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Towards a Theory of Doctoral Student Professional Identity Development: A Developmental Networks Approach

What role do relationships play in the professional identity development process for individuals on the path to the professoriate? Understanding the influence of relationships and determining "how and why relationships matter" (Gersick, Bartunek, & Dutton, 2000, p. 1027) has been important for scholars and practitioners in higher education. For years, researchers have examined the influence of the academic advisor and peers on the doctoral student experience, and this work has served as the foundation for research on doctoral education (Golde, 2000; Green, 1991; Green & Bauer, 1995; Nettles & Millett, 2006). To date, however, few studies have accounted for the influence of relationships beyond faculty and peers in the academic context, with even fewer studies accounting for the multitude of relationships students are likely to rely on outside of the academic community. Wulff and Austin (2004) acknowledged this gap in graduate education research in their book *Paths to the Professoriate*. They noted that future research on graduate education would benefit from the inclusion of a variety of voices and perspectives both inside and outside of higher education. In addition, more longitudinal and interdisciplinary research that examines the graduate student experience

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would inform the current understanding of the experience, the factors that influence it, and would likely improve graduate education in general.

In an attempt to address these needs in the literature, I followed a cohort of business doctoral students throughout their first year of study to begin to explore the influence of students' personal communities or as I refer to them—*developmental networks*—defined as the "set of people a protégé names as taking an active interest in and action to advance the protégé's career by providing developmental assistance" (Higgins & Kram, 2001, p. 268). I sought to uncover if there were relationships beyond the academic advisor that were important to doctoral student success. If so, what other types of relationships were important and what kinds of support were provided? In addition, I wanted to understand how interactions with a variety of individuals and their expectations influenced students' developing conception of the faculty career. The ultimate goal of this research was to theoretically advance the study of doctoral education by proposing preliminary models of doctoral student professional identity development and to address the paucity of research that explores the influence of relationships, both within and outside of the academic community, on outcomes such as professional identity development. I relied on literatures from higher education and organization studies to inform this work.

This article proposes preliminary models for doctoral student professional identity development. It explores the question, What role do relationships play in doctoral students' professional identity development? In the first section, I provide an overview of the prior research that informed this study with an emphasis on two previously proposed models of the doctoral student experience (Tinto, 1993; Weidman, Twale, & Stein, 2001). In the second section, I discuss the theoretical framework that guided this research. Specifically, I describe social network theory and the connection between social (developmental) networks and professional identity development. I also include a brief summary of socialization theory as it pertains to the first stage of the doctoral student experience. In the third section, I provide an overview of the background to the study. In the fourth section, I describe the preliminary models of doctoral student professional identity development for the two clusters of students that emerged. In the final section, I draw on the students' stories and experiences and the perspectives of their network partners (the individuals identified by the students as influential, positive and negative, throughout their first year) to generate preliminary theoretical interpretations and propositions to advance the study of doctoral education through the exploration of professional identity development while on the path to the professoriate.

Prior Research

Models of the Doctoral Student Experience

The notion that students' personal communities are important to the doctoral student experience is not novel. In fact, researchers have acknowledged the likely importance of such communities. For example, Weidman, Twale, and Stein (2001) proposed the Graduate Socialization Framework which highlighted the importance of personal communities that include relationships with individuals not associated with the academic program. Weidman et al. noted that these individuals may also have expectations for a student's progress that are likely to influence various outcomes such as persistence and attrition. Tinto (1993) proposed a theory of doctoral student persistence in which he highlighted two key factors thought to influence it: (a) institutional experiences, including program level, which support or inhibit degree attainment, and (b) individuals who provide support to the student throughout the doctoral program. In terms of relationships, Tinto suggested that doctoral students' social membership within the academic program and student-faculty interactions were important to doctoral student persistence. Although both of these models acknowledged the importance of students' personal relationships, they focused primarily on students' relationships with faculty and peers from within their respective academic programs as important to professional career attainment (Tinto) and professionalization (Weidman et al.).

Fundamental to the Weidman et al. (2001) model is socialization, which they defined as "the process by which persons acquire the knowledge, skills, and dispositions that make them more or less effective members of their society" (p. 4). They argued that throughout the socialization process, graduate students acquire necessary information by way of communication strategies to aid in their transition. Prior research on doctoral education supports this notion and has shown that the doctoral student experience is the first stage of socialization to the faculty career (Austin, 2002; Austin & McDaniels, 2006). Authors including Austin and McDaniels (2006), Braxton and Baird (2001), Gardner (2007), Golde (1998), and Lovitts (2001) discussed the various stages of socialization that occur at the doctoral level which prepare students for academic careers. During the "beginning" or "anticipatory" stage, students enter a new program and begin to learn the language of a particular discipline and start to identify with the new role. Particularly important to the first stage is the development of relationships with peers and faculty. Past research on the first stage of socialization informs and supports the current study by showing that relationship development in the first year

not only occurs but is an important part of the socialization process. However, predominant reliance on socialization theory fails to capture the importance of the variety of relationships, within and outside of the academic community, that are important to students' "communication strategies" and there is a need for alternate theoretical frameworks to enhance the perspective socialization theory provides.

Theoretical Framework

Social Network Theory

In an effort to enhance existing research that relies on socialization theory, the current study introduces social network theory as a mechanism for exploring professional identity development and the process by which it occurs for doctoral students, which is lacking in the literature (Hall, 1968; Robole, 2003). Social network theory, or a developmental networks approach, is particularly salient for studying doctoral education because it seeks to explain how a network of actors establish and maintain connections within an organizational context and how those connections facilitate a multitude of outcomes such as professional advancement, information acquisition, and identity development (Ibarra, Kilduff, & Tsai, 2005; Ibarra, 1999; Kadushin, 2004). Research has shown that individuals' networks influence career outcomes including job satisfaction and attainment (Podolny & Barron, 1997), promotion and advancement (Burt, 1992), and overall career success (Guiffe, 1999; Hansen, 1999). Doctoral students are likely to have relationships or ties to many types of individuals such as peers, faculty, friends and family, and business associates who may provide various types of support, including friendship, advice, or developmental assistance throughout a student's doctoral program. As noted earlier, doctoral education and the experiences that occur during this time are regarded as the first stage to the faculty career (Austin & Wulff, 2004), therefore exploring doctoral students' networks as important to that process is a logical and necessary step to further advancing the study of doctoral education.

