“SUCH A DIRTY WORD”:
NETWORKS AND NETWORKING IN ACADEMIC DEPARTMENTS

A Dissertation in
Higher Education
by
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ABSTRACT

In the past 35-45 years, college and university faculties have changed considerably and there is no longer a single profile that fits all professors in U.S. higher education. These demographic changes within the professoriate suggest that research is needed to understand faculty work life and careers. This study explores one particular aspect of academic life – faculty members’ interactions within the context of academic departments.

Faculty members’ intradepartmental networks provide access, and potentially barriers, to resources pertinent to their daily work and careers, such as information about policies and politics, opportunities for research collaboration and publication, and general support and encouragement. Building on research about the diversification of the professoriate and social networks, and using a combination of social network analysis and qualitative research methods, this study explores the processes by which faculty members develop networks and exchange resources in academic departments.

The purpose of this study is to initiate the development of a theory of networks in academic departments. The conceptual framework that guides this research integrates Ibarra’s model of network development among women and minorities in management, Finkelstein’s typology of colleagueship functions, and the principle of homophily (the preference to interact with similar others). This framework guides an investigation of how departmental characteristics, individual characteristics, colleagueship functions, and networking behaviors influence networks and the exchange of resources in two academic departments. Findings from this study of networks in academic departments include propositions and implications for future research.
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CHAPTER 1

Introduction

Faculty members play a central role in colleges and universities, and an important role in society. Motivated by the creation and application of knowledge, the professoriate has been influential in the economic, social, political, scientific, technological, and cultural development of the United States. The National Center for Education Statistics (n. d.) describes faculty as “the pivotal resource around which the process and outcomes of postsecondary education evolve,” and states that “it is essential to understand who they are; what they do; and whether, how, and why they are changing.”

As the demographic profile of the U.S. professoriate has changed over the past 35-45 years, researchers have begun to investigate how faculty careers have changed, as well as new ways of understandings those changes. As Schuster and Finkelstein (2006) wrote, “the future of the academic profession – who the faculty are, who they will be, the nature of academic work, and the trajectories of academic careers – is perhaps less certain, more permeated with threats (and yes, opportunities) than at any time in the past” (p. 4). The addition of new participants into the professoriate from historically underrepresented groups has created a new socio-structural context for faculty careers and has begun to diversify the professoriate across gender, socioeconomic class, race, and a range of other characteristics. No longer as homogeneous as it once was, today’s professoriate is comprised of a wider variety of people who bring an equally diverse range of roles, identities, and characteristics to their work. The interaction of individuals within this changing context creates formal and informal networks that provide access to
information and other resources pertinent to faculty members’ work and careers, as well as barriers to those resources.

Formal networks are based on hierarchies, position descriptions, and task-related communication, while informal networks are naturally occurring based on members’ preferences and voluntary interactions. Despite their officially recognized structure, formal networks do not provide a complete picture of interactions in organizations or explain organizational behavior fully. Research on informal networks is useful for exploring complex interactions between organizational members and their effects on both the individual members and the organization. Thus, network research lends itself to studies of faculty members’ interactions within the context of their academic departments and the structures and strategies developed within departmental networks.

Research that explores faculty members’ networking behaviors within their departments would be helpful in understanding more about who the members of the professoriate are and how they interact with their colleagues, leading to practical implications for recruiting and retaining faculty members and increasing the diversity of the professoriate. Knowledge of the professional lives of faculty members within the contexts of their departments would allow department chairs and other institutional administrators to offer better support to those who comprise this “pivotal resource” (National Center for Education Statistics, n. d.) and would provide insights into how faculty members rely on each other for access to instrumental career resources.

Research and practical literature on academic careers reveals that networks are powerful yet unequally distributed sources of information and influence within the professoriate, and that those with limited access to network resources suffer a
disadvantage. This disadvantage affects access to formally and informally communicated information about the organization, support and friendship, promotion and advancement opportunities, and resources needed for job effectiveness and productivity (Ibarra, 1993). Some, such as Di Leo (2003), focus on the potential for bias and prejudice within these networks. Others, such as Whicker, Kronenfeld, and Strickland (1993), describe individual differences as something one should seek to minimize in academic networks, suggesting a conformist strategy for achieving career success.

Despite an awareness of the significance of networks in academic careers, and an expressed interest in diversifying the professoriate, scholars and practitioners have limited knowledge about how faculty members obtain and utilize network resources. Equally little is known about how structural and individual differences affect faculty members’ networking strategies and thus their access to network resources. In response to the need for increased knowledge of faculty work and the changing nature of the professoriate, this study explores one particular aspect of academic life – networks in academic departments. Specifically, the study explores how departmental characteristics (such as proximity and disciplinary influence) and individual characteristics (such as gender and race) affect networking strategies (or the behaviors people employ to obtain resources from their networks), what networking strategies emerge in departmental networks, and what patterns of access to network resources are revealed.

It is difficult to identify how, precisely, departmental networks affect career-related outcomes such as promotion or tenure for a number of reasons: deliberations of faculty committees are confidential, current and former department members are reluctant to discuss unfavorable decisions, and the perceptions of those who are denied
tenure may be difficult to substantiate. An exploration of faculty members’ networking strategies and the patterns of access in their departments takes us a step toward greater understanding of how departmental networks affect the lives and careers of faculty members. Knowledge of successful strategies for acquiring network resources will be useful to researchers, administrators, and faculty members alike.

The Changing Profile of the Professoriate

Historically, the professoriate in the United States was a homogeneous population. Until 1969, over 96 percent of full-time faculty members were White and only 17 percent of faculty members were female (Schuster & Finkelstein, 2006). The demographic profile of faculty members in colleges and universities, however, is evolving slowly (Leahey, 2007; Poole & Bornholt, 1998; Schuster & Finkelstein, 2006). While there is still a strong majority within college and university faculties, there is no longer a single distinct profile of the American professor. Schuster and Finkelstein (2006) described the increasing heterogeneity of faculty after 1969 as “an exercise in academic biodiversity” (p. 40). By 1998, for example, non-White faculty members in full-time positions had increased to 15 percent and women held 36 percent of faculty positions (Schuster & Finkelstein, 2006). By 2007, there were approximately 119,000 non-White faculty members in the United States (17 percent of the total number of faculty members). That same year, there were about 294,000 female faculty members (42 percent of the total number of faculty members) (Digest of Education Statistics, 2008).

Race and gender are the most commonly studied demographic characteristics within the professoriate, but the population of postsecondary faculty members is also changing in other ways. Analyses of the professoriate based on a range of characteristics,
including disciplinary affiliation, age, nationality, social class, religious orientation, and family structure, demonstrate demographic shifts within college and university faculties (National Center for Education Statistics, 2007; Schuster & Finkelstein, 2006). As Austin (2002) wrote, “the academic workplace is significantly different from that which has characterized higher education in the past” (p. 95).

In part, the evolution of the professoriate can be traced to broad socio-political factors, such as the Second Morrill Act of 1890, which provided funding to institutions that served the educational needs of African Americans (Lane & Brown, 2003); the G. I. Bill (the Servicemen’s Readjustment Act of 1944), which provided working-class veterans with access to higher education (Lucas, 1994); World War II, which changed gender norms and women’s roles in the workforce and higher education (Eisenmann, 2006); and the Civil Rights Act of 1964, which prompted increased faculty diversity within colleges and universities (Banks, 1984; Schuster & Finkelstein, 2006). Many traditional norms and majorities persist, however, and understanding and responding to changing social conditions and the ongoing challenges that faculty members face in their careers remains an unfinished task (Lewin, 2005; Wasley, 2006).

The diversification of the faculty has introduced previously absent backgrounds and perspectives into the professoriate, and each person brings multiple roles and identities to his or her work. For example, a faculty member in history may not view herself solely as a professor, but also as a woman, a citizen, an African American, and a mother. Even the single role of professor is comprised of various identities such as teacher, mentor, colleague, researcher, and author. The need to manage multiple roles
suggests that the traditional model of the professoriate, in which identities are clearly defined and neatly separated, is no longer appropriate for understanding faculty careers. The diversification of the professoriate, although positive in most regards, has resulted in career-related concerns and challenges among faculty members, and the potential for difficulty in developing personal and professional connections with colleagues. Seeing both oneself and others through various roles and identities can facilitate or impede faculty members’ connections with one another and the exchange of resources crucial for career development. For example, as departments become increasingly “in gender, race, lifestyle, age, training, sense of mission, priorities, and salaries, such diversity may exacerbate the sense of separateness that new faculty feel from senior colleagues” (Sorcinelli, 1992, p. 31). Faculty members representing a wide range of backgrounds and characteristics experience doubt about professional fit and access to resources (Kennelly, Misra, & Karides, 1999). Perceived similarities to colleagues, and subsequent personal and professional relationships with coworkers, also affect career outcomes such as selection, promotion, tenure, and persistence. Collegiality receives increasing attention as an informal job requirement, and how it is defined and perceived raises questions about its role in tenure and promotion decisions (Cooper, 2006; Whicker, Kronenfeld, & Strickland, 1993). Research has demonstrated disparities in career outcomes such as tenure achievement within certain categories, particularly gender and race (Cataldi, Fahimi, & Bradburn, 2007). While researchers and practitioners have identified such professional concerns and challenges among faculty members, the causes and results of these challenges, as
well as tools for alleviating them, have yet to be studied in depth. One possible theoretical and empirical approach to addressing this gap in the research is social network analysis. Networks within academic departments and individual careers create connections among faculty members that result in the exchange of information, opportunities, and other important resources. Learning how networking strategies develop, and their effects on individual careers and academic departments would provide valuable information to scholars and practitioners who seek to understand the advancement of faculty careers and address potential inequities that hinder that advancement.

The Role of Networks in Academic Careers

At a recent university symposium, senior faculty members and administrators addressed the challenges of the tenure process unique to faculty members from underrepresented groups. One tenured panelist told the audience that as a mentor, the best advice she gives to faculty members who feel excluded from departmental or institutional networks is to leave the institution. Counseling faculty members out of the university was, from her perspective, the most helpful and honest way to assist those who felt that they did not have the same access to resources as their peers. The panelist was advising these faculty members on their networking strategies, or the behavior patterns they develop in response to the unique combinations of individual and structural characteristics that shape their networks in an effort to obtain their desired network resources. Faculty members are likely to cultivate behavioral strategies in the same ways as network members in any given context. They observe their surroundings and interpret them through salient personal characteristics, including their own and those of potential
network partners with whom they might interact. These interpretations of context and subsequent behavior influence the network benefits they seek and their strategies for obtaining those resources (Fischer, 1982; Krackhardt & Porter, 1985).

