involves several different stages of learning that enable
the advisor to evaluate whether the advisee meets the expectations for performing quality research.

The first stage of most doctoral programs involves taking coursework, for example, often during the first two years of graduate school. Taking courses enables advisees to gain a foundation of disciplinary knowledge and learn about research methods (Spronken-Smith, 2018). Although grading in doctoral courses is usually relatively generous on the assumption that those who make it into graduate school are all capable of doing the work, advisors do look at the pattern of grades that students earn through their first two years in the program. While taking courses, advisees are also expected to engage in research projects with their advisors to learn how to apply classroom knowledge, and often advisors look for course or seminar papers that can be further developed into publishable research.

At the end of coursework, most doctoral programs give an exam, often after the first two years of a doctoral program, to determine if the doctoral student should be allowed to proceed in the program. These exams, which are sometimes called preliminary exams (as in preliminary to writing a dissertation) or sometimes called comprehensive exams (as in testing a body of knowledge that students are expected to have mastered), test their disciplinary knowledge. Passing the preliminary or comprehensive exam is the first major milestone, aside from course grades, for a doctoral student, as it indicates a formal, positive evaluation of the advisee’s progress. Exam committees may or may not include the advisees’ advisor, and most committees require a minimum of three or four faculty members to evaluate the exams. The intent is that once the student has demonstrated sufficient knowledge in the field by passing this exam that it is “safe” to
turn the student over to the guidance of an advisor and a dissertation committee to
develop independent research that will become the advisee’s dissertation.

Despite the advisee’s ability to pass the preliminary or comprehensive exam,
however, there may be ambiguities about the advisee’s performance that could affect the
ongoing relationship with the advisor. Although the preliminary or comprehensive exam
serves as a formal check on the advisee’s mastery of the knowledge in the field, most
advisors, based on course grades, course papers, and other experiences with the advisee’s
involvement in research duties, have already formed a personal view of whether the
advisee is capable of becoming an independent scholar who can contribute to the field.
The evaluation that the advisor has made of the advisee by the time of the exam, as well
as the performance on the exam itself, may shape what kind of support the advisor is
willing to give to the student through the development of the dissertation. The advisor’s
evaluation at this stage impacts the level of instrumental and social support that they will
provide their advisees in the later years of the doctoral program. For their part, advisees
may use this opportunity to reevaluate the relationship with their initial advisor and may
perhaps seek to change advisors. Especially if advisees perceive a disconnect from their
advisors at this stage, they may seek to develop a relationship with another faculty
member who can better guide them through successful dissertation completion. While it
is possible that at this stage, a change of advisors may lead to a strengthened relationship
with a new advisor, it may also lead to the new advisor feeling a sense of obligation to
only help the advisee finish the dissertation but not to take the extra steps to facilitate the
advisee’s career development for the longer term. At this stage of the program, advisees
can be at a disadvantage in forming an in-depth relationship with an advisor who is
willing to take on the extra effort to help the student develop publishable research. Importantly, advisees do not always know that they are in an unfavorable position in the relationship.

After passing their preliminary or comprehensive exams, advisees usually spend their third and fourth year developing their dissertation proposals. This period of graduate school is experienced very differently by most students than the first two years of a doctoral program. Ideally, students are no longer taking courses which gives them a structure and a set of fixed deadlines. Instead, they are now required to work more independently and to find a new way to structure and manage their time and productivity. In the post-coursework phase, the advisor-advisee interactions may vary from one advisor and advisee to another. While it is expected that advisees drive the advising relationships at this stage of graduate school, some advisors may prefer to meet on a regular schedule. Others may prefer to meet when there is a tangible item to discuss, such as a draft of a manuscript. Having such autonomy works for some advisees, but others may find the lack of structure and accountability difficult to manage. For example, writing is an iterative process, so it is often difficult to measure progress by checking off a to-do list. This transitional period may be especially difficult for advisees who have difficulty putting their ideas into writing or who are reluctant to share their work with their advisors to receive feedback. Frequent and scheduled meetings with advisors can assist advisees in making progress and remaining accountable with completing their writing goals. Therefore, some advisees may get stalled in their third and fourth year in developing their own research in the form of a dissertation.
Given the shift in expectations and the sudden lack of structure, the third and fourth years of a doctoral program present a critical junction in the advisor-advisee relationship. Advisors who believe that their advisees can perform the task, based upon initial assessments of earlier performances, may be more inclined to invest the time to help their advisees think through their ideas and identify relevant literature. Success at this stage usually requires advisees to seek continuous, yet often negative, feedback, and requires advisors to provide timely and constructive criticism on how to move their advisees’ dissertation forward. While it is advantageous for advisees to pursue a dissertation topic that is aligned with their advisors’ research interest, it is not always the case that they do. For example, it is not uncommon for minority group members to draw from their own experiences by pursuing self-relevant research, although, they may be discouraged from conducting research on issues regarding race/ethnicity or gender and encouraged instead to pursue topics that are thought to be more mainstream (Bell et al., 2021; Nkomo, 2021). Jané et al. (2018) demonstrated that some research topics (i.e., gender in management), and even research methods (i.e., qualitative and interpretive methods), may be perceived by advisors of minority doctoral students as lacking full legitimacy in business education. This issue is especially prevalent for underrepresented racial minority group members, whose research interests may be undervalued by the academic community (Bell et al., 2021). Even if the advisor is not opposed to the student pursuing such topics or methods, if these are not topics with which the advisor is especially well versed, it can make it more difficult for the advisor to provide the advisee with the needed guidance to successfully develop research in this area. Such biases and misalignment can create barriers for the advisor-advisee relationship to develop into the
kind of mentoring relationship that can help the advisees launch their careers upon degree completion.

Although there may be variation within this prescribed timeline, what remains constant is the advisees’ reliance on their dissertation advisors for guidance as they develop independent research and navigate the publication process, while also establishing themselves in a community of scholars and trying to secure tenure in their first academic job (Merriam et al., 1987). In the earlier stages, advisors can often help students develop a pipeline of research and a reputation in their field (Sinclair et al., 2014). For example, Williamson and Cable (2003) used a longitudinal design to examine the predictors of early career research productivity, defined in terms of the number of academic journal publications, the number of presentations at Academy of Management Conferences, and the quality of journals in which publications appeared. One of the key findings of the study was that the productivity of advisors strongly predicted the research productivity of the junior faculty members during the first six years of their careers.

While it is presumed that advisors will serve in their assigned duties as chair of the dissertation committee, what is less certain is the extent to which advisors will serve as mentors who will socialize and guide their students into the academy (Green and Bauer, 1995; Tenenbaum et al., 2001). The degree of mentorship that is carried out through the advisor-advisee relationship is likely to vary based on the advisors’ subjective evaluation of the student during the early years of the doctoral program (McCoy et al., 2015). Mentorship is also contingent on whether the advisors’ interpretation of their supervision duties includes a more active investment in the advisees’ career development during the later stages, as the advisee transitions to an
independent researcher (Wright, Murray, and Geale, 2007). These choices may be affected in part by the individual differences that advisees bring to the doctoral experience, which may subsequently impact the resources that their advisors choose to invest in the relationship. Green and Bauer (1995), for example, found that students’ ability, experience, and commitment were predictors of the level of career, psychosocial, and research support provided by an advisor. Furthermore, advisors’ experiences in the academy impact how they interpret their role in training doctoral students (Wright, Murray, and Geale, 2007). Factors such as the advisor’s own past doctoral experience, interaction with other members in the academy, and the departmental culture of the program they are in are all likely to contribute to how an advisor undertakes the supervisory experience (Wright, Murray, and Geale, 2007). That is, some advisors are likely to follow the contractual agreement they take on in advising a doctoral student but become more selective in whether they are also willing to serve as a mentor. Undoubtedly, advisors are likely to select students with whom they align the most and students whom they believe demonstrate promise in their productivity and long-term success.

*Role Expectations at Different Stages of the Apprenticeship Model*

As outlined, a doctoral program includes a series of stages at which advisees are evaluated by their advisors and during which the advisor may make a choice about how much time and effort to invest in the relationship. Although the relationship is reciprocal, it is usually the advisors who are making the decisions about how much promise the advisees have in their view, depending on how the advisee performs through each of the stages of graduate school. In other words, a doctoral program is patterned like a stage-
gate model where at each stage, there is an evaluation about how to proceed in the next stage. The evolution of advisor-advisee relationships can be understood in terms of insights from the leader member exchange (LMX) theory which emphasizes changes in role expectations through a series of stages in the experiences of leaders and their followers. The LMX model asserts that, at any given period, a leader is likely to have more than one follower, each relationship is unique and qualitatively different, and that leaders often favor some followers over others (Dansereau, Graen, and Haga, 1975). The LMX model assumes that leadership is a series of dyadic relationships in which work roles are developed and negotiated through a series of exchanges over time (Bauer and Green, 1996). In this regard, the LMX model can help explain what happens in the advisor-advisee relationship as the doctoral student moves through different stages of the doctoral program. Among other things, LMX research has shown that leaders’ and followers’ similarities, such as racial demography and personality traits, often drive the strength of these dyadic ties, while dissimilarities typically result in weaker ties between the pair in the earlier stages of development, (Bernerth et al., 2008; Waismel-Manor, 2010; Graen and Uhl-Bien, 1995; Liden et al., 1993). Thus, underrepresented racial minorities may be at a disadvantage when they seek mentorship from their advisors, because among other things, they are less likely to share social identities.

As is the case in the LMX model, the amount of time and resources that advisors devote to their advisees will vary, resulting in a range from low-quality to high-quality relationships. Low-quality relationships are defined as transactional, meaning that they operate from a contractual basis of formal roles and duties (Dansereau, Graen, and Haga, 1975). In a doctoral program, this may mean advisors who agree to help advisees finish
their degrees, if they are capable, but who do not expect more from the advisee and who therefore do not go beyond the custodial responsibilities that are part of the advisor role. Low-quality relationships according to the LMX model, lend themselves to less supervisory support, less information being exchanged, and to fewer resources being expended (Gerstner and Day, 1997). High-quality relationships, in contrast, are less formal and are often sustained by mutual liking, trust, commitment, and respect by each party (Bernerth et al., 2007; Graen and Uhl-Bien, 1995). High-quality relationships are likely to result in greater growth opportunities (Graen and Scandura, 1987). In the context of a doctoral program, higher levels of mentoring support for the advisee may lead to advisors inviting advisees onto projects and connecting advisees to their networks (Kraimer, Wayne, and Jaworski, 2001). Essentially, low-quality relationships are more transactional, while high-quality relationships add a social component that extends beyond the formal employment contract of the relationship (Sparrowe and Liden, 1997).

The foundational work on the LMX model is grounded in role theory, which can be applied to what is happening in doctoral programs between advisors and advisees. Graen and Cashman (1975) argued that a leader and his/her followers, or in this case, the faculty advisor and advisees, will experience a series of role episodes, each of which may be considered “tests” in which an advisor provides a series of assignments and then evaluates his/her advisee (Graen and Scandura, 1987). In LMX theory, this is called a role taking phase, which is similar to the activities that are occurring during the first two years in a doctoral program. Advisees are completing courses, earning grades, and ideally, undertaking some initial research tasks under the supervision of their advisors. Through this initial phase, the advisors are testing their advisees’ motivations and
potential by evaluating their initial role performances, for example, in coursework and research projects. The advisors’ evaluation at this stage is likely to impact the time and resources that they will subsequently devote to the relationship.

LMX theory then argues that leader-follower dyads move on to a second phase called role making, which involves the development of a working relationship between the leader and the follower. The same can be seen in the advisor and advisee relationship as advisees move into the cultivation phase of developing their own research ideas. If advisors find their advisee’s research promising, then they may give the advisee an opportunity to engage in additional tasks that are instrumental to the advisee’s scholarly development. Such opportunities may include co-authoring manuscripts, joining in conference presentations, and so forth. In the LMX model, if the follower takes on the expected tasks and performs well, then the leader and follower view each other as valuable resources, in which case, their exchange is viewed as reasonably equitable (Graen and Scandura, 1987; Liden, Sparrowe, and Wayne, 1997). Similarly, if the advisee begins to demonstrate that he or she can add value to the research agenda of the advisor, then the advisor is likely to think of the advisee as more of a collaborator or partner on a more equal basis than was the case at the outset of their relationship. Furthermore, there is an implicit assumption of reciprocity that governs the social exchange between the advisor and advisee if this transition occurs. As is the case in the LMX model, by meeting advisors’ expectations, advisees expect their advisors to reciprocate with an equally valued exchange (Sparrowe and Liden, 1997). These positive exchanges increase the level of affect, liking, and trust between the parties (Martin et al., 2016; Sparrowe and Liden, 1997). That is, in a doctoral program, if this stage develops in
a positive direction, the advisor takes on more of a mentoring role and invests more time and effort in the advisee’s work.

Thinking of the stages of a mentoring relationship from the initiation to the cultivation stage as similar to the shift in the LMX model from a role taking to a role making phase provides a useful way to characterize advisors shifting from a custodial role to more of a mentor role with their advisees. It is possible for the advisor to provide mentoring functions in the initiation stage, however, depending on the advisee’s early evaluations. Nevertheless, this terminology is a useful way to describe the shifting boundaries and long-term development of the relationship among advisors and advisees. As such, in thinking about the stages of graduate school as shifting from a process of role taking in which advisees are being tested to see if they can perform adequately to one of role making in which they are given an opportunity to take on more independent research, we can gain insight as to why advisors are likely to invest more time and resources into some relationships, while only adhering to their formal custodial responsibilities in others (Tepper, 1995). While advisors may play a dominant role in creating the foundation of the relationship, advisees also have a central role in cultivating the relationship by meeting the advisors’ expectations and delivering on performance. Gaining access to research projects, receiving critical and developmental feedback, and attaining personal support are critical in the advancement of advisees’ careers. A high-quality relationship that develops between the advisor and the advisee may serve as a foundation for mentoring functions to evolve in the advising relationship (McManus and Russell, 1997).
The theoretical model below provides a visual schema of how the apprenticeship model maps on to the suggested three phases of a mentoring relationship: initiation, cultivation, and separation or redefinition. I argue that at each stage, the advisor can make a choice to limit their engagement to a more custodial role with the advisee, or the advisor may invest more time and resources to foster the development of the advisee’s career and serve more as a mentor. As in the LMX model, there are a series of stages in which the advisee is evaluated by the advisor with regard to fulfillment of role expectations, and based on those evaluations, additional opportunities may be offered or withheld. In the following chapter, I further elaborate on the behavioral processes that are enacted and evaluated during each stage of the relationship as I test a model of these dynamics based on a survey of advisors and advisees in doctoral programs in business school management departments.

**Figure 1:** Theoretical Model
CHAPTER 3: QUANTITATIVE STUDY

As previously outlined, Kram (1983, 1985) identified four distinct stages of the developmental relationship: initiation, cultivation, separation, and redefinition. The basic premise is that developmental relationships will evolve over an extended period consisting of these four sequential phases (Kram 1983,1985). However, in the current study, I argue that there may only be three stages: initiation, cultivation, and separation or redefinition. Depending on continued assessments and evaluations of their doctoral students during the initiation and cultivation stages, advisors and advisees may discontinue engagement after the advisees’ degree completion, leading to a separation. Alternatively, the advisees’ performance during the earlier stages may provide a foundation for a relationship that continues to flourish after degree completion, leading to the redefinition stage. These stages and factors operative at each stage are discussed in further detail below.

Initiation Stage

Traditionally, the initiation stage has been conceptualized as a period during which each partner imagines what the relationship might entail. In the context of an advising relationship, the advisor ideally is seen in a favorable light and is thereby viewed by the student as someone who can assist the advisee in his or her career development. There may well be, however, a gap between impression and reality (Kram 1983, 1985). In the initiation stage, advisees attempt to show promise in their ability to perform during their first and second year as doctoral students, and the advisor evaluates advisees to determine if they are worth the investment of the advisor’s resources.
Essentially, at this stage both parties are getting to know each other through observed behaviors (Healy and Weichert, 1990).

*Initiation Stage: Perceived Initial Role Performance*

In the initiation stage, the advisor tests the advisee’s potential and motivation through a series of structured assignments (Graen and Scandura, 1987). These series of tests can also be defined as initial role performance or in-role behaviors, which are the necessary behaviors to complete core tasks that are directly recognized by the formal doctoral program (Williams and Anderson, 1991; Vey and Campbell, 2004). The advisees are evaluated based upon their quality of performance in completing such tasks (Katz, 1964; Vey and Campbell, 2004). These tasks may include advisees’ performance in the classroom, such as engagement in writing seminars and ability to contribute to existing literature. In-role performances may also include serving as a teaching or research assistant. As a teaching assistant, advisees are responsible for grading assignments, responding to student emails, and supporting other classroom functions. Ideally, this role provides advisees with preparation in becoming an instructor of record in the latter years of their program. Additionally, as a research assistant, advisees may be charged with writing literature reviews, collecting and analyzing data, and presenting at conferences. These core and structured tasks are essential to the advisees’ progression in their doctoral programs. Consequently, advisees who are unable to meet these initial role performances are less likely to advance within their doctoral programs and may be evaluated negatively by their advisors.

*Initiation Stage: Perceived Competence*
Initial role performance aids in shaping the advisor’s early evaluations, such as the advisor’s perception of the advisee’s competence. Perceived competence is the advisor’s belief concerning their advisees’ abilities and performance (Weiner, 2005). By performing well in initial core tasks, advisors are likely to feel confident in their advisees’ ability to excel in the doctoral program. Conversely, advisors are likely to withdraw from the relationship and provide less time and attention if they interpret their advisees’ initial performance outcomes as negative (Weiner, 2005).

Also, influencing the advisor’s evaluation is the perception the advisee has of his or her own competence, including the belief that the advisee has in his/her own capabilities to perform specific tasks (Bandura, 1994, 1997). Perceived competence (otherwise known as self-efficacy) has been shown to impact an array of outcomes such as academic performance and career choice (Mizell, 1999; Lane and Lane 2001; Grabowski et al. 2001). Research has shown that individuals with high confidence in their abilities both set challenging goals and develop a commitment to achieve their goals. Because of this orientation, these individuals tend to remain task-oriented even while navigating adversity and situational demands (Bandura, 1997). Additionally, individuals with high perceived competence often attribute their failures to either lacking knowledge and skills, or insufficient efforts, rather than to low abilities. Essentially, individuals’ outcomes become a manifestation of their beliefs and judgments about what they can achieve.

The advisors’ perception of the advisees’ competence and confidence serves as a baseline to test the advisees’ motivations and ability to put forth the effort in accomplishing their initial role performances. While the doctoral process is expected to
be challenging, advisees’ ability to persevere through uncertainties provides advisors with evidence that their advisees are invested in the doctoral and research process. Hence, the initial role performance, as previously outlined, allows advisors to gauge advisees’ belief that they are able to learn, adapt, and complete new challenges and tasks that are necessary to progress in their field.

H1: Advisors’ perceptions of advisees’ initial role performance will be positively related to their perceptions of advisee’ competence.

Initiation Stage: Perceived Competence & Underrepresented Minority Groups

As a result of historical and socialized processes, there exists a racialized hierarchy of students’ academic abilities. Within this hierarchy, underrepresented racial minorities are perceived to have less competency than majority group members (Hurtado et al., 2009; McGee, 2011; Flores et al., 2019). These perceptions are often influenced by group stereotypes and attributions that suggest underrepresented racial minorities are not as academically capable as their White and Asian counterparts (McGee, 2011). More importantly, these stereotypes and biases may influence advisors’ assumptions regarding underrepresented racial minority doctoral students’ ability to perform required tasks, thus, impacting underrepresented racial minorities’ sense of belongingness in the academy and ability to excel in a tenure-track position. Given the overrepresentation of Whites and Asians in senior faculty positions, advisors may assume that underrepresented racial minorities do not fit the prototype of a professor (Rosette et al., 2008; Miller et al., 2020), thereby resulting in negative, and perhaps even discriminatory, evaluations of their advisees’ performance.

Knowing that they are being evaluated by their advisors, underrepresented racial minorities may also experience stereotype threat, wherein they feel at risk of reinforcing
negative stereotypes associated with their social groups and, thereby, creating an impression that they are unable to perform their roles without the assistance of others (Steele and Aronson, 1995; Steele, 1998; Cohen and Steele, 2002; Autin et al., 2014; Walton et al., 2015; Cadaret et al., 2017). In a series of studies, Steele and Aronson (1995) found that African Americans were more likely to experience stereotype threat when engaged in intellectual tasks, meaning that they feared confirming the negative stereotypes of African Americans’ intellectual ability, and the stereotype threat in itself resulted in lower performance on intellectual tasks than their white counterparts (see also Brown and Day, 2006). These behaviors may influence underrepresented racial minorities’ engagement with the research process such as their hesitancy in seeking feedback while performing in-role tasks (Roberson et al., 2003). Such subtle yet fraught behavioral processes can have significant implications for the career development of underrepresented racial minority advisees, and more importantly, influence the advisors’ perceptions of underrepresented racial minority advisees’ ability to perform.

H2: Underrepresented racial minority group membership will moderate the positive relationship between advisors’ perceptions of advisees’ initial role performance – perceived competence. The relationship will be less positive among underrepresented racial minority than White and Asian advisees.

Cultivation Stage

In the cultivation stage, the advisor and advisee begin to identify their real value to each other by developing a more-in-depth relationship, if they perceive their current relationship as favorable. Otherwise, the relationship may seem tenuous if the advisor’s perceptions of the advisee’s initial role performance and competence is low. Hence, this may be viewed as the most challenging stage of the relationship (Mullen and Schunk, 2012). In addition to defining boundaries, including role expectations (Kram, 1983,
mentoring functions such as career, psychosocial, and research support become especially important (Chao, 1997; Paglis, Green, and Bauer, 2006). Perhaps, mentoring functions may even start much earlier in the advising relationship, if the advisor believes that the advisee has a lot to offer and thus gets him/her involved in research from the outset.

Also in the cultivation stage, the advisor and advisee are more likely to be explicit about the goals of the relationship and the efforts that are needed to facilitate progress (Mullen and Schunk, 2012). Ideally, the interpersonal bonds are strengthened because of the mentoring functions that are provided by the advisor and the performance that is delivered by the advisee. With respect to the apprenticeship model, one can think about the cultivation stage as being the second to third year of a doctoral student’s career. In this period, advisees have already completed their coursework (or are in the process of completing it), passed their preliminary or comprehensive exams, and ideally, engaged in at least one independent research project. Optimal learning is likely to occur at this stage, as advisees prepare for their dissertation.