In an attempt to bridge mentoring and social network theories, Higgins and Kram's (2001) notion of developmental networks incorporated traditional concepts such as mentor, sponsor, and coach, yet acknowledged a new role, "developer," meant to encompass all of the previous terms mentioned. The term "developer" expands the concept of the single, traditional mentor relationship by acknowledging that developmental relationships may provide support beyond just career and/or psychosocial support to include knowledge development and information sharing which is likely important to the doctoral student experience and

professional identity development. Individuals' developmental networks are likely to change as career needs change resulting in the development of new relationships and the loss of others. There is a need in the career context to better understand which relationships are most important at different career stages and the same is true for doctoral education. Austin and McDaniels (2006) argued that professional networks are vital to faculty and graduate students alike, yet there is very little empirical evidence that examines the roles of a variety of relationships. The developmental networks approach described by Higgins and Kram (2001) provides a theoretical foundation to explore those relationships for doctoral students as a precursor to the faculty career.

Although most social network research examines the different types of networks (friendship, advice, entrepreneurial) independent of each other, I studied which network partners provided various types of support and how they provided that support. This information was then examined to determine how those relationships and support received by the doctoral student influenced professional identity development and the process by which it occurs. To move the study of doctoral students' relationships beyond a dyadic focus and to bridge the interdisciplinary divide, this paper answers calls from both higher education (Wulff & Austin, 2004) and organization studies (Gersick, Bartunek, & Dutton, 2000) by exploring how and why relationships matter in organizational contexts and to outcomes such as professional identity development. The developmental networks approach emphasizes the examination of all an individual's relational ties and the potential outcomes of those ties that may result.

Professional Identity Development

Recently, social network scholars have begun to explore the possibility that individuals' social networks may serve as identity construction mechanisms (Ibarra, Kilduff, & Tsai, 2005). "Although networks have been thoroughly studied as conduits for information and resources, we know little about the role they play in creating and shaping identities" (p. 362). Operating under the assumption that individuals construct their identities through their developmental networks, Dobrow and Higgins (2005) studied the extent to which individuals' developmental relationships enhanced the clarity of their professional identity. This study was the first to look at the influence of developmental network relationships on professional identity development longitudinally in career contexts and used two developmental network characteristics: high and low developmental network range (social relationships from multiple contexts or from a single context) and density (access to redundant

or nonredundant sources of information). Their research suggested that as developmental network density increased (i.e., less access to non-re-dundant sources of information), the clarity of one's professional iden-tity decreased. However, the authors noted that more longitudinal re-search is needed that examines the content and help-giving interactions of relationships and why and how developmental networks change over time.

Background of the Study

The study explored longitudinally how the friendship, advice, and de-velopmental support provided by peers, faculty, family, friends, and business associates facilitated doctoral students' early professional iden-tity development in the first year of a business doctoral program. The proposed models of doctoral student professional identity development I report here are based on analyses of mini-case studies of the 12 doctoral students (and their networks) enrolled in five business disciplines at a top ranked research university and college of business which I refer to as Valley University/Valley College of Business. Valley University is a top-rated research institution in the Northeast which enrolls approximately 40,000 undergraduate and graduate students. Valley College of Business is rated among the top 50 business colleges across the country and offers five doctoral degree programs: Accounting, Finance, Management and Organization, Marketing, and Supply Chain and Information Systems. Each year, Valley College of Business enrolls between 12-15 doctoral students and provides full funding through degree attainment to all of the doctoral students in the form of research assistantships. Some stu-dents serve as teaching assistants, though that is the minority. While stu-dents do enter doctoral programs with a variety of professional experi-ences, mostly in the business realm, Valley faculty are hesitant to admit students with "too much professional experience." I was told by an Associate Dean and other faculty that too much professional experience is a potential red flag whereby the admissions committee questions stu-dents' ultimate interest in earning a research faculty appointment. As such, the goal of Valley's doctoral program is to train "researchers who will place at other top-rated research institutions upon graduation." Stu-dents entering this program aspire for faculty careers and communicated those goals throughout the first year interviews.

Development of "Fit" Categories

One key difference that surfaced during the longitudinal analysis was the types of relationships students chose to identify as important to the

first-year doctoral student experience. Specifically, it appeared that some students chose to rely on individuals within the academic community only while other students relied on a combination of relationships with individuals inside and outside of the academic community. These differences in developmental networks were associated with variations in support provided to students, expectations communicated by network partners, students' conceptions of the doctoral student, research assistant, and teacher roles, and students' corresponding impressions of the faculty career.

Two clusters of students emerged based on these differences which I labeled Perceiving Fit and Assessing Fit. Fit, for the purposes of this study, is defined as congruence between students' goals for performance, placement, and weighting of academic roles (doctoral student, research assistant, and teacher) with Valley's goals for student performance, placement, and weighting of academic roles. I developed the Perceiving Fit and Assessing Fit characterizations at the end of the first year of data collection based on students' responses to the five key questions (content areas) believed to be most related to their developing professional identity: (a) what does it mean to be a doctoral student, (b) what does it mean to be a research assistant, (c) what does it mean to be a teacher, (d) how do you prioritize these roles, and (e) how does your experience in these roles serve as a preview to the faculty career. If a student's response to these five categories of questions appeared to mirror or support Valley's goals, that student was categorized as Perceiving Fit. If a student's responses were not congruent with Valley's goals, or the student appeared to be questioning Valley's goals, that student was categorized as Assessing Fit (see Table 1 for Perceiving Fit and Assessing Fit student quotes related to the five key questions).

Perceiving Fit students identified faculty and peers within the Valley community as important to first-year success while the Assessing Fit students identified relationships with faculty within the Valley community as well as family, friends, and prior business associates not affiliated with Valley. Based on these two clusters of students (Perceiving Fit and Assessing Fit), I developed two models of doctoral student professional identity development which posit that the process by which most doctoral students begin to develop professional identities as future faculty members is explained, in part, by individual differences such as socialization susceptibility and learning orientation, and by the new relationships they developed during the experience and the pre-existing relationships students brought to their doctoral education experiences.

TABLE 1

Perceiving Fit and Assessing Fit–Development of Categories

	Perceiving Fit	Assessing Fit
Mean to be a doctoral student	• "It means that you're here to develop a very wide range of skills from . . . skills in research. . . ." • "You're trying to accumulate a good research portfolio."	• "You know, I'm not here for the degree. I'm just here to see if I can learn some more." • "Most of the time you are just a student and you try to increase your knowledge level"
Mean to be a research assistant	• "I don't see the teaching as being a major part in the particular major that I'm in . . . all I can think of is publish, publish, publish." • "You do your research assignments … and if you contribute to a paper you can be a co-author on that paper."	• "It means to give back some of what you got from the school . . . , it means to establish a relationship with your professor you're working with. And, it's a source of ideas as well." • "As a research assistant, your job is twofold: it's to learn how to do the research and to provide value to the field and for the faculty member that you're working with."
Mean to be a teacher	• They [faculty] just give you the option to teach for money over the summer. But, I don't think they're really pushing you in that direction." • "Here, the teaching load isn't too high which is good . . . I need time to work on research."	• "I like teaching a lot and I look forward to teaching here . . . it's an opportunity to help people develop." • "Being an instructor means to do something that I think is beautiful . . . it's interaction with other students and developing knowledge together."
How do you prioritize the roles	• "Research and developing good ideas is my number one priority." • "While the student role is most important to me now, I see it as the most important because it will help me be a better researcher."	• "I see all the roles as opportunities to learn . . . but I guess the student role is most important as I need to develop the tool box of skills." • "The most salient role for me right now is being a student and trying to be a sponge . . . just taking it all in."
Preview of faculty career	• "The key focus here is research which is good preparation for being a researcher at a 'Top 50' institution." • "I think they [faculty] do a good job here showing us how important research and publication is to earning a top faculty position."	• "To be honest, I am not sure . . . I haven't taught yet and am just learning how to develop research ideas. When I have to juggle it all, then I will be able to tell you for sure."