Researchers have confirmed what many in the professoriate know through experience – faculty members rely on informal networks and unwritten rules to accomplish their daily work and career goals. While all faculty members collectively contribute to the development of networks within their departments, access to the resources provided through those networks is not always equally distributed. For example, Poole and Bornholt (1998) revealed the gendered context of academic career development, which manifests itself in gender-based differences in working conditions, income, relative emphasis on teaching over research, and involvement in institutional governance. The effect of fewer opportunities for governance and management for female faculty members than those available to their male peers is one manifestation of the significant loss of networking opportunities for women. This loss of opportunities can lead to weaker networks than those of their male counterparts, which in turn can lead to additional missed opportunities.

In her discussion of departmental culture, Hu-DeHart (2000) wrote, “faculty culture, like all cultures, is most readily accessible to those whose backgrounds are most similar to those who are its keepers and main beneficiaries, [those who] have written the rules and profited by them” (p. 29). Menges & Exum (1983) stressed the importance of access to supportive colleagues during particular times in one’s academic career that require both emotional and intellectual support, such as tenure review. They, too, noted
that access to gatekeepers and crucial information regarding norms within departments are not necessarily shared equally among colleagues.

Tierney and Bensimon (1996) focused on the importance of information exchanged through networks and noted the potential challenges of accessing those networks for faculty members from underrepresented groups. Austin and Rice (1998) found that all new faculty members experience frustration and stress over trying to untangle contradictory messages about the tenure process at their institutions. Olsen, Maple, and Stage (1995), concerned by insufficient information and reliance on potentially damaging assumptions, wrote, “We need to know more about the institutional factors, as well as the personal and professional proclivities, needs, and interests, that determine women’s and minorities’ participation in higher education – and ultimately their success in and satisfaction with the academic world” (p. 267).

Empirical studies, how-to guides, and personal reflections have given attention to the role of informal networks in academic careers and have provided focused opportunities to address topics such as obtaining faculty positions, navigating tenure and promotion, and experiencing the professoriate as an “other” or non-majority faculty member. For example, Cooper (2006) coined the phrase the Sista’ Network “to describe the relationships between and among professional African-American women that enable them to assist one another in learning the unwritten rules” in colleges and universities (pp. 5-6). The Sista’ Network is a response to the exclusion of African American women from “the formal and informal networks, the primary information loops, especially when it comes to the information needed for the tenure process” (p. 1). Di Leo (2003) wrote, “Academia is to a large degree unfair, biased, and prejudicial…an environment where
success is in too many instances related to whom you know, not what you know” (p. 5). Whicker, Kronenfeld, and Strickland (1993) advised new faculty as follows: “Similarity of backgrounds is a factor in academic tenure decisions, although its role is rarely acknowledged publicly….If you are dissimilar in background, work extra hard to develop good communication with your colleagues. Do not highlight your differences except in rare instances” (p. 30). Anecdotal evidence of inconsistent practices and messages, the occasional acknowledgement of differential treatment (e.g., Harvard, 2005; Massachusetts Institute of Technology, 1999), and the potential for detrimental effects based on such differences, raise concerns about the consistency and fairness of the exchange of information and other important resources among faculty members.

Purpose of the Study

Although many scholars have explored the academic profession, researchers who study faculty careers have long called for further investigation of the networking behaviors of faculty members. For example, writing in 1986, Clark and Corcoran cited Cole’s (1979) argument that “it is time to describe in detail and to analyze the informal structure of activities and experiences of young scientists (academics) that set in motion and sustain an accumulation of advantages and disadvantages” (p. 21). In their study of the relationship between social connections and faculty members’ job performance, van Emmerik and Sanders (2004) noted the importance of professional networks in academic careers and suggested that future research should investigate individual differences and personal characteristics in relationship to job performance.

Homophily, the preference to interact with similar others, influences individuals’ behavior within social networks. Building on research about the diversification of the
professoriate and social networks, the study draws on the theoretical construct of homophily as the guiding theory in a conceptual framework for investigating faculty members’ networking strategies within their academic departments. The role of salient departmental and individual characteristics is also central to this study.

A combination of social network analysis and interviews with network members provides a research model for examining networking strategies in the context of departmental structures. Multiple-case sampling contributes to the strength and validity of findings (Miles & Huberman, 1994) and provides two contextual environments within which to study the network interactions of faculty members. By employing a replication method to apply the conceptual framework to multiple cases, the study includes in-depth analysis of cases, comparison of patterns, and the development of the theoretical framework (Yin, 1984).

The goals of this study are 1) to gain new insights into the ways that departmental and individual factors shape the development of networking behaviors, 2) to begin development of a typology of network strategies employed in academic departments, and 3) to observe whether patterns of access to network resources emerge in academic departments. The research questions are as follows:

1) How do departmental characteristics affect faculty members’ networking strategies?

2) How do individual characteristics affect faculty members’ networking strategies?

3) What networking strategies do faculty members develop and use within their departments?

4) What patterns of access to resources, if any, are revealed within departmental networks?
Significance of the Study

Results from this study provide greater understanding about how department life affects faculty members. The academic department is the tenure home of faculty members. Thus, departments are likely to have a strong influence on faculty members’ careers. This study results in knowledge of how relationships within academic departments may influence faculty work life, and how the socio-structural characteristics of academic departments may influence faculty members’ agency in their careers.

While network analysis as a research method has received strong support in organization theory, sociology, epidemiology, and many other areas, it has not yet been applied to the study of faculty careers. This study contributes to the development of theory and research on social networks by extending the use of network theory in the context of faculty careers and applying network research to a new context. It also contributes to research in organization theory and organizational behavior by investigating how structural and individual factors shape employee experiences, employee behavior, career development, and workplace environments. This study also advances knowledge of homophilic behavior, specifically in the context of academic departments, and explores the role of salient characteristics in faculty members’ departmental networks.

Previous studies of networks (and related topics such as colleagueship and mentoring) in academic settings have tended to focus on productivity as the primary outcome. This study does not focus on how networks contribute to productivity, but explores how individual and structural characteristics affect networking strategies and patterns of access to network resources in academic departments. This study moves
beyond descriptive demographic information about academic departments and anecdotes about the distribution of network resources to explore the opportunities for, and outcomes of, interaction between faculty members and the characteristics they use to define those relationships.

Who people are, and how they perceive their peers, plays a major role in the development and use of social networks. Research has demonstrated that people prefer to interact with others whom they perceive to be like themselves (Lin, Ensel, & Vaughn, 1981; McPherson, Smith-Lovin, Cook, 2001), but research about how people make such selections is inconsistent and incomplete. This study identifies assumptions that faculty members make about who they are and who their colleagues are, and links these assumptions with subsequent actions to investigate how they result in access or barriers to important network resources.

Looking at the complex set of network ties that members forge within departments permits a complex view of social interaction in the departmental context. These patterns highlight not only how the opportunities and barriers emerge, but also what responses to opportunities and barriers emerge, resulting in findings about the different types of behavioral strategies that faculty members engage in, and how successful these strategies are in helping them to meet their networking goals. Researchers must also explore whether some strategies are more successful than others.

Describing the structure and outcomes of instrumental, expressive, and multiplex ties in faculty members’ departmental networks is another contribution of this study.

This research introduces a new perspective on questions of how to recruit, retain, and support diverse faculties in higher education. Findings about the role of relationships
in the exchange of important career resources are useful for both administrators and faculty members. By identifying and describing networking strategies and their outcomes, the study creates a tool for faculty members to assess their own behaviors, departments, and careers. Similarly, the study produces a new resource for department chairs and other administrators to assess communication, collaboration, and support within academic departments. Learning more about the role of departmental networks in accessing resources relevant to faculty careers enables department heads, faculty members, and researchers to better understand the experiences, challenges, and opportunities that faculty members face in their daily lives and careers, and to better understand and foster effective academic departments. Knowledge of the outcomes of departmental networks on academic careers also allows faculty members and their department chairs to understand how relationships and interactions in their departments, as well as networking behaviors, might facilitate or hinder career success and satisfaction.

Finally, this study results in insights into if, how, and why some faculty members experience inequalities in accessing network resources that are important to advancing their careers. By identifying successful (and unsuccessful) strategies for obtaining access to information, opportunities, and other resources and for responding to barriers to such access, this study initiates the development of a typology of networking strategies that faculty members develop within their academic departments.
Network Terms and Definitions

Several network analysis terms are used throughout this dissertation, and are defined as follows:

1. **Adjacency matrix**: A square matrix, usually consisting of zeros and ones, that indicates for each pair of actors in the network whether they are connected (i.e., ‘adjacent’ to each other). Also known as ‘sociomatrix’ or ‘relational matrix’ (Kilduff & Tsai, 2007, p. 132).

2. **Bridge**: An actor who is a member of two or more groups (Kilduff & Tsai, 2007, p. 28).

3. **Centrality**: Extent to which an actor occupies a central position in the network (Kilduff & Tsai, 2007, p. 132).

4. **Clique**: A group in which all actors have direct ties with all other actors in the group, and there is no outside-the-group actor to whom all group members have a tie (Kilduff & Tsai, 2007, p. 133); a sub-set of points in which every possible pair of points is directly connected by a line and the clique is not contained in any other clique (Scott, 2007, p. 114).

5. **Degree Centrality**: The number of direct links with other actors (Monge & Contractor, 2003, p. 32).

6. **Homophily**: The tendency for actors to interact with, and share the opinions and behaviors of, other actors similar to themselves (Kilduff & Tsai, 2007, p. 134; McPherson, Smith-Lovin, Cook, 2001).

7. **Isolate**: An actor with no ties to any other actor in the network (Kilduff & Tsai, 2007, p. 135).

8. **Multiplexity**: The extent to which two actors are connected by more than one type of tie; extent to which a link between two actors serves a multiplicity of interests. (Kilduff & Tsai, 2007, pp. 33, 135).

9. **Network**: A set of actors and the relations (such as friendship, communication, advice) that connect them (Kilduff & Tsai, 2007, p. 135).

10. **Size**: number of actors in the network (Monge & Contractor, 2003, p. 33).

11. **Sociogram**: A picture in which actors are represented as points and relationships among actors are represented as lines in two-dimensional space (Kilduff & Tsai, 2007, p. 135).
CHAPTER 2

Literature Review

This study draws from and integrates several distinct bodies of research, including literature on social networks, networking in academic careers, and homophily. First, social network research is reviewed to introduce the concept and connect it to the study of academic departments and faculty careers. Then, literature on networking in the context of academic careers is discussed to provide an overview of the topic and to identify gaps in current research and practice. Finally, homophily is introduced as the main theoretical principle in the study, which is central in a discussion of salient characteristics, individual and structural influences on network development, networking strategies, and patterns of access. In the closing section of this chapter, Ibarra’s (1993) model of factors that shape networks is introduced and described as the basis for the conceptual framework that is used in this study.

Social Networks

Nohria and Eccles (1992) contended that “all organizations are in important respects social networks and need to be addressed and analyzed as such” (p. 4). The question of what constitutes a network is fundamental in employing network analysis for organizational research. A network is a set of actors linked by a social relationship (Brass, Galaskiewicz, Greve, & Tsai, 2004; Laumann, Galaskiewicz, & Marsden, 1978). A network perspective on organizations focuses on relationships and the “structured patterns of interaction” between individual actors in a given social or organizational context (Brass, Galaskiewicz, Greve, & Tsai, 2004, p. 795). Social network analysis
allows for individual actors to be “simultaneously analyzed to discover new insights concerning social structure and interaction” (Kilduff & Tsai, 2007, p. 13).