Furthermore, as previously suggested, advisors have a formal role that consists of structured tasks such as providing technical guidance and facilitating their students’ progress through the program. Based on the advisor’s evaluation of the advisee during the initiation stage, the relationship may transition to the role making phase, wherein the advisor provides the advisee with the opportunity to engage in unstructured activities that are independent of the student’s required dissertation work, such as research projects, conference presentations, and other visible, yet related tasks. Along with fulfilling their functional responsibilities, if the relationship is perceived favorably, advisors may have a
vested interest in their students’ career development. In this phase, advisees are able to gain a pulse on the relationship by their exposure to developmental opportunities that they are receiving (or not receiving) from their advisors.

*Cultivation Stage: Developmental Opportunities*

Upon assessing their advisees’ performance and motivation in the initiation stage, advisors may be more or less apt to provide their students with developmental opportunities. Given the challenges and learning opportunities that are to be gained while pursuing a doctorate, certain assignments are perceived to be more developmental than others (Lyness and Thompson, 2000). These experiences may include the advisees’ engagement with writing literature reviews, assisting in data collection, analyzing and coding data, and co-presenting at conferences. These skills are a necessity as advisees advance into becoming independent scholars in their fields.

Also, advisors may be inclined to introduce their advisees to other colleagues in their research domain and collaborate on research projects outside of the advisees’ dissertation. This allows advisees to expand their network outside of their specific program, which is advantageous for their career development and advancement. More exposure to the research process allows advisees to become increasingly confident in working with other scholars and publishing in reputable journals in their fields. Additionally, exposure to developmental opportunities allows advisees to begin thinking about their careers more strategically, by creating a foundation for their research identity and research pipeline, both of which are critical in securing a tenure-track assistant professor position. This level of engagement requires a hands-on approach that includes constructive, yet developmental feedback from advisors. Thus, to obtain this exposure,
advisors must feel confident in their advisees’ ability to perform and deliver exceptional performance on their required tasks.

H4: Advisors’ perceptions of advisees’ competence will be positively related to advisees’ access to developmental opportunities.

Separation or Redefinition Stage

The separation stage involves advisees seeking independence and autonomy from the relationship (Mullen and Schunk, 2012) or may involve the advisor ending the relationship post-graduation. Kram (1985, p. 618) characterized this phase as likely to have “some turmoil, anxiety, and feelings of loss.” Separation occurs both structurally and psychologically. Structurally, the hierarchical role that existed between the advisor and advisee is relinquished. Psychologically, if the advisee receives a job placement and/or begins to seek independence, there may be feelings of resentment. Variation in psychological outcomes is expected if changes in the structural arrangement occurs prematurely or later than expected (Kram, 1983, 1985).

In this stage, the advisor-advisee relationship is likely to end once the advisee has completed his/her degree. Separation may occur for functional or dysfunctional reasons (Kram, 1985; Levinson et al., 1978; Ragins and Scandura, 1997). A functional separation occurs when neither the advisor nor the advisee can benefit from its continuation. For example, advisors have fulfilled their contractual duties such as serving as dissertation chair, and advisees are learning how to navigate a new environment in their junior faculty role. Although there may be limited interactions during annual conference meetings and other mutual events, the advisor and advisee are no longer actively engaged in a relationship. Dysfunctional separation occurs when negativity such as hostility or turmoil develops in the relationship (Kram, 1985).
Lastly, in the redefinition stage the relationship may be transformed into a friendship or peer-based relationship (Kram, 1983, 1985). Ideally, a high-quality advising relationship is one that continues to evolve into a peer-like affiliation (Kram 1983, 1985; Carreau, 2016). While not all advising relationships turn into an ongoing relationship, those that do, enjoy informal contact and mutual support as the relationship continues. The advisor and advisee relationship transforms into a mutual friendship, and the pair are likely to continue to work on manuscripts together. While the advisees are also learning to develop their own identities, their advisors continue to play an instrumental role in their career development, including co-authored publications and support with navigating the tenure clock. More importantly, in this stage, the relationship is viewed as a reciprocal venture; both parties are giving and receiving in the relationship (Healy and Werchert, 1990, p. 20). Collectively, outcomes such as advisees’ career satisfaction and publication performance are likely to be impacted by the advisor and advisee’s decisions to separate or redefine their relationship.

*Separation/Redefinition Stage: Career Satisfaction*

Career satisfaction is an internal career outcome that is perceived by the advisee or in this case, now junior faculty member (Greenhaus, Parasuraman, and Wormley, 1990). The construct captures junior faculty members’ evaluation of their career progress and subjective career-related success such as income, advancement, and development of new skills (Greenhaus, Parasuraman, and Wormley, 1990; Hofmans, Dries, and Pepermans, 2008). Junior faculty members who were perceived to have low competence and received minimum developmental opportunities with their former advisors may be more likely to experience lower career satisfaction, as they did not reap the full benefits
of the advisor-advisee relationship. Low levels of interaction between the advisor and advisee may restrict the level of trust, respect, and commitment that emerge in high-quality relationships (Graen and Uhl-Bien, 1995; Bernerth et al., 2007) and that lead to transitions into the redefinition stage.

H4: Advisees’ access to developmental opportunities will be positively related to advisees’ career satisfaction.

Separation/Redefinition Stage: Performance

An external career outcome that can be objectively measured are joint publications between the advisor and advisee. Joint publications are an indication of the research support that the advisor is perhaps providing the advisee. In the redefinition stage, wherein the advisor and advisee experience a high-quality social exchange, both parties are actively contributing to the relationship and their exchanges are perceived as equitable (Graen and Scandura, 1987; Liden, Sparrowe, and Wayne, 1997). From a research perspective, advisees are now driving the relationship with regards to managing projects and submitting manuscripts for publication. However, it is important to note that while there may be an increase in joint publications earlier in the advisee’s career, publications may diminish as advisees advance in their junior faculty role and are encouraged to create their own identity and publish with other scholars. Nevertheless, the research values and knowledge that advisors impart impacts their advisees’ research productivity as newly appointed junior faculty members (Williamson and Cable, 2003).

H5: Advisees’ access to developmental opportunities will be positively related to advisees’ performance.

Figure 2 provides a summary of the quantitative model and hypotheses.
Methodology

I employed a survey-based design to examine the proposed hypotheses. I also created a database of published articles by advisees and advisors to provide further documentation of ongoing relationships where they exist. I used Google Scholar to identify areas in which a junior faculty member may have a joint publication with his/her former dissertation advisor. Along with Google Scholar, I retrieved some participants’ CVs via personal webpages and department websites. I was able to use both Google Scholar and participants’ CVs to cross-check areas of joint publications between the former advisee and dissertation advisor. This database was also used to measure the dependent variable, performance, in the quantitative model. However, it is critical to note that joint publications of advisees and advisors does not necessarily equate to a continued favorable relationship. Joint publications could simply indicate that the advisor and advisee were using data that were shared when the junior faculty member was a doctoral student. The publication could represent the finalization of projects underway as the degree was being completed. As junior faculty members seek to develop and strengthen their own research identity, continued publications with their primary advisors, especially

Figure 2: Quantitative Model & Hypotheses

- Underrepresented Racial Minority (Advisee)
- Initial Role Performance (Advisor)
- Perceived Competence (Advisor)
- Access to Developmental Opportunities (Advisee)
- Career Satisfaction (Advisee)
- Performance (Advisee & Advisor)

H1: Initial Role Performance (Advisor) → H2: Perceived Competence (Advisor)
H3: Access to Developmental Opportunities (Advisee) → H4: Career Satisfaction (Advisee)
H5: Performance (Advisee & Advisor)
after about 3 years since degree, may be evaluated unfavorably, depending on job placement.

*Context*

Accredited business schools in the United States present an interesting setting for exploring the development and transformation of advising relationships. In 2020, African Americans, Latinx, and Native Americans represented 3.9%, 2.8%, and 0.3% of full-time business school faculty, respectively (Colby and Fowler, 2020). While there have been initiatives to address the underrepresentation of students, faculty, and administration in business schools, there still exists a serious pipeline issue (Baldwin et al., 2012; Minefee et al., 2018) at all levels. The pipeline issue, in part, may prevail because underrepresented racial minorities are less likely to receive the same structural support required to obtain tenure, as their White and Asian counterparts. Factors such as perceived initial role performance, perceived competence, access to developmental opportunities, career satisfaction, and performance (i.e., co-publications between the advisee and advisor) are likely to emerge and impact the dynamics in which the advisee and advisor engage in a relationship together.

*Sample*

Participants included business scholars in management or a management related field. I specifically focused on the management domain of business to ensure consistency among departmental practices and to gain a better understanding of the nuances that are unique to the discipline. Also, in comparison to the other fields (with the exception of marketing), management has a larger representation of underrepresented racial minorities (PhD Project, 2019), allowing me to potentially capture a larger sample size. Lastly, it is
anticipated that the department will become a salient context in which the junior- and senior-faculty narratives are shared. Norms, along with individual perceptions of the department’s climate of diversity and inclusion may provide insight into the mechanisms that allow for favorable or unfavorable relationships to develop and transform over time.

Eligible participants included junior faculty members who completed their doctorates from an accredited U.S. business school within the last six years and currently serve as a junior faculty member in a management department. While the focus is on tenure-track, junior faculty members, the sample also included a small number of business scholars who were serving in postdoctoral positions. Upon degree completion, advisees may elect to pursue a 2 to 3 years postdoctoral fellowship prior to pursuing a tenure-track assistant professor position. As newly minted faculty members prepared for a productive career in academe, some opted to use a postdoctoral position to better position themselves before starting on the tenure clock. This extended period provided an opportunity for junior faculty members to increase the number of potential manuscripts they had in the pipeline and create relationships with potential co-authors, thereby enhancing their chances for a tenure-track career placement.

Sample: Underrepresented Racial Minority Junior Faculty Members

I gained access to underrepresented racial minority scholars through the KPMG PhD Project, a non-profit organization created by the KPMG Foundation that has successfully increased the representation of underrepresented racial minorities in business schools. The organization was founded in 1994, at which time there were only 294 African American, Latinx, and Native American professors at U.S. business schools. Since its inception, the PhD Project has helped more than quadruple the number of
minority professors in U.S. business schools to 1,470, with 254 minority doctoral business students in the pipeline (PhD Project, 2018).

To provide context, it is important to elaborate on the structural model that the PhD Project has successfully executed over the last twenty-five years to improve the pipeline of racial minority business professors. The PhD Project has a three-pronged approach which includes 1) a marketing campaign to identify potential doctoral students of color, 2) an annual conference to expose potential students to the intricacies of a doctoral program, and 3) the Minority Doctoral Student Associations that are designed to increase students’ retention (Milano, 2005). The annual conference is a three-day program that allows potential students to network with doctoral candidates, business school representatives, professors, and sponsor organizations (PhD Project, 2018). The Minority Doctoral Student Association is a professional peer association within each discipline (i.e., accounting, finance, information systems, management and marketing). Each association meets annually in conjunction with the relevant professional academic meeting for the discipline (Milano, 2005). For example, the management Minority Doctoral Student Association meets three days prior to the start of the Academy of Management Annual Meeting. This model has resulted in a lower attrition rate of minority doctoral students than that of their majority-group counterparts (PhD Project, 2019). Even more impressive, the PhD Project has a 97% retention rate for its faculty/professors, compared to the U.S. 60% average retention rate overall for higher education faculty/professors (PhD Project, 2019). Essentially, the PhD Project has aided in providing a network of support for both doctoral students and the program alumni, wherein underrepresented racial minority professors are now mentoring the next
generation of business scholars. This model has contributed to enabling underrepresented racial minority students to successfully navigate the myriad barriers in doctoral programs, including managing their relationships with their primary dissertation advisors. Through its rich network, the PhD Project has sustained a 90% minority doctoral completion rate, compared to the U.S. average of 70% for overall doctoral completion rate (PhD Project, 2019). To obtain my sample of underrepresented racial minorities, I only recruited members of the PhD Project who are junior faculty members at U.S. accredited institutions in management departments.

**Sample: White and Asian Junior Faculty Participants**

To access non-underrepresented racial minorities, I researched junior faculty members who were placed at R1, R2, D/PU, and M3 institutions. The list of non-underrepresented minorities were majority White and Asian scholars. I used the Carnegie Classification system to identify the universities at each level (The Carnegie Classification of Institutions of Higher Education, 2018). In this classification system, doctoral degree granting institutions are ranked based upon a research activity index (The Carnegie Classification of Institutions of Higher Education, 2018). Per the classification system R1 denotes very high research activity, R2 indicates high research activity, D/PU represents doctoral/professional universities, and M3 signals Master’s Colleges and Universities: Larger Program institutions (The Carnegie Classification of Institutions of Higher Education, 2018). Initially, I began with the list of R1 institutions on the Carnegie Classification of Institutions of Higher Education and searched for assistant professors who are currently placed at these universities. In academe it is common for scholars to be placed at peer institutions; thus, a tenure-track assistant professor placed at an R1
institution is likely to have earned their doctoral degree from an R1 institution of similar caliper. However, it is also common for junior faculty members to be placed at a lower-tiered institution than where they were granted their doctoral degree, as it may provide a better fit for that individual. To capture a larger pool of potential candidates, I expanded my recruitment list by searching junior faculty members at R2, D/PU, and M3 institutions. I also used snowball sampling to increase participants’ response rate. In this case, junior faculty members referred colleagues with whom they shared cohorts and/or co-authored manuscripts.

Procedure

To obtain a current list of junior faculty members who completed their degrees in management, an email request was sent out to an administrator of the KPMG PhD Project from whom I obtained a usage data file. The file captured a current list of graduate students who completed their degrees after 2013. The list, obtained in July 2019, included a total of 97 graduates of management programs. Out of the 97 participants, 23 were no longer eligible for the study, as they had either pursued a career in industry, had earned tenure and were no longer considered a junior-faculty member, or had pursued a faculty position abroad. Upon approval from Rutgers University’s Institutional Review Board (IRB), I sent out a recruitment email in February 2020 to eligible participants and subsequently followed up with emails and phone calls. The email requested junior faculty members to complete a 15-minute survey that included a unique identifying number to match with their former dissertation advisor. Junior faculty members were informed that the unique identifying number would be used to link their response to their former dissertation advisor’s response. The email, along with the consent form, reiterated that
information would be kept confidential. Lastly, junior faculty members were asked to share and confirm who they identified as their former dissertation advisor. An email and follow-up phone calls were then sent to senior faculty members.

In addition to obtaining a list of junior faculty members from the KPMG PhD Project, I also connected with executive members of the Management Faculty of Color Association (MFCA). MFCA is an organization that promotes and supports the professional development of African Americans, Latinx, and Native Americans who have earned a doctorate (Ph.D. or D.B.A.) in a management or management-related field. Membership includes scholars who are tenure-track, tenured or administrators in management or a management-related field. Ideally, upon completing their doctorate, PhD Project members of the management Minority Doctoral Student Association become members of MFCA; however, that is not always the case. Thus, an email stating the study’s purpose along with eligibility requirements was sent to the MFCA email list-serv to recruit additional participants and encourage participation.

Simultaneously, an email was also sent to a list of non-underrepresented racial minority doctoral students who occupied management or management-related positions at R1, R2, D/PU, and M3 institutions. The list contained 640 potential participants: 246 from R1 institutions, 141 from R2 institutions, 61 from P/ DU institutions, and 192 from M3 institutions. Prior to sending out an email, I first identified whether I had a relationship with a scholar from that university. I then leveraged that relationship and requested my colleague to send a friendly recruitment email on my behalf. This strategy proved to be advantageous in helping to increase the participation rate, as individuals were more likely to respond to a familiar colleague rather than an unknown individual.
requesting a favor. Additionally, I took advantage of snowball sampling, participants who completed the survey were asked to extend a friendly recruitment email to their network and other eligible participants at their current institution.

**Challenges in Data Collection**

Research has shown that in examining developmental relationships, it is most fruitful to examine both parties. Considering both the advisor and advisee perspectives helps to increase our understanding of the transformation of advising relationships (Allen and Eby, 2007), as each party is likely to highlight different costs and benefits (Ragins and McFarlin, 1990; Eby et al., 2006; Eby, 2007). However, while studies have shown the added value of conducting dyadic research, there are also challenges in recruiting pairs of participants. Given my positionality and the small degree of separation in specific fields of academe, it is expected that some junior faculty members may be hesitant to participate in the study based on their prior working relationship with their former dissertation advisors. While respondents were reminded that information was kept confidential, some were still reluctant to participate in the data collection. For example, below are several responses I received to my initial email roll-out:

Can you explain more about the process you will use to contact my advisor? What would he/she be told?

I thought you just needed me to fill this out. I don’t want [you] to contact my advisor because I was harassed.

Thus, although I initially intended to target only R1 institutions, based on the low response rate and small sample size that are typically seen in mentoring studies (Hagler, 2018), I expanded my initial recruitment list to include junior faculty members who were placed at both research-intensive institutions and balanced (research and teaching)
institutions. I also sent emails to multiple list-servs that were unique to members attending management-related conferences and posted messages on social media platforms. Follow-up emails and phone calls were also made to non-respondents.

Lastly, data collection was further complicated as a result of the coronavirus pandemic. In March 2020, the same month I began data collection, federal and state-wide decisions were made by the hour with regards to public health, social distance, and business operations in the United States. Several states mandated “shelter in place” and “stay at home” orders. These orders remained in effect throughout the month of April, and longer in different regions of the country. Consequently, many lives were impacted both structurally and financially. Among a host of other issues, my targeted sample was challenged with structurally changing their classes into an online format in a short period of time, while also managing a new dynamic of teaching from home and responding to students’ needs and concerns. Additionally, universities, and subsequently departments, were dramatically affected by the pandemic in terms of their budgets and hiring freezes (American Association of University Professors, 2021). Faculty members experienced the threat of layoffs, furloughs, salary reductions, and more (American Association of University Professors, 2021). There were many levels of uncertainties that threatened the security of institutions that are, to some extent, still relevant.

Furthermore, in addition to the economic crisis as alluded to above, many argued that the country was simultaneously experiencing two pandemics, the coronavirus disease and systemic racism. While the media highlighted the adverse impact that coronavirus had on the Black and Latinx community, including higher rates of hospitalization and death related to the virus (Godoy and Wood, 2020), national attention was given to three
unjust killings of three Black individuals within a two-month period, Ahmaud Aubrey, Breonna Taylor, and George Floyd, leading to civil unrest and protests both nationally and globally (DoSomething, 2020). While systemic racism has been present for centuries, it was forced to the forefront of the nation’s consciousness in this period. Given these visible challenges, I placed a hold on my data collection during the spring and only responded to participants who replied to the initial email I sent prior to federal and state coronavirus shut down mandates. I did not send any follow-up emails or phone calls through this period. I informed my committee of my status and was encouraged to resume once the climate became more stabilized. I resumed data collection in the month of June.

Measures

Data on both former advisors and advisees were included in the measures for this study. Advisors and advisees provided information on demographics, perceived initial role performance, perceived competence, and access to developmental opportunities. Additionally, former advisees also responded to questions about career satisfaction. Participants were asked to indicate their agreement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) unless otherwise indicated. To measure various concepts, multiple items were averaged to create a single score.

Perceived Initial Role Performance. Perceived initial role performance was measured using the Williams and Anderson (1991) 8-item scale. The questions were modified to fit the context of the study. Sample items included “My former doctoral student adequately completed required coursework as noted in the department policies and procedures” and “My former doctoral student engaged in activities that directly
afected his/her research trajectory.” High scores indicated a high display of initial role performances. Cronbach’s alpha is .94 for senior faculty participants on this measure.

*Gender.* Junior and senior faculty members self-identified their gender. Men were coded as (0) and women were coded as (1).

*Ethnicity.* Junior and senior faculty members were able to self-select their ethnicity. Participants were asked if they were non-Hispanic/Latino or Hispanic/Latino. Non-Hispanic/Latino was coded as (0), and Hispanic or Latino was coded as (1).

*Race.* Junior and senior faculty members were able to self-select their race. Participants were asked to select from the six major racial categories: Asian, Black/African American/West Indian, Native American or American Indian, and Native Hawaiian/Pacific Islander, White/Caucasian, or Other. As a result of the small sample selection (i.e., n = 1) for Native Hawaiian/Pacific Islander, I combined the category with the Asian race. There was a non-response rate for Native American or American Indian. As such, White/Caucasian was coded as (0), Black/African American was coded as (1), and Asian and Native Hawaiian/Pacific Islander was coded as (2).

*Underrepresented Racial Minorities.* White/Caucasian, Asian, and Native Hawaiian/Pacific Islander participants were coded as (0). Underrepresented racial minority participants (Black/African American and Hispanic/Latino) were coded as (1).

*Perceived Competence.* Perceived competence was assessed using a modified Bandura (1977) scale. The scale included 8-items and was modified to fit the context of the study. Sample items included “My former doctoral student submitted and presented a paper (as a solo- or co-author) at a well-recognized conference” and “My former doctoral student was an effective co-author on a published paper.” High scores indicated a high
display of perceived competence. Cronbach’s alpha is .89 for senior faculty participants on this measure.

**Access to Developmental Opportunities.** Consistent with previous literature (McCall et al., 1988; Valerio, 1990; Van Velsor and Hughes, 1990; and Lyness and Thompson, 2000), the developmental opportunities measure was adopted to assess junior faculty participants’ most significant developmental experiences as former advisees. The scale included 5-items and was modified to fit the context of the study. Sample questions included “My former dissertation advisor and I presented research at a conference together” and “My former dissertation advisor had me complete tasks such as writing a literature review, coding, or data write-up.” High scores indicated a high display of access to developmental opportunities. Cronbach’s alpha is .84 for junior faculty participants on this measure.

**Career Satisfaction.** Career satisfaction was measured by the Greenhaus, Parasuraman, and Wormley (1990) 5-item scale. This construct was only included in the junior faculty (i.e., former doctoral students) survey. Sample questions included “I am satisfied with the progress I have made toward meeting my overall career goals” and “I am satisfied with the progress I have made toward meeting my goals for advancement.” To better capture the context of the study, an additional question was added to the measure, “I am satisfied with the quality of the job I was able to obtain.” High scores indicated a high display of career satisfaction. Cronbach’s alpha is .90 for junior faculty participants on this measure.