Methods

Data collection included interviews with the focal doctoral students (*N* = 12), their self-identified network partners[1] (*N* = 22), and other Valley faculty and administrators (*N* = 15) most involved in the first-year experience. To triangulate the data and to cross check information I collected during the interviews, I conducted direct observations of college-wide orientations at the beginning of the fall and spring semesters and content analyzed Valley documents such as the strategic plan, web sites, and doctoral program brochures. A series of three interviews were conducted throughout the first year of study (September 2005, January 2006, May 2006) to capture students' development and changes throughout the first year. Each student interview elicited information regarding students' personal characteristics, the factors that influenced their decision to pursue doctoral study, the relationships (positive and negative) that were most influential to their progression throughout the first year, the expectations students' network partners placed on them, the primary types of support provided by network partners, their perceptions of what it means to be a doctoral student, research assistant, and teacher, and how the first year experience served as a preview of the faculty career.

Network partner interviews were conducted during the spring 2006 semester and were used as an opportunity to assess consistency (or inconsistency) in students' and network partners' perceptions, as well as to learn more about the Valley culture. Network partner interviews elicited information about the focal students' personal characteristics, the types of interactions the network partner had with the students, the primary expectations the network partner placed on the student, the overall expectations of the Valley College of Business doctoral program in terms of placement post-graduation and performance (if network partner was a Valley community member), and the types of support the network partner provided to the student.

Due to the longitudinal nature of the study, individual write-ups were created for each student at each interview time that served as stand alone entities (Eisenhardt, 1989). Included in each student write-up were data from corresponding network partner interviews and drawings of students' developmental networks. The drawings included the network partners identified by the students and indicated the type and frequency of interaction between student and network partner. Interviews were analyzed to assess changes in students' developmental networks, perceptions of network partner expectations, and early professional identity development in the roles of doctoral student, research assistant, and

teacher. Using students' responses to the above noted questions, I categorized students as Perceiving Fit or Assessing Fit at each interview time. At the end of the first year, 6 students were categorized as Perceiving Fit and 6 students were categorized as Assessing Fit. In fact, one of the Assessing Fit students withdrew from Valley after completion of the second interview but remained in the study (see Table 2 for Perceiving Fit and Assessing Fit Categorizations for each student at each interview time).

Using the Time 3 categorizations as an end point, I also examined other individual differences or demographic data that may have contributed to students' categorization of Perceiving Fit and Assessing Fit. The individual differences and demographic data comparisons examined include gender, international status, age, and years of prior work experience (see Table 3). As is evidenced by Table 3, gender and international status did not appear to influence a student being categorized as Perceiving Fit or Assessing Fit in this group of students. Males were just as likely to be Perceiving Fit or Assessing Fit as were females. International status, age, and years of prior work experience also did not appear to be a contributing factor to fit categorizations in this small sample. While other comparisons such as marital and parental status and departmental differences were considered, those comparisons are not included in order to protect students' identities as they are still enrolled at Valley.

TABLE 2

Perceiving Fit and Assessing Fit Categorizations at Each Interview Time

Student	Perceiving Fit			Assessing Fit		
	T1	T2	T3	T1	T2	T3
A	X	X	**X**			
B	X		**X**		X	
C		X	**X**	X		
D				X	X–*Withdrew*	**X–*Withdrew***
E	X	X				**X**
F				X	X	**X**
G	X	X	**X**			
H				X	X	**X**
I	X	X	**X**			
J				X	X	**X**
K				X	X	**X**
L	X	X	**X**			

TABLE 3

Perceiving Fit and Assessing Fit Comparisons at Time 3

	Perceiving Fit	Assessing Fit
Age		
20–30	3	2
31+	3	4
Gender		
Male	4	3
Female	2	3
International Status		
International	2	3
Domestic	4	3
Prior Work Experience		
5 years or less	3	3
6 years +	3	3

The individual student write-ups, the Perceiving Fit and Assessing Fit categorizations at each interview time, and the other individual differ- ence comparisons facilitated a cross-case analysis which allowed for the identification of patterns in types of relationships, key expecta- tions communicated in those relationships, and how those relation- ships appeared to influence students' perceptions of the faculty career. After identifying patterns across students' experiences and relationships, I returned to the literature to develop preliminary theoretical interpre tations and working propositions regarding students' relationships and their influence on the student experience and professional identity development.

The Models

In the following section, (a) I provide an overview of the key compo- nents shared by the two models of doctoral student professional identity development, and (b) discuss the models with specific illustrations re- lated to Perceiving Fit and Assessing Fit students.

General Model Overview

An individual enters a doctoral program with key individual differ- ences that are likely to influence the doctoral student experience: social- ization susceptibility and learning orientation. As a result of those

individual differences, students are likely to develop and rely on a variety of relationships (e.g., developmental network) that are likely to influence the types of experiences students engage in and the types of goals they develop in terms of performance in the program and placement post-graduation. Interactions with network partners may influence a student's activation of a particular learning orientation at later times in the program based on expectations communicated by network partners. At the same time, a student is likely to begin to evaluate whether he or she agrees with or accepts the goals of the program for placement and weighting of academic roles which they have been socialized to accept (i.e. percentage of time that should be allocated to research, teaching, and service). This, in turn, triggers the student's questioning or acceptance of fit with the academic program and the faculty career, thus influencing their developing professional identity as a faculty member.

Perceiving Fit

The students I labeled as Perceiving Fit at the end of their first year in the program entered the program with two distinct characteristics: a strong orientation to identify and describe themselves in professional terms only and a focus on tangible goals such as publications in top-tier journals and placement post-graduation at highly ranked research institutions as the metric for success in the program. These characteristics appeared to influence the types of relationships they chose to develop or identify as important to success in the program. In fact, the Perceiving Fit students only described relationships with individuals within the Valley community with those who shared the same goals and expectations for performance and placement. Engaging in relationships with Valley community members only appeared to influence the types of activities the Perceiving Fit students engaged in such as early involvement in research assistantship duties and a strong within developmental network socialization that further supported publication and placement as metrics for program success. I characterized these relationships as *internal-mission supporting developmental networks* because the primary message and expectation communicated to students in these types of networks supported Valley's goals for research productivity and "Top 50" placement (e.g., earning a faculty appointment at another top-ranked research institution).