Defining Networks

Networks are constructed around the interactions of their members (Salancik, 1995). In turn, action and interaction become embedded in networks of social structures and relations, aid in the accomplishment of goals, and create meaning in people’s lives (Adler & Kwon, 2002; Fischer & Pollock, 2004; Granovetter, 1985; Lin, Ensel, & Vaughn, 1981; Scott & Davis, 2007; Uzzi, 1996). There are different ways of determining who is included in a network. Ego-centric networks include all relationships and contacts maintained by one person, the center of the network. Networks can also be defined by the social relations and interactions that occur within specific organizational boundaries (Kilduff & Tsai, 2007; Scott & Davis, 2007; Van Wijk, Van Den Bosch, & Volberda, 2003). The determination of a network’s boundaries is, as Scott (2007) points out, “the outcome of a theoretically informed decision about what is significant in the situation under investigation” (p. 54). In this study, networks are defined as those sets of relations that exist between tenure-track faculty members within the organizational boundaries of academic departments.

Formal and Informal Networks

Networks include both formal and informal interactions. Formal and informal networks coexist simultaneously, and in some ways, interchangeably (Monge & Contractor, 2003; Nohria & Eccles, 1992). Formal networks can be observed through organizational structures or hierarchies and are based on company policies, formal procedures, and institutionalized programs such as mentoring or orientation programs.
They are “public, official, and have clear boundaries.” Informal networks, on the other hand, are “personal, voluntary, and have fluid boundaries not formally governed or officially recognized” (McGuire, 2000, p. 403). Informal networks occur naturally, based on members’ preferences and voluntary interactions. The different structures and purposes of these two network types lead to different outcomes and different implications of exclusion (McGuire, 2000).

While the term formal networks and its definition suggest a certain legitimacy in organizational structures, formal networks do not provide a complete picture of interactions in organizations. In fact, Lincoln (1982) wrote that formal structure is “at best a highly idealized image of organizational reality. At worst it is pure ideology, bearing little direct relation to internal organizational networks” (p. 8). One of the limitations of studying formal structures exclusively is the limits of such research to explain organizational behavior. Informal networks often provide information, advice, support, and other personal and professional resources that are not distributed through formal networks. Research indicates that employees who rely on informal networks for training, promotion, and other resources experience differential access to such networks according to race and gender. This differential access establishes an informal system that reinforces formal inequities within organizations. Scholars have called for further research on the role of informal networks as it relates to equality within organizations (McGuire, 2000) and the coexistence of both types of networks as a step towards increasing understanding of organizational behavior (Monge & Contractor, 2003).
Goals and Outcomes of Networking

Social network research indicates that networks have tangible outcomes for people’s lives and careers. Research has demonstrated that the use of networks leads to access to information and other resources, such as previously unknown colleagues, professional opportunities, friendship, advice, professional advancement, and the ability to accomplish personal goals (Adler & Kwon, 2002; Brass, 1992; Fischer & Pollock, 2004; Galaskiewicz, 1996; Granovetter, 1985; Krackhardt, 1990; Lin, Ensel, & Vaughn, 1981; Uzzi, 1996). In addition to their effects on careers, formal and informal networks affect a variety of areas across people’s lives, including friendships and relationships, health, and self-perceptions and identities (Kilduff & Tsai, 2007). Studies have shown that employees who are more connected to colleagues within an organization are less likely to depart the organization (McPherson, Popielarz, & Drobnic, 1992). A network perspective has led researchers to explain variance in job satisfaction, employee performance, group structures, and other organizational characteristics and outcomes (Brass, Galaskiewicz, Greve, & Tsai, 2004). While the network perspective has emerged as a useful lens for understanding organizations and their members, “we still have much to learn about how people use, adapt, and change the networks of relationships that form such a critical part of our working lives” (Ibarra, Kilduff, & Tsai, 2005, p. 359).

Networks in Context: Academic Departments

Like everyone else, faculty members have complex networks comprised of the variety of affiliations in their lives, including family members, coworkers, friends, and neighbors. Within their roles as faculty members, individuals’ networks include ties to people from additional sources, such as former coworkers, colleagues within their
departments, cross-disciplinary collaborators, mentors, and so on. Although these affiliations are relevant components of faculty members’ personal and professional networks, this study focuses exclusively on networks within academic departments.

Some of the network resources provided within academic departments are similar to those of organizational networks in general. The structure and outcomes of networks in the context of academic departments have idiosyncratic characteristics as well. While there has been an active dialogue about networking in faculty careers, research is needed that draws on the scholarly and practical perspectives of networks to explore the development and effects of networking strategies on academic departments and individual careers.

*Network Resources in Academic Departments*

Academic departments are primary contexts for faculty members’ work. Griffin (2008) found that it’s not campus climate that affects faculty members as much as departmental climate. Gappa and Leslie (1993) identified departmental culture as the key variable in positive faculty attitudes about their work. They wrote that in departments with positive cultures regarding education, teaching and learning, “people sense that they can have an effect on what happens” (p. 185). Mills et al. (2005) wrote of academic departments,

> Since departments are relatively small, make some policies for themselves, and have relatively homogeneous memberships due to the similarity of discipline and socialization, they readily lend themselves to developing sets of shared norms, beliefs, and values enacted within the unit. In this sense, an academic department
establishes its own culture and becomes the locus for how its members define their roles and identify with their institutions and academic disciplines (p. 597).

The influence that a department and its members have on individual careers is a characteristic of the departmental autonomy resulting from both academic specialization and the administrative structure of modern colleges and universities (Duryea, 2000). Departments are organized by teaching, research, and service requirements that are established by the institution and the discipline. There is a highly participatory process among members of academic departments in selecting new members, establishing job descriptions and components, and awarding promotion and tenure. Department members are likely to share departmental and disciplinary goals and engage in a high degree of interaction and collaboration towards achieving those goals (Tolbert, Simons, Andrews, & Rhee, 1995).

This organizational co-membership often facilitates interaction between network members (Alderfer, 1987; Ibarra, 1993; McPherson, Smith-Lovin, Cook, 2001). Necessary information for faculty members about cultural norms, relationships, and the ways in which faculty work is done in the departmental and institutional contexts are communicated through the networks of relationships in academic departments (Fries-Britt, 2000). For example, Mitchell (1987) found that female faculty members who were highly connected to networks within their departments (including those within the physical, biological, and social sciences) had higher publication rates than their unconnected or less connected peers, were approached more often by male colleagues for professional collaboration, and were included in informal conversations about research.
Locke, Fitzpatrick, and White (1984) reported that faculty members value the same general qualities in their careers as other employees, including “coworkers who facilitate the achievement of work-related values and who are personally helpful, honest, and respectful” (p. 121). Perceived recognition and support and overall satisfaction with one’s department are highly significant predictors of job satisfaction (Olsen, Maple, & Stage, 1995). The availability of resources and networking opportunities are significant contributors to subjective career success among faculty members (Peluchette, 1993). As in most organizational settings, faculty members rely on informal networks to access resources such as friendship, mentoring, advice, information, ties to powerful people, and opportunities for professional advancement (Di Leo, 2003; Poole & Bornholt, 1998).

Relationships within academic departments become central in faculty members’ careers as sources of day-to-day conversation, support, advice, information-sharing, and mentoring. Potential network resources relevant to faculty members also include “access to new knowledge prior to publication, information on trade secrets and financial resources, professional information on department operations and career advancement opportunities” (O’Leary & Mitchell, 1990, p. 59). Departmental networks are also likely to lead to a set of resources unique to faculty members, such as information about the tenure process; opportunities for co-teaching, collaborative research, and co-authored publications; and knowledge of the cultural and relational dynamics within departments and institutions. As much as positive relationships can provide access to such resources, negative relationships or exclusion from relationships can cause stress, barriers to information, feelings of isolation, and missed professional opportunities such as participation in co-teaching, research, or co-publishing.
Literature on Networks in Academic Careers

The role of the academic department in faculty members’ daily lives and careers is one that has been demonstrated and explicated in the literature. This literature has three broad strands – experiential, instructive, and empirical. Experiential literature focuses on individual and collective accounts of faculty life and the role of networks, collegiality, and often discrimination in faculty members’ experiences. The instructive literature provides advice and how-to guides for academics of all kinds, at all stages of their careers, and in various positions and institution types. Empirical literature reports findings from research studies about faculty members’ experiences and careers. The first two strands are critical for providing valuable insights into the professoriate and situating this study in the context of, and dialogue about, faculty work. It is the empirical literature, however, that establishes what components of faculty life researchers have explored previously, what was found, and what remains to be explored. What follows is an integration of these three strands of literature and a brief discussion of similar themes across these strands.

The concept of the invisible college advanced by Price and Beaver (1966) led to a small stream of research that can be seen as a precursor to social network analysis in the context of academic careers. Crane (1969) collected sociometric data on the ties between 147 scientists to test the idea of the invisible college, a particular type of informal networks in academic settings. Zaltman (1974) used survey responses from 977 scientists to construct a sociogram, or visual depiction of relationships, that demonstrates the presence of an international invisible college among physicists. Blackburn, Behymer, and Hall (1978) reported that faculty members who are more active and influential in their
departments tend to be more productive (measured by book and article publications). In their review of studies on faculty networks, Hitchcock and colleagues (1995) found that surprisingly little research had explored the creation and maintenance of colleague relationships, and noted that many of the cited studies’ conclusions about network development were “based on inference and intuition” (p. 1111). The authors concluded by explicating which articles made the most scholarly contribution, acknowledging those that 1) were data-oriented, 2) allowed faculty members to identify their colleagues and describe their relationships, including reasons for interaction, 3) assessed the size and connectedness of networks, 4) and assessed the effect of networking with colleagues on faculty careers. Each of these four points is incorporated into this investigation of departmental factors, individual factors, and faculty members’ networking strategies within their academic departments.

Finkelstein’s Investigation of Colleagueship

Finkelstein (1981, 1982) conducted one of the few empirical studies of the structure and outcomes of social networks in academic careers. Referring to these connections not as networks but as colleagueship, he discussed the importance of faculty members’ personal and professional connections with peers and mentors. Drawing from the need fulfillment perspective, he defined collegial interaction as “the reciprocal fulfillment of needs or exchange of services that takes place in the course of faculty-faculty interaction” (1982, p. 6). The basis for the need fulfillment perspective in Finkelstein’s exploration of network interaction in academic careers came from his theory that faculty members interact in ways that are important for meeting needs related
to “belonging, esteem and self-actualization (Maslow) and for relatedness, including respect and recognition, and professional growth (Alderfer)” (1982, p. 6).