**Performance.** Performance was measured by the number of joint publications that the senior faculty member and junior faculty member co-authored to date. The cut-off
period for publication was October 2020. Joint publications included books, book chapters and peer-reviewed journal articles. While book chapters hold less weight than peer-reviewed publications, it does allow former doctoral students to engage in developmental opportunities such as synthesizing and integrating literature, which is critical in their ability to contribute to existing literature. These data were sourced using Google Scholar and current CVs. High scores indicated a high display of co-publications.

As previously mentioned, increased publications may be perceived favorably during the earlier part of the junior faculty members’ career; however, as junior faculty members advance in their tenure-track positions, joint publications with advisors may be perceived less favorably.

Controls

To strengthen the internal validity of the study, I collected multiple control variables from both the former doctoral students and former dissertation advisors.

*Junior Faculty Member Doctoral Granting Institution.* While it is expected that the majority of the junior faculty members would have completed their doctoral degrees from an R1 institution, there is a subset who earned their degrees from lower-tier institutions. Using the Carnegie Melon Classification System link provided in the survey, the junior faculty members were asked to characterize the doctoral granting institution where they received their degree. The doctoral granting institution classification provides an indication of the research, teaching, and service expectations required of the former doctoral student. Participants were able to select from R1 – Very High Research Activity, R2 – High Research Activity, and Other. Junior faculty members who earned their
doctoral degree from an R1 institution were coded as 0, those with degrees from all other institutions were coded as 1.

*Junior Faculty Member Educational Background.* Junior faculty members were asked to identify the classification of their undergraduate and, if applicable, graduate degree (other than their doctorate) institutions. Participants were able to select from the following options: R1 – Doctoral University: Very High Research Activity, R2 – Doctoral University: High Research Activity, D/PU – Doctoral/Professional Universities, M1 – Master’s College and Universities: Larger Programs, M2 – Master’s Colleges and Universities: Medium Programs, M3 – Master’s Colleges and Universities: Smaller Programs, and Baccalaureate Colleges. As a result of the small sample selection for D/PU and Master’s Colleges and Universities, I combined the categories with R2 responses. Junior faculty members who earned their undergraduate degree from a R1 institution were coded as 0, those with degrees from all other institutions were coded as 1.

*Junior Faculty Member Prior Research Experience.* Junior faculty members were asked two questions regarding their research experience prior to graduate school. The questions were, “How many, if any, papers had you submitted to a professional conference prior to being admitted into a doctoral program?” and “How many, if any, papers, had you published as either an author or co-author in an academic journal prior to being admitted into a doctoral program?” Participants responded on a 4-point numerical scale ranging from (1) 0, (2) 1, (3) 2, (4) 3 or more. The answers to these questions were combined to gain an average composite score and operationalized as a continuous measure.
**Former Dissertation Advisor Position.** Senior faculty members were asked to identify their positions during the period of advising their former doctoral student. One’s position in the department provides an indication of his/her status and potential resources to aid former doctoral students. Participants responded to a list of the following options: Assistant Professor, Associate Professor, Full Professor, Endowed Chair, and Other. Although, while most are, not all associate professors are tenured. Assistant Professors were coded as (0), Associate Professors were coded as (1), Full Professors were coded as (2), and Endowed Chairs were coded as (3).

**Number of students that the former dissertation advisor has advised.** Senior faculty members were asked, “Approximately how many other doctoral students did you advise while simultaneously advising your former doctoral student?” The response to this question may be indicative of the amount of time an advisor was able to invest in his/her doctoral students. Participants responded on a 4-point numerical scale ranging from 0 students to more than 5 students. Senior faculty members who advised 0 students were coded as (0), 1-2 students were coded as (1), 3-5 students were coded as (2), and more than 5 students (3).

**Results**

A total of 121 dyads responded to the survey questionnaire. The junior faculty sample was 52% women. Approximately 19% were Black/African American, 61% White, and 14% Asian. Six percent of the junior faculty members identified as being of Hispanic or Latino ethnicity. Approximately 92% of the junior faculty participants earned their doctorate degree from R1 Universities. The senior faculty sample consisted of 67% men and 84% white participants. Approximately 6% of the participants were
Black/African American, 8% Asian, and 2% Other. Three percent of the senior faculty members identified as being of Hispanic or Latino ethnicity.

Before hypothesis testing, I used SPSS to examine the factor structure of my measures by performing an exploratory factor analysis (EFA). EFA was performed jointly for all junior faculty variables and senior faculty variables. Items that loaded .40 or better on their focal factor with low cross loadings on other factors (i.e. - loadings that were at least .20 lower on their non-focal factors) were kept (Hinkin, 1998). I then used Mplus 8.0 to confirm the factor structure of my measures by performing a confirmatory factor analysis (CFA) for the junior faculty variables and senior faculty variables.

Lastly, to improve model fit, I used the EFA results to reduce the number of items in each variable so that it only reflected the top three to five items that had the highest loadings on their respective factors (Velicer and Fava, 1998). While it is generally necessary to have a large sample size for path analysis, strategies have also been made for smaller sample sizes (Kline, 2005, p.14-15). I used the top three to five items that had the highest loadings on their respective factors to construct the scale scores. I conducted a CFA to assess whether senior faculty participants aptly differentiated the initial role performance and perceived competence constructs, and whether junior faculty participants aptly differentiated the access to developmental opportunities and career satisfaction constructs. A non-significant chi- square, CFI and TLI values of .90 or more, RMSEA of .08 or less constitute an acceptable model fit (Bentler, 1990; Browne & Cudeck, 1989; Joreskog & Sorbom, 1981). CFA results for the junior faculty variables exceeded acceptable cutoff levels with $\chi^2(8)=5.93$, $p<.001$, CFI=1.00, TLI=1.00, RMSEA=0.00, SRMR=0.03. All factor loadings were significant (all p values<.001),
ranging from .73 to .91. The senior faculty variables exceeded acceptable cutoff levels with $\chi^2(19)=17.63$, $p<.001$, CFI=1.00, TLI=1.00, RMSEA=0.00, SRMR=0.01. All factor loadings were significant (all $p$ values $<.001$), ranging from .80 to .99. I compared the baseline measurements for junior faculty variables with a theoretical plausible alternative model, constraining access to developmental opportunities and career satisfaction items to load on a single factor, which fit significantly worse than the baseline model and did not exceed acceptable cutoff levels ($\chi^2(9)=235.71$, $p<.001$, CFI=0.41, TLI=0.01, RMSEA=0.46, SRMR=0.23). The same analysis was completed for the senior faculty variables. I compared the baseline measurements for senior faculty variables with a theoretical plausible alternative model, constraining initial role performance and perceived competence items to load on a single factor, which fit significantly worse than the baseline model and did not exceed acceptable cutoff levels ($\chi^2(20)=1782.59$, $p<.001$, CFI=0.18, TLI=0.00, RMSEA=0.85, SRMR=0.37). Overall these results provided support for the construct validity of the initial role performance, perceived competence, access to developmental opportunities, and career satisfaction scales.

I estimated two primary path analytic models to test study hypotheses. Model 1 included statistical controls and the main effects of advisors’ perception of advisees’ initial role performance and underrepresented racial minority advisees on advisors’ perception of the advisees’ competence, whereas model 2 added the initial role performance x underrepresented racial minority advisee interaction to model 1. Path analytic findings supported the fit of my data to Model 1 ($\chi^2(5)=5.73$, $p<.001$, CFI=0.99, TLI=0.95, RMSEA=0.04, SRMR=0.03) and Model 2 ($\chi^2(8)=8.80$, $p<.001$, CFI=1.00,
Results relevant to the study hypotheses are presented in figure 3 and table 1. Hypothesis 1 predicted a positive relationship between advisors’ perception of advisees’ initial role performance and advisors’ perception of the advisees’ competence. This hypothesis was supported ($\beta = 0.77$, $p < 0.001$), and the controls and independent variables accounted for 27% of the variance, $R^2 = 0.27$. This finding suggests that advisees whose
advisors rated them as higher in initial role performance were perceived as more competent than advisees rated as lower in initial role performance.

Hypothesis 2 predicted that underrepresented racial minority advisees will moderate the positive relationship between initial role performance and perceived competence, such that advisors’ perceptions of advisees’ initial role performance will have a less positive relationship with advisors’ perception of advisees’ competence. The initial role performance and underrepresented racial minority interaction was found to be significant in predicting perceptions of advisees’ competence ($\beta=-2.14$, $p<.001$), suggesting a moderating effect. This hypothesis was supported. Follow-up simple slope analyses revealed a stronger positive relationship of the initial role performance and perceived competence relationship for non-underrepresented racial minorities, which includes White and Asian advisees ($\beta=-0.85$, $p<.001$). Figure 4 graphically depicts the initial role performance and perceived competence relationship for underrepresented racial minority advisees. The overall pattern of findings strongly corroborates Hypothesis 2.
Bootstrapping analyses were performed to estimate the moderated-mediation effects posed in Hypothesis 2. I observed that advisors’ perception of advisees’ initial role performance significantly moderated the mediated effect of underrepresented racial minority advisees on advisors’ perception of the advisees’ competence. Results show that underrepresented racial minority advisees have a significantly stronger indirect effect on advisors’ perception of the advisees’ competence in high initial role performances (indirect effect = -16.153, p<.01; CI = -29.935–(-2.371)) versus low initial role performances (indirect effect = -9.937, p<.01; CI = -18.260–(-1.613)). The racial effect is exacerbated by higher initial role performance. That is, greater initial role performance of White and Asian advisees results in greater disfavoring of Black and Hispanic advisees. Graphical depictions of the moderated indirect effects are presented in Figure 5.
Figure 5: Moderated-Mediation Effects of Race on Performance

(a) Low Initial Role Performance

(b) High Initial Role Performance

Hypothesis 3 predicted that advisors’ perceptions of advisees’ competence will be positively related to advisees’ access to developmental opportunities. This hypothesis was significant ($\beta=.36$, $p<.001$) and the controls and focal predictor variables accounted for 18% of the variance, $R^2=0.18$ in developmental opportunities. These results suggest that advisees whose advisors rated them as higher in perceived competence received more access to developmental opportunities than advisees who were rated lower in perceived competence.
Hypothesis 4 predicted that advisees’ access to developmental opportunities will be positively related to advisees’ career satisfaction. This hypothesis was not supported ($\beta=.11$, $p=.26$). The statistical controls and focal predictor variables accounted for 7% of the variance, $R^2=0.07$. This finding suggests that advisees who received access to developmental opportunities did not receive greater career satisfaction than advisees who received lower access to developmental opportunities.

Hypothesis 5 proposed that advisees’ access to developmental opportunities will be positively related to advisees’ performance. This hypothesis was supported ($\beta=.32$, $p<.001$), accounting for approximately 27% of the variance, $R^2=0.27$. This finding suggests that advisees who received greater access to developmental opportunities received more joint publications than advisees who received lower access to developmental opportunities.

Because my model includes a set of mediated pathways, I conducted a mediation analysis to estimate the direct and indirect effects of in-role performance on performance. In performing these analyses, I modeled the initial role performance $\rightarrow$ perceived competence $\rightarrow$ developmental opportunities $\rightarrow$ performance mediated pathway. The results are reported in table 2 and include the direct and indirect effects. The indirect effects were significant ($\beta=.63$, $p<.001$, 95% CI[0.27, 1.21]). The direct effect approached significance ($\beta=.77$, $p=.06$, 95% CI[-0.18, 1.72]) in the model. The results indicate a significant, indirect effect of in-role performance on performance through perceived competence and developmental opportunities. The results of the mediated pathway reveal that advisees’ initial role performance, such as completing required coursework, engaging in activities directly related to their research trajectory, and performing tasks that met
their advisors’ expectations, significantly impact the advisors’ evaluation of advisees’ competence. This favorable evaluation led advisors to feeling confident in their advisees’ ability to perform the necessary tasks to become independent scholars, hence, providing them with access to developmental opportunities to further learn the intricacies of the research process by engaging their advisees in continuous feedback and learning opportunities, which increases the number of joint publication opportunities with the advisor. The direct effect that is approaching significance reveal that high initial performers are likely to be better positioned to attain joint publications with their advisors irrespective of competence perceptions and developmental opportunities.

Table 2: Direct, Indirect, and Total Effects Initial Role Performance – Performance

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate</th>
<th>Lower 2.5%</th>
<th>Upper 2.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>.773</td>
<td>-0.180</td>
<td>1.720</td>
</tr>
<tr>
<td>Indirect</td>
<td>.634**</td>
<td>0.269</td>
<td>1.206</td>
</tr>
<tr>
<td>Total</td>
<td>1.431**</td>
<td>0.420</td>
<td>2.449</td>
</tr>
</tbody>
</table>

Note. p** < .001

Joint Publication Database

A two-way ANOVA was conducted to compare the main effects of the advisee’s race and gender as well as their interaction effects on the number of co-publications with the advisor. Race and gender were not statistically significant. The main effect for gender yielded a non-significant F ratio of F(1, 113)=.274, p=.60, indicating that there was not a significant difference between men (M=3.20, SD=3.26) and women (M=2.32, SD=2.56) advisees. The main effect for race yielded a non-significant F ratio of F(3, 113)=2.65, p=.052, indicating there was not a significant difference between Whites (M=3.09, SD=3.35), Asians (M=3.24, SD=2.22), Whites/Hispanics (M=3.67, SD=1.51), and Blacks/African Americans (M=1.13, SD=1.51). Although, it is worth noting that the main
effect for race approaches significance. The interaction effect was not significant $F(3, 113)=.310$, $p=.82$, indicating that there was no combined effect for advisee’s race and gender on shared publication with his/her advisor. While the results of the two-way ANOVA were not shown to be significant, the data revealed that on average Black/African American advisees were less likely than White, Asians, and even White/Hispanics to co-publish with their advisors. Results are shown in table 3.

**Table 3: Junior Faculty Race and Gender ANOVA on Co-Publications**

<table>
<thead>
<tr>
<th>Variable</th>
<th>White</th>
<th>Asian</th>
<th>White/Hispanic</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Men Advisees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Publications</td>
<td>3.48</td>
<td>3.68</td>
<td>3.11</td>
<td>1.76</td>
</tr>
<tr>
<td><strong>Women Advisees</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Publications</td>
<td>2.59</td>
<td>2.84</td>
<td>3.37</td>
<td>2.77</td>
</tr>
</tbody>
</table>

*Supplementary Analysis*

I conducted a series of supplemental analyses to examine the robustness of my study results and the effects of race on key outcome variables. As shown in table 4, the disparities in joint publication opportunities appeared to impact Black/African American advisees rather than White/Hispanic advisees, who on average were likely to co-publish with their advisors at the same rate as their White and Asian counterparts. As such, I examined the mean differences for key outcome variables: initial role performance, perceived competence, developmental opportunities, and publication performance. The mean differences by race and gender are provided below in table 4 and table 5.
Table 4: Mean differences on key variables by Race/Ethnicity for Men

<table>
<thead>
<tr>
<th>Variable</th>
<th>White</th>
<th>Asian</th>
<th>White/Hispanic</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Initiation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Performance</td>
<td>3.81</td>
<td>0.37</td>
<td>3.97</td>
<td>0.38</td>
</tr>
<tr>
<td>Perceived Competence</td>
<td>3.46</td>
<td>0.60</td>
<td>3.83</td>
<td>0.25</td>
</tr>
<tr>
<td><strong>Cultivation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Opportunities</td>
<td>2.99</td>
<td>1.06</td>
<td>3.78</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>Separation or Redefinition Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publication Performance</td>
<td>3.48</td>
<td>3.68</td>
<td>3.11</td>
<td>1.76</td>
</tr>
</tbody>
</table>

In examining the mean differences, Black/African American advisees continued to be evaluated lower for each key dependent variable in comparison to all other advisees, indicating that there is a difference in advising experiences for Black/African American advisees, rather than underrepresented racial minority advisees in general. Thus, I performed a one-way ANOVA to compare Black/African American advisees with all other races for each of the key dependent variables. I used Welch’s test to test the differences in the ANOVA analysis. Welch’s t-test is robust to unequal variance and

Table 5: Mean differences on key variables by Race/Ethnicity for Women

<table>
<thead>
<tr>
<th>Variable</th>
<th>White</th>
<th>Asian</th>
<th>White/Hispanic</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Initiation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Performance</td>
<td>3.83</td>
<td>0.39</td>
<td>3.81</td>
<td>0.35</td>
</tr>
<tr>
<td>Perceived Competence</td>
<td>3.47</td>
<td>0.79</td>
<td>3.68</td>
<td>0.47</td>
</tr>
<tr>
<td><strong>Cultivation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Opportunities</td>
<td>3.19</td>
<td>1.13</td>
<td>3.17</td>
<td>0.69</td>
</tr>
<tr>
<td><strong>Separation or Redefinition Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publication Performance</td>
<td>2.59</td>
<td>2.84</td>
<td>3.37</td>
<td>2.77</td>
</tr>
</tbody>
</table>

In examining the mean differences, Black/African American advisees continued to be evaluated lower for each key dependent variable in comparison to all other advisees, indicating that there is a difference in advising experiences for Black/African American advisees, rather than underrepresented racial minority advisees in general. Thus, I performed a one-way ANOVA to compare Black/African American advisees with all other races for each of the key dependent variables. I used Welch’s test to test the differences in the ANOVA analysis. Welch’s t-test is robust to unequal variance and
unequal sample sizes at the same time (Lakens, 2013). The purpose of the analysis was to examine whether there were differences at the outset in how Black/African American advisees were perceived by their advisors with regard to their initial role performance and thus, how advisors translate that perceived difference into perceptions about advisees’ competence and advisees’ access to developmental opportunities.

The one-way ANOVA results revealed non-significant racial mean differences in initial role performance (F(1,119)=5.82, p=.15) and advisor's perceptions of advisee's competence (F(1,118) = 2.90, p=.13). These results suggest that ratings of initial role performance and perceived competence did not vary significantly by race. However, significant racial differences were observed for advisee’s access to developmental opportunities (F(1, 119)=9.63, p<.05) and publication performance (F(1, 119)=9.63, p<.001). This finding signifies that on average, White, Asian, and White/Hispanic advisees reported higher levels of access to developmental opportunities and joint publications with their advisors than Black/African American advisees. Results are reported in table 6.

Table 6: One-Way ANOVA on Key Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Others</th>
<th>Black/African American</th>
<th>F(120)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td><strong>Initiation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Role Performance</td>
<td>3.84</td>
<td>0.35</td>
<td>3.56</td>
<td>0.88</td>
</tr>
<tr>
<td>Perceived Competence</td>
<td>3.52</td>
<td>0.64</td>
<td>3.26</td>
<td>0.74</td>
</tr>
<tr>
<td><strong>Cultivation Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental Opportunities</td>
<td>3.18</td>
<td>1.02</td>
<td>2.39</td>
<td>1.43</td>
</tr>
<tr>
<td><strong>Separation or Redefinition Stage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>3.15</td>
<td>3.08</td>
<td>1.13</td>
<td>1.51</td>
</tr>
</tbody>
</table>
Lastly, based on the disparities shown in the key outcome variables for Black/African American advisees, I reran model 2 and examined the moderation effects for White and Asian advisees (see figure 6 below). Given that Hispanic advisees only represented 6% of the total junior faculty sample, they were removed from the dataset, resulting in a sample size of n=117. Results indicated that Model 2 fit the data well ($\chi^2(14) = 14.66, p<.001, \text{CFI}=1.00, \text{TLI}=1.00, \text{RMSEA}=0.02, \text{SRMR}=0.05$). In addition, the initial role performance and White advisee interaction was found to be significant in predicting perceptions of advisees’ competence ($\beta=.46, p<.001$), suggesting a moderating effect. Follow-up simple slope analyses revealed a stronger positive relationship of the initial role performance and perceived competence relationship for White advisees ($\beta=.92, p<.001$). Figure 7 graphically depicts the initial role performance and perceived competence relationship for White advisees. Although the indirect effects approached significance, I found that White advisees had a stronger indirect effect on advisor’s perceived competence when advisors’ perception of advisees’ initial role performance was high (indirect effect $= 18.521, p=.06; CI=-7.225-44.267$) rather than less (indirect effect $=11.289, p=.06; CI=-4.244-26.822$). The indirect effects approaching significance may be attributed to the small sample size, given that Hispanic advisees were removed from the dataset. Essentially, these results replicate my earlier findings and suggest that there continues to be a performance disadvantage for Black advisees, and it is worse at higher levels of performance. The moderation-mediation effects are shown figure 6.
Figure 6: Supplementary Quantitative Model

- Underrepresented Racial Minority (Advisee)
- Initial Role Performance (Advisor) 0.07
- Perceived Competence (Advisor) 0.36**
- Access to Developmental Opportunities (Advisee) 0.32**
- Performance (Advisee & Advisor)

Whites: 0.46**
Asians: -0.07

Figure 7: Simple Slope Analysis Interaction (Initial Role Performance x Whites)

- Competence
- Initial Role Performance

Whites
Blacks
**Figure 8: Moderated-Mediation Effects of Race on Performance**

(a) Low Initial Role Performance

```
<table>
<thead>
<tr>
<th>Initial Role Performance</th>
<th>Perceived Initial Role Performance (Advisor)</th>
<th>Access to Developmental Opportunities (Advisee)</th>
<th>Performance (Advisee &amp; Advisor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites (Advisee)</td>
<td>3.95**</td>
<td>2.06**</td>
<td>2.65**</td>
</tr>
<tr>
<td></td>
<td>3.44*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

(b) High Initial Role Performance

```
<table>
<thead>
<tr>
<th>Initial Role Performance</th>
<th>Perceived Initial Role Performance (Advisor)</th>
<th>Access to Developmental Opportunities (Advisee)</th>
<th>Performance (Advisee &amp; Advisor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites (Advisee)</td>
<td>5.21**</td>
<td>2.71**</td>
<td>3.50**</td>
</tr>
<tr>
<td></td>
<td>4.48*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

**Summary**

The overall model revealed that advisee’s behavior in the initiation stage impacted subsequent evaluations in the later stages of the relationship, such that advisees who received an initial positive evaluation from their advisors were likely to continue to benefit from the relationship, as they were perceived to be more prepared to meet the expectations of a doctoral program. As predicted, underrepresented racial minority status of advisees did moderate the positive initial role performance–perceived competence relationship, such that they were perceived less favorably than their White and Asian counterparts, and consequently less likely to continue to benefit from the advising relationship. The finding revealed that higher initial role performance for White and
Asian advisees led to lower perceived competence evaluations for Black and Hispanic advisees. Unfortunately, in comparison to their counterparts, underrepresented racial minority advisees did not benefit from higher initial role performance. It takes underrepresented racial minority advisees a longer time to prove themselves as competent to their advisors in comparison to White and Asian advisees. As such, having a really high record over time allows underrepresented racial minority advisees to be seen as an exception and mitigates the presumed relationship between race group membership and perceived competence. These results were replicated when comparing White and Black advisees, such that the racial effect is exacerbated at higher levels of initial role performance.