Valley faculty and administrator emphasis on pre-established indicators of success as a basis for interaction (i.e., training of "Top 50" researchers) appeared to activate students' adoption of performance orientation learning goals. According to Graham (2003), performance orientation occurs when individuals are motivated by the desire to
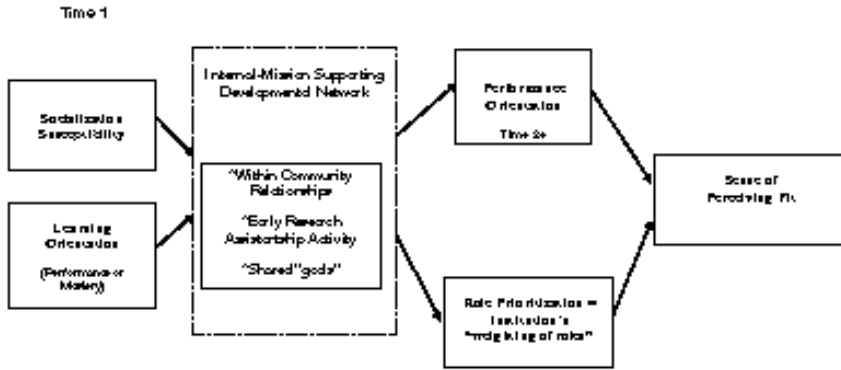
MODEL 1. *Perceiving Fit Model of Doctoral Student Professional Identity Development*

demonstrate adequate mastery while simultaneously displaying tendencies to conceal low levels of ability. Socialization efforts that encourage students' activation of performance orientation as the primary goal may persuade students to adopt an "all or nothing" metric of success and thereby contribute to students' assessment of fit with the institution or discipline. Most of the Perceiving Fit students' responses to interview questions throughout the first year were consistent with a role prioritization similar to Valley faculty's weighting of academic roles (i.e., research is more important than teaching or service), thus indicating the acceptance of Valley's "prototypical" professional identity.

Assessing Fit

The Assessing Fit students, as labeled at the end of Year 1, also entered the program with two distinct characteristics that differed from their Perceiving Fit counterparts. When asked to describe themselves, the Assessing Fit students focused on more personal characteristics such as "creative," "interested in learning," and "a good person." Program success in their opinion was more about learning and developing as an individual with much less emphasis on top-tier publications and placement at top research institutions. The combination of network partners identified by the Assessing Fit students appeared to share common goals with an emphasis on individual development and learning as the primary motivator in the doctoral program. Because of this emphasis on individual development, most Assessing Fit students and their network partners viewed academic roles (doctoral student, research assistant, and teacher) as integrated and as opportunities for learning. Integration occurs when

engagement in academic roles achieves more than one goal such as when a professor uses findings from a research study to inform a class discussion among graduate students (Colbeck, 2002). As such, I labeled this network *individual-development supporting*.

The within developmental network focus on individual development and integration of academic roles appeared to activate the Assessing Fit students' adoption of a mastery orientation toward learning. A mastery orientation results, according to Graham (2003), when students "are oriented toward acquiring new skills or improving their level of competence . . . they may strive to develop competence by learning as much as they can" (p. 1694). While the Assessing Fit students and their network partners' goals for performance were complementary, the difference in goals (e.g., mastery orientation rather than performance orientation), appeared to result in Assessing Fit students questioning fit with Valley's weighting of academic roles or more specifically, prioritization of academic roles. Thus, it may be possible for a student to accept the given roles of doctoral student, research assistant, and teacher but not place the roles in the same priority that veteran organizational members assign to the given roles. While it is likely that the Assessing Fit students began to develop professional identities as future faculty members, they did not appear to accept Valley's "prototypical" professional identity which emphasized "A-level publications" and placement in a "Top 50" research institution by the end of the first year.

Time 1
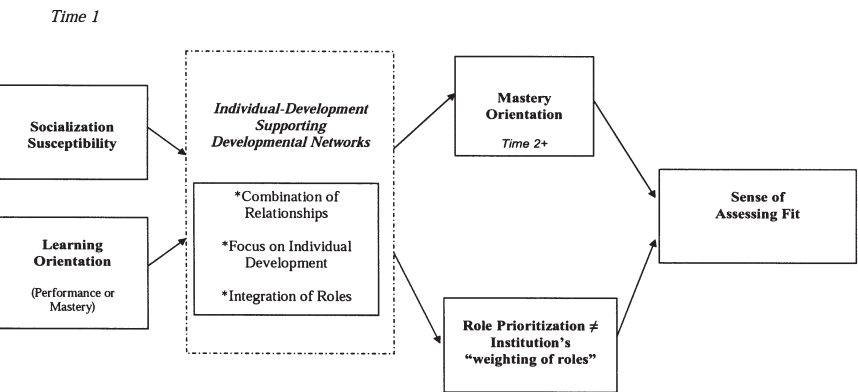
MODEL 2. *Assessing Fit Model of Doctoral Student Professional Identity Development*

Propositions and Future Research

The models of doctoral student professional identity development I describe above focus on four key areas: individual differences students bring to the doctoral student experience, *within* developmental network experiences, the role interactions with network partners have on students' prioritization of academic roles, and the likely influence these areas have on doctoral students' ultimate assessment of fit with the academic program and future faculty career. In the following section, I explore specific relationships among the four key areas addressed, discuss working propositions, and propose areas for future research to advance the study of doctoral education.

Individual Differences

For decades, researchers have explored the role individual differences play on a myriad of outcomes (Detert, Treviño, Sweitzer, 2008; Murphy, 2002; Treviño, 1986), and have acknowledged that individuals respond differently to organizational contexts as a result of past experiences. Furthermore, research revealed that individuals reflect on past experiences to help make sense of their current environment (Louis, 1980; Trice, 1993) and it is reasonable to suggest that the doctoral student experience is no different. Individuals enter doctoral programs with individual differences that influence their choice in academic program, the research agendas they pursue, and the types of relationships they develop along the way. Two individual differences that appeared to be salient for the students I followed from the Valley College of Business were something I labeled socialization susceptibility and learning orientation.

Socialization Susceptibility

Organizational socialization has received substantial research attention as a means of understanding how organizational newcomers come to identify and understand the norms and expectations of their new environment and future profession (Austin & McDaniels, 2006; Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Schein, 1971). One criticism of socialization programs or processes is that a large number of organizations, including doctoral programs, offer "one-size-fits-all" socialization programs that often result in individuals feeling that their personal needs are being neglected. The failure to account for individual agency as important to the development that should occur in a doctoral program, and the realization that most socialization efforts fail to ac-

knowledge the importance of individual differences led to an important, yet still unanswered question in the socialization literature: who is "socializable" and who is not?