Although he drew primarily from prior work by Maslow and Alderfer and did not identify social network theory as a central component of his research, Finkelstein referred to an important concept in social network analysis: Granovetter’s (1973) discussion of the strength of interpersonal ties. Granovetter focused on the importance of weak ties in social networks as types of relationships that extent one’s network by facilitating access to a greater number of previously unknown individuals, and consequently, greater social integration and opportunities. “The choice of a functional ‘need fulfillment’ conceptualization,” Finkelstein noted, was “derived from [Granovetter’s] theoretical work on interpersonal networks” (1982, p. 6).

Finkelstein wrote that despite the importance of collegial interaction, “we know very little about how colleagueship works – its structures and dynamics in the worklife and development of the individual professor” (1981, p. 4). He called for further investigation of the organizational and structural factors associated with functional patterns of colleagueship, advocating for the development of departmental structures to strengthen departmental relationships and connections and thus support faculty members throughout their careers. To date, this call has gone largely unanswered and research that advances Finkelstein’s findings is still needed.

Finkelstein’s research resulted in the generation of five need categories that faculty members fulfill through network relationships, developed out of survey responses from 188 faculty members. These categories include 1) help in teaching; 2) help in research; 3) institutional linkage (e.g., institutional politics); 4) disciplinary linkage (e.g.,
identifying sources of research support); and 5) general support, intellectual stimulation, and friendship. The categories, further described in Table 1, are included in the conceptual framework for this study under the broader categories of network benefits sought and network benefits obtained. They also shape the data collection tools, as discussed in Chapter 3.

Table 1: Finkelstein's Five Functions of Collegial Interaction

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>Teaching</td>
<td>- Course development</td>
</tr>
<tr>
<td></td>
<td>- Teaching techniques</td>
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<tr>
<td></td>
<td>- Resolving classroom problems</td>
</tr>
<tr>
<td></td>
<td>- Course assignments</td>
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<tr>
<td>Research</td>
<td>- Collaboration</td>
</tr>
<tr>
<td></td>
<td>- Co-publication</td>
</tr>
<tr>
<td></td>
<td>- Critical feedback on ideas and writing</td>
</tr>
<tr>
<td></td>
<td>- Consulting</td>
</tr>
<tr>
<td>Institutional Linkage</td>
<td>- Informant on institutional policy</td>
</tr>
<tr>
<td></td>
<td>- Departmental/institutional politics</td>
</tr>
<tr>
<td></td>
<td>- Sponsorship for committee assignments</td>
</tr>
<tr>
<td>Disciplinary Linkage</td>
<td>- Identifying sources of research support</td>
</tr>
<tr>
<td></td>
<td>- Access to publication media</td>
</tr>
<tr>
<td></td>
<td>- Sponsorship for academic positions and association offices</td>
</tr>
<tr>
<td></td>
<td>- Facilitating contacts with disciplinary elite</td>
</tr>
<tr>
<td>General Support, Intellectual</td>
<td>- General support and encouragement</td>
</tr>
<tr>
<td>Stimulation, &amp; Friendship</td>
<td>- Career advice</td>
</tr>
<tr>
<td></td>
<td>- Intellectual stimulation</td>
</tr>
<tr>
<td></td>
<td>- Providing a “listening ear”</td>
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</tbody>
</table>

Networking Relationships

As Finkelstein’s categorization of needs suggests, networks serve multiple purposes. There are different types of network relationships that can lead to a given faculty member’s desired network outcomes. Organizational research has shown that workplace relationships provide both instrumental (or career) support and expressive (or emotional) support (Gerstick, Bartunek, & Dutton, 2000). Instrumental relationships
provide resources such as professional advice, information, advocacy, expertise, political access, resources, and career opportunities. Expressive relationships include a high degree of trust and provide resources such as friendship, support, and ways of communicating information (Ibarra, 1993).

The five functions of networks developed by Finkelstein focus heavily on instrumental ties. Only the category of general support, intellectual stimulation, and friendship focuses on expressive ties. Thus, while Finkelstein’s five functions might comprise a framework for research on the functions of departmental networks in faculty careers, studies that allow participants to describe the structure and functions of their networks in their own words would confirm, and potentially update and expand, the categories of faculty needs met by networking behaviors.

It is common for network ties to be both instrumental and expressive (Ibarra, 1993; Lincoln & Miller, 1979). Such ties demonstrate multiplexity in that they serve multiple purposes simultaneously (Kilduff & Tsai, 2007). As Ibarra (1993) pointed out, one should not assume that professional and personal network ties are mutually exclusive, or that ties of one type cannot produce relationships and outcomes of the other. In other words, being friends with someone can lead to professional opportunities. Collaborating with someone can lead to friendship and support. The presence of both instrumental and expressive network ties, and the degree of multiplexity within each relationship, leads to increased access to information, opportunities, and support for faculty members. This may translate into real differences in network outcomes based on both professional and personal connections.
It is at this point that homophily and salient characteristics become significant. Because people tend to relate to others like themselves, the potential for unequal access to network resources is very real. Since it matters to whom one is connected, it matters how one obtains (and maintains) network connections. Exploring the outcomes of the departmental and individual factors that shape networking strategies and resulting patterns of access contributes to an understanding of how networks affect faculty members’ careers and how faculty members acquire important network benefits.

Homophily

The ability to cultivate relationships with others and build mutual trust is crucial to obtaining access to network resources. A preference to interact with others perceived to be similar to themselves often dictates people’s behavior. This preference, homophily, can result in both access and barriers to network resources.

Defining Homophily

According to the principle of homophily, social interaction most often occurs between people with similar attributes (Lin, Ensel, & Vaughn, 1981; McPherson, Smith-Lovin, Cook, 2001). Studies have demonstrated homophily across a variety of relationship types and personal characteristics. Homophily can exist according to demographic characteristics such as gender, race, ethnicity, religion, age, and education and psychological characteristics such as intelligence, attitudes, aspirations, motivation, and values (McPherson, Smith-Lovin, & Cook, 2001).

As Burt (1992) wrote, “We are sufficiently egocentric to find people with similar tastes attractive” (p. 12). When actors trust and identify with each other, they are likely to interact in mutually supportive ways (Bolino, Turnley, & Bloodgood, 2002; Westphal &
Empirical investigations have shown that people tend to invest in relationships with those whom they perceive to be similar to themselves (Burt & Ronchi, 1990; Coleman, 1988; Fischer, 1982; Marsden, 1987); the more similar people are to each other, the stronger their relationship is likely to be (Granovetter, 1973). Lincoln and Miller (1979) describe organizational members’ preferences for homophilous relationships as a response to “the need to eliminate uncertainty from organizational arrangements” (p. 197). Perceived similarity leads to improved communication, predictability of behavior, and trust (Brass, Galaskiewicz, Greve, & Tsai, 2004).

Although not directly applied to this research, several theories closely related to homophily reinforce the theoretical importance of perceived similarities and differences in the establishment of relationships and exchange of resources. Social comparison theory suggests that people establish relationships with others like them as a way of measuring themselves. These social comparisons with similar others result in “pressure to adopt opinions, to acquire skills or to strive for outcomes such as promotions” (Goethals & Darley, 1987, p. 49). Self-categorization theory suggests that people classify themselves and others into categories, often unintentionally. Categorizations that include the self are held in high regard, therefore negative biases may form against those with whom one does not identify. People are more likely to make negative attributions about those they perceive as different, particularly among potential competitors for resources (Westphal & Stern, 2007).

McPherson and Smith-Lovin (1987) differentiate between two types of homophily. The individual perspective, choice homophily, focuses on individual preferences for interaction with similar others, such as the preference to interact with
people of the same race, gender, age, or family status. The structural perspective, induced homophily, is based on the idea that structural constraints on potential interactions limit personal preferences. For example, if a woman prefers to seek advice from other women, she will be limited in the number of potential sources of support by the number of women in her organization or department. This study considers both types of homophily.

Departmental characteristics serve as structural constraints that shape networking goals and strategies. Homophilous preferences according to individual characteristics salient to network members are equally important in shaping interactions.

Differential Access to Network Resources

Networks are “structures of constraint and opportunity negotiated and reinforced between interacting individuals” (Kilduff & Krackhardt, 1994, p. 5) and sources of “differential access to resources and power” (Brass, Galaskiewicz, Greve, & Tsai, 2004, p. 807). Homophily can lead to relationships with positive outcomes, such as mentoring or friendship. It can also lead to negative outcomes in networks for those who are not perceived as similar to others (or do not perceive themselves to be similar to their peers), such as exclusion from social groups, isolation, or a lack of peer encouragement.

There is strong empirical support for the notion that differences between individuals may cause efforts to cultivate relationships to be more difficult and costly for some than for others, and that interactions can be heavily influenced by values, demographic characteristics, and perceived similarity to peers (Clark & Corcoran, 1986; Riley & Eckenrode, 1986; Salancik, 1995). Some members have more access to network resources than others based on personal characteristics such as race and gender (Brass, 1985; Ibarra, 1993). For example, Westphal and Stern (2007) found that subtle forms of
discrimination existed among corporate executives based on gender and race, and that even when individuals engage in similar actions, demographic minorities derive fewer benefits from such actions than their non-minority peers. Ibarra, Kilduff, and Tsai (2005) argued that when there is a dominant demographic majority, individuals from non-dominant groups feel excluded by the majority and have heightened preferences to connect to those with whom they relate or have a shared sense of identity.

Kanter (1977) provided a powerful example of the negative effects of homophily in her groundbreaking study of organizations. After discussing the role of sponsorship, or senior members’ providing access and opportunities to newer members of the organization, Kanter noted the increased importance – and difficulty – of women finding sponsors. She cited one participant’s explanation, 

Boy wonders rise under certain power structures. They’re recognized by a powerful person because they are very much like him. He sees himself, a younger version, in that person….Who can look at a woman and see themselves? (p. 184).

While it may be the case that the status of women in organizations has changed since the original publication of Kanter’s work, gender equity has yet to be achieved across organizations. This also remains true of equity more broadly defined. Homophilic identifications still create, and prevent, access to opportunities and information for organizational members representing a wide variety of backgrounds and characteristics.

Ibarra (1993) called for a shift in research on access to network resources when she wrote that future research “needs to move beyond confirmation or disconfirmation of the occurrence of network exclusion to specification and empirical exploration of theoretically and practically relevant network differences” (p. 79). She encouraged
researchers to look past “anecdotal accounts of perceived exclusion” (p. 57) to examine network structures and outcomes and identify patterns of interaction and, subsequently, potential for differences in access or opportunity. This study responds to this call by investigating salient similarities and differences between network members in the context of academic departments.