Additionally, supplementary analysis showed differences in advising experiences for Black/African American advisees in the cultivation stage, and subsequently, the separation and redefinition stage. Specifically, the data revealed that Black/African American advisees reported significantly lower access to developmental opportunities and lower shared joint publications with their advisors than all other advisees. It appeared that Black/African American advisees were not making the transition from the initiation stage to the cultivation stage, i.e., from coursework to establishing themselves as independent researchers, often in apprenticeship to their advisors. In other words, Black/African American advisees did not appear to receive the same level of developmental opportunities and number of joint publications commensurate with their White, Asian, and Hispanic counterparts. Presumably their relationships with their advisors may become custodial (if they were not at the beginning) and lead to subsequent separation, rather than proceeding to mentorship and peer-based relationships. As such,
the lack of developmental opportunities and joint publications between Black/African American doctoral students and their advisors indicate that these advising relationships may be less likely to advance into the redefinition stage.

To further investigate the experiences of underrepresented minority doctoral students compared to others, in chapter 4, I introduce my qualitative study which is based on interviews with study participants. The chapter includes the methodology, analysis, and findings for the in-depth, semi-structured interviews.
CHAPTER 4: QUALITATIVE STUDY

In addition to the survey and joint publication database analyzed in Chapter 3, I also conducted semi-structured interviews to examine the development, transformation, and ending, if relevant, of advising relationships in academe. In this regard, I am using a mixed data collection strategy, which is becoming increasingly widespread in the social sciences, including in organizational research (Small, 2011, p. 59). Integrating qualitative and quantitative methods, including the joint publication database I constructed for this study, provides a diverse set of data to better understand the nuances and complexities of developmental relationships. While the quantitative study was the dominant approach, the small qualitative study was used to help interpret the results of the larger study, using a complementary design (Small, 2011). Additionally, by using more than one method, I was able to gain a more comprehensive and enhanced understanding of the advisor-advisee relationship, especially as it relates to the experiences of underrepresented racial minority advisees.

Both quantitative and qualitative data were collected simultaneously so that the semi-structured, in-depth interviews could be guided by the quantitative model and provide further insight into key aspects of the advisor-advisee relationships that are likely to manifest throughout the years of working together. These areas have been identified in prior research as key dimensions of the advising and mentoring experience, but how these relationships change over time has been understudied with underrepresented racial minorities (Kram, 1983; Ragins and Scandura, 1997; Thomas, 1993; Blake-Beard et al., 2006; Blake-Beard et al., 2011). The key concerns for the interview study are the same as those for the survey study, namely, perceived initial role performance, perceived
competence, developmental opportunities, and publication performance (see Figure 2 in Chapter 3).

Sample

As was the case for the quantitative study, I gained access to underrepresented racial minority scholars through the KPMG PhD Project. To access non-underrepresented racial minorities, I identified junior faculty members who were placed at R1, R2, D/PU, and M3 institutions. I used the Carnegie Classification system to identify the universities at each level (The Carnegie Classification of Institutions of Higher Education, 2018). Eligible participants included junior faculty members who completed their doctorate from an accredited U.S. business school within the last six years and currently serve as a junior faculty member in a management department. More specifically, junior faculty members who have been in their positions for at least two academic years were selected to participate in a semi-structured interview. The two-year period allows for some distance from graduate school and for better reflection on post-graduate changes in the advisor-advisee relationship, thus allowing me to better generalize the unique experiences of the junior faculty. Focusing on junior faculty members who have served in their roles for at least two-years increased the likelihood that the narratives will include relationships that may have transitioned into the redefinition stage as well as those that have terminated.

Procedure

A recruitment email was sent to eligible participants. In the email, I informed the junior faculty members that the study also required participation from their former dissertation advisors. After interviewing the junior faculty members, I emailed and endeavored to schedule a time to interview their former dissertation advisors. Both
parties were informed that the interviews would be confidential. The interviews were conducted over the phone or by video conference (i.e., Skype and Zoom) from March 2020 to July 2020. Junior faculty members were contacted first, and then follow-up requests were sent to senior faculty members. The junior faculty interviews averaged 44 minutes and senior faculty interviews averaged 27 minutes in length.

Appendix B provides a list of the topics and questions covered in the interview. The interview questions were open-ended and semi-structured. Although participants were made aware that my study included the development and transformation of diverse advising relationships, I did not explicitly ask about racial and gender dynamics until after I learned about the history of the dyadic relationship and its functioning. Additionally, given the current racial climate and civil unrest in the country, I was conscious and sensitive to participants’ receptiveness to my questions with respect to representation and inclusion. With the participants’ consent, the interviews were audio-recorded and transcribed by a third-party transcription service. I listened to the interviews multiple times while taking detailed memo notes. Pseudonyms were assigned to all participants, and excerpts were only edited to remove verbal utterances such as “um” and “uh.”

The transcribed files were uploaded to NVivo 12. I independently reviewed the 56 transcribed files to identify initial codes, along with similarities and differences across the interview data. The analysis process involved line by line, open coding of each interview transcript to identify salient themes. The themes were supported by the quantitative model provided in the previous chapter and organized with regard to the behaviors and role expectations that were likely to emerge at different stages of the relationship. The
salient themes highlighted in each stage aided in better understanding the mechanisms that drive low-quality or high-quality relationships.

Researcher’s Positionality

As with any form of research, bias through personal involvement and identification is inevitable. My positionality in relation to the study population involves both strengths and weaknesses. Identifying as an African American/Black woman, who is also pursuing a doctoral degree at an R2 public university in the field of management, it was important for me to be mindful of the thoughts, feelings, and biases that may have been present during the data collection and analysis stages. I am a first-generation college student and have completed both a bachelor’s and master’s degree from an R2 public university in the Midwest. While pursuing my undergraduate degree, I participated in a federally funded initiative known as the Ronald E. McNair Post-Baccalaureate Achievement Program, a program designed to prepare underrepresented undergraduate students for doctoral studies through involvement in research and other scholarly activities. Prior to pursuing my doctoral degree, I worked approximately 5-7 years in corporate, higher education, and consulting industries. In these domains, I had a host of mentors, many of whom were either African Americans or White women, who assisted me in my career advancement. Most of my mentoring experiences have been favorable and several of the relationships are still ongoing.

In the pursuit of my doctoral degree, I became an active and proud member of the PhD Project and management Minority Doctoral Student Association. During my tenure with the organization, I have served on a host of committees and was also awarded the 2018 Student Spirit award for supporting recruitment initiatives, facilitating conference
sessions, and collaborating with other MDSA colleagues in research activities.

Furthermore, Rutgers Business School, the institution where I am pursuing my doctorate degree, has had a long-standing partnership with the PhD Project and has been nationally recognized for having one of the most diverse faculty pools, apart from historically black colleges and universities (Todd, 2017). Hence, my doctoral journey has been unique, in that I experienced immediate access to an array of faculty who have supported me both professionally and personally. Additionally, my dissertation advisor is a White woman whose research focuses on diversity, culture, and inequality. Thus, during my doctoral journey, I have been able to access a range of faculty members who have invested their time and resources in my overall professional development in the academy, which is not necessarily common for underrepresented racial minority doctoral students.

Thus, considering my academic and professional background, I brought the following assumptions to this study: 1) advisors are essential in the advancement of an advisee’s career; 2) underrepresented racial minority advisees may receive less comprehensive support while pursuing their doctoral degrees; 3) comprehensive support has the potential to impact an advisee’s overall performance in their domain; and 4) underrepresented racial minority advising relationships may be less likely to transition into the redefinition phase as a result of stereotypes and biases. While these assumptions are influenced by my personal experiences, there is also research literature, as presented in the previous chapters, that has affirmed and impacted my thoughts and perceptions. Nevertheless, identifying these assumptions helped me to be more conscious during the data collection and analysis stages, and to establish credibility with potential participants.
Pilot Study

In preparation for developing the interview study, I conducted a pilot study in March 2018-July 2018. The pilot study examined the development and transformation of underrepresented racial minorities advising relationships from initiation through either termination or separation. The pilot interview covered the advising relationships between junior faculty members and their former dissertation advisors in a business school setting. This exploratory study was designed to identify potential themes in the data and to improve the design and research questions of the primary study.

I interviewed 7 dyads from various business disciplines: 4 management, 2 accounting, and 1 marketing. Participants were recruited from the PhD Project. The junior faculty members included 3 African American women, 1 Bi-Racial woman, 2 African American men, and 1 Hispanic/Latino man. The senior faculty members included 5 White men, 1 White woman, and 1 Asian woman. The junior faculty members were granted their doctoral degrees from various institutions: 5 from R1 institutions, 1 from an R2 institution, and 1 from an R3 institution. The junior faculty members earned job placements at a host of institutions, ranging from R1 (Very High Research University) to M2 (Master’s Colleges and Universities – medium programs) and Baccalaureate Colleges. During the time of the pilot study, one of the seven relationships advanced to the redefinition stage, in that the relationship continued to be research active. The remaining relationships did not necessarily sever ties; however, there were very minimal communications that occurred throughout the academic year between the partners in the relationships. Further details about the pilot sample can be found in table 7.
Table 7: Pilot Study Participants

<table>
<thead>
<tr>
<th>Advisee</th>
<th>Advisor</th>
<th>Earned PhD</th>
<th>Job Placement*</th>
<th>Pre-Doc Pubs</th>
<th>Post-Doc Pubs</th>
<th>Dyad Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Female</td>
<td>White Male</td>
<td>R2</td>
<td>R1</td>
<td>0</td>
<td>0</td>
<td>Separation</td>
</tr>
<tr>
<td>Bi-Racial Female</td>
<td>White Male</td>
<td>R1</td>
<td>M1</td>
<td>0</td>
<td>0</td>
<td>Separation</td>
</tr>
<tr>
<td>Black Female</td>
<td>White Male</td>
<td>R1</td>
<td>Baccalaureate College</td>
<td>1</td>
<td>0</td>
<td>Separation</td>
</tr>
<tr>
<td>Black Female</td>
<td>Asian Female</td>
<td>R1</td>
<td>R1</td>
<td>0</td>
<td>0</td>
<td>Redefinition</td>
</tr>
<tr>
<td>Black Male</td>
<td>White Male</td>
<td>R1</td>
<td>R2</td>
<td>1</td>
<td>1</td>
<td>Separation</td>
</tr>
<tr>
<td>Black Male</td>
<td>White Male</td>
<td>R1</td>
<td>M2</td>
<td>0</td>
<td>0</td>
<td>Separation</td>
</tr>
<tr>
<td>Hispanic Male</td>
<td>White Female</td>
<td>R3</td>
<td>R3</td>
<td>2</td>
<td>0</td>
<td>Separation</td>
</tr>
</tbody>
</table>

* R1: Doctoral Universities – Very High Research Activity; R2: Doctoral Universities – High Research Activity; D/PU: Doctoral/Professional Universities; M1: Master’s Colleges and Universities – Larger Programs; M2: Master’s Colleges and Universities – Medium Programs; M3: Master’s Colleges and Universities – Smaller Programs

From the pilot study, I identified emergent and salient themes that were informed by the three phases of the developmental relationship: initiation, cultivation, and separation or redefinition. The initiation stage represented the formation of the relationship and provided insight into how advisees and advisors began to work with each other. The cultivation stage, which represented both personal and professional compatibility, provided insight into the doctoral apprenticeship model and whether the relationships will continue to transform beyond the students’ doctoral career. The separation stage represented the relinquishing of hierarchical roles and the former doctoral student’s ability to cultivate relationships with other potential co-authors and research collaborators. Lastly, the redefinition stage, represented a relational shift; whereby the dyads took on a peer-based friendship and continued to be research active. In this phase, the distinction between an advisor and a mentor became very clear, as later explained in
the qualitative analysis. A summary of the stages is provided in Table 8.

**Table 8: Pilot Study Summary**

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Advisor-Advisee Relationship Salient Themes</th>
<th>Year</th>
</tr>
</thead>
</table>
| Initiation | Time in which the relationship has started. | - Communications prior to becoming admitted  
- Seminar or independent study  
- Default to what’s available | 1-2 |
| Cultivation | Time in which the range of instrumental and psychosocial functions provided expands to maximum | - Apprenticeship model (developmental opportunities)  
- Program structure  
- Racial and gender dynamics | 3-4 |
| Separation | Time in which the established nature of the relationship is altered by structural changes in the organizational context and/or by psychological changes within one or both individuals | - Status change to assistant professor  
- Aligned or misaligned research priorities  
- Cultivating a network for co-authorships | 4-5 |
| Redefinition | Time in which the relationship evolves into a new form that is significantly different from the past, or the relationship ends entirely. | - Advisor’s mentoring philosophy  
- Advisees’ driving research projects  
- Relational shift | 5+ |

The results of the pilot study revealed that along with racial and gender dynamics, other factors, such as initial role performance, perceived competence, and access to developmental opportunities were likely to emerge during these stages and influence the amount of time and resources that each party invested in the developmental relationship. More critically, the cultivation stage represented a defining period in which both parties,
based upon previous interactions and performance, were likely to identify whether the relationship would continue to evolve once the former advisee became a junior faculty member in the academy. The distinction between an advisor and a mentor directly translated into whether the developmental relationship had the ability to progress into the redefinition stage or if it simply ended (i.e., separation). Based on these findings, the primary study gives special attention to the role taking processes of the initiation stage and the role making processes that are likely to occur during the cultivation stages.

*Findings of Semi-structured Interview Study*

I interviewed 33 junior faculty members and 23 senior faculty members in the management field, for a total of 56 individual interviews and 23 dyadic interviews. I included the four interviews from those in management departments that were part of the pilot study in my overall analysis, because many of the questions were the same and there was no reason to exclude the information they provided for the purposes of the qualitative study. Given that the snowball method was employed in the data collection, several junior faculty participants earned their doctoral degrees from the same university and program. For example, three participants were in the same cohort at a southern region university. Three participants attended a northwestern region university, but at different time periods. Lastly, two participants attended a midwestern university at different times. However, each dyad from the sample was unique. None of the junior faculty members from the same institution shared the same advisor.

While the questions in the primary study were revised to capture the role taking and role making processes, the questions in the pilot study also met the criteria for understanding the behavioral dynamics that occurred within each phase of the advising
relationship (as seen in Appendix A). The findings presented below draw from the new data as well as from the themes identified in the pilot study.

As detailed in Table 9, the junior faculty sample was 67% women (n=22). Approximately 30% of the participants identified as White/non-Hispanic (n=10), 6% Asians (n=2), 48% African American/Black (n=16), 6% Bi-racial (n=2), and 3% Other (n=1). Six percent (n = 2) of the junior faculty members identified as being of Hispanic or Latino ethnicity. All the junior faculty participants, with the exception of one, obtained their doctorate degrees from R1 Universities. And except for two participants who were serving in post-doctoral and visiting professor positions, the junior faculty participants were tenure-track assistant professors. Although participants earned job placements at various types of institutions, a plurality were placed at R1 schools.

The senior faculty sample consisted of 65% men (n=15) and 65% White/non-Hispanic participants (n=15). Approximately 22% were Asian (n=5) and 8% of the participants were Black (n=2). Four percent (n=1) of the senior faculty members identified as being of Hispanic or Latino ethnicity.

Table 9: Senior Faculty & Junior Faculty Participants

<table>
<thead>
<tr>
<th>Senior Faculty Participants</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Race</th>
<th>Job Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Hispanic</td>
<td>White (Non-Hispanic)</td>
<td>R1</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>Non-Hispanic</td>
<td>Asian</td>
<td>R2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>African</td>
<td>D/PU</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>American/Black</td>
<td>M1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bi-Racial</td>
<td>M2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Middle East</td>
<td>Baccalaureate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Faculty Participants</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Race</th>
<th>Job Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Hispanic</td>
<td>White (Non-Hispanic)</td>
<td>30% R1</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>Non-Hispanic</td>
<td>Asian</td>
<td>6% R2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>African</td>
<td>48% D/PU</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>American/Black</td>
<td>6% M1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bi-Racial</td>
<td>3% M2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Middle East</td>
<td>3% Baccalaureate</td>
</tr>
</tbody>
</table>
The dyadic sample included 61% junior faculty members who identified as an underrepresented racial minority, African American/Black (n=13) and White/Hispanic (n=1). The remaining sample included 39% non-underrepresented racial minorities, White/Non-Hispanic (n=7) and Asian (n=2). The White/Hispanic junior faculty member was grouped into the underrepresented racial minority category because the participant was an active member of the PhD Project and benefitted from the resources and support provided by the network. During the time of the interviews, 50% of the underrepresented racial minority advisees’ relationships had advanced into the redefinition stage, whereas 78% of Whites and Asians had advanced into the redefinition stage. Furthermore, on average, Whites and Asians were 2.5 times more likely to publish with their advisor during their doctoral program than the Black and Hispanic interviewees and 2.4 more likely to publish with their advisor post degree completion. Details regarding joint publications are provided in table 10. Additional details about joint publications as it relates to the gender and race of the advisee can be found in table 11.

### Table 10: Junior Faculty Publication Status

<table>
<thead>
<tr>
<th>Junior Faculty</th>
<th>N</th>
<th>Pre-Doc Pubs (Avg)</th>
<th>Post-Doc Pubs (Avg)</th>
<th>Total Pubs</th>
<th>Redefinition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites &amp; Asians</td>
<td>9</td>
<td>2.33</td>
<td>1.56</td>
<td>3.89</td>
<td>78%</td>
</tr>
<tr>
<td>URM</td>
<td>14</td>
<td>0.93</td>
<td>0.64</td>
<td>1.57</td>
<td>50%</td>
</tr>
</tbody>
</table>
Table 11: Junior Faculty Publication Status (Race & Gender)

<table>
<thead>
<tr>
<th>Junior Faculty Women</th>
<th>N</th>
<th>Pre-Doc Pubs (Avg)</th>
<th>Post-Doc Pubs (Avg)</th>
<th>Total Pubs</th>
<th>Redefinition</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Women</td>
<td>6</td>
<td>1.83</td>
<td>0.67</td>
<td>2.5</td>
<td>67%</td>
</tr>
<tr>
<td>Asian Women</td>
<td>1</td>
<td>2.00</td>
<td>6.00</td>
<td>8.00</td>
<td>100%</td>
</tr>
<tr>
<td>White/Hispanic Women</td>
<td>1</td>
<td>2.00</td>
<td>2.00</td>
<td>4.00</td>
<td>100%</td>
</tr>
<tr>
<td>Black Women</td>
<td>10</td>
<td>0.90</td>
<td>0.60</td>
<td>1.50</td>
<td>60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Faculty Men</th>
<th>N</th>
<th>Pre-Doc Pubs (Avg)</th>
<th>Post-Doc Pubs (Avg)</th>
<th>Total Pubs</th>
<th>Redefinition</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Men</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>8.00</td>
<td>100%</td>
</tr>
<tr>
<td>Asian Men</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4.00</td>
<td>100%</td>
</tr>
<tr>
<td>Black Men</td>
<td>3</td>
<td>0.67</td>
<td>0.33</td>
<td>1.00</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 12 provides an overview of the themes and subthemes found at each stage of the developmental relationship. The initiation stage highlighted advisees’ attempts to show promise in their abilities to perform during their first two years as doctoral students, and the advisors’ evaluation of their advisees to determine if they were worth their investment in time and resources. In the cultivation stage, boundaries such as role expectations between the advisor and advisee became more defined, and mentoring functions were important for further developing the relationship into the role taking phase. Lastly, the separation or redefinition stage reflected the hierarchical shift, in which advisees sought independence and autonomy from the advising relationship. Relationships that shared mutual reciprocity, liking, and respect were able to transform into a peer-based relationship, while those that lacked such qualities were likely to terminate. The data presented in the initiation and cultivation stages reflected the junior faculty members’ experiences as a doctoral student, whereas the separation and redefinition stages represented the post-degree completion status of the relationship between the junior faculty members and their former dissertation advisors.
Table 12: Primary Study Summary

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
<th>Salient Themes</th>
<th>Year/Status</th>
</tr>
</thead>
</table>
| Initiation                | • Advisees attempt to show promise in their ability to perform during their first and second year as a doctoral student  
  • Advisors evaluate the advisee and determine if he/she is worth their investment of resources | • Familiarity with work task  
  • Perceived competence to meet initial expectations  
  • Demographic and perceived similarity | Years 1-2 Doctoral Student |
| Cultivation               | • Advisor and advisee define role expectations and boundaries  
  • Mentoring functions such as career, psychosocial, and research support are central | • Access to developmental opportunities  
  • Feedback processes  
  • Racial and gender dynamics | Years 3-5 Doctoral Student |
| Separation or Redefinition| • Advisees seek independence and autonomy from the advising relationship  
  • Relationship may be transformed into a friendship or peer-based relationship or may terminate | • Continued reciprocity and mutual gain  
  • Relationship quality  
  • Career satisfaction | Junior Faculty Member |

*Initiation Stage*

The initiation stage sheds light on the advisors’ evaluation of their advisees’ initial role performance and perceived competence. Also influencing the advisors’ initial evaluation were demographic attributes such as gender and race, and perceived similarity. Initial role performance was a function of the advisees’ familiarity with the work task.
For instance, whereas 56% of White and Asian advisees reported having *somewhat or a great extent* prior research experience before entering their doctoral program, only 36% of underrepresented racial minorities reported having similar experience. Some advisees gained experience during their undergraduate programs while others began working independently with professors after earning their bachelor’s degrees. These experiences were unique in that they allowed advisees to explore their research interests prior to pursuing their doctoral degrees, as shown by Kayla (White woman):

> So, I started researching with [Scholar] who really guided me towards PhD programs where people studied [research domain] because I’ve fallen in love with working on [research domain] when working with her, which is how I ultimately ended up at [University] working with [Advisor].

This prior research experience allowed Kayla to have confidence in crafting her research identity and aligning with supportive faculty members at an early start of her career. Her advisor, a White man, reported being impressed with Kayla’s skills and competency. He stated the following:

> And on the academic side, she really is sharp. So, it was always fun working with [her] because from day one, it felt more like I was working with a colleague than a first-year doctoral student. She’s that sharp.

Additionally, Kayla’s advisor had an established and favorable relationship with the scholar who mentored her prior to being admitted into the program, which enhanced Kayla’s credibility and worth.