During the Time 1 interviews students were asked, "Who were you prior to coming to Valley" and I continued to ask this question at the close of each interview. Students' responses across interview times served as a base of comparison for how they perceived themselves during their first year experience. While I originally asked the question to assess changes over time, it was their initial self-descriptions that were either supported or changed as a result of interactions with their network partners. In turn, this led me to question Valley faculty's tacit assumption that older, more experienced students are less "malleable" and have a more difficult time accepting or fulfilling the rigors associated with a research career. Based on my discussions with these students, it appeared that age, experience, and other identifiers such as parent or spouse were less influential, as thought by Valley faculty. Rather, their self-descriptions were much more likely to contribute to how (un)willing they were to be socialized.

The students I characterized as Perceiving Fit described themselves in relation to their most recent professional experience, such as consultant or research analyst beginning at Time 1. Conversely, the Assessing Fit students focused much more on personal self-descriptors such as "loyal," "creative," or "interested in learning." The Perceiving Fit students were much more willing and accepting of the strong socialization they were experiencing at Valley, it appeared, because of their propensity to focus on their professional selves. The Assessing Fit students, on the other hand, were hesitant to shed the other roles and interests that led them to pursue doctoral study even after realizing the possibility that those roles could and likely did conflict with Valley's intense socialization. Therefore, it appeared that individuals who readily identified with a prior professional role, regardless of age and prior work experience, were more accepting of strong socialization efforts because they already had the propensity or "susceptibility" to be socialized because of their stronger focus on external, professional self-descriptors. Conversely, the individuals who described themselves in more personal terms, regardless of age, prior work experience, or outside commitments, were less susceptible to strong socialization efforts because they were more focused on internal, individual self-descriptors (refer to Table 3).

Proposition 1:
   1a: Students higher in socialization susceptibility will more readily accept the messages and expectations communicated through social-

ization efforts because of their focus on external, professional self-descriptors and their prior experience with and acceptance of professional socialization.

1b: Students lower in socialization susceptibility will have a more difficult time accepting the messages and expectations communicated through socialization efforts regardless of prior professional experiences because of their focus on personal self-descriptors rather than professional self-descriptors.

The notion of socialization susceptibility is consistent with prior research which suggests that individuals bring a multitude of experiences to work and academic contexts that are likely to influence the ways they make sense of socialization experiences (Louis, 1980; Trice, 1993). Treating socialization susceptibility as a stable individual difference trait, however, contributes to existing socialization literature. This view contradicts the traditional one-size-fits-all perspective of socialization and supports the notion that organizations that are able to effectively tailor such efforts at the individual level are more effective, beneficial, and current with the times (Murphy, 2002; Towler & Dipboye, 2003). While an individual may be new to a particular organization, that person may not be new to a given field or to being a professional; the notion of socialization susceptibility acknowledges this difference. Doctoral programs that are able to effectively embrace students' differences, rather than viewing them as obstacles, and use those differences to the programs' and students' advantage will likely be more successful in preparing the next generation of faculty.

It is important to note that while findings from this study contribute to the idea that socialization susceptibility may be a stable trait, data obtained from the first year is not sufficient to confirm this assertion. Therefore, future research is needed that explores the factors (such as individual differences) that may contribute to one's socialization susceptibility.

Goal Orientation

An important area of research in both educational and psychological fields is the attempt to uncover the motivational processes that affect learning, with a particular emphasis on goal orientation (Ames & Archer, 1987; Dweck, 1986; Kanfer & Ackerman, 1989). Two important goal orientations widely examined in the literature are mastery orientation and performance orientation (Dweck, 1986). Mastery orientation is defined as "the belief that effort leads to improvement in outcomes and that ability is malleable" (Ford, Smith, Weissbein, Gully, & Salas, 1998,

p. 222). Mastery-oriented individuals are focused on developing new skills and believe that success is realized by achieving self-referenced standards (Ford et al., 1998). In contrast, performance-oriented individuals are concerned with being judged as capable, they strive to outperform others, and they value ability and achievement of normatively high standards (Ames & Archer, 1988). Research has shown that educational environments that foster performance goals as the primary metric of achievement encourage students to focus more on their ability than on the learning process itself. A debate that is fundamental to this line of research is whether goal orientation is a stable trait that remains consistent across experiences and environments versus a trait-like variable that is malleable and can be activated given the goals of the environment (DeShon & Gillespie, 2005).

In an attempt to identify the conceptual and methodological inconsistencies that fuel this debate in the goal orientation literature, DeShon and Gillespie (2005) proposed a self-regulation model of goal orientation which they termed, motivated action theory (MAT). In their review of the literature on goal orientation, they found that treating goal orientation as a stable trait only accounted for part of the picture. In fact, they noted that Dweck (1996) voiced concerns that the trait perspective failed "to capture parsimoniously the dynamic, process-oriented nature of personality" (p. 348), yet researchers have failed to acknowledge this concern when exploring goal orientation. They also suggested that situations, whether deemed weak or strong, are insufficient alone in explaining goal orientation. Therefore, they suggested an interactionist perspective that accounts for an individual's propensity to consciously or subconsciously enter into a situation with a certain goal orientation, and the situational influences that either supports or activates the adoption of one goal orientation over another given the organizational goals. The models of doctoral professional identity development described earlier account for both individual and situational influences.

Individuals entering doctoral programs are likely to enter the academic environment with varying learning goals which will influence how they approach coursework, their interactions with individuals, and their goals for development and advancement. While enrolled in the program, two contributing factors are likely to influence students' activation of a goal orientation: the mission of the academic program and students' interactions *within* their developmental networks. Programs differ in the extent to which their mission encourages the achievement of narrowly defined targets. Valley's "Top 50" placement goal could be categorized as a narrowly defined measure of student success, and by its very nature, is likely to encourage students to adopt a performance orientation. Con-

versely, programs which have more diffuse missions may be more likely to facilitate students' adoption of mastery learning goals because of the focus on individual development.

Differences within developmental network socialization may also be associated with students' adoption of different learning orientations. Based on an analysis of the messages and expectations communicated by students' network partners, there was a major difference in how the Perceiving Fit and Assessing Fit students were socialized. While all students were exposed to the same messages and expectations from Valley during orientation and other group-wide events, the messages and expectations that were communicated *within* students' developmental networks appeared to influence the primary socialization these two groups of students experienced. Through interactions with their *internal-mission supporting networks*, the Perceiving Fit students were continually reminded that research productivity resulting in "A-level" publications and placement at "Top 50" institutions upon graduation were the only metrics of success by Valley standards. As such, the Perceiving Fit students adopted those messages and goals as their own. Conversely, the messages and expectations communicated to the Assessing Fit students by their *individual-development supporting networks* emphasized individual growth and skill building which appeared to support Assessing Fit students' existing values and program goals (see Table 4 for sample messages from network partners).