*Homophily in Context: Academic Departments*

As noted, homophily serves as a basis for shared identity and trust, and thus fosters interaction. Mutual trust is necessary for friendships, effective mentoring relationships, collaborative work, and the exchange of sensitive information (Geleta, 2004). The role of homophily in network development may have particular relevance in academic departments. Trust enables faculty members to be open to the vulnerability that can be attached to academic work, such as seeking and obtaining feedback on classroom management, teaching style, grant writing, research design, and other skills. This vulnerability can be particularly acute for junior professors who have entered the profession and seek tenure. When homophily leads faculty members to interact with certain colleagues based on perceptions of similarity and exchange network resources with them, it contributes to the development of networking strategies and patterns of access to network resources. Applying the principle of homophily to academic careers suggests that while all faculty members contribute to the development of networks within academic departments, they may not grant or receive equal access to the resources provided through these networks.

Although not previously expressed as homophily, the notion of inclusion and exclusion is rooted in the history of the professoriate. Price and Beaver’s (1966)
discussion of the “invisible college” reminds us that the existence of networks and their gatekeepers, or “ingroups,” have existed in academia since the seventeenth century. The purpose of this longstanding invisible college is to control access to resources, reputations, and the advancement of knowledge and new ideas (O’Leary & Mitchell, 1990). In his study of institutional reputations and faculty salaries, Hargens (1969) challenged the notion of “the academic community as a system wherein universalistic achievement norms are realized” (p. 19) and called for research about interpersonal relationships among faculty members to explore unacknowledged differences in experiences within the professoriate. Gerstick, Bartunek, and Dutton (2000) referred to academia as “an occupational realm where true inclusion is treasured – and jealously guarded” (p. 1027). Reskin (1978) defined academic networking as “scientists and scholars who collaborate with, encourage, inform, evaluate, reward, compete with, and befriend co-workers.” Within Reskin’s definition, however, is the assumption that all scholars have equal networking opportunities.

Blau (1974) stressed the importance of interpersonal relationships in the advancement of knowledge, and acknowledged that relationships within an academic community are “structured by the personal preferences that bring together scientists who find in one another traits congenial with their own” (p. 401). Yet Blau’s finding that “associations within the specialized community are generally impervious to social differences among individuals” (p. 404) contradicts findings from more recent studies of the experiences of academics. For example, Blackburn and Lawrence (1995) drew on literature that showed how sociodemographic characteristics “influence behavior indirectly by limiting or enhancing one’s access to resources and opportunities” (p. 16).
They viewed faculty members’ “beliefs about others in the environment, individuals with whom they interact and on whom they may depend,” as central to the distribution of resources (p. 17). Research has demonstrated differential access to network resources in organizations in general (e.g., Brass, 1985; Ibarra, 1993), as well as in the academy in particular (e.g., Clark and Corcoran, 1986; Menges & Exum, 1983; Tierney & Bensimon, 1996; Toutkoushian, 1999). For example, Exum, Menges, Watkins, and Berglund (1984) indicated that all Black and female faculty members in their study reported “being relatively distant from the social circles of their White male colleagues” (p. 317).

Barriers to network resources can be caused by a number of biased behaviors by institutions and individuals, albeit not always intentionally. Such barriers might occur when faculty members not perceived to be like the dominant group are not granted access to information and opportunities that are so important for career success – the sum effect of department members’ homophilic behavior (Clark & Corcoran, 1986; Exum, 1983; Thomas & Alderfer, 1989). In their research on women in academic careers, Olsen, Maple, and Stage (1995) described such barriers as “perhaps more insidious than overt discrimination, because it allows women to enter academe while severely limiting opportunities for advancement” (p. 271).

Scholarship on academic careers has begun to demonstrate that faculty members who do not represent the historic majority may be at a disadvantage in terms of accessing resources shared through networks because they do not have a sense of fit within their departments (Perna, 2005; Tierney & Bensimon, 1996). Faculty members who identify less with colleagues and peers, on whom they depend for network resources, are likely to have less mutual trust and interaction with these colleagues, resulting in very different
access to social networks than those whom colleagues perceive to be similar to
backgrounds reduce the probability of collegiality, friendship, and informal information
dissemination. Greater work is needed to achieve cohesiveness” (p. 30). Ibarra (1993)
explained, “Similarity of identity characteristics produces common interests and world
views and best explains the spontaneous ties of interpersonal attraction” (p. 60). As
Kennelly, Misra, and Karides (1999) stated, “individuals from these groups have had to
personally integrate academic departments” (n. p.). Hu-DeHart (2000) echoed this in her
own words, “Many of us are still gate crashers. We have to learn the rules of the game,
accept as many of them as our consciences and personal values permit, and most
importantly, survive to make a difference” (p. 38).

Salient Characteristics in Academic Careers

In The Black Academic’s Guide to Winning Tenure – Without Losing Your Soul,
(2008) Rockquemore and Laszloffy wrote that Black faculty on the tenure track “face the
same demands as their White counterparts and they also must negotiate both nuanced
racial insensitivities and outright racial insults” (p. 3). In Unfinished Agendas: New and
Continuing Gender Challenges in Higher Education, Judith Glazer-Raymo (2008) wrote,
there are “continued barriers to women’s advancement, affecting the teaching and
learning environment and the personal and professional well-being of both men and
women” (p. 30). A New York Times article titled The 60’s Begin to Fade as Liberal
Professors Retire discussed a variety of differences between generations of older and
younger faculty members, including political views and familial responsibilities (Cohen,
2008).
There are many more stories like the three examples above. Each describes the experiences of faculty members as they are shaped by the interplay between personal characteristics and the environments within which they conduct their work. Defining individual characteristics may be relatively straightforward – examples include age, gender, religious beliefs, and personal emphasis on teaching and research – but only the individual faculty member can identify which characteristics are salient to him or her in both the selection of peers with whom they build personal and professional relationships and the identification of barriers to network resources caused by individual differences. Not only is it important to recognize that faculty members consider a range of potential factors when determining what characteristics are salient in their networking activities, it must also be acknowledged that faculty members have different reasons for why those characteristics are salient to them. Determining the characteristics by which people evaluate similarity and thus engage in interaction with others is central in homophily theory (Kantz, Lazer, Arrow, & Contractor, 2004). While the tendency for homophilic preferences among network members is supported in the research, it is not clear which characteristics become salient to individual actors as they engage in networking behavior in social contexts (Brass, Galaskiewicz, Greve, & Tsai, 2004; Mehra, Kilduff, & Brass, 1998). Kilduff and Tsai (2007) wrote, “Actors’ attributes are in dynamic interplay with social contexts. There is no fixed set of characteristics that dominates actor identity across social contexts. Instead, each actor’s distinctiveness emerges from the unique pattern of social groups to which the actor belongs” (p. 116).

Some studies of homophily indicate that demographic characteristics are the most salient characteristics for identifying similar others (Goethals & Darley, 1987). Non-
demographic characteristics can also become salient as actors choosing others with whom to interact. Brass (1985) pointed out, for example, that similarity in job function can be more salient than gender. McPherson, Smith-Lovin, and Cook (2001) viewed homophily as not only what brings similar others together, but also what creates divides among people. Their research indicated that race and ethnicity, age, religion, education, occupation, and gender create the strongest divides, with race/ethnicity being the greatest divisive characteristic. They also note that race and religion can become less salient in forming ties among co-workers and that sex and education are the salient characteristics reinforced through workplace segregation. In the context of academic departments, it may be that intellectual interests, skills, or experiences become the most salient basis for interaction among colleagues.

**Prior Research on Race and Gender**

Most research on networks and homophily has focused on gender and race in particular, or at least refer to them consistently as examples of how similarities and differences affect networking strategies and outcomes. McGuire (2000), for example, noted that while “many studies acknowledge that informal networks help to maintain inequality, few have data to examine the mechanisms through which employees’ gender, race, and ethnicity affect their informal networks” (p. 502). Ibarra, Kilduff, and Tsai (2005) echoed this assertion, asking researchers to focus “increasingly on the social processes by which demographic characteristics such as gender and race become more or less salient in affecting interaction patterns” (p. 364).

Wood (1994) wrote that challenges experienced by underserved faculty members often go unrecognized by the majority and result in “layers of prejudice, severally and in
tandem, creating difficulties and inequities uniquely experienced by academics who are women and/or members of minority groups” (p. 56). While Wood focused on the commonly studied characteristics of women and racial minorities, she highlighted the problem of not knowing who is experiencing challenges in their academic careers, what factors are contributing to those challenges, or how the majority contributes to the perpetuation of those problems, either intentionally or inadvertently.

O’Leary and Mitchell (1990) argued that differential access to network resources and mentoring relationships prohibit women from being as well-integrated into their academic departments as men. Olsen, Maple, and Stage (1995) drew similar conclusions from their research, which demonstrated that female faculty members were often not included in invitations to have lunch or drinks with colleagues and thus experienced “greater difficulty in acquiring information about the department and informing the department about their own activities,” and were “likely to be less attuned to departmental politics, needs, and goals, while the department and institution” (p. 286).

Banks (1984) wrote of Black scholars, “the special and complex problems that being black and intellectual entail present a forceful and continuing challenge to the ecology of higher education” (p. 338). Fries-Britt (2000) also identified potential challenges for faculty of color related to learning the culture of the academy and the need for effective networks of supportive colleagues. She noted that “minority faculty may have less information about how the system works, and may be unaware of the resources available to them” (p. 40). In their review of the literature about faculty of color in academe, Turner, González, and Wood (2008) found that faculty of color reported
negative aspects of their careers such as isolation within academic departments, perceived biases in hiring processes, and expectations of representing racial/ethnic groups.

Several studies have explored layered identities within race and gender and their salience in academic careers. Incorporating both gender and nationality as the salient characteristics of interest, Geleta (2004) contended that when mentors choose to advise faculty members similar to themselves, they leave immigrant women faculty of color excluded from “crucial networks” that provide “the unspoken rules of gaining access.” She concluded that this “discrimination and isolation make it difficult for these faculty members [to succeed]” (p. 30). Similarly, McDowell and Smith (1992) focused on the academic careers of women who have children, identifying gender and motherhood as the salient characteristics in these faculty members’ careers. Freidenreich (2007) discovered that while Jewish women were once compelled to consider themselves outsiders in the academy, most Jewish women in tenured faculty positions “no longer consider themselves academic outsiders, either as women or as Jews,” and “they did not think of their Jewishness as a salient factor in their careers” (p. 94). In this case, the salient characteristics had changed due to relevant changes in the sociocultural context of their careers; Jewish women who had formerly identified most with their male Jewish colleagues were now more likely to identify with non-Jewish women (Freidenreich, 2007). Cooper (2006) pointed out that African American female faculty members sometimes sacrifice their access to women’s networking functions by choosing to identify with their race. In these examples, the interaction of individual characteristics in career contexts have an effect on how people network, with whom, and for what purposes.
Researchers have found that race and gender have an effect on people’s experiences and networking behaviors in the context of the professoriate, but additional research is needed to build on these findings. Research that moves beyond race and gender to explore faculty members’ experiences and networking strategies within their academic departments illuminates in greater detail the complex experiences of faculty members as they interact with departmental peers. Such research leads to a broader, more inclusive understanding of how salient characteristics in structural contexts affect people’s choices regarding networking behaviors and thus access to resources.