In contrast, underrepresented racial minorities were more likely to report having more years of corporate experience prior to pursuing their doctoral degrees than their White and Asian counterparts, 50% compared to 33%. Whereas advisees’ professional experience helped to shape their research questions based upon their lived experiences,
others felt they spent more time trying to learn the intricacies of academia which left them with a sense of uncertainty, as Jake (Black man) expressed:

So, I think there are some people who go into PhD programs, they already know exactly what they want to do. Probably because they have prior research experience…So, I think I spent a long time in the wilderness because I came in not really understanding academia and then I was working a lot.

Jake continued to elaborate on his experience by stating how he felt his first two years could have been spent more productively had he better understood the value of identifying his research interests and gaining research experience, such as contributing to manuscripts. He continued to add:

So, in the early stages, I think [my Advisor] was trying to prod me in the right direction, but I was probably a bit of a stubborn goat. He was trying to prod me, but I probably wasn’t getting the hint. I didn’t feel like those early years were particularly productive. What I thought was productive for me was, in terms of understanding the course material, I thought I understood it great... But in terms of actually getting research done, I think I was behind the curve.

Moreover, advisees who had minimal or no prior research experience were intentional about trying to create positive impressions, as they firmly understood that despite having significant corporate experience, they were entering into a new and unfamiliar space. Mason (Black man) stated, “So, I saw it as every time I was invited to work on a project or do some type of guest research job for faculty, I wanted to like bring my A game. I was very kind of aware, very consciousness, about you know delivering good like results.” Responding favorably to research requests and completing tasks in a timely manner left a positive impression on advisors, specifically with Lincoln (White man), who valued his advisee’s (Black woman), professional background, but more so appreciated her enthusiasm to learn a new craft.
She had this amazing, several years of executive experience, but when she showed up in the program, she had that kind of glow that a fresh psych undergraduate…would convey. She had respect for the science and learning the science side of things. So, that was very easy. When we sat down to talk about projects, it wasn’t all, ‘Well, at [Company], we did this, so it must have been the right way,’ she was very open.

Additionally, professional work experience influenced advisees’ research interests, specifically for underrepresented racial minorities. Several underrepresented racial minority advisees expressed an interest in examining phenomena that they directly encountered or observed as a result of their race and/or gender in corporate roles. For example, Noelle (Black woman) said:

I had experienced what I now know to be a lot of microaggressions. But I was like, ‘Why are people talking to me like this and responding to my emails and my requests like this?’…And so, I became really, really curious about how that happens in workplaces, and how it affects the well-being of people in one place when those kinds of interactions happen across cultural interaction.

As illustrated in the quote, Noelle was interested in examining and contributing to the literature that directly addressed experiences of marginalized groups. Specifically in Noelle’s case, she was able to identify an advisor, while pursuing her master’s degree. She was quickly drawn to her advisor’s research that explored issues of diversity and inclusion. As such, she pursued an independent research project while a master’s student, and later applied to the doctoral program at the same institution, wherein she continued to work with the same advisor. The advisor, an Asian woman, spoke very highly of Noelle’s initial role performance:
But yes, in terms of wanting to work with [Noelle], that was always very clear to me. I mean, she always was someone who had a very clear zeal and dedication to doing research. And she always had a very kind of research academic mindset, even as a master’s student. Because our program was a professional degree program, it wasn’t like an academically oriented program, the master’s one. So, very few of those students are in the mindset of joining academia, she was very rare in that sense.

However, underrepresented racial minorities’ research interests, especially those who pursued *self-relevant research* were not always supported by faculty members, as expressed by Carly (Bi-Racial woman): “I was interested in bringing in diversity questions; I was interested in power, I was interested in status. I was pretty much told that maybe you should go elsewhere to do those topics.” Another advisee, Alicia (Black woman), shared how she initially perceived that her interests were aligned with her advisor’s research interest in women’s workplace experiences, but later learned that they lacked synergy: “…and so, when I started talking with him about other ideas I had, that had to do with gender, I realized that we just came from two different perspectives.”

These dynamics presented an issue, specifically for black women, as they felt unsupported in the earlier stages of their doctoral careers. An advisor, Asian man, shared his perceptions and challenges that he experienced with his advisee during their initial years of working together. His advisee was a black woman with substantial years of professional experience:

“[Advisee] was far more focused on what she wanted to do, and it was much harder for me to sort of say, “Do this and do that,” because she [had] a very clear idea of what she wanted to do. We had disagreements about what she was doing and why it was important. We had disagreements about what was good quality and what was not. We had disagreements about needing to cater to a certain academic standard versus needing to get the voice and the research out there for policy purposes. So, we had lot of disagreements throughout the process.”
Consequently, homophily by gender and race was common in most advising relationships in doctoral programs, which contributed to the level of support received by doctoral students. Valerie (white woman) who was advised by another white woman, made the following observation:

I think that because it was such a big department, people—especially faculty—were drawn to work with people that they most closely resembled. So, for example, I worked almost primarily with women, not that I was seeking out women, but I think that maybe other women saw that as an opportunity to maybe mentor me and that sort of thing. A lot of white men worked with the other white men, a lot of our students of Asian descent worked with our faculty of Asian descent.

As such, there was a lot of mirroring between the diversity of the faculty and whom they chose to advise. Faculty were drawn to work with people whom they most closely resembled. Thus, this presented a challenge with underrepresented racial minority advisees who had to first navigate racial and gender barriers, while simultaneously attempting to form a favorable working relationship with their advisors. Out of the 10 Black women interviewed, 4 changed advisors after their second or third year as a result of misaligned research interests and perceived fit. Two other advisees (one Black man and one White woman) also changed advisors during their programs.

Further, these experiences often occurred in an environment wherein underrepresented racial minorities were the only Black doctoral student in the department, and in some cases the first Black doctoral student to be admitted to the program. For example, Paige (Black woman), recalled an interaction with a faculty member: “…but one of the faculty members said to me, ‘How does it feel to be the first black grad student here?’” In fact, Paige’s advisor, a White man, noted that this was his first time engaging in an advising relationship with a Black person:
No, she was my first African American student of either gender. Like I’ve said, I’ve had non-white, but international, so Korean, Chinese, Indian students. And I’ve had males and females, but she was my first African American student.

The lack of representation of underrepresented racial minorities in business doctoral programs reflected the low priority given to issues of diversity and inclusion within management departments. For example, George (White man), an advisor, stated the following:

Being in [region], which is as you can imagine, it’s a hugely Hispanic population. It’s like, what, 30 percent of the city is Hispanic. And yet, we do not get many applicants. For African American, same thing. I think in my 24 years, we’ve probably graduated three or four African Americans and Hispanics. I’m going to say, three, if even that. Both are low numbers.

Although, the advisor recognized the lack of racial-ethnic representation within the department, the issue persisted because it had not been given much attention in the department. George continued to share how diversity and inclusion efforts diminished once a PhD Project member left the University:

So, we were plugged into [PhD Project], because one of our colleagues was an active member of it. And so, she would go and do roundtables. And that actually helped, and I think, a more representative set of applicants who thought of [University] for the first time was a real safe place to go. When she left the faculty, and I don’t think that initiative continued after she left. So, I think in that sense, we’re not doing a great job.

Further, universities that created initiatives to increase representation of underrepresented racial minorities in graduate education were met with challenges regarding inclusivity. For instance, Aiden (White man) spoke about his advisee’s admission being part of a diversity initiative at the university level, while at the departmental level there was little attention given to individuals and not much structural level support for underrepresented graduate students: “After the admission, from what I can see, there’s not a heck of a lot of attention to that in the department afterwards.”
As demonstrated in the aforementioned cases, exposure to the research process prior to entering a doctoral program helped to shape the advisees’ experiences at the outset. For those with prior research experience, advisees had clear direction with the research they aimed to pursue and had identified an advisor who would be best suited to guide their research interests. Additionally, prior research experience appeared to shape the advisors’ perceptions of their advisees, leading to a favorable evaluation of their initial role performance. As such, a favorable evaluation led advisors to invest more time in their advisees’ development as they were perceived as a rising scholar with the potential to contribute to their field.

As shown in the examples, underrepresented racial minorities were more likely to enter their doctoral program with significant years of professional experience, including positions in leadership and management. While some underrepresented racial minorities were able to quickly plug into the research model, others took more time to engage in the research process with their advisors. Further, underrepresented racial minorities’ research questions were influenced by their personal and professional experiences, which was not always aligned or supported by their advisors. This lack of alignment impacted underrepresented racial minorities’ ability to identify with their advisors and vice versa, resulting in a lack of mentoring support. Lastly, aligned with the issue of identification, is the lack of representation within the department, at the faculty and student levels. Although faculty were transparent about the underrepresentation of racial minorities, there was little if any structural support in place to ensure the retention of the very few who were present in the department. Overall, the initiation stage served as an important precursor to the more developmental aspects of the cultivation stage.
**Cultivation Stage**

The cultivation stage represented years three through five of the advisees’ doctoral program. In this phase, the apprenticeship model was in full bloom, meaning that role expectations were more clearly defined and functional support such as career and research were central to the continuation of the relationship. It is also quite possible that advisees began receiving mentoring support in the initiation stage, especially advisees who had prior research experience before pursuing their doctoral degrees, leading to favorable evaluations from their advisors at the outset. In the cultivation stage, those advisees who were being helped along learned the art of research by engaging in developmental opportunities with their advisors and other faculty members. Approximately 48% of advisors expressed a prescribed advising style, in which the advisee worked on a faculty member’s research project during the first two years and then took an independent approach, pursuing their own research ideas, while also continuing to receive constructive feedback from their advisors in the latter years. Within the dyadic sample, 54% of White and Asian advisees and 45% of underrepresented racial minority advisees reported following this kind of prescriptive advising approach. While there existed slight variations within this model, the common denominator was that advisees received actual research exposure and training. An advisor, Dylan (White man), explained the process below:

Meanwhile, at that point, they’re learning how to collect data, whether in the lab or field, how to analyze data, how to write a methods and results section, those things, and then they take comps. And at that point, your next thing is lead author, and it can’t be in my area. It’s got to begin to be you branching out into an area that will be your own.
Another advisor, Isaac (White Man), contributed to this process by emphasizing the need for students to begin thinking about their curriculum vita at the start of their doctoral journey, so that it was well polished once the advisee entered the job market:

But thinking about your vita from early on and making sure that [Advisee] had opportunities to present in conferences as we submit papers to AOM that she’s the one doing the presenting and any other conferences, getting into the right doctoral consortia and the right years to make these connections, introducing her around the Academy, going on at least one other conference.

Essentially, advisors who followed a prescriptive advising approach were more likely to expose their advisees to developmental opportunities, which often led to extensive networking and co-authored publications.

In contrast, some advisors took an alternative approach, in which emphasis may be placed on the advisees’ theoretical development, and projects were initiated by the advisee. Aiden (White Man) stated, “And [Advisee] came up with her dissertation topic, it wasn’t spoon fed from me and stuff like that. So, projects might come up naturally. We don’t push it. We let the students develop.” This presented a challenge for advisees, especially for those who did not enter into their programs with prior research experience. In addition to learning existing theories and identifying their research interests, advisees had to initiate a project, with the hope of creating a publishable manuscript. Aiden’s advisee, a Black woman, shared the outcome of her experience.

We’re pretty laid back. Actually, they’re very laid back and maybe a little too laid back because now that I’m in the tenure track role now, I do sometimes wish that not just [Advisor] but even the other faculty pushed us a little bit hard to publish something before we left because it is difficult now starting out without.

There were also environments in which senior faculty members were no longer actively engaged in research, which led to advisees depending heavily on junior faculty members,
who were also constrained with time or developing their own research agenda, as highlighted by Leslie (Black Woman):

And you have to just come up with your own projects, because faculties didn’t really have a strong research agenda other than the one guy who was like, ‘But everybody must do this one thing,’ which just actually does not get published in the A journals, only [International] journals.

Those advisees who lacked access to developmental opportunities had to take an independent approach in navigating their doctoral journey. The process of forming independent projects came at a cost, especially for advisees, who were still learning the art of publication, “…that's a lot of work to be a leading author and that can be slow. And if you propose ideas not good enough and then ended up wasting half a year or a year on that and didn't go anywhere...” stated Chan (Asian man). While Chan was fortunate to be invited on a research team at an early stage of his program, he was aware of the challenges that his peers faced with trying to create a top-tier journal publication with little guidance from a senior faculty member, prior to entering the job market.

Specifically, Chan was invited to join a research group that consisted of both junior and senior level doctoral students, and senior faculty advisors. Chan’s advisor, an Asian Man, explains his prescriptive advising approach below:

I’d asked them to bring printouts and we go over line by line so they learn what all this stuff was and the details because most students learn quickly how to cut and paste from R or use SPSS, pull down, and click. But most students don’t remember a lot of what that stuff means. So, we made it a point of trying to teach him what these things mean.

He continued by stating the following:
Over time, we always wanted our students to have a project. And so, in addition to their dissertations, we tried to set them up with a project that we would negotiate them to be first author. Now, this is always pending that you may start out as a project manager but if you don’t do a good job, you may be dropped in the authorship line. If you start out like [Advisee] on the Journal of Applied Psychology paper which he was first author, he started out as first author and worked his way up and we decided that he was first author at the end of the day.

As shown in the quote, advisees who were plugged into the apprenticeship model, not only learned how to publish in reputable journals, but more importantly developed a network of like-minded scholars to continue to publish with as they grew in their careers. Being invited as a co-author on an established project with a senior faculty member increased the chances of potentially publishing an article and provided insight into the review process and how to contribute to existing literature. Essentially, through this hands-on, mentoring process, advisees learned the rules of the game. Although, as previously mentioned, not all advisees had access to developmental opportunities, and subsequently they had a more difficult time with developing a network of scholars who could contribute to their research development. Bridget (Black Woman), who believed her gender and race impacted her ability to cultivate developmental opportunities and research collaborations with colleagues in her department, provides an example:

It’s not one particular thing. It’s just they treat you like you’re not part of the club or group because you’re not their friend. Because they do research with their friends, and I just don’t fit what a friend looks like. So, it’s just a natural way of interacting with people that you know you’re a student…you know you are different from me, and I don’t think that you’re going to do well because you are black and a woman, and not what I’m used to. So, I don’t…have faith in that.

To manage these challenges, advisees who did not feel they were getting sufficient support from their advisors or departments sought research and career support outside of their programs, and this was especially the case for underrepresented racial minorities who leaned heavily on their relationships within the PhD Project. The PhD
Project provided substantive support by addressing challenges that advisees encountered in their program, such as managing the advisor-advisee relationship, creating research opportunities with senior faculty members, and accessing resources such as teaching, research, and funding support. A prime example of an advisee creating a network outside of her institution is Alicia (Black Woman). Alicia was one of the six advisees in the dyadic sample who experienced a change in advisor while entering into the dissertation phase, leading to potential challenges in her advancement. While she performed well in the classroom, both as a student and instructor of record, Alicia was not perceived as a good fit by several of the senior faculty members. Due to the lack of perceived fit, Alicia feared being dismissed from the program: “Right, ‘cause I was on definitely on a down swing at [University] when I went to that AOM conference...” However, due to Alicia’s leadership and active involvement with the PhD Project, she was able to form productive working relationships with colleagues from other institutions. In doing so, she received several external accolades for teaching and research that were eventually recognized by the department as a result of the department’s PhD Director (non-faculty member) who publicly highlighted her achievements. Below, Alicia discussed how her performance and network outside of her department contributed to her progression in the program.

So then, another friend and I, also through MDSA, we had got an award for a paper at [Regional] Conference. And then the staff person again threw my picture up there, like, so now I’m coming back, and this all happened like in that early half of fall semester, so it’s right around the time where they could have asked me to leave...But then these awards start coming in and they’re like ‘oh this doesn’t look good. I’m sure if we kicked her out and she has [received] awards now.’

Given that Alicia was one of very few underrepresented racial minorities in the college’s doctoral programs, she believed that her progression was attributed to her external accolades, as the department could have received unfavorable attention for dismissing a
high performing Black student. This continued to create tension, as the advisee perceived the department to be more concerned about their interests, rather than acknowledging her potential and taking an interest in her professional development in the academy.

Another barrier that advisees confronted with regard to accessing developmental opportunities included departmental funding. Although all the participants, with the exception of one, earned their doctoral degrees from R1 institutions, there was variation in the level of financial support provided to doctoral students in the sample. Advisees who were led by advisors who used a prescriptive advising approach often received protection from other duties such as teaching, while simultaneously receiving research assistantship appointments. Essentially, these advisors structured their advisees’ duties and responsibilities with a focus on earning a potential publication (or manuscript under review) prior to entering the job market. In feeling less supported than her peers, Gina (White woman) explained her frustration with the lack of transparency in determining who received research assistantship, fellowships, and grants:

    Some of us didn’t even know that there was money to ask for. And so, we didn’t know. It felt very unfair and that’s been across the board for years. It’s not just my year. It’s not just the year before me. It’s continual. So, certain people would get money and others wouldn’t to do research. And then when you find out about it, the people get in trouble for telling [you because] the money was distributed unfairly.

Thus, some advisees were challenged with balancing teaching and research requirements while simultaneously trying to secure funding for research appointments. Many took on the role of an adjunct professor, teaching every semester, including summers, to meet financial needs. Accordingly, advisees reported that they were not able to engage in the same quality of research projects as their peers.
A central mechanism that influenced advisees’ access to developmental opportunities was the feedback process, an inherited function of the role taking and role making process. In doctoral programs, feedback is typically negative, because academic work requires constant revision. Even so, as shared by Olivia (White woman), it is also a critical component of the advisee’s development:

I honestly saw her feedback as a true gift. It’s like having an AMJ reviewer, editor look for everything I’m doing wrong and help me figure out how to do it better. And she didn’t just criticize, it was like explaining. She really was teaching me why this is a problem, why this is not the way to do it, why this is an issue. And so, I felt like I learned so much. So, I just felt like, ‘Well, what a gift.’ It’s a huge asset to have her looking at this.

Advisees’ receptiveness to feedback provided an outlet for further engagement with the advisor. While sometimes perceived as harsh, feedback also empowered advisees to pursue specific research ideas, helping to boost their self-efficacy, as shown by Owen (White man).

But I felt like whereas a lot of my friends in other PhD programs, they would meet with their advisors. They would come away feeling discouraged…I feel like with [Advisor], I would go into our meetings not sure what I was doing, not sure if it was right…And she somehow always made me feel I was doing really well. She gave me confidence.

More importantly, given the advisor’s myriad responsibilities such as advising multiple students and serving as editors and reviewers for high quality management journals, there was a consistent expectation for advisees to manage their advisors, as articulated by Ben (White man): “So I told him from the beginning, when he became my student that he has to really, really, bug me. And that I will respond to it really well, and that he will need to manage me. I cannot manage him.” While this process worked well for some dyads, other advisees did not actively engage with their advisors. Specifically, both Black women and men spoke about various rationales for not actively seeking
feedback. For example, Ellen (Black woman), spoke about not wanting to feel inadequate and incompetent.

And I think sometimes for students of color, it’s hard for us to make that ask. It’s a callback where you’ll show up in someone’s office. And I think that it was definitely harder for me in conversations I’ve had with my peers, harder for me to do that. Even though I’m not a shy person and I’m a very aggressive person, it’s hard for me to ask somebody for a favor...I’m not trying to be that Black person who always needs extra whatever.

In hindsight, Henry (Black man) expressed that he wished he had taken more advantage of the relationship: “You know, in fact, you know I wish I would have asked more of myself in terms of asking for things from [my Advisor].”

At the same time, some advisors struggled with giving honest and constructive criticism. For example, Alicia (Black woman) recalled her advisor complaining about another student’s progress, who happened to also be Black.

...so I think this person was kind of like working with my advisor, at least a little bit, and [student] and my advisor were not getting along at all. And so, my advisor would kind of come to me to talk to me about [student] and that was weird. Like it just put me in a very weird position.

Alicia felt that she was in an awkward position, as the advisor implicitly suggested that she informally act as a buffer between him and the doctoral student, by acting as a direct resource for the student. In other words, rather than the advisor directly confronting the student about his/her performance, the advisor hoped that Alicia would provide the student with constructive feedback. Another advisee, Carly (Black woman) spoke about how she always felt that she was underperforming in comparison to her colleagues because of the lack of feedback she received from her advisor and the PhD Coordinator:
But then, I remember I went to the coordinator’s office one day and she just so happened to have a listing of PhD students up along with their research activities. She had already asked us for information around our conference records, our publications, et cetera. And I had more than anybody else, but I feel as though I was treated as if I was underperforming basically. So, that kind of rubbed me in the wrong way.

Carly’s perceptions provide insight to not only the lack of feedback she received in her program, but also the lack of guidance and support that she received relative to her peers. While actually exceeding performance expectations, Carly still felt that her performance was not sufficient. Lastly, Amira (International woman) expressed the challenge of not receiving direct and honest feedback during her initial years of completing coursework, which subsequently, impacted her performance on the comprehensive exam.

So, something that really struck me hard when I failed the comp exam is that all my grades in the seminars before that was B-plus and A. And then suddenly, I failed the comp exam. I’m like, ‘If my writing is so bad, if you’re saying that I cannot synthesize and integrate and all that, how come you never talked to me?’

While this was not a normal trend in the data for the two Asian junior faculty members, senior faculty members who advised international students mentioned what they perceived as cultural differences in learning styles between domestic and international students. In particular, advisors observed a high-power distance culture that typically existed for international students, which required hands-on and closer supervision than was necessary for domestic students. Also, international students tended to have strong analytical skills, but less creativity and independence in the earlier start of their doctoral journey from the perceptions of the advisors. Nevertheless, taken together, the lack of honest feedback and constructive criticism severely inhibited advisees’ levels of engagement and development in the research process. More importantly, advisees who did not receive honest, critical feedback and frequent interactions with their advisors
were also less likely to be exposed to developmental projects and to receiving mentoring support.

As shown in the previous cases, the cultivation stage represented a pivotal point in the advisor-advisee relationship. In this phase, advisors spoke about the importance of the apprenticeship model, which provided a structure for advisees to engage in developmental opportunities, including managing research projects, coding and analyzing data, writing and synthesizing results, and more. Advisees who showed promise in the initiation stage were likely to be introduced to developmental opportunities in the cultivation phase. These experiences were necessary for skill building as advisees developed into independent researchers in their fields and built networks with other scholars. Not all were able to access these essential learning opportunities, and this seemed especially the case for underrepresented racial minorities. As indicated in some of the cases, underrepresented racial minorities were not always recognized for their performance, and sometimes they did not receive the necessary critical feedback from their advisors.