Proposition 2:

2a: Socialization that occurs in networks focused on the academic program's mission facilitates students' adoption of performance orientation learning goals because of the congruence between programmatic goals and developmental network goals.

2b: Socialization that occurs in individual-development networks facilitates students' adoption of mastery orientation learning goals because of the greater within network emphasis on individual development and learning rather than achievement of programmatic goals.

DeShon and Gillespie (2005) discussed the tendency of this line of research to encourage organizations to create climates that emphasize one orientation over another. They suggest, given the performance demands on most organizations and fields, an organization's ability to adopt a particular goal orientation is likely unrealistic. The academic profession is no different. It is important to note that while an academic context may promote the adoption of a performance orientation, implicitly that

TABLE 4

Key Expectations Perceived by the Perceiving Fit and Assessing Fit students.

	Perceiving Fit	Assessing Fit
Faculty	• "Coursework is not important" • "Coursework interferes with research." • "Research is the most important priority." • "Research gets you the most recognition." • "Don't let teaching interfere with research." • "Get decent teaching evaluations."	• "Coursework is an opportunity to develop." • "Not being the star in class is okay as long as you learn and push yourself." • "Learn to take an interest in other grad students." • "Place at an institution where you can make a contribution." • "Explore ideas that interest you."
Peers	• "Advanced students expect us to succeed." • "Advanced students support faculty expectations." • "Fellow cohort members expect to be supportive of each other." • "Fellow cohort members are in this together."	
Family & Friends		• "Don't lose balance." • "Do what makes you happy." • "Be the best you can be." • "Don't forget about the importance of family." • "We'll move if this is not right for you."

[1]Network partners included Valley faculty ($n = 6$), advanced Valley doctoral students ($n = 5$), cohort members ($n = 5$), business associates ($n = 2$), and family members including spouses and siblings ($n = 5$).

same student has to display an acceptable level of mastery. In other words, a student may be focused on earning an "A" in a methods course which would appear to support a performance orientation (e.g., a primary focus on the end result). However, the professor will not assign the student an "A" if the student does not display mastery of the material.

The proposed models described earlier support research which suggests that classroom learning environments influence how students view themselves and the learning process (Ames, 1992; Ames & Ames, 1984). Prior research on learning goals has shown that self-efficacy, knowledge development, and increased metacognitive activity have been positively linked to mastery orientation (Ford et al., 1998). The

models suggest that learning goals may be associated with fit in an academic program and potentially the faculty career which is certain to influence professional identity development. Future research could explore longitudinally the effect of role performance and mastery orientations on professional identity development and their subsequent influence on preparing future faculty which would contribute to both lines of research. Other research might also explore the effects of learning goals on persistence to degree or withdrawal from graduate study. Such research might address questions including: Is mastery orientation or performance orientation most likely to contribute positively to long-term persistence and degree attainment? How does mastery or performance orientation interact with institutional mission to influence persistence? Although the proposed models of doctoral student professional identity development note the importance of learning goals at Time 1 and beyond, I did not capture specific data about learning orientation. Therefore, future research should collect data on learning goals at Time 1 in order to assess changes in learning orientation over time as a result of within developmental network interactions.

Within Developmental Network Experiences

Research shows that very few students enter doctoral programs with a solid understanding of doctoral education or the faculty career (Wulff, Austin, Nyquist, Sprague, 2004). Furthermore, research has revealed that a majority of doctoral programs often fail to facilitate students' ongoing development in order to acquire the variety of skills now required by the faculty career (Austin & Wulff, 2004). Doctoral programs, particularly those at top-rated research institutions, often train students for the tasks and roles they themselves were prepared for during their own training and that are rewarded by the promotion and tenure process at similar institutions. While it is reasonable that faculty at top-rated research programs aspire to place students at other top-rated programs, research shows that very few students, at least initially, are able to earn faculty appointments at comparable institutions for a variety of reasons such as lack of faculty openings or students' lack of interest for the research faculty lifestyle (Prewitt, 2006). As a result, students are ill-prepared for the responsibilities they are likely to encounter at other institutional types.

Weidman, Twale, and Stein (2001), highlighted the importance of socialization to the graduate experience noting that classroom engagement results in important knowledge acquisition crucial for functioning as a professional in a given field. They also discussed the importance of in-

volvement, which they defined as engaging in some aspect of or preparation for a professional role. Although the authors noted that no two graduate programs or graduate students are alike, it is reasonable to assert that there is a fundamental similarity in experiences such as orientation, the series of required courses, and overall program requirements to which all students are exposed in a given program. There are, however, differences in *within developmental network experiences* that may be more important than the overarching socialization efforts implemented by an academic program. Based on my prior research (Sweitzer, 2008), it appears that interactions within developmental networks either reinforces or detracts from program or institutional goals.

Interactions in *internal-mission supporting developmental networks* reinforce the goals and aspirations the academic program places on entering doctoral students for several reasons. First, the network partners identified by the Perceiving Fit students consisted of faculty and peers within the Valley community only. It appeared that these network partners believed in Valley's goals which influenced their interactions with the focal students. Second, the activities and experiences the faculty, in particular, helped involve the Perceiving Fit students in also supported the overarching program goals, mainly early involvement in research to establish a potential publication record. Interactions with within-community network partners and early involvement in research appeared to further solidify shared goals within the Perceiving Fit students' developmental networks.

Conversely, interactions in individual-development supporting developmental networks appeared to contradict the overarching program-goals communicated to students. In terms of relationships, the Assessing Fit students identified and relied on a combination of relationships both within and outside of the Valley community. The key relationships identified by the Assessing Fit students included Valley faculty and family members including spouses, siblings, and parents. Several of the Assessing Fit students said maintaining relationships outside of Valley was so important to maintaining balance. Perhaps more important, the Assessing Fit students said their relationships with these individuals helped to remind them of their original purpose for enrolling in a doctoral program, which was individual development and learning. The within developmental network focus on learning and development removed some of the performance pressure that the students said they felt based on program goals alone. One Assessing Fit faculty advisor communicated to me that he advised his student to focus less on the actual grade on a given assignment, and to spend more time working through ideas of interest, even if it resulted in a "relatively crappy paper." By emphasizing

the learning, the Assessing Fit students did not feel the need to prioritize the roles they held (doctoral student, research assistant, and teacher). In fact, the Assessing Fit students, along with their network partners, viewed the roles as opportunities to develop and hone skills, therefore making it less important to view one role as more important than another.

Proposition 3:
   Within developmental network socialization is more important to individual student progression and program success and "trumps" the socialization that occurs at the program and institutional-levels.