**Moving Beyond Race and Gender**

Some studies have explored the effects of characteristics other than race and gender on networks in faculty careers. One salient characteristic appears to be a focus on research vs. teaching. Blau’s (1974) research on professional contact among physicists focused on role similarity within institutions, comparing research-focused faculty with those focused on teaching. Finkelstein’s (1982) interest in the relationships between collegial interaction and research productivity resulted in the identification of differing patterns of interaction, or networking behavior, also based on individuals’ orientations to teaching and research. Independent of institution type, faculty members with stronger research orientations showed higher interaction with disciplinary colleagues outside their academic departments, while those focused more on their teaching roles interacted more with colleagues within their departments.

Another salient characteristic seems to be career age or time in the professoriate. New and junior faculty members share “substantial commonalities” in their professional experiences, such as sources of stress and needs for support, but there are also
“substantial differences,” such as the effects of gender on their experiences (Finkelstein & Lacelle-Peterson, 1992). For these new faculty members, the need for support might prompt friendship within the group, but gender differences might affect the development of friendships differently.

A Diversity of Differences

The examples above illustrate that there are many types of difference and underrepresentation within the professoriate, particularly in light of the growing diversification of the faculty across demographic, social, and familial characteristics (Schuster & Finkelstein, 2006). Research indicates that differences in the experiences of, and sometimes biases against, non-majority faculty members are based on characteristics such as gender, race, ethnicity, sexual orientation, physical disabilities (Wood, 1994), age, citizenship, educational background, marital status, family status, political view, tenure status (Schuster & Finkelstein, 2006), appointment type (Gappa & Leslie, 1993; Schuster & Finkelstein), prior institutional affiliation (Hitchcock, Bland, Hekelman, & Blumenthal, 1995), rank (Austin & Rice, 1998), lifestyle, accent, habit of dress, and intellectual perspective (Whicker, Kronenfeld, & Strickland, 1993), and religion (Alleman, 2009; Wood, 1994), to name a few. Faculty members who are defined by these characteristics or others as being in the minority risk being “separated from the mainstream and its informal information channels” (Whicker, Kronenfeld, & Strickland, 1993, pp. 30-31).

Attempts to predict how faculty members determine which components of their identities are salient to their career development have not produced consistent results. For example, in support of competition theory, Tolbert, Simons, Andrews, and Rhee (1995)
found that turnover among women in faculty positions increased in departments with greater representation of women due to negative and competitive environments. Given the same example, social contract theory would predict that increased representation of women in a work setting would lead to decreased turnover and increased peer support among female colleagues (Tolbert, Simons, Andrews, & Rhee, 1995). Ibarra, Kilduff, and Tsai (2005) argued that in structures where there is a dominant demographic majority, individuals from non-dominant groups feel excluded by the majority and heightened interest in connecting to those with whom they relate or have a shared sense of identity. Niemann and Dovidio (1998) found that within the context of academic careers, faculty members from underrepresented groups perceive the same or similar working environments differently than by people in racial majorities, therefore making the workplace functionally different for faculty members who are not in the racial majority. In these examples, different theories lead to different predictions about how faculty members determine salient components of their identities, suggesting that further research in this area would be helpful. Additional research is needed to understand what professional and personal characteristics faculty members perceive to be salient when creating and using their networks, when determining what network resources are of importance to them, and when identifying and responding to challenges in their careers.

Researchers have investigated certain personal characteristics in particular, but have rarely focused on organizational members’ determinations of which characteristics are salient in the development of their personal networks and careers. It is not enough to assume that certain characteristics will be dominant in shaping network interactions. As Mehra, Kilduff, and Brass (1998) wrote, “All people, at some point in their
organizational careers, are likely to be members of underrepresented groups, whether this involves race, gender, working in a foreign country as an expatriate, or simply joining a cross-functional team composed mainly of those with different expertise” (p. 450).

Building on the foundation of existing research, a new approach is needed for researching how faculty members perceive themselves to be similar to or different from their peers and the department within which they work, and how these perceptions affect network-building strategies and access to important career resources.

In their study of the social network positions of members of underrepresented groups, Mehra, Kilduff, and Brass (1998) measured the “perception of oneness with others” by asking participants to indicate the people within the organization with whom they were friends or to whom they were similar. This method left participants “free to make identity choices based on individually salient criteria, unaffected by researcher-imposed categories” (p. 443). Studies like this allow participants to tell their own stories and identify which characteristics are salient to them in shaping their networking strategies.

Individual and Structural Factors in Network Development

Networks develop in organizations based on individuals’ interactions in the context of social structures (Salancik, 1995). As Brass and Burkhardt (1993) wrote, “At any given time, the structure of an organization is providing access to and control of valued resources, while behaviors to acquire and strategically use those resources are occurring” (p. 444). Individuals form networking strategies based on personal characteristics, such as interest in teaching or gender, and structural characteristics, such as disciplinary culture or number of potential contacts within the network. The structural
and individual approaches to researching social networks were once viewed as separate (Kilduff & Krackhardt, 1994), with psychological perspectives focused more on individual-level research and sociological perspectives focused more on structural research (Brass & Burkhardt, 1993). Ibarra (1992) distinguished the two perspectives as “person-centered or dispositional.” Person-centered perspectives are focused on “preferences, personality characteristics, and behavior patterns,” and “situation-centered or structural” perspectives focus on social contexts (p. 423).

The danger of focusing exclusively on a macro, or structural, perspective lies in neglecting individuals’ actions and their consequences on networks, while a strictly micro perspective fails to acknowledge the structural context, opportunities, and limitations within which individual actions take place (Ibarra, Kilduff, & Tsai, 2005). Many researchers now acknowledge that “all [organizational] phenomena are simultaneously micro and macro,” or caused by both structural and individual factors (Krackhardt & Porter, 1985, p. 242). Researchers have argued that the two perspectives should be combined to better understand networks, and theorists have called for greater integration of the individual and structural approaches (Brass & Burkhardt, 1993; Ibarra, 1992; Kilduff & Krackhardt, 1994; Krackhardt & Porter, 1985; Molm, 1990; Obstfeld, 2005; Stevenson & Greenberg, 2000). This combined approach allows researchers to focus on individual characteristics and actions as well as structural constraints or opportunities when exploring the factors that contribute to individuals’ experiences in organizational and social settings (Ibarra, 1993). As Molm (1990) wrote, “together, structure and action produce outcomes of consequence for actors and relationships” (p. 427).
Cook (1990) presented an integrative approach to understanding individual and structural factors in networks. Cook argued that actors’ attempts to meet their needs through networking or social exchange results in patterns of interaction, which contribute to social structures and constraints. These structures cause “differences in power, prestige, and privilege, which in turn further constrain future exchange opportunities” (p. 116). He advocated for such an integrative approach to network research when he wrote, “to deal adequately with the link between actors and structures, the first requirement is a theoretical framework which incorporates both concepts” (p. 113). Kilduff and Tsai highlighted one of the underutilized benefits of social network analysis in regards to the divide between individual and structural approaches when they wrote, “as organizational social network researchers, we are bound by no disciplinary dogma and can therefore freely borrow from the structural and psychological traditions in pursuit of answers to important questions” (Kilduff & Tsai, 2007, p. 70).

Just as network researchers are attempting to bridge the gap between the individual and structural levels, research on faculty members has also acknowledged the need to bring together the two perspectives. Blackburn and Lawrence (1995) noted that prior research about faculty behavior is split among studies of organizational factors and those of personal characteristics. This study builds on the recognized importance of both individual and structural factors, and the integration of the two, to explore how their combined influence leads to the development of faculty members’ networking strategies.

The Development of Networking Strategies

Prior research has documented the existence of networking strategies in relationships with peers, superiors, and subordinates in organizations in general, as well
as in academic careers (Finkelstein, 1981; Kipnis, Schmidt, & Wilkonson, 1980). For example, Mitchell (1987) found that highly connected female academics built their professional networks by using a series of tactics not used by less connected colleagues, such as offering to serve as consultants in specialized areas of research and utilizing mentors for introductions to new contacts. Tierney and Bensimon (1996) described the strategies that female faculty members employ to fit in to their departments differently, writing, “they engage in what we call ‘smile work’ tactics to get along in departments dominated by senior male colleagues….It is a strategy women use to fit into departments with a tradition of male dominance” (p. 83). Hu-DeHart (2000) pointed out that “avoidance is itself a form of engagement, albeit a negative one” (p. 28). Finkelstein (1982) made note of faculty members whose networking behaviors are the exceptions to the rule, but did not go into further exploration of their experiences and networks. Finkelstein’s research suggests that there may be networking behaviors, strategies, and outcomes unique to those faculty members who do not “fit the mold” (p. 19).

Much of the research has focused on structural effects on the development of networking strategies. As Ibarra (1992) wrote, “structure defines the potential for action, while strategies describe its enactment” (p. 178). Stevenson and Greenberg (2000) found that social structure, including not only contextual factors but also whether actors face opposition and where they are positioned in networks, affects decisions to engage in networking strategies. Reporting findings from their study of strategies in networks, Stevenson and Greenberg wrote, “Context altered strategy. It would be naïve to ignore social context when considering the strategies actors use in networks….Actors are socially embedded in a network of relations, and costs and benefits are not evaluated in a
social vacuum” (p. 675). Ibarra (1993) stated this perspective similarly, “Strategies are not viewed as reflections of endogenous traits or enduring personal preferences; instead, they are viewed as alternatives that are shaped by social context” (Ibarra, 1993, p. 74). Ibarra (1992) found that the most significant structural effects on networking strategies were the opportunity context, the availability of potential network partners, and the size and composition of the network structure.

It is not just structural opportunities that provide access to resources, but also the strategic use of such opportunities to achieve network benefits. It is not just the relationships that are important in networks, but also the behaviors people take to form, cultivate, and benefit from those relationships (Kilduff & Krackhardt, 1994; Obstfeld, 2005; Stevenson & Greenberg, 2000). Molm (1990) found a weak relationship between structural power and strategic action, and noted that structural opportunities do not guarantee that network members know how to use such opportunities or recognize structural constraints. Ibarra (1992) wrote, “little attempt has been made at specifying the conditions under which certain types of strategies may be more effective than others, and scant attention has been focused on the identification of interactions between strategies, context, and action” (p. 178). As Stevenson and Greenberg (2000) pointed out, “we do not know the strategies of action that have allowed [people] to become centrally located or maintain their central locations. Perhaps more importantly, we do not know what strategies the peripheral members of the organizational network use to take action” (p. 651). Just as people differ in experiences, skills, and goals, they differ in their “willingness to use those skills and abilities to acquire and exercise power, or whatever network resources they desire,” (Brass & Burkhardt, 1993, p. 447) and their “assessments
of whether gaining access to certain benefits is worth the cost of access” (Ibarra, 1993, p. 74).