The feedback process is a two-way medium that requires the engagement of both advisees and advisors. In some instances, underrepresented racial minorities did not actively consult with their advisors for fear of “not wanting to make the ask,” and in doing so they navigated the process independently with their existing resources. At the same time, advisors did not always feel comfortable with providing advisees with constructive and negative feedback, which ultimately hindered the advisees’ development. Given the lack of structural support, underrepresented racial minorities were tasked with developing their own blueprint for success, and for those in this sample,
they primarily gained necessary support from the PhD Project. The PhD project continued to be a critical source of support for underrepresented racial minority advisees. The network allowed advisees to form relationships with peers and faculty members outside of their home institutions, provided a medium for advisees to express concern about navigating potential turmoil, and guided advisees through the required milestones of the doctoral program. Inherently, in the cultivation stage, advisors who were more custodial and who did not include advisees in their research activities were less helpful to the future success of advisees than were those advisors who made sure their advisees were involved in developmental opportunities and who otherwise actively mentored their advisees.

Separation or Redefinition Stage

The separation or redefinition stage represented the advisees’ transition to a junior faculty position. Hierarchical roles were set aside, and advisees began seeking independence and autonomy from their advising relationships. Based on the level of liking, reciprocity, and mutual respect that occurred in the cultivation stage, advisees and advisors were aware if their relationship would end at the separation stage or continue into the redefinition phase meaning that both parties would enjoy a peer-based relationship and the advisors would continue to provide mentoring functions for their former advisees who were now tenure-track junior faculty members.

Advisors’ commitment to their students beyond degree completion was a function of the role taking and role making processes that involved the evaluation of their advisees’ motivations and abilities. The findings based on these interviews suggest that advisees who were exposed to developmental opportunities and plugged into the
apprenticeship model were likely to continue their relationship with their advisors. Leah (White woman) expressed how simple it was to continue her relationship with her advisee, a White woman, due to the advisee’s diligent work ethic in the initiation and cultivation stages.

If she needs to learn something, she will go off and she will learn it. She’s really smart, she’s really hardworking, and she’s very creative. She reads a lot. So, it makes her really amazing to work with. I mean, she’s really easy to work with.

Conversely, advising relationships that formed in the latter years or lacked research engagement, independent of the dissertation, were likely to separate. A separation in the relationship did not necessarily translate into dysfunctionality, but rather to a difference in goals and perspectives, as shared by Irene (White woman): “I think she thinks positively of me. I think it’s just working with doctoral students is not a priority for her. She’s someone who doesn’t want to work on projects that are outside of her very specific area of research.” Advisors and advisees who separated still shared mutual respect as they continued limited interactions at academic conferences and occasional check-ins. Advisees that were no longer actively engaged with their former advisors spoke about the importance of forming research collaborations with others to jumpstart their publication pipeline; however, this process presented its own challenges, as expressed by Amira (International woman).

I had a lot of people, professors, who I connected with in conferences. But the problem is, nothing comes out of it. At [a] personal level, awesome. We’re seeing each other in conferences. We laugh, we talk, but nothing more than that.

In addition to forming relationships with scholars from various conferences, others spoke about connecting with their peers from their doctoral granting institution and attempting to build a new network at their current institution.
For those relationships that moved to a redefinition stage, a critical function of the newly defined relationship was the feeling of reciprocity gained by both parties. In this phase, advisees took a lead role in managing projects; although, occasionally, if it was a good fit, advisors would invite advisees onto their project. However, there was also a tension that existed between junior faculty members continuing joint research with their advisors, versus their need to pull away and demonstrate their independence and ability to take on a leadership role in research. About 35% of advisees expressed the need to become more independent scholars at their current institution, especially those who earned a job placement at an R1 institution. Leslie (Black woman) shared the expectations of her current institution below:

So then they were like, ‘Get to work on your dissertation. That needs to be published and that needs to be published solo,’ which was a different expectation than what we had at my old school. My old school dissertation was like, ‘Be published with your advisor.’

Some junior faculty members who only published with their advisors or primarily co-authored publications with their advisors, were at a disadvantage when it came to the tenure decision. Essentially, institutions wanted to ensure that their junior faculty members were capable of publishing on their own, initiating ideas, and seeing them through to fruition. Dylan (White man), who used a prescriptive advising approach, shared his rule of thumb with continuing to work with his former advisees, while also supporting their independence.

One rule that I have for the most part of my students is once you graduate, and once their graduate papers are done, we’re done until you’re a full professor. And that’s a rule that I’ve almost always adhered to.

In these circumstances, the advisors continued to mentor their students just in a different capacity. For instance, some advisors provided friendly reviews and others served as a
broker in connecting their former advisees with other scholars in their research domain. And in doing so, they indirectly contributed to strengthening their advisees’ research pipeline. Advisors also mentored their advisees by helping them to think critically about their reappointment and tenure packet.

Furthermore, psychosocial support was typically given in the context of career and research interests, rather than on a personal level. For instance, whereas many advisors preferred their advisees to seek and earn a job placement of the same caliber as the doctoral granting university, others remained supportive of considering their advisees’ overall needs and interests. Below, Lincoln (White man) expressed his confidence in his advisee’s (Black woman), ability to thrive in any environment:

We think that we can impart the research skills necessary to publish in any journal in the world in our program, so she had that under her belt. And what makes it nice for somebody like her then, is you can say, ‘Well, you certainly have the chops to play at a research one institution.’ But she’s also got this professional side to her, that would allow her to play at a place that’s much more balanced, not just between teaching and research, but between being engaged actively in the real business world, in their community, it’s a third angle.

Given the advisee’s extensive corporate experience prior to pursuing a doctorate degree, Lincoln was well aware of the value that his advisee could bring to both environments, a research institution and to a balanced institution. In this case, the advisee pursued a career at a balanced institution and continued to actively publish in high-quality journals with her advisor, Lincoln.

In contrast, some advisors were less supportive of their advisees selecting a lower-tier institution, as they felt it was a poor reflection on the time and resources they invested in the relationship. This was illustrated by Hannah (White woman), who decided later in her doctoral journey that a balanced university would be a better fit for her career
interests, as she enjoyed teaching and connecting with undergraduate students. Hannah recalled her advisor’s reaction (White woman), after sharing her job offer from a balanced institution. “‘No, you need to go to an R1.’ So, I just remember being really upset and completely conflicted, and calling [Senior Faculty Member] and crying to her.” The advisor responded to her job offer by suggesting that she stay another academic year in the program to increase the odds of a better job placement. While in retrospect, Hannah’s advisor expressed being happy about Hannah’s career decision, she also shared her initial disappointment, “Was it a disappointment for me? Yes, I was a little bit. I thought she’d go to an R1 school. But it’s more important that she be at a place where she and her family are happy, and she’s happy.” While these two continue to work on Hannah’s dissertation, they do not have other projects in her research pipeline.

Advisors who took a comprehensive approach in advising their students on the job market also shared a more personal bond with their advisees, which was especially relevant for underrepresented racial minority advisees. For example, Isaac (White man), discussed being open-minded and receptive to his advisee’s experience, as this was his first time advising a Black student:

Certainly, it’s been useful for me, because I try to be empathetic to understand how she’s experiencing the world. And also, what are likely challenges you’re going to face and be blunt about it. So, I’m actually trying to recode something out this political correctness. If this is likely going to be an issue, let’s talk about it.

Even going forward, the advisor continued to have dialogue with his advisee about the racial climate at her current university and inquired about the advisee’s family adjustment to a new, rural region. Junior faculty members who had a high-quality relationship with their former advisors shared the experience of feeling that each party was genuinely
interested and concerned about the other’s well-being, outside the walls of academia, as shared by Mason (Black Man):

Again, I go back to him taking ownership of my development as a scholar. He’s like my academic father, I’m like his academic son. And like any parent, no matter what, when you leave the house, when you leave the nest, a parent will still want to be a parent to you, and make sure you, you know, make sure they’re there for you.

On the other end of this spectrum were advisees, both black men and women, who received remarks such as expressed by Noelle, “You’re Black and you’re a woman. You know what that means. You’re definitely going to get a job.” And similarly as Logan said, "If he can get R&Rs and be Black, then that should help him to get a better place[ment]." This was an increasingly problematic issue, as advisees felt that they were not valued for their intellect, and that somehow their job market experiences were not as equally taxing emotionally, cognitively, and physically as was the case for their counterparts. Interestingly, Logan discussed that his job placement at an R1 institution was the result of the PhD Project mentorship and network, versus his advisor’s advocacy. Further, Gamal, spoke about assessing the job market from a more comprehensive perspective, considering how his placement would also impact his family. As a result of differences in demography and family dynamics, Gamal decided to create his own blueprint for his academic career:

It was harder for me to find people who were, who reminded me of me and all…who were family guys with kids, who had a working spouse that was not in academia, you know so that you are talking about your significant other’s career just like you’re thinking about your career and all that stuff, and so I just said man if I do what this person has done, why would I not end up in their situation. So I happened to say, I need to do something different if I want something different.

Rather than relying upon his dissertation advisor to assist him with the job market process, Gamal used his network, specifically the PhD Project, to identify alternative
ways to navigate his career. Like Logan, Gamal could rely upon other scholars in the PhD Project with whom he shared similar identification and challenges in academe.

Lastly, an advisor’s presence was really felt by advisees who were past their three-year reappointment. While Mary (White woman) expressed the need to create a network that was more reflective of her career values, she also expressed the appreciation for her advisor’s prescriptive advising approach. While feeling supported, but also overwhelmed by her advisor’s continued expectations and demands, in hindsight, she realized that he gave her the “gift of tenure” as illustrated below:

And so, I just think of that, and I don't know, I guess it was good for grad school. And I got a great job. And I feel like I know – I'm not worried about tenure. I think that's the best gift that he's given, is that our field still works, for the most part, that they count these things.

This level of assurance increased Mary’s confidence to engage and establish a network that was distinct from the network she built as a doctoral student under her advisor’s tutelage. As expressed below, Mary is becoming actively involved in collaborating with scholars who reflect her values and who have broader research interests as a junior faculty member:

I had decided this year that I was going to make sure that I built out a support network that was more reflective of my values and more female. But it felt like his advice wasn’t helping me in the same way it used to, and it wasn’t necessarily going to help inform the next choices that I make.

Career satisfaction varied between advisees. Pamela (Bi-Racial woman) shared her experience with not receiving tenure in the last academic year because she lacked the requisite peer-reviewed publications during her tenure clock.
So, in this current search stage in my career, I really, really regret not knowing in advance and putting weight on the fact that I should have had more work with others, and in particular, dissertation chairs, or others in order to have more things actually published while I was in this job. And I think that it would have been better, in his role as an advisor to push that.

Unfortunately, although Pamela had a positive relationship with her advisor, they did not work on research together, even during her time as a doctoral student. While the advisor was supportive in her research endeavors and they continued to communicate post-degree, Pamela soon realized that she was at a disadvantage in her tenure-track role, as their relationship lacked substantial research development during her time as a graduate student.

There is a clear distinction between Mary who felt like she received the “gift of tenure” and Pamela who did not receive tenure at her first job placement, which is the differences in their respective exposure to developmental projects from their advisors. Mary’s advisor followed a prescriptive advising style that allowed Mary to be involved in research at the start of her first year. In her first two years her research closely aligned with her advisors, allowing her to be exposed to critical skills such as writing a literature review, collecting and analyzing data, and so forth. In contrast, Pamela was more self-guided in her research pursuit, as she and her advisor did not engage in any joint publications. In addition to advisees having access to developmental opportunities, advisors who genuinely invested in their advisees’ professional development were likely to yield a high-quality developmental relationship that advanced into the redefinition stage. In other words, relationships in which advisors took on the role of a mentor by going beyond the custodial role of a dissertation chair to someone who makes an effort to
facilitate and develop their advisees’ career goals, were likely to enter into the redefinition stage.

In the redefinition stage, advisors and advisees advanced into a peer-based relationship, wherein advisees became independent scholars but still relied upon their advisors for mentoring support. This support came in different forms such as collaborating on research, providing friendly reviews, navigating the nuances of a tenure-track position, and much more. Additionally, advisees who experienced this relationship status, also received the benefit of an established network of scholars with whom they continued to collaborate on research. However, as shown in the examples discussed here, depending on the advisees’ job placement, some of the advising relationships became less active. While this was not the case for all, advisors preferred their advisees to seek career opportunities at peer-based institutions, as it was a positive reflection of the training and time that the advisor had invested in their advisees’ development. Further, at peer-based institutions, advisees were likely to receive the funding support and resources needed to publish in reputable and impactful journals in their field, because there would likely be less emphasis on teaching and service activities. Advisees who chose a more balanced institution were more likely to cultivate a new network that aligned better with research, teaching, and service activities.

Additionally, even post-degree, underrepresented racial minorities continued to rely heavily on the PhD Project as they navigated the job market and sought placement that aligned with both personal and professional goals. Further, in reflecting upon their own careers, junior faculty members began to identify the role that their advisors contributed to their careers as a tenure-track professor. Advisees who were exposed to the
apprenticeship model and gained hands-on developmental opportunities were confident in their ability to publish manuscripts in reputable journal outlets, and they were also more likely to have a robust research pipeline. In contrast, advisees who lacked access to developmental opportunities felt more challenged to create relationships with potential co-authors that could lead to research publications, but their efforts did not always pan out well on a 6- to 7-year tenure clock. Given that it can take 2-3 years, at minimum, to publish a manuscript in a good journal, there is not much time for changing direction, and it is harder to manage if working alone.

Summary

In conclusion, while some advisees were provided with the structural support to help them build their research pipelines the moment they entered their doctoral programs, others had to independently navigate their journeys and develop the necessary resources on their own as they progressed through each stage of their careers. A contributing factor of the structural support each doctoral student received was the evaluation of the advisees’ in-role performance by their advisors. These interviews revealed that underrepresented racial minorities were less likely to have prior research experience than their White and Asian counterparts, which affected their ability to identify their research interests and direction more readily. Additionally, advisees, more specifically White and Asian advisees, who exhibited promise were likely to gain access to developmental opportunities, which contributed to their developing their research identity, research pipeline, and career network early in their doctoral programs. Based on the interviews in this study, it seems clear that disparities existed with regards to the level of engagement and feedback that underrepresented racial minorities received as they progressed toward
becoming independent scholars compared to White and Asian students. Consequently, underrepresented racial minorities received less access to developmental opportunities than their White and Asian counterparts.

Given these divergent experiences between the students and their advisors, the PhD project served as an essential resource for underrepresented racial minority advisees by providing both individual- and structural-level support, which was absent for many students in their relationships with their advisors. The PhD Project provided underrepresented racial minorities with the assurance they needed to continue to progress by identifying key milestones at each year. Through the PhD Project, underrepresented racial minorities cultivated a network of peers, junior faculty members, and senior faculty members, which proved to be instrumental in developing research opportunities and potential collaborations, both of which are needed to advance in a tenure-track position. Because underrepresented minority students do not as readily seek doctoral degrees as a result of having opportunities to do research as undergraduates as is the case for White and Asian students, the role of the PhD Project in providing a pipeline for prospective doctoral students in business programs constitutes the key distinctions that seems evident in these interviews. The underrepresented minority students had more corporate experience, while the White and Asian students had more research experience prior to graduate school. That meant that the underrepresented minority students had more of a transition to learn what doing publishable research entails than was the case for the White and Asian students. If they did not get this kind of orientation early on from their advisors, they could find themselves off track in the critical early years of their doctoral programs.
In chapter 5, I discuss my main findings for both the quantitative and qualitative chapters, detail the theoretical and practical implications, identify the limitations of my study, and recommend future research directions.
CHAPTER 5: CONCLUSION

The purpose of this study was to examine the changes over time in the relationships between advisors and advisees in doctoral programs. I consider what happens in the relationship at different stages of the doctoral program, with the main focus on whether the relationship transforms from one where the advisor enacts custodial duties associated with getting through a doctoral program to one where the advisor becomes a mentor and invests in the career success of the advisee. In my study, I am primarily interested in the differences in the experiences of White and Asian versus those of underrepresented racial minority doctoral students. The findings of both the survey and interview data suggest that what happens in the early stages of the relationship, i.e., the initiation and cultivation stages are especially important to whether the relationship continues or terminates after completion of the degree. However, there exist disparities with regards to how underrepresented racial minorities are evaluated in comparison to White and Asian advisees. In my study, I specifically aimed to address the following research questions:

1) How does the initial role performance of doctoral students affect the advisor-advisee interactions at subsequent stages of the relationship?

2) How important are developmental opportunities provided by academic advisors for the success of doctoral students?

3) What are favorable strategies for underrepresented racial minority advisees and their advisors to pursue in advising relationships as they change over time?

First, I conducted a pilot interview study of both advisors and advisees to explore how diverse advising relationships unfolded over time. The interviews for the pilot study
included underrepresented racial minority junior faculty members with their former advisors who were either White or Asian in a business school setting. This exploratory study was designed to identify potential themes in the data and to improve the design and research questions of the primary study. Next, I conducted a mixed methods field study that included additional interviews, a survey of both advisees and their advisors, and a database of joint publications for participants in management or management-related departments in business schools to examine my hypotheses and research questions.

Below, I outline my main findings, detail the theoretical and practical implications, discuss the limitations of my study, and identify future research directions.

**Summary of Findings**

In response to my first research question, “How does the initial role performance of doctoral students affect the advisor-advisee interactions at subsequent stages of the relationship?”, the results from the survey showed that how the doctoral student is perceived at the outset in terms of enactment of expected role performance has an effect on the perceptions the advisor develops of the student’s competence, and then these views affect whether developmental opportunities are offered, all of which affect the ultimate publication performance of the students and whether their relationships with their advisors continue or terminate. However, the positive relationship between advisors’ perception of advisees’ initial role performance and advisors’ perception of the advisees’ competence favors White and Asian advisees at higher levels of initial role performance, leading to lower perceived competence evaluations for Black and Hispanic advisees.

Further, in comparing White and Black/African American advisees initial role performance, Black/African American Advisees continued to be disfavored. That is,
Black/African American advisees were less likely to benefit from higher initial role performance such as their White counterparts. Subsequently, this evaluation led to a lack of developmental opportunities and joint publications between Black/African American advisees and their advisors.

The qualitative findings from the interviews provided some additional depth in terms of the experiences that might support the survey data. In particular, advisees who were familiar with the research process prior to beginning their doctoral program were more intentional about their research interests and about forming relationships with those with whom they preferred to work. Prior research experience allowed advisees to familiarize themselves with academic literature and helped them identify the scholars with whom they wanted to be in conversation. In other words, familiarity with the work tasks shaped advisees’ ability to excel in their initial-role performances by providing increased awareness of the role expectations against which they would be judged and an understanding of how their initial task performance directly influenced their advisors’ perceptions and evaluations. As such, advisees who gained familiarity with the research process, more specifically, White advisees, prior to pursuing a doctorate degree were able to shape their advisor’s perceptions in the initiation stage. And in some cases, it led the advisor to provide mentoring support earlier on in the relationship with White Advisees.

Also, most departments had very few doctoral students from underrepresented minority groups, so for most underrepresented racial minority students, they were isolated in their home departments. Among other things, the isolation in the home department was evident in that several of the underrepresented racial minority students were the first and/or only minority advisees within their departments, which may have
contributed to the stereotypes and biases that were enacted in their advising relationships. This lack of representation affected the advisees, especially those who sought to identify a dissertation advisor who was supportive of their research interests and development. For several of the interviewees, the advisees were either discouraged from pursuing self-relevant research or they found that their research interests lacked alignment with the primary interests of their advisors. Several underrepresented racial minority advisees spoke about having to navigate their journeys independently, forming relationships with peers and faculty from other institutions to gain exposure and access to research opportunities, due to the lack of engagement they received from their advisors. In the process, they often felt that they were underperforming in comparison to other students in their cohort, as they were not provided with the same level of structural support to excel and lacked feedback about their progress and development.

Further, even though some schools had initiatives to increase representation at the university level, racial-ethnic diversity was not necessarily prioritized at the departmental level, unless there was a senior faculty member (e.g., a PhD Project affiliate) driving the initiative. For instance, even for schools located in regions with populations that were diverse by race/ethnicity, they had few applicants and few doctoral students or faculty from underrepresented racial minority groups. Senior faculty members also acknowledged in the interviews the lack of sufficient attention given to creating more diversity in their departments. Consequently, racial-ethnic advisees, more specifically Black advisees, were less likely than their White and Asian counterparts to feel supported or included in the research endeavors of their advisors.
In response to my second research question, “How important are developmental opportunities provided by academic advisors for the success of doctoral students?”, I was able to uncover the behavioral processes that characterized the dynamic and progression of mentoring relationships by understanding how role taking and role making enable the development of high-quality relationships. Based on the survey data, the findings revealed that in the initiation stage, initial role performance had a positive relationship with the advisor’s perception of the advisee’s competence. Although, there was a positive relationship between advisors’ perceptions of advisees’ initial role performance and their perceptions of advisees’ competence, the relationship was less positive for underrepresented racial minority advisees, and more specifically Black/African American advisees. This finding from the survey data is supported by the interview data, suggesting that White advisees who had more familiarity with research prior to entering their doctoral programs were likely to be perceived more favorably by their advisors. This outcome was uniquely tied to the role taking process, wherein the advisor determined whether to delegate unstructured related tasks (i.e., developmental opportunities), such as additional projects independent of the advisee’s dissertation after testing the advisee’s potential and motivations on the more structured tasks during the first years of the doctoral program.

The data on joint publications revealed that Black/African American advisees were less likely to access developmental opportunities and co-publish with their advisors than were White, Asian, and even White (Hispanic) advisees. This finding was further supported in the qualitative study wherein some of the Black/African American advisees reported that they lacked access to developmental opportunities from their advisors and
from their home departments. Being offered developmental opportunities aided the advisee in building a network and research pipeline, and both are critical in the transition to a tenure-track position. Furthermore, developmental opportunities enabled advisees to showcase their skills and talent to their advisors, creating a valued exchange between the two parties. Essentially, these valued social exchanges between the advisor and advisee served as a vehicle to build a high-quality relationship wherein mentoring functions emerged. In the mentoring literature, this is equivalent to taking on the role of a sponsor, one who uses their social capital to propel their protégé’s career advancement. Based on the qualitative findings, those advisors and advisees who engaged in research together experienced a high-quality relationship that was more likely to continue as a working relationship that informally grew into a peer-based relationship. That is, the advisor, when serving in the role of mentor continued to advocate and provide substantial support to their protégé, while the protégé advanced in the ranks of the academy. Unfortunately, Black/African American advisees were less likely to advance into the redefinition stage with their advisors, leading them to develop their own instrumental and social support networks to aid them in their junior faculty roles.