The focus on within developmental networks does, however, fuel a chicken-or-the-egg-type debate. Are the students coming into the academic program with these beliefs and therefore developing relationships with individuals that support their already existing goals? In other words, are students seeking out individuals that tell them what they want to hear rather than building relationships with individuals that challenge existing values and goals? Or, are students' developmental networks the major source of influence throughout the experience? During the first year, the faculty relationships students identified were with faculty they were assigned to work with during that year. It is important to note that while every student was assigned an academic advisor, not every student mentioned the faculty advisor as important to the first year experience. Furthermore, several students were married or in committed relationships and not all students discussed those relationships as important to first year success. Therefore, future research which continues to explore (a) which relationships are important and why, (b) *within* developmental network experiences, and (c) the changing nature of students' developmental networks will contribute to research on developmental networks and the role they play in an organizational context and on professional identity development.

Role Prioritization and Fit

My outcome of interest was professional identity development and I was interested in exploring the factors that influenced this process. One contributing factor that I believed to be important was students' perceptions about and their development in three key roles: doctoral student, research assistant, and teacher. I asserted that students would either identify or disidentify with these roles. If students identified with these roles, I believed they would be likely to persist. Conversely, if students

disidentified with any of the roles, they would be more likely to withdraw from doctoral study. However, the empirical evidence revealed that for all 12 students who participated in the study, role identification and role disidentification did not adequately address the differences between the students' experiences and perceptions surrounding the three roles. This was especially true for the Assessing Fit students because these students appeared to identify with the three roles (doctoral student, research assistant, teacher), but they did not place the roles in the same priority that Valley preferred or socialized them to accept.

This observation led me to consider an important question: can doctoral students persist to degree attainment if *individual* role priority does not match *program* role priority? During the doctoral student experience, it may be possible for a student to accept the given roles of doctoral student, research assistant, and teacher but not place the roles in the same priority that veteran organizational members assign to them. Perhaps the doctoral student is more interested in teaching than research, but still has an interest in research. In this instance, the student struggles not with the roles themselves, but with the priority placed on the given roles by veteran organizational members. This disconnect is likely to trigger students' assessment of fit with the doctoral program and possibly with the faculty career. Person–environment fit is defined as the "compatibility between an individual and a work environment that occurs when their characteristics are well matched" (Kristof-Brown, Zimmerman, & Johnson, 2005, p. 281). Lovitts (2001) noted that graduate programs place too little emphasis on fit between a student's interest and the program's strength. Therefore, the notion of fit is important in the context of doctoral education because it can shed light onto issues such as doctoral student development and persistence.

Differences within developmental network socialization are likely to contribute to students' perceptions of fit. Many students described their apprehension in communicating doubt about choice of program of study or research career to faculty and administrators involved in the program because they feared they would lose faculty support or funding. The Perceiving Fit students, as noted previously, heard the same messages communicated within their developmental networks as they did from the program-level. Again, this reinforced their notion of fit with the program and expectations of the faculty career. This fear of negative reprisal may have accounted for the composition of the Assessing Fit students' developmental networks. Developmental network type (internal-mission or individual-development) and the resulting socialization may be associated with doctoral students' evaluation of fit with the surrounding environment.

Proposition 4:
  4a: Internal-mission supporting networks contribute to students' perceptions of fit because of the congruence between within *network goals, institutional or disciplinary goals, and the way students prioritize academic roles.*

  4b: Individual-development supporting networks contribute to students' questioning of fit because of the difference between within *network goals, institutional or disciplinary goals, and the way students prioritize academic roles.*

I did not develop the study with the notion of fit in mind. Rather, fit was a consistent theme among the students and across interview times. Findings suggest that perceptions of fit influenced students' development of the prototypical professional identity they were socialized to accept (Sweitzer, 2008). The Perceiving Fit students appeared to initially accept Valley's prototypical professional identity because of the congruence between developmental network goals and Valley's goals. Conversely, the Assessing Fit students were still questioning fit due to the apparent incongruence between developmental network goals and Valley's goals. By studying this phenomenon longitudinally, one could examine the point at which fit supports or hinders professional identity development or persistence. In other words, at what level is questioning of fit so overwhelming that it causes a student to leave a particular institution or the faculty career entirely? Additional longitudinal research would reveal the connection, if one exists, between fit perceptions and type of placement post graduation as well as further explain the association between developmental networks and fit over time. Other research questions worth exploring include, can a student have a mismatched role priority with the program but still persist because of the support provided within his/her developmental network?

Professional Identity Development

Research has found that individuals' developmental networks contribute to professional identity development (Dobrow & Higgins, 2005) and findings from my previous work contribute to this line of research (Sweitzer, 2008). However, it is important to note that student' relationships (e.g., developmental networks) influence the professional identity development process in different ways. As noted in Model 1, the Perceiving Fit students' developmental networks supported the development of the "prototypical" professional identity that Valley socialized

students to adopt. The Assessing Fit students' relationships, on the other hand, encouraged students to focus on their learning and individual development (See Model 2). As suggested earlier, the Assessing Fit students were also developing professional identities as future faculty members, but their conception of the faculty career and what it means to be a faculty member differed from those of the Perceiving Fit students because of the *nonredundancy* in messages and the nature of their developmental networks (Granovetter, 1973). In other words, the different messages communicated and types of support provided by network partners to these two groups of students influenced the professional identity development process, resulting in different conceptions of the faculty career.

Proposition 5:

5a: High susceptibility to socialization and messages communicated by internal-mission supporting networks *and the academic program lead to students' prioritization of academic roles matching the program's prioritization because of the primary focus on achievement of institutional goals (i.e., "Top" 50 placement).*

5b: Low susceptibility to socialization and nonredundant messages communicated to students by their individual-development supporting networks *and the academic program lead to students' mismatched prioritization of academic roles because of the primary focus on individual goals rather than institutional goals.*

The suggested propositions of professional identity development continue to fuel the longstanding debate—what is the purpose of doctoral education? It would be naïve to suggest that programs are not concerned with their reputation or placement of students and that these factors do not play a role in the socialization process and other program-related experiences students are exposed to while enrolled in a doctoral program. However, as Prewitt (2006) suggested, doctoral programs need to "take a hard look at how doctoral training can be better designed to teach the skills and instill the habits of the mind that, in fact, will increase the odds of careers success . . ." (p. 26). This statement suggests that although research is fundamental to PhD-level training, doctoral programs are missing the mark because the majority of individuals who graduate from doctoral programs at the top research institutions do not always place at comparable institutions (Austin & Wulff, 2004; Prewitt, 2006).