There is more work to do towards understanding the development and use of networking strategies. Studies of faculty careers have not explained fully the networking strategies of academics or how individual and structural factors affect those strategies. This study builds on prior research of networking strategies by exploring how individual and structural factors affect the development of networking strategies in academic departments. It also explores how faculty members use these strategies to exchange network benefits. This study results in the initial development of a typology of networking strategies and a greater understanding of how each strategy seems to affect individual faculty members’ networks, department-wide network structures, and the patterns of access that emerge. Such information is valuable for learning more about faculty members’ experiences in their academic departments and the consequences of interactions within departments.

Developing a Conceptual Framework: Ibarra’s Model of Personal Networks

The literature on networks suggests the need for a framework that incorporates individual and structural factors to explore networking needs, strategies, and outcomes. Ibarra (1993) developed a conceptual model for integrating individual and structural factors in her framework for investigating the factors that shape network structures of women and minorities in management. Her framework was built upon the premise that “organizational and individual factors affect network structure indirectly by shaping available alternatives, costs of alternatives, and the benefits individuals seek from their
interaction networks,” and that the effects of structural and individual factors on personal networks are mediated by individuals’ networking strategies (p. 77).

Ibarra identified both organizational factors and individual factors as key antecedents of networks. Organizational factors include formal organizational context and interaction dynamics. Organizational context constrains people’s network choices and “precludes or makes possible various kinds of social contacts” (Ibarra, 1993, p. 66). This structural constraint causes induced homophily – potential preference for interaction with similar others is limited by the availability of similar others. In Ibarra’s model, organizational context also affects networks by influencing the interaction dynamics between network members. “Personal networks are shaped by stereotypes, attributions, and biases that are bolstered by structural arrangements” that limit the development of connections within the network (Ibarra, 1993, p. 66). Interaction dynamics heighten perceptions of social differences and decrease perceptions of similarity, thus reducing the likelihood that network relationships will develop.

Ibarra suggested that “structure is not all-determining. Individuals play an active role in structuring their social networks to achieve their goals and maximize the benefits they seek” (p. 74). In her model, the individual factors that indirectly affect networks include career factors and interaction styles and orientations. These individual factors shape the specific benefits that people hope to obtain through their personal networks. (Ibarra included individual factors in her model, but does not provide a discussion of such factors.) So, organizational factors lead to structural constraints on network choices, while individual factors shape network benefits sought. These two factors lead to network
development strategies and thus personal network structures and acquisition of network benefits.

Each network member has perceptions of and is constrained by the departmental network. For example, perceptions of the network might include opinions about its potential usefulness in connecting the faculty member to research opportunities such as collaborative studies, co-publishing, or funding opportunities. Constraints of the network for the given example might include the number of peers within the department who are interested in similar research or available for new projects. This interaction between individual and structural context results in what Ibarra (1993) called “choice-strategy tradeoffs” or “network development dilemmas” (p. 74).

Networking strategies develop in response to network development dilemmas. It is through these networking strategies that individuals develop their network structures and obtain network benefits. The three strategies Ibarra included in her model are functional differentiation, maximizing instrumental benefits, and maximizing expressive benefits. Instrumental benefits include those related to one’s job; expressive benefits include those related to friendship and social support (Ibarra, 1993). A functionally differentiated network, according to Ibarra, includes homophilous relationships that provide expressive benefits and a separate group of relationships that provide instrumental benefits. Ibarra’s model (Figure 1) could guide research on faculty networks, and serves as the foundation for the conceptual framework used in this study. In the following chapter, her model is revisited and revised for use in this study of how departmental and individual characteristics affect networking strategies and access to network resources.
Figure 1: Ibarra’s Model of Network Development

Summary Model of Factors that Shape the Personal Networks of Women and Minorities

**Antecedents**  **Mediating Processes**  **Consequences**

**Organizational Factors**
- Formal organizational context
- Interaction dynamics

**Individual Factors**
- Career factors
- Interaction styles and orientations

**Structural Constraints on Network Choices**

**Network Development Strategies**
- Functional differentiation
- Maximize instrumental benefits
- Maximize expressive benefits

**Personal Network Structure**
- Composition
- Relationship characteristics

**Network Benefits/Resources Obtained**
CHAPTER 3

Research Methods

Using qualitative interviews and social network analysis, this study explores networks in academic departments. The goals of this study are 1) to gain new insights into the ways that structural and individual factors shape the development of networking behaviors, 2) to begin initial development of a typology of network strategies employed in academic departments and how those strategies affect network outcomes, and 3) to observe whether and how patterns of access to network resources emerge in academic departments.

Research Design

Most network research includes reliance on a single source of data (Mehra, Kilduff, & Brass, 1998), which can be a limitation, particularly given the potential for “thorough and in-depth analysis” through the integration of quantitative, qualitative, and graphical data in network analysis (Kilduff & Tsai, 2007, p. 7). Stevenson and Greenberg (2000) cautioned against relying solely on social network data, which have the potential to identify types, directions, and strengths among relationships, but do not address actors’ strategies of action. In other words, social network analysis answers the questions of what networks exist, who their members or actors are, and to a certain extent, how they interact, but it does not explore why actors choose the actions they do. Although network analysis contributes to an understanding of how actors are socially embedded in particular network contexts, other forms of data collection are required to understand the meanings of actors’ choices and experiences. Incorporating multiple research methods into the design of a study contributes to the confirmation and corroboration of data, the
development of richer analysis, and the inclusion of new lines of thinking and fresh insights to a topic (Miles & Huberman, 1994).

This study uses a mixed methods approach that combines qualitative research methods and network analysis research methods. The qualitative component consists of semi-structured interviews with each participating member of the networks under investigation. Network analysis is based on data from network surveys, which produced scores and sociograms derived from carefully selected network measures. In addition to the value they add to the richness of data and depth of analysis, each type of research compliments the other. Network data were shared with participants during interviews, and thus facilitated data collection about interaction within departments during individual interviews. Interviews provided data on the experiences of each participant, which contextualized and enriched analysis of survey data.

The use of multiple-case sampling contributes to the strength and validity of findings in qualitative research (Miles & Huberman, 1994). By including two cases, and thus two cultural and structural environments within which to study the network interactions of faculty members, this study begins to develop an understanding of faculty members’ networking strategies within their departments. This study employs a replication strategy and uses the conceptual framework to study multiple cases in depth in order to compare patterns and develop the theoretical framework (Yin, 1984). Comparing two departments with different structural and cultural contexts provides insights into how structural and cultural factors influence faculty members’ networking strategies and the subsequent patterns of access. It also provides two different contexts in which to explore the effects of individual factors on networking behaviors, as well as the interaction
between structural and individual influences on networking behaviors, resource exchange, and patterns of access in academic departments.

**Social Network Analysis**

Researchers have used social network analysis to explore organizational phenomena at multiple levels of analysis, with the first applications taking place in the early decades of the twentieth century. Kilduff and Tsai (2007) cited the Hawthorne Studies of factory workers in the 1920s as the first to use sociograms to map out interactions between employees. In 1933, Moreno applied this “psychological geography” to a study of the social relations between the 500 residents of the New York State Training School for Girls, (“Emotions Mapped,” 1933). Since then, network analysis has been applied to a range of social roles and groups, from executive boards to kindergarteners to celebrities. It is increasingly used as a method of analysis in fields such as biology, management, mathematics, and sociology.

Social network analysis considers the ties between members of a network and the structural and individual influences on those ties. It focuses on relationships between people, and the patterns and implications of those relationships (Wasserman & Faust, 2008). Commonly studied components of relationships include communication, work flow, advice, and friendship (Brass, Galaskiewicz, Greve, & Tsai, 2004). In network analysis, people’s attributes are “understood in terms of patterns or structures of ties” among people within the network (Wasserman & Faust, 2008, p. 8). Through network analysis, researchers are able to observe relationships and patterns of behavior that are often not realized by the people within networks (Galaskiewicz, 1996). This method of analysis provides useful insights into actions, decisions, and their outcomes (Adler &
Kwon, 2002; Fischer & Pollock, 2004). Network analysis also allows researchers to model relationships and depict the structure of a group, as well as how that structure affects both the group and the individuals within it (Wasserman & Faust, 2008). Finally, it allows researchers to identify systematic differences in the formal and informal interactions of network members within a particular organizational context (Ibarra, 1992) and the constraints of structural positions on social relations (Cook, 1990). As Stevenson and Greenberg (2000) wrote, “to understand network position is to explain power inequalities” (p. 652).

It is up to the researcher to determine which types of relationships are of interest in an analysis of social networks. For this study, the academic department is defined as the network of interest, including the relationships between members in the department. Network analysis was used to determine network interactions and relationships among department members. Results from the network analysis provided a feedback tool to help participants reflect on their departmental networks, their positions in those networks, their networking strategies, and their access to network resources.

*Interviews*

Maxwell (2005) identified five intellectual goals that align with qualitative studies, including 1) understanding the context within which participants act and its influence, 2) understanding the meaning of experiences and actions for participants, 3) understanding the process by which actions take place, 4) identifying unanticipated phenomena and influences, and 5) developing causal explanations. This study incorporates each of these five goals into its exploration of 1) the role of departmental factors in shaping networking strategies, 2) the role of individual characteristics and
interactions in shaping networking strategies, 3) how faculty members construct networking strategies, 4) the potential for patterns of inequality in access to network resources in this context, and 5) how networking strategies may cause or prohibit access to network resources.

Qualitative research methods were used to conduct a phenomenological investigation of faculty members’ networking behaviors in their departments. Interviews provided data on participants’ experiences, how they made meaning of those experiences, and the resulting actions they took (Bogdan & Biklen, 2007; Maxwell, 1996). In addition to considering participants’ experiences and meaning-making, phenomenological research was useful for the discernment of themes, commonalities, and differences among participants (Miles & Huberman, 1994; Patton, 2002).

**Conceptual Framework**

The conceptual framework for this study is included as Figure 2. Because social networks are comprised of dynamic interactions and exchanges between network members, and because of the reciprocal effects that structure, individual characteristics, and behavior have on each other, this framework represents a linear model for studying networks in academic departments. It is an abstraction of reality to facilitate investigation rather than an actual depiction of network processes.
Figure 2: Conceptual Framework

**Networks in Academic Departments**

- Departmental Factors
- Individual Factors

**Network Benefits Sought / Offered**
- Help in Teaching
- Help in Research
- Institutional Linkage
- Disciplinary Linkage
- Support, Intellectual Stimulation, & Friendship

**Network Development Strategies**
- Functional Differentiation
- Maximize Instrumental Relationships
- Maximize Expressive Relationships
- Maximize Instrumental & Expressive Relationships
- Alternative Strategies

**Network Benefits Obtained / Provided**

**Patterns of Access to Network Resources**
There are five major components of the conceptual framework: 1) networks in academic departments and relevant characteristics, 2) network benefits sought or offered in departments, 3) network development strategies, 4) network benefits obtained or provided, and 5) patterns of access to network resources. The conceptual framework assumes that both departmental factors (e.g., disciplinary norms and number of network partners) and individual factors (e.g., the characteristics of each network member and perceptions of others) influence network development. Of particular interest is the role of homophily in network interactions, including the effects of induced homophily (how structural constraints shape interaction with similar others) and choice homophily (the selection of similar others based on personal preference and identities).