In response to my third research question, “What are favorable strategies for underrepresented racial minority advisees and their advisors to pursue in advising relationships as they change over time?”, it is important to acknowledge that it takes both parties, the advisor and advisee, to advance a developmental relationship. While it is instructive for future doctoral students, especially those from corporate positions, to understand the importance of their hitting the ground running with regard to learning how to do publishable academic research early on and then pursuing opportunities to develop
their skills, the results of the survey data showed that at even high level of initial role performance, Black/African American advisees are still disadvantaged. Hence, meritocracy did not apply to Black/African Americans, as they were not likely to benefit from higher initial role performance such as their White counterparts. The data supported that it takes Black/African American advisees a longer time to prove themselves as competent. Having a really high record over time will make Black/African American advisees be seen as an exception and mitigate the presumed relationship between race group membership and competence.

Given the findings from this study, it is clear that a favorable strategy for underrepresented racial minority advisees to pursue is to develop networks within the academy that provide research support beyond their departments, especially if they do not feel they are getting the necessary support within their departments. Because developmental opportunities are so critical to helping shape advisees into independent scholars, it is essential for Black/African American advisees to create networks within the academy that can provide support in the areas that are not attended to in their advising relationships. The support provided by the substantial network offered to underrepresented minority students through the PhD Project is a prime example of how such networking can work beyond the department. The PhD Project essentially provides to underrepresented racial minority students the kind of support that is otherwise available for majority students in doctoral programs. In my study, underrepresented racial minority students leveraged the PhD project to create research synergy, gain psychosocial support, and to access critical resources needed to advance their careers. Interestingly, new initiatives within the PhD Project-MDSA are currently taking place to address the
lack of prior research exposure for underrepresented racial minority doctoral students and junior faculty members. Because of the importance of structural support, the management Minority Doctoral Student Association and Management Faculty of Color Association within the PhD Project are initiating critical programs to help facilitate research collaboration. This new initiative provides a platform for doctoral candidates, junior faculty members, and senior faculty members to collaborate on research that has the potential to be published in quality management journals with high impact. Thus, the initiative allows underrepresented racial minority doctoral candidates to gain access to developmental research opportunities through their doctoral programs and helps junior faculty members to strengthen their research pipeline as they move toward the tenure review.

Even with the opportunity to develop relations and research opportunities beyond the department, it is important to keep in mind that advisors play a critical role in the developmental relationship as well, arguably, even greater, as they serve as gatekeepers to completing the doctoral degree. The quantitative model from the survey showed that the process does not work the same for underrepresented racial minority advisees as it does for White and Asian advisees in that being an underrepresented racial minority does moderate the positive relationship between initial role performance and perceived competence. This means that there are a different set of experiences for underrepresented racial minority students as compared to White and Asian students. Both the quantitative and qualitative findings provided evidence that Black/African American advisees are receiving significantly less structural support than their White, Asian, and even White (Hispanic) counterparts. Specifically, advisors are not providing their Blacks/African
American advisees with the research training and support that is needed to develop into independent scholars and prepare for tenure-track roles to the same extent that they are doing with White and Asian advisees.

The same difference in development experiences that are evident in this study can be found in a corporate setting as well. Thomas (2001), for example, found that White managers entered a fast track earlier in their careers than did Black managers. High potential minorities were found to take off much later in their careers, mainly as a result of the difference in mentoring and sponsorship received by Whites compared to underrepresented racial minorities in the early stages of their careers. My research shows similarly that Black/African American advisees are not receiving the same type of graduate mentorship experiences as their White and Asian counterparts, leading them to have to develop other networks to provide the tools they need to be successful in a tenure track position. While advisors of underrepresented racial minority students are tending to their custodial duties as dissertation advisors, they are not providing the additional support that would help underrepresented racial minorities toward enhanced career development. To aid in the representation of underrepresented racial minorities in traditionally excluded spaces and positions, institutions (e.g., business schools) must take a comprehensive approach in how they develop and cultivate talent by addressing biases and stereotypes that continue to negatively impact the advancement of Blacks/African Americans in underrepresented spaces despite their ability to meet initial role performances and expectations. It is not sufficient to provide access to spaces without also providing an inclusive and equitable climate for advisees to grow and learn. It is essential that advisees, especially Black/African American doctoral students, are
provided with the same level of support and investment in the development of their research skills as their counterparts during the initiation and cultivation stages of their doctoral programs if they are going to excel in their careers.

Practical Implications

My study explores the dimensions of mentoring that extends beyond a formalized relationship, whereby mentors may take on extra-role behaviors that lead to increased exposure and advancement opportunities for their protégés. Differentiating the role of an advisor and mentor is parallel to the conversation that management practitioners are having about the distinction between a mentor and sponsor. Whereas career advice and social support are needed for underrepresented racial minorities in traditionally excluded space, what is more critical are leaders who are helping to advance their protégé’s careers by advocating on their behalf, providing visible and challenging opportunities, and creating a safe space for critical and honest feedback. Beyond a traditional mentoring relationship, these processes have been proven to be instrumental for underrepresented minorities in advancing their careers by providing more exposure, visibility, and experience through unique opportunities (Smith, 2021).

Limitations

One of the main objectives of this research is to understand how and why developmental relationships, more specifically, advising relationships, end or are transformed as the circumstances change for either the advisee or advisor. I am only able to understand the intricate dynamics of a relationship if advisees and advisors are willing to share their stories, which may not always be the case. Given that the academy is a small, niche field, which becomes even more intimate once you examine it from a
department perspective, faculty members are cautious about the information that they reveal. Although participants were informed that their identities and experiences would be kept confidential, many may have felt hesitant to reveal sensitive information that could be perceived unfavorably by others. Unfortunately, this research is limited because it was not possible to examine the full range of nuances that occur in relationships both before and after the degree completion. Given the sensitivity of these issues and the concerns about maintaining both confidentiality and future relationships between advisees and advisors, it is likely that those who participated in my study overrepresent those with more favorable advising relationships.

Future Research

My focus on the transformation of advising relationships through accounts adds a significant contribution to the mentoring literature, by understanding the behavioral processes that define the progression of mentoring relationships. Even so, retrospective accounts, as opposed to real-time, may not provide a full picture of what occurred between the advisor and advisee. Future research should consider a longitudinal study in which the advisor-advisee (or mentor-protégé) relationships are followed over time from inception. A longitudinal approach would make it possible to uncover the unique relational dynamics that occur at various stages (i.e., initiation, cultivation, separation or redefinition) of cross-gender and cross-race, developmental relationships.

Lastly, a growing body of research has focused on the importance of having multiple mentors (Baugh and Scandura, 1999; Higgins and Kram, 2001; de Janasz and Sullivan, 2003). While the advisor’s role is essential, advisees are also likely to simultaneously form developmental relationships with other senior faculty members to
help guide their careers. For example, in addition to the dissertation advisor, dissertation committee members also contribute to the advisees’ development and scholarship. Cultivating these relationships increases the advisee’s access to developmental opportunities and an expansion of their networks. Additionally, many advisees have published or initiated research projects with these faculty members post degree completion, thus contributing to their publication pipeline as a junior faculty member and increasing the likelihood of earning tenure. Future research may consider the role of developmental networks in contributing to underrepresented racial minorities academic careers.
References


Ragins, B. R., & Scandura, T. A. (1997). The way we were: Gender and the termination of mentoring relationships. Journal of Applied Psychology, 82(6), 945.


Appendices

Appendix A: Pilot Study Interview Protocol

Background Information for Mentor:
Name:
University:
Position:
Sex:
Race:
Single or Married:
Number of Children:
Electronic copy of CV

Opening
1. Can you tell me about your academic career up until now?
2. How did your relationship develop with your former protégé?
3. Where were you at in your career when you began mentoring your former protégé?
4. In your departmental program, what characterizes the mentor/protégé relationship?
5. How would you assess yourself as a mentor?

Communication
1. How frequently did you and your former protégé communicate?
2. What were your primary sources of communication (e.g. – email, in-person, Skype, phone)?
   a. Did you often schedule informal meetings over coffee, lunch, or dinner (off-campus)?
   b. Did you and your former protégé share connections in other social outlets such as Facebook, LinkedIn, Twitter, etc.?
3. Did you and your former protégé’s communication patterns change as he/she progressed through the program (e.g. – doctoral student, doctoral candidate, and faculty)? If so, how? Please provide an example.
4. In our line of work, it is very common for scholars to receive constructive criticism so that that may improve their work. Did you provide your former protégé with continuous constructive criticism throughout their doctoral journey?
5. How receptive do you feel your former protégé was to your continuous constructive criticism?
6. Did you also provide your former protégé with positive reinforcement? If so, please elaborate?

Challenges
1. What type of challenges did you encounter with your former protégé?
   a. Were these challenges communicated with the protégé? If so, how were they communicated? Please provide an example.
b. Did these challenges seem to reoccur or were they managed?
2. Were there any issues, in which you felt a level of discomfort in addressing with your former protégé? If yes, please provide an example.
3. Were there any issues ever brought up by your former protégé that you felt you couldn’t address? If yes, please provide an example.
4. Did you ever observe your former protégé engaging in inappropriate behavior towards you or others?
5. Do you think some challenges can be attributed to demographic or cultural differences? If yes, please elaborate.

Instrumental Support
1. Did you and your former protégé discuss his/her career interests? If yes, can you provide examples of those conversations?
   a. Did your protégé’s career interests align with your expectations?
   b. If yes, what type of support did you provide your former protégé to help him/her reach their goal(s)?
   c. If no, what type of challenges did this present in your mentoring relationship?
   d. Was there ever a point in time in which the goals and expectations were initially aligned, and became misaligned later in the relationship?
2. What type of support did you provide your former protégé with job market preparation?
   a. Did you inform your protégé of niche conferences or workshops that may have been related to their interest?
   b. Did you ever write letters of recommendations or offer letters of referrals?
3. Did you assist your former protégé with seeking funding for academic related expenses, such as conferences, data collection, summer funding support?
4. What type of support did you provide your former protégé with research publications?
5. How open were you to introducing your former protégé to people in your network?
   a. At what stage did you begin to introduce your former protégé to people in your network (for example: pre-comps, post-comps, and job-market)?

Psychosocial Support
1. Did you and you former protégé, together, engage in activities outside of academics, such as plays, sporting events, invitation to your home?
2. Did you and your former protégé discuss non-academic related topics, such as family, politics, or cultural activities? If yes, please elaborate.
3. Did you and your former protégé speak about any personal challenges he/she was experiencing during the program? If yes, please elaborate.
   a. Did you feel that you had the knowledge or tools to address your former protégés personal challenges?
   b. If so, how did you assist your former protégé in dealing with his/her personal challenges?
4. Did you and your former protégé engage in conversations centered on personal values, goals, and aspirations? If yes, please elaborate.
5. Would you say your relationship with your former protégé became similar to your relationship with a close friend or close relationship?

Contextual Factors
1. How would you assess your department with regards to providing students with an outlet to share research ideas, learn about current research, and other professional development related activities?
2. How would you assess your department with regards to addressing doctoral students’ concerns?
3. During your tenure with the University, how would you assess the department with respect to diversity and inclusion?
4. Were there any internal factors (such as policies or practices) within your department that you felt facilitated favorable interactions between you and your former protégé?
5. Were there any internal factors (such as policies or practices) within your department that you felt hindered interactions between you and your former protégé?

Quality
1. Overall, how would you describe the quality of your relationship with your former protégé?
2. Would you say that the quality of your relationship shifted over time (for example: pre-doc, post-doc, assistant faculty)?
3. Can you describe one of the most favorable interactions that you experienced with your former protégé?

Current Status
1. How would you characterize the current status of your mentoring relationship?
2. How does this relationship compare to other students you have mentored in your career?
3. Is the relationship still ongoing? Is it still as close as it was while your former protégé was in graduate school?
   a. If not, when and how did it end? What were the circumstances?
4. What do you think has contributed to the continuation (or discontinuation) of your mentoring relationship?
5. How has the relationship changed (if any) since the former protégé achieved a new status as Assistant Professor?
6. Do you and your former protégé still communicate with each other?
   a. How often do you and your former protégé communicate?
   b. What do you and your former protégé communicate about?
7. Does your former protégé still consult you for advice? If so, what type of advice?
8. Have you and your former protégé published any articles together upon completion of his/her doctorate degree? If so, how many during (and after) completion of degree?
9. Do you and your former protégé have any current projects that you are working on together?
10. In an ideal world, what would your relationship look like now with your former protégé?
11. Anything else you think is important to share with me, so I can understand the relationship with your former protégé?

Background Information for Protégé:
Name:
University:
Position:
Sex:
Race:
Single or Married (while in program):
Number of Children (while in program):
Electronic copy of CV

Opening
1. Can you tell me about your academic career up until now?
2. How did your relationship develop with your former mentor?
3. Prior to beginning your doctoral journey, how much experience (or exposure) did you have in research or within academia?
4. How would you characterize the role of a mentor/advisor in your academic doctoral program?
5. How would you assess yourself as a protégé?

Communication
1. How frequently did you and your former mentor communicate?
2. What were your primary sources of communication (e.g. – email, in-person, Skype, phone)?
   a. Did you often schedule informal meetings over coffee, lunch, or dinner (off-campus)?
   b. Did you and your former mentor share connections in other social outlets such as Facebook, LinkedIn, Twitter, etc.?
3. Did you and your former mentor’s communication patterns change as you progressed through the program (e.g. – doctoral student, doctoral candidate, and faculty)? If so, how? Please provide an example.
4. In our line of work, it is very common for scholars to receive constructive criticism so that he/she may improve their work. Did your former mentor provide you with continuous constructive criticism throughout your doctoral journey?
5. How receptive was you to your former mentor’s continuous constructive criticism?
6. Did your advisor also provide you with positive reinforcements? If so, please elaborate?
Challenges
1. What type of challenges did you encounter with your former mentor?
   a. Were these challenges communicated with the mentor? If so, how were they communicated? Please provide an example.
   b. Did these challenges seem to reoccur or were they managed?
2. Were there any issues, in which you felt a level of discomfort in addressing issues with your former mentor? If yes, please provide an example.
3. Were there any issues ever brought up by your protégé that you felt you couldn’t address? Please provide an example.
4. Did you ever observe your former mentor engaging in inappropriate or out of bounds behavior towards you or others?
5. Do you think some challenges can be attributed to demographic or cultural differences? If yes, please elaborate.

Instrumental Support
1. Did you and your former mentor discuss your career interests? If yes, can you provide examples of those conversations?
   a. Did your career interests align with your former mentor’s expectations?
   b. If yes, what type of support did you receive from your former mentor to help reach your goal(s)?
   c. If no, what type of challenges did this present in your mentoring relationship?
   d. Was there ever a point in time in which the goals and expectations were initially aligned, and became misaligned later in the relationship?
2. What type of support did your former mentor provide with job market preparation?
   a. Did your former mentor inform you of niche conferences or workshops that may have been related to your interests?
   b. Did your former mentor write you letters of recommendations or offer letters of referrals?
3. Did your former mentor assist you with seeking funding for academic related expenses, such as conferences, data collection, summer funding support?
4. What type of support did your former mentor provide you with research publications?
5. How open did your former mentor introduce you to people in his/her network?
   a. At what stage did your former mentor introduce you to people in his/her network (for example: pre-comps, post-comps, and job-market)?

Psychosocial Support
1. Did you and your former mentor, together, engage in activities outside of academics, such as plays, sporting events, invitation to his/her home?
2. Did you and your former mentor discuss non-academic related topics, such as family, politics, or cultural activities? If yes, please elaborate.
3. Did you and your former mentor speak about any personal challenges that you experienced during the program? If yes, please elaborate.
a. Did you feel that your former mentor had the capacity to assist you with your personal challenge(s)?

b. If so, how did your former mentor assist you in dealing with your personal challenge(s)? Please provide an example.

4. Did you and your former mentor engage in conversations centered on personal values, goals, and aspirations? If yes, please elaborate.

5. Would you say that your relationship with your former mentor became similar to your relationships with a close friend or close relationship?

Contextual Factors

1. How would you assess the department with regards to providing students with an outlet to share research ideas, learn about current research, and other professional development related activities?

2. How would you assess the department with regards to addressing doctoral students’ concerns?

3. During your time in graduate school, how would you assess the department with respect to diversity and inclusion?

4. Were there any internal factors (such as policies or practices) within your department that you felt facilitated favorable interactions between you and your former mentor?

5. Were there any internal factors (such as policies and practices) within your department that you felt hindered interactions between you and your former mentor?

Quality

1. Overall, how would you describe the quality of your relationship with your former mentor?

2. Would you say that the quality of your relationship shifted over time (for example: pre-doc, post-doc, assistant faculty)?

3. Can you describe one of the most favorable interactions that you experienced with your former mentor?

Current Status

1. How would you characterize the current status of your mentoring relationship?

2. How do you compare your relationship with your peers (from the same institution) and their advisors?

3. Is the relationship still ongoing? Is it still as close as it was while you were in graduate school?
   a. If not, when and how did it end? What were the circumstances?

4. What do you think has contributed to the continuation (or discontinuation) of your mentoring relationship?

5. How has the relationship changed (if any) since you achieved a new status as an Assistant Professor?

6. Do you and your former mentor still communicate with each other?
   a. How often do you and your former mentor communicate?
   b. What do you and your former mentor communicate about?
7. Do you still consult your former mentor for advice? If so, what type of advice?
8. Have you and your former mentor published any articles together upon completion of your doctorate degree? If so, how many during (and after) completion of degree?
9. Do you and your former mentor have any current projects that you are working on together?
10. In an ideal world, what would your relationship look like now with your former mentor?
11. Anything else you think is important to share with me, so I can understand the relationship with your former mentor?

Appendix B: Primary Study Interview Protocol

Background Information for Mentor:
Name:
Current University:
Current Position:
Gender:
Race/Ethnicity:
Single or Married (while advising student):
Number of Children (while advising student):

**Interviewer to obtain a copy of CV**

Opening (Background)
1. Can you tell me about your career path prior to becoming a professor?
2. Generally speaking, as a professor with substantial experience in academe, how would you describe your advising philosophy?
3. What do you think has contributed to your advising philosophy and practices?
4. Roughly, how many students have you advised since you became a faculty member?

Initiation Stage (Role Taking)
1. How did your relationship develop with your former advisee?
2. What was your initial impression of your former advisee?
   a. How did you feel about serving as his/her advisor?
3. Do you recall some of the first projects you assigned your former advisee?
   a. How did he/she perform on those projects or assignments?
   b. What type of feedback did you provide your advisee?
      i. How did he/she respond to the feedback?
4. Were you also working with other students during the formation of your advisee relationship?
   a. If yes, can you describe your relationship with your other doctoral students/colleagues?
   b. Did you ever feel that you were unable to devote the amount of time you desired in the beginning stages of the relationship with your advisee?
c. Were other students you were advising of the same demographic background as yourself (i.e. – gender/race)?

5. Do you recall any other significant interactions or experiences with your former advisee during the earlier stage of your relationship (i.e. – performance on comprehensive exam)?

Cultivation Stage (Role Making)

1. How would you describe your relationship during the latter years of the advisee’s doctoral journey (i.e. – post comps, dissertation phase)?
   a. Did it continue to be formal or did it take on some informal dynamics?
      Please elaborate.
      i. Did you and your former advisee, together, engage in activities outside of academics, such as plays, sporting events, invitation to his/her home?
      ii. Did you and your former advisee discuss non-academic related topics, such as family, politics, cultural activities? If yes, please elaborate.

2. Did you continue to work on research projects with your former advisee?
   a. What type of feedback did you provide on his/her performance?
   b. Did you and your advisee present any projects at conferences?
   c. Did you and your advisee publish together?

3. Did you encourage your advisee to work with other faculty members in the department?
   a. If yes, are you aware of the dynamics of those relationships?

4. Did you and your former advisee experience any personal or professional incongruencies such as expectations with publishing, job market, etc.?
   a. Were there any incongruencies or challenges that caused you to feel discomfort in addressing with your former advisee? If yes, please provide an example.
   b. Do you think some incongruencies can be attributed to demographic or cultural differences? If yes, please elaborate.

5. Did you ever observe your former advisee engaging in inappropriate or out of bounds behavior towards you or others?

6. Did you and your former advisee speak about any personal challenges that he/she experienced during the program? If yes, please elaborate.

7. Are there any additional challenges that you encountered with your former advisee?

8. Are there any things that you especially appreciated or valued about the experiences of advising your former doctoral student?

Contextual Factors (and perceived climate of diversity and inclusion)

1. Tell me about the general atmosphere of the department?

2. Would you say that your advising practices are consistent with other faculty members in your department?

3. How supportive is the department with doctoral students (i.e.- funding for academic related expenses, summer funding, data collection)?
4. How would you assess the department with regards to addressing doctoral students’ concerns?
5. What is the expected teaching load for a (funded) doctoral student?
   a. At what stage of the student’s doctoral journey does he/she typically begin teaching?
6. How would you describe the department’s attention to the climate of diversity and inclusion?
   a. Do you feel that your gender or race impacted your interaction with your former advisee?
   b. Do you feel that the students’ gender or race impacted how other faculty members interacted with your former advisee?
   c. Do you feel that the student’s gender or race impacted how other students interacted with your former advisee?

Separation Stage
1. Did you and your former advisee discuss his/her career interests? If yes, can you provide examples of those conversations?
   a. Did your former advisee’s career interests align with your expectations?
      i. If yes, what type of support did you provide to help former advisee reach his/her goal(s)?
2. What type of support did you provide your former advisee with job market preparation?
   a. How open were you to introducing your former advisee to people in your network?
3. Would you say that your relationship with your former advisee became similar to a mentoring relationship? Why or why not?
4. How do you compare your advising relationship with your former advisee with other students you worked with in the past?