The models of doctoral student professional identity development described earlier account for the differences in *within* developmental

network experiences and the influence those differences are likely to have on students on the path to the professoriate. Both the Perceiving Fit and Assessing Fit students began to develop professional identities as future faculty members in business; however, their conceptions at the end of the first year varied. It appears that even within the same college of business, students were being exposed to different experiences. The Perceiving Fit students might be likely to achieve the ideal touted by Valley which would enable them to earn "Top 50" placement because of their willingness to accept the existing model of success. The Assessing Fit students, on the other hand, may be at risk for attrition in the Valley context. It is important to note, however, that the Perceiving Fit and Assessing Fit characterizations I assigned to the students or the models described in this paper were not and are not based on students' quality of work or academic performance and do not indicate such.

Discussion

The goal of this paper was to theoretically advance the study of doctoral education by proposing models of doctoral student professional identity development that draw on literatures from higher education and organization studies. The models offer insight into students' multiple relationships, labeled *developmental networks*, and the role they play in shaping students' experiences and the development that occurs while on the path to the professoriate. Specifically, the models posit a relationship between developmental networks and key outcomes important to the doctoral student experience, namely fit and professional identity development. The models draw on four key variables—individual differences, *within* developmental network experiences, the proposed relationship between interactions with network partners and role prioritization, and fit thus influencing professional identity development, which aided in the development of working propositions and future research directions.

Contributions

This article and the proposed models contribute to research on doctoral education in several ways. First, it serves as a starting point for the third generation of doctoral education research as described by Austin and Wulff (2004) on several fronts. The proposed models acknowledge and account for the focal student's experiences *and* the experiences and perspectives of the individuals most involved with the student from both within and outside the academic community. To date, the majority of research on doctoral education has regarded the advisor as the most critical relationship to doctoral student success with a predominant focus on

within academic community relationships only. While Tinto's (1993) model accounted for external relationships as important to persistence, these relationships are not considered a factor until the third stage of the doctoral student experience. Both Tinto (1993) and Weidman et al. (2001) discussed students' outside relationships as important, yet fundamental to their models is a predominant focus on faculty-student mentoring relationships which encourages a dyadic focus. The models I propose in this paper not only account for the influence of external communities beginning in year one, but the models are a first attempt at moving beyond *within* academic community relationships only by proposing that students' developmental networks and the experiences that occur within those networks may be more important than program-level socialization.

Second, the models draw on literatures from higher education and organization studies to explore the importance of a variety of relationships to a student's developing conception of the faculty career while recognizing the variety of roles a student is likely to juggle that may influence that development in different ways. This research makes an important contribution to our understanding of the role relationships, within and outside of the academic community, have on doctoral students' professional identity development, an area seriously understudied in the literature. Weidman, et al. (2001) discussed the need for more student support, particularly from faculty as important to socialization and professionalization. Again, faculty relationships are important, but near sole reliance on faculty relationships fails to acknowledge that students rely on a myriad of relationships and those relationships may be just as important, if not more important, than faculty or advanced students in the academic program. In fact, if students question fit with the academic program or faculty career, they may be more inclined to rely on individuals outside of the academic community for fear of negative reprisal. As such, a social networks approach allows the focal individual to identify the critical individuals involved in one's developmental network which facilitates the examination of types of relationships, the nature and frequency of interactions, and the variety of outcomes associated with those relationships.

Third, the models are based on longitudinal data collected from the first year doctoral student experience as an attempt to capture changes in developmental networks and how students' network of relationships influence the professional identity development process. Tinto (1993) stated longitudinal research on doctoral education was needed "to trace out over time the experiences and differential outcomes of a sample of beginning doctoral students" (p. 241). By exploring the experience

longitudinally using a developmental networks approach, it is possible to truly capture the dynamic environment of doctoral education as described by Weidman et al. (2001). Relationships within and outside of the academic community can no longer be ignored when examining doctoral education. Both worlds influence students' experiences throughout all stages of a doctoral program, result in expectations which may conflict with those communicated by the academic program, and help to shape individuals' personal and professional selves (Ibarra, 1999).

Practical Implications

As the models suggest, the faculty advisor is not always the most important relationship, particularly in the first year. Unlike the traditional undergraduate student, most doctoral students have outside responsibilities that extend beyond their academic pursuits and may conflict with doctoral studies. However, most doctoral programs fail to acknowledge this reality. Family support, particularly for the Assessing Fit students, was regarded as the most important factor to first year success. This suggests that doctoral programs would likely benefit by instituting policies that allow for work-personal balance at the doctoral student level or that, at a minimum, encourage family involvement in the academic as well as social community. Institutions such as Princeton University and the University of California are investigating and instituting such policies (Walker, Golde, Jones, Bueschel, & Hutchings, 2008). In the case of Valley, once perceived detractors such as marital or parental status or substantial prior work experience may not be as detrimental as once thought by the faculty and could instead be used more effectively in socialization efforts.

Social network theory, or a developmental networks approach, allows for an examination of interactions between individuals which provides insight into the doctoral student experience. As Lovitts (2004) noted, one cause of attrition is program culture. An important component of program culture is the messages communicated between organizational veterans and newcomers. The messages communicated to students, particularly early in the doctoral student experience, serve as critical sources of information and set the tone for performance expectations and future interactions. Inconsistent messages communicated between new students and faculty, or between program and developmental network, can lead to confusion and frustration or even a lack of information that may lead to withdrawal. Alternatively, inconsistent messages may serve as a "saving grace" for students to explore areas of personal interest despite the messages communicated program-wide.

Limitations

While this paper contributes to research on doctoral education there are a few limitations worth noting. First, the data gathered and study participants were from a single site—Valley University College of Business—from five business disciplines. As a result, it is not appropriate at this time to compare these students' experiences to other doctoral students' experiences at the University or across universities. These models were developed to be tested across a variety of disciplines in order to assess their generalizability.

Second, although this study is one of a few that uses a longitudinal rather than retrospective approach, the models were based on the first-year experience only. In order to truly develop a comprehensive theory of doctoral student professional identity development, an examination of the entire experience is necessary across a multitude of disciplines.

Conclusion

The expectations of the faculty career are changing in many fields and across institutional types. Pressures for promotion and tenure such as "A-level" (top-tier) publications in top academic journals, procurement of external funding, and earning a reputation for being the best among one's peers are becoming overwhelming. The pressures doctoral students face, and continue to face, at Valley and other doctoral programs are immense and require personal and professional support to meet these challenges successfully. I argue that it is the relationships students have and develop, within and outside of the academic community, that provide that necessary support and findings from this study begin to address "how and why relationships matter" to professional and personal development while on the path to the professoriate. Until recently, few studies on doctoral education have included the variety of relationships students deem critical to success. I argue that most, if not all, individuals rely on relationships in and out of the work context to provide support, advice, guidance, and nurturing. Doctoral students are no different, and this study reveals that students' personal and professional lives merge and can have an enormous impact on their professional identity development while on the path to the professoriate. Clearly, more research is needed in a variety of disciplines to understand the influence of students' multiple developmental relationships on professional identity development, but this study provides a useful starting point for future research.

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