Redefinition Stage
1. How would you characterize the current status of your relationship?
2. Have you and your former advisee published any articles together after completion of his/her doctorate degree? If so, how many?
   a. Do you and your former advisee have any current projects that you are working on together?
3. Does your former advisee still consult you for advice? If so, what type of advice?
4. Overall, how would you describe the quality of your relationship with your former advisee?
5. What do you think has contributed to the continuation (or discontinuation) of your relationship?
6. Anything else you think is important to share with me, so I can understand the relationship with your former advisee?
Background Information for Protégé:
Name:
Name of University where Ph.D. Obtained:
Area of Study:
Current University:
Current Position:
Gender:
Race/Ethnicity:
Single or Married (while in program):
Number of Children (while in program):

**Interviewer to obtain a copy of CV**

Opening (Background)
1. Can you tell me about your career path prior to becoming a professor?
2. What motivated you to pursue your PhD?
3. Prior to beginning your doctoral journey, how much experience (or exposure) did you have in research or within academia?

Initiation Stage (Role Taking)
1. How did your relationship develop with your former advisor?
2. What was your initial impression of your former advisor?
   a. How did you feel about him/her serving as your advisor?
3. Do you recall some of the first projects you worked on with your former advisor?
   a. How do you feel you performed on those projects or assignments?
   b. What type of feedback did you receive from your advisor?
      i. How did you respond to the feedback?
4. Was your former advisor also working with other students during the formation of your relationship?
   a. If yes, can you describe your relationship with the other doctoral students/colleagues?
   b. Did you feel that you often had to compete for your advisor’s attention?
   c. Were the other students of the same demographic background as yourself (i.e. – gender/race)
5. Do you recall any other significant interactions or experiences with your former advisor during the earlier stage of your relationship (i.e. – performance on comprehensive exam)?

Cultivation Stage (Role Making)
1. How would you describe your relationship during the latter years of your doctoral journey (i.e. – post comps, dissertation phase)?
   a. Did it continue to be formal or did it take on some informal dynamics?
      Please elaborate.
   i. Did you and your former advisor, together, engage in activities outside of academics, such as plays, sporting events, invitation to his/her home?
ii. Did you and your former advisor discuss non-academic related topics, such as family, politics, cultural activities? If yes, please elaborate.

2. Did you continue to work on research projects with your former advisor?
   a. What type of feedback did you receive on your performance?
   b. Did you and your advisor present any projects at conferences?
   c. Did you and your advisor publish together?

3. Did your advisor encourage you to work with other faculty in the department?
   a. If yes, can you briefly describe other relationships you developed with faculty members?

4. Did you and your former advisor experience any personal or professional incongruencies such as expectations with publishing, job market, etc.?
   a. Were there any incongruencies or challenges that caused you to feel discomfort in addressing with your former advisor? If yes, please provide an example.
   b. Do you think any incongruencies can be attributed to demographic or cultural differences? If yes, please elaborate.

5. Did you ever observe your former advisor engaging in inappropriate or out of bounds behavior towards you or others?

6. Did you and your former advisor speak about any personal challenges that you experienced during the program? If yes, please elaborate.

7. Are there any additional challenges that you encountered with your former advisor?

8. Are there anything that you especially appreciated or valued in your experiences with your advisor?

Contextual Factors (and perceived climate of diversity and inclusion)

1. Tell me about the general atmosphere of the department?

2. Would you say that your advisor’s practices were consistent with other faculty members in the department?

3. How supportive is the department of doctoral students (i.e.- funding for academic related expenses, summer funding, data collection)?

4. How would you assess the department with regards to addressing doctoral students’ concerns?

5. What was your teaching load as a (funded) doctoral student?
   a. At what stage of your doctoral journey did you begin teaching?

6. How would you describe the department’s attention to the climate of diversity and inclusion?
   a. Do you feel that your gender or race impacted your interaction with former advisor?
   b. Do you feel that your gender or race impacted how other faculty members interacted with you?
   c. Do you feel that your gender or race impacted how other students interacted with you?
Separation Stage
1. Did you and your former advisor discuss your career interests? If yes, can you provide examples of those conversations?
   a. Did your career interests align with your former mentor’s expectations?
      i. If yes, what type of support did you receive from your former advisor to help reach your goal(s)?
2. What type of support did your former advisor provide with job market preparation?
   a. How open was your former advisor to introducing you to people in his/her network?
3. Would you say that your relationship with your advisor became similar to a mentoring relationship? Why or why not?
4. How do you compare your advising relationship to those of your peers (from the same institution) with their advisors?

Redefinition Stage
1. How would you characterize the current status of your relationship?
2. Have you and your former advisor published any articles together after completion of your doctorate degree? If so, how many?
   a. Do you and your former advisor have any current projects on which you are working together?
3. Do you still consult your former advisor for advice? If so, what type of advice?
4. Overall, how would you describe the quality of your relationship with your former advisor?
5. What do you think has contributed to the continuation (or discontinuation) of your relationship?
6. Anything else you think is important to share with me, so I can understand the relationship with your former advisor?

Appendix C: Junior Faculty Survey

Please refer to your email and insert your unique identifying number provided to you by the Principal Investigator.

The next set of questions will ask about your current academic and professional background.

What is your current position?
- Visiting Professor
- Assistant Professor
- Associate Professor
- Full Professor
- Endowed Chair
- Other
If you indicated "other" in the previous question, then please specify below:

In what area of Management did you pursue your doctoral degree (check all that apply)?

- Entrepreneurship
- International Business
- Human Resources
- Organizational Behavior
- Organizational Theory
- Strategy
- Other

If you indicated "other" in the previous question, then please specify below:

What year did you earn your doctorate degree?

The next set of questions will ask about your past academic and professional background.

Approximately how many years of industry experience did you have prior to pursuing your PhD?

- 0
- 1-2 years
- 3-5 years
- 6-9 years
- 10+ years

Using the Carnegie Melon Classification System link below, please characterize your undergraduate institution.

Carnegie Classification Institution Lookup

- R1 - Doctoral Universities - Very High Research Activity
- R2 - Doctoral Universities - High Research Activity
- M1: Master's Colleges and Universities – Larger programs
- M2: Master's Colleges and Universities – Medium programs
- M3: Master's Colleges and Universities – Smaller programs
- Baccalaureate Colleges
- Other

If you indicated "other" in the previous question, then please specify below:

Using the Carnegie Melon Classification System link below, please characterize the institution where you received a graduate degree other than your doctorate, (e.g., Masters, MBA, JD, etc.).
Carnegie Classification Institution Lookup

- R1 - Doctoral Universities - Very High Research Activity
- R2 - Doctoral Universities - High Research Activity
- M1: Master's Colleges and Universities – Larger programs
- M2: Master's Colleges and Universities – Medium programs
- M3: Master's Colleges and Universities – Smaller programs
- Baccalaureate Colleges
- Other
- Not Applicable

If you indicated "other" in the previous question, then please specify below:

Using the Carnegie Melon Classification System link below, please characterize your doctoral-granting institution.

Carnegie Classification Institution Lookup

- R1 - Doctoral Universities - Very High Research Activity
- R2 - Doctoral Universities - High Research Activity
- Other

If you indicated "other" in the previous question, then please specify below:

The next set of questions will ask about your previous research and mentoring experiences.

To what extent did you work on research projects that prepared you for academic quality research prior to being admitted into a doctoral program?

- Not at all
- Very Little
- Somewhat
- To a great extent

How many, if any, papers had you submitted to a professional conference prior to being admitted into a doctoral program?

- 0
- 1
- 2
- 3 or more

How many papers, if any, had you published as either an author or co-author in an academic journal prior to being admitted into a doctoral program?

- 0
- 1
- 2
- 3 or more
Prior to being admitted into a doctoral program, approximately how many professional mentors did you have in your career up until that point?
- 0
- 1-3
- 4-5
- More than 5

Prior to being admitted into a doctoral program, approximately how many of your mentors were of a different gender than you?
- 0
- 1-3
- 4-5
- More than 5

Prior to being admitted into a doctoral program, approximately how many of your mentors were of a different race-ethnicity than you?
- 0
- 1-3
- 4-5
- More than 5

At what stage of your doctoral program did you form a relationship with your former dissertation advisor/chair?
- First year (pre-qualifying exams)
- Second year (pre-qualifying exams)
- Third year (post-qualifying exams)
- Fourth year (post-qualifying exams)
- Other

If you indicated "other" in the previous question, then please specify below:

Approximately how many additional doctoral students did your former dissertation chair advise while also advising you?
- 0
- 1
- 2-3
- More than 3

For the next set of questions, please rate your ability to complete the following in-role tasks and responsibilities when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)
1. I adequately completed required coursework as noted in the department policies and procedures.
2. I met deadlines for my research responsibilities.
3. I adequately completed my research duties.
4. I met deadlines for my teaching responsibilities.
5. I adequately completed my teaching duties.
6. I fulfilled responsibilities specified by the department policies and procedures.
7. I performed tasks that were expected of me.
8. I engaged in activities that directly affected my research trajectory.

For the next set of questions, please express your level of perceived similarity with your dissertation advisor/chair when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former dissertation advisor and I saw things in much the same way.
2. My former dissertation advisor and I were similar in terms of outlook, perspectives, and values.
3. My former dissertation advisor and I were alike in a number of areas.
4. My former dissertation adviser and I thought alike in terms of having similar research interests.
5. My former dissertation advisor and I viewed social issues in a similar way.
6. My former dissertation advisor went to a more prestigious institution than I attended.
7. My former dissertation advisor went to a more prestigious institution than I attended.
8. As far as I know, my former dissertation advisor and I come from similar socioeconomic backgrounds.

For the next set of questions, please rate your ability to complete the following research tasks when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. I effectively contributed to one or more research projects.
2. I successfully initiated a research project by myself.
3. I submitted and presented a research paper (as a solo- or co-author) at a well-recognized conference.
4. I was an effective co-author on a published paper with my former dissertation advisor or another faculty member.
5. I participated in data analysis.
6. I identified and posed research questions that were worthy of study.
7. I completed a literature review and summarized important issues on a joint paper with my advisor.
8. I designed and conducted effective research on which I was the lead author.
For the next set of questions, please express the frequency with which you engaged in feedback-seeking with your former dissertation advisor/chair when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. I asked my former dissertation advisor how I was performing.
2. I asked my former dissertation advisor if I was effectively meeting the program's requirements and milestones.
3. I talked to my former dissertation advisor about my research and writing progress while in graduate school.
4. I observed what performance behaviors my former dissertation advisor rewards and used that as feedback on my own performance.
5. I compared myself with other graduate students in my department.
6. I paid attention to how my former dissertation advisor acted towards me in order to understand how he/she perceived and evaluated my performance.
7. I observed the characteristics of people who were rewarded by my former dissertation advisor and used this information to navigate my relationship.

For the next set of questions, please express the degree to which you received access to developmental opportunities from your former dissertation advisor/chair when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former dissertation advisor invited me to work on one or several projects.
2. My former dissertation advisor and I presented research at a conference together.
3. My former dissertation advisor provided me with the opportunity to assist in data collection.
4. My former dissertation advisor had me complete tasks such as writing literature reviews, coding, or data write-ups.
5. My former dissertation advisor introduced me to other colleagues in the same research domain as me.

For the next set of questions, please express the degree of career and psychosocial support your former dissertation advisor/chair provided when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former dissertation advisor took a personal interest in my academic career.
2. My former dissertation advisor helped me coordinate my professional goals.
3. My former dissertation advisor devoted special time and consideration to my academic career.
4. I shared personal problems with my former dissertation advisor.
5. I exchanged confidences with my former dissertation advisor.
6. I considered my former dissertation advisor to be a professional friend.

For the next set of questions, please express your **overall level of satisfaction** with your former dissertation advisor when you were in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former dissertation advisor is someone with whom I am satisfied.
2. My former dissertation advisor was very effective in his/her role.

For the next set of questions, please express the **current status of your relationship** with your former dissertation advisor/chair.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. As a junior faculty member (or post doc fellow), I continue to communicate with my former dissertation advisor regularly (i.e. - once or twice a semester).
2. As a junior faculty member (or post doc fellow), I continue to consult my former dissertation advisor for career advice.
3. As a junior faculty member (or post doc fellow), I continue to work on research projects with my former dissertation advisor.
4. While a junior faculty member (or post doc fellow), my former dissertation advisor and I presented at research conferences together.
5. As a junior faculty member (or post doc fellow), I have published one or more research projects with my former dissertation advisor.
6. With regard to my former dissertation advisor, I now feel more like a colleague than like a student.

Please express your **current level of career satisfaction**.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. I am satisfied with the success I have achieved in my career so far.
2. I am satisfied with the progress I have made toward meeting my overall career goals.
3. I am satisfied with the progress I have made toward meeting my goals for income.
4. I am satisfied with the progress I have made toward meeting my goals for advancement.
5. I am satisfied with the progress I have made toward meeting my goals for the development of new skills.
6. I am satisfied with the quality of the job I was able to obtain.

For the last set of questions, please provide your sociodemographic information.
Please indicate your gender.
- Male
- Female
- Other

If you indicated "other" in the previous question, then please specify below:

Please indicate your race/ethnicity.
- Hispanic or Latino
- Non-Hispanic or Latino

Please indicate your race/ethnicity.
- Asian
- Black/African American
- Native American or American Indian
- White/Caucasian
- Native Hawaiian/Pacific Islander
- Other

If you indicated "other" in the previous question, then please specify below:

What was your marital status for the majority of your doctoral studies (check all that apply)?
- Dating
- Long-term committed/common law
- Married
- Separated
- Divorced
- Widowed

What is your current age?
- 20-29 years of age
- 30-39 years of age
- 40-49 years of age
- 50-59 years of age
- 60 years or greater

How many children did you have while pursuing your doctorate degree?
- 0
- 1-2
- 3-5
- More than 5
What was your average household income level while pursuing your doctorate degree?
- $15,001-$25,000
- $25,001-$40,000
- $40,001-$60,000
- $60,001-$80,000
- $80,001-$100,000
- Above $100,000

Are there any additional comments that you would like to include regarding the relationship between you and your former dissertation advisor that were not asked in previous questions?

Appendix D: Senior Faculty Survey

Please refer to your email and insert your unique identifying number provided to you by the Principal Investigator.

The next set of questions will ask about your current academic and professional background.

What is your current position?
- Assistant Professor
- Associate Professor
- Full Professor
- Endowed Chair
- Other

If you indicated "other" in the previous question, then please specify below:

Which area of Management do you consider your expertise (check all that apply)?
- Entrepreneurship
- International Business
- Human Resources
- Organizational Behavior
- Organizational Theory
- Strategy
- Other

If you indicated "other" in the previous question, then please specify below:

What year did you receive tenure?

The next set of questions will ask about your past academic and professional background.
Approximately how many years of industry experience did you have prior to pursuing your PhD?
- 0
- 1-2 years
- 3-5 years
- 6-9 years
- 10+ years

What was your position while advising your former doctoral student?
- Assistant Professor
- Associate Professor
- Full Professor
- Endowed Chair
- Other

If you indicated "other" in the previous question, then please specify below:

Approximately how many years total have you or had you been on the faculty at the institution where you began advising your former doctoral student?
- 1-2 years
- 3-5 years
- 5-7 years
- More than 7 years

Using the Carnegie Melon Classification System link below, please characterize your doctoral-granting institution.

Carnegie Classification Institution Lookup
- R1 - Doctoral Universities - Very High Research Activity
- R2 - Doctoral Universities - High Research Activity
- Other

If you indicated "other" in the previous question, then please specify below:

The next set of questions will ask about your previous advising experience.

Approximately how many other students did you advise prior to advising your former doctoral student?
- 0
- 1-2
- 3-5
- More than 5
Approximately how many students have you advised who were of a different gender than you prior to advising your former doctoral student?

- 0
- 1-2
- 3-5
- More than 5

Approximately how many students have you advised who were of a different race-ethnicity than you prior to advising your former doctoral student?

- 0
- 1-2
- 3-5
- More than 5

How would you rate your level of advising experience prior to working with your former doctoral student?

- No experience
- Little experience
- Moderate experience
- A lot of experience

How would you rate your level of confidence in advising prior to working with your former doctoral student?

- Not at all confident
- A little confident
- Confident
- Moderately confident
- Very confident

Approximately how many other students did you advise while simultaneously advising your former doctoral student?

- 0
- 1-2
- 3-5
- More than 5

At what stage of the doctoral program did you form a relationship with your former doctoral student?

- First year (pre-qualifying exams)
- Second year (pre-qualifying exams)
- Third year (post-qualifying exams)
- Fourth year (post-qualifying exams)
- Other

If you indicated "other" in the previous question, then please specify below:
Approximately how many additional doctoral students did your former dissertation chair advise while also advising you?

- 0
- 1
- 2-3
- More than 3

For the next set of questions, please rate your former doctoral student’s ability to complete the following in-role tasks and responsibilities when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former doctoral student completed required coursework as noted in the department policies and procedures.
2. My former doctoral student met deadlines for his/her research responsibilities.
3. My former doctoral student adequately completed his/her research duties.
4. My former doctoral student met deadlines for his/her teaching responsibilities.
5. My former doctoral student adequately completed his/her teaching duties.
6. My former doctoral student fulfilled responsibilities specified by the department policies and procedures.
7. My former doctoral student performed tasks that were expected of him/her.
8. My former doctoral student engaged in activities that directly affected his/her research trajectory.

For the next set of questions, please express your level of perceived similarity with your former doctoral student when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former doctoral student and I saw things in much the same way.
2. My former doctoral student and I were similar in terms of outlook, perspectives, and values.
3. My former doctoral student and I were alike in a number of areas.
4. My former doctoral student and I thought alike in term of our research interests.
5. My former doctoral student and I viewed social issues in a similar way.
6. My former doctoral student went to a less prestigious institution than I attended.
7. My former doctoral student went to a less prestigious institution than I attended.
8. As far as I know, my former doctoral student and I come from similar socioeconomic backgrounds.

For the next set of questions, please rate your former doctoral student's ability to complete the following research tasks when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)
1. My former doctoral student was an effective contributor to one or more research projects.
2. My former doctoral student successfully initiated a research project on his or her own.
3. My former doctoral student submitted and presented a paper (as a solo- or co-author) at a well-recognized conference.
4. My former doctoral student was an effective co-author on a published paper with me or another faculty member.
5. My former doctoral student participated in data analysis.
6. My former doctoral student identified and posed research questions that were worthy of study.
7. My former doctoral student completed a literature review and summarized important issues on a joint paper with me.
8. My former doctoral student designed and conducted effective research on which he or she was the lead author.

For the next set of questions, please express the frequency with which your former doctoral student engaged in feedback-seeking with you when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. Your former doctoral student asked how he/she was performing.
2. Your former doctoral student asked if he/she was effectively meeting the program's requirements and milestones.
3. Your former doctoral student asked you about his/her research and writing progress while in graduate school.

For the next set of questions, please express the degree to which you provided access to developmental opportunities to your former doctoral student when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. I invited my former doctoral student to work on one or several projects.
2. My former doctoral student and I presented research at a conference together.
3. I provided my former doctoral student with the opportunity to assist in data collection.
4. I provided my former doctoral student with tasks such as writing literature reviews, coding, or data write-ups.
5. I introduced my former doctoral student to other colleagues in the same research domain as he/she.

For the next set of questions, please express the degree of career and psychosocial support you provided your former doctoral student when he/she was in graduate school.
5 Item Scale (Strongly Disagree – Strongly Agree)

1. I took a personal interest in my former doctoral student's academic career.
2. I helped coordinate my former doctoral student's professional goals.
3. I devoted special time and consideration to my former doctoral student's academic career.
4. My former doctoral student shared his/her personal problems with me.
5. My former doctoral student exchanged confidences with me.
6. I considered my former doctoral student to be a professional friend.

For the next set of questions, please express your overall level of satisfaction with your former doctoral student when he/she was in graduate school.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former doctoral student is someone with whom I am satisfied.
2. My former doctoral student was very effective in his/her role.
3. My former doctoral student met my expectations.

Please express the current status of your relationship with your former doctoral student. These questions are in reference to the level of engagement after the student has completed his/her doctoral degree.

5 Item Scale (Strongly Disagree – Strongly Agree)

1. My former doctoral student continues to communicate with me regularly (i.e. - once or twice a semester).
2. My former doctoral student continues to consult me for career advice.
3. My former doctoral student and I continue to work on research projects together.
4. My former doctoral student and I presented at research conferences together.
5. My former doctoral student and I have published one or more research projects.
6. With regard to my former doctoral student, I now feel more like a colleague than like an advisor.

For the last set of questions, please provide your sociodemographic information.

Please indicate your gender.
- Male
- Female
- Other

If you indicated "other" in the previous question, then please specify below:

Please indicate your race/ethnicity.
- Hispanic or Latino
- Non-Hispanic or Latino
Please indicate your race/ethnicity.
- Asian
- Black/African American
- Native American or American Indian
- White/Caucasian
- Native Hawaiian/Pacific Islander
- Other

If you indicated "other" in the previous question, then please specify below:

What was your marital status while advising your former doctoral student (check all that apply)?
- Dating
- Long-term committed/common law
- Married
- Separated
- Divorced
- Widowed

What is your current age?
- 20-29 years of age
- 30-39 years of age
- 40-49 years of age
- 50-59 years of age
- 60 years or greater

How many children did you have while advising your former doctoral student?
- 0
- 1-2
- 3-5
- More than 5

Are there any additional comments that you would like to include regarding the relationship between you and your former doctoral student that were not asked in previous questions?
## Tables

### Table 13: Means, Standard Deviations, and Correlations between Variables

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<th></th>
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<th>SD</th>
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<th>3</th>
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<tbody>
<tr>
<td>1. Performance</td>
<td>2.75</td>
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<td>2. Development Opportunities</td>
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<td>3. Career Satisfaction</td>
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<td>5. Perceived Competence</td>
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<td>6. JF Undergrad Education</td>
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<td>7. JF Doctoral Education</td>
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<td>8. JF Research Experience</td>
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**Notes.**

*N* = 121.

JF Undergrad Education is coded as follows: 0 = R1 Institution, 1 = All other institutions.

JF Doctoral Education is coded as follows: 0 = R1 Institution, 1 = All other institutions.

Internal consistency reliabilities are reported in the diagonal.
Table 14: Frequencies and Percentages for Nominal-Level Variables for Junior Faculty

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*Note. Due to rounding errors, percentages may not equal 100%.*

Table 15: Frequencies and Percentages for Nominal-Level Variables for Senior Faculty

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*Note. Due to rounding errors, percentages may not equal 100%.*
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Table 17: Qualitative Interviews Senior Faculty Participants
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<th>Experience</th>
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<td>Full Professor</td>
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</tr>
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* Nadia did not complete the survey after several follow-up emails.
Table 18: Qualitative Summary of Dyad Participants

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<th>Cross-Race</th>
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