The conceptual framework suggests that networks in academic departments influence faculty members’ network development strategies, based on the combination of departmental factors, individual factors, and resulting network benefits that people choose to seek and/or offer. The benefits shown in the “Network Benefits Sought and Offered” frame are based on Finkelstein’s (1982) colleagueship functions. The specific types of behavioral strategies that develop are determined through analysis of survey and interview data. Prior to data collection and analysis, potential behavioral strategies were suggested in the framework, based on Ibarra’s (1993) model. As shown in Figure 2, the potential “Network Development Strategies” that may emerge include functional differentiation (multiple relationships that serve multiple and distinct purposes), maximized instrumental relationships (those that focus on professional interactions or outcomes), expressive relationships (those that focus on personal interactions or outcomes, such as friendship), a combination of instrumental and expressive
relationships, or other strategies not yet considered in this framework. These strategies are assumed to serve a mediating role in the effect that networks in departments have on “network benefits obtained and provided” (such as help with teaching or friendship) and on the broader “patterns of access to network resources” within the department.

While Finkelstein’s functions of colleagueship are used as the proposed “Network Benefits Sought and Offered,” these five functions are not included as “Network Benefits Obtained and Provided.” These functions guided data collection about the benefits and resources faculty members exchange within their networks, but were not assumed to be a comprehensive list of the network benefits and resources that emerged. Similarly, specific patterns of access to network resources are not suggested in the conceptual framework, as they also were expected to emerge through data collection and analysis.

**Sampling Techniques & Sample**

Case study selection for this study was guided by Miles and Huberman’s (1994) and Patton’s (2002) suggestions that small, purposive samples be used for case studies in order to provide actual examples of and insights into the phenomena of interest. Prior research on faculty careers, and on networks in the workplace in general, reinforces the importance of selecting and comparing departments when studying social networks and provides some guidance into the selection process. In considering the effects of race- and gender-based differences on faculty job satisfaction, Olsen, Maple, and Stage (1995) note that while generalizations based on specific academic environments may be limited, controlling the context of faculty interactions will “disentangle the effects” of structure from those of actors’ attributes and will provide useful information about “differences among faculty groups facing similar professional demands” (p. 269).
Academic departments comprise a specific context for professional interaction and network development within a complete and predetermined boundary. Conducting research within a specified organizational context allowed for an investigation into the unique structural factors shaping the given network, as well as the identification of themes and findings generalizable to other networks within similar contexts. McPherson, Smith-Lovin, and Cook (2001) pointed out findings from several studies of workplace networks that suggest networks are shaped more at the department level than at the organizational level. In their study of faculty productivity, Blackburn, Behymer, and Hall (1978) found that professors’ levels of productivity were influenced by interaction with colleagues in departments with an average of between 11 and 15 faculty members; departments greater than that size did not have an effect on productivity. In their study of relationships within one organization, Kram and Isabella (1985) “forfeited the opportunity to examine how variations in the organizational setting affect the nature of peer relationships” and noted that “it would be useful to investigate how these vastly different conditions facilitate or inhibit the opportunities to develop supportive peer relationships” (p. 130).

Because this study focused in part on the structural and cultural factors that shape department networks and faculty careers, it was important to consider carefully the choice of departments included as case studies. Academic disciplines influence the culture of departments, and disciplinary influences provide strong points of comparison across departments. Biglan (1973) pointed out that distinct disciplinary norms warrant avoiding generalized investigations of social structure and scholarly work, drawing from Kuhn’s (1962) observations regarding paradigm differences between physical sciences,
social sciences, and non-science disciplines. Other researchers have reached similar conclusions regarding disciplinary distinctions (Blackburn, Behymer, & Hall, 1978). For example, Becher and Trowler (2008) identified four disciplinary groupings including pure sciences, humanities, technologies, and applied social science.

Disciplinary norms influence departmental characteristics in multiple ways. Departmental cultures, influenced by disciplinary norms, result in commonly-accepted practices and shared beliefs among faculty members related to research, teaching, collegiality, and other components of the academic career (Biglan, 1973; Blackburn, Behymer, & Hall, 1978; Blackburn & Lawrence, 1995; Becher & Trowler, 2008; Kuhn, 1962). The culture, norms, practices, and beliefs that exist within academic departments influence faculty members’ interactions and exchanges of resources, thus affecting the structure and outcomes of networks within the departments.

In some disciplines and their departments, scholarly productivity is measured by the number of sole-authored books. In others, collaborative research and co-authored articles is the norm. Some disciplines, particularly those in the sciences, technology, engineering, and math, have been cited for a long-standing chilly climate for women and faculty of color. Others, such as the social sciences and humanities, tend to have more heterogeneous faculties. Other factors, such as relative prestige of the discipline; value placed on teaching, research and service; and tenure and promotion expectations can also lead to important differences between departments and thus contribute to the value of comparing networking strategies and patterns of access across departments. Such disciplinary characteristics and contextual factors play a role in faculty members’ departmental networks and interactions.
A review of the literature suggested two key criteria for purpose sampling in this study: department size (about 15-30 tenure-track members) and disciplinary type. Two departments were selected as the research sites for this study. To protect the identity of participants, they are identified in this study as the Business Department and the Social and Behavioral Sciences Department. The departments are located in the same research-intensive university in a rural area. Both have undergraduate and graduate degree programs.

Selection of these two departments was made, in part, based on Biglan’s (1973) classification of academic disciplines in order to consider two contrasting disciplinary perspectives within which to investigate networks. Biglan (1973) characterized academic disciplines according to three dimensions: hard/soft, pure/applied, and life/non-life systems. The first two dimensions have received support from subsequent research. In this classification system, hard disciplines include relatively high consensus on methods of inquiry and content compared to soft disciplines. Pure disciplines are less concerned about the practical application of knowledge in their subject areas than those considered to be applied (Biglan, 1973; Lattuca & Stark, 2009). Both the Business Department and the Social and Behavioral Sciences Department are characterized as applied disciplines within Biglan’s model. The Business Department can be characterized, specifically, as being in a soft/applied discipline. Scholarship in the Business Department is organized by the traditional research areas and methods of the discipline. The Social and Behavioral Sciences Department can be characterized as that of a hard/applied discipline, but is interdisciplinary and innovative in its approach to research. The selection of contrasting
departments according to these characteristics was based on an interest in researching intradepartmental networks in two different cultural and structural contexts.

Once the departments were selected, the dean of each department was contacted by email and informed of the study, and permission was requested to approach the department chairperson and recruit participants. The chair of each department was then contacted by email, informed of the study, and permission to recruit participants was obtained from the chair. A list of tenure-track faculty was obtained from each department's public web site, and confirmed with each department chairperson. The chair of each department then contacted potential participants by e-mail to describe the study, using the recruitment script (Appendix A). Faculty members interested in participating contacted the researcher directly to indicate their willingness to participate. This step was taken to ensure sufficient participation in each department before collecting data. Participants then received a confirmation email with a secure link to the survey, which included the consent form (Appendix B). Participants were encouraged to print the consent form for their records before beginning the survey. Completion of the survey provided implied consent for the study. Once participants completed the online survey, individual interviews were scheduled. Participants were also offered copies of the consent form before their interviews.

Participant characteristics are provided in Table 2. Of the 15 tenured and tenure-track faculty members in the Business Department, eleven (73%) participated in the study. Of the 28 tenured and tenure-track faculty members in the Social and Behavioral Sciences Department, ten (36%) participated in the study. As seen in Table 2, the sample is diverse in terms of age and academic rank; of the 21 participants, 15 (71 percent) are
tenured. This sample represents less diversity in terms of race and gender; 71 percent of participants are men and 66 percent of participants are White. While the sample does not entirely lend itself to a study of difference and diversity according to some measures, it is somewhat reflective of demographic trends within the professoriate nationally.

Table 2: Participant Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Business Department</th>
<th>Social &amp; Behavioral Sciences Department</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>9 (82%)</td>
<td>6 (60%)</td>
</tr>
<tr>
<td>Female</td>
<td>2 (18%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>2 (18%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>40-49</td>
<td>4 (36%)</td>
<td>3 (30%)</td>
</tr>
<tr>
<td>50-59</td>
<td>4 (36%)</td>
<td>1 (10%)</td>
</tr>
<tr>
<td>60-69</td>
<td>1 (9%)</td>
<td>2 (20%)</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian American</td>
<td>2 (18%)</td>
<td>---</td>
</tr>
<tr>
<td>Indian</td>
<td>3 (27%)</td>
<td>---</td>
</tr>
<tr>
<td>Latino(a)/Hispanic</td>
<td>---</td>
<td>2 (20%)</td>
</tr>
<tr>
<td>White</td>
<td>6 (55%)</td>
<td>8 (80%)</td>
</tr>
<tr>
<td><strong>Tenure Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenured</td>
<td>9 (82%)</td>
<td>6 (60%)</td>
</tr>
<tr>
<td>Untenured</td>
<td>2 (18%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td><strong>Rank</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>2 (18%)</td>
<td>4 (40%)</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>3 (27%)</td>
<td>3 (30%)</td>
</tr>
<tr>
<td>Professor</td>
<td>6 (55%)</td>
<td>3 (30%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>

Data Collection

Data collection for this study occurred in two phases. First, tenured or tenure-track faculty members who indicated their willingness to participate in the study received links to an individual online network survey. Then, participants participated in one-on-
one interviews to discuss the data provided in their survey responses and their experiences and interactions in their departments.

**Network Data Collection**

In the first stage of data collection, participants completed surveys indicating which colleagues they interacted with in their departments, and the types of resources they received and provided through those interactions. Data collection for network analysis was administered through an online social network survey. Surveys are commonly used to collect data for network analysis. The survey was customized for each department in the study survey and included a complete roster of faculty members in the department (see Appendix C). Participants indicated the types of interactions they had with each department member, based on the five functions of colleagueship set forth by Finkelstein (1982) and outlined in Table 1. These include teaching; research; institutional linkage; disciplinary linkage; and general support and friendship. A list of survey questions according to each function is included as Table 3.

There are three types of questions, roster vs. free recall, free choice vs. fixed choice, and ratings vs. complete rankings (Wasserman & Faust, 2008). Participants were not constrained by a maximum limit of network partners, thus the data were free choice. In addition to the complete roster, participants had the option to write in additional network members with whom they interacted for each category. Because participants indicated whether or not they had ties to network members, the survey also provided ratings data.

Network survey data were used to customize interview protocols for each participant. In addition, the participant’s sociogram was presented during each interview.
to obtain feedback about participants’ intradepartmental networks and to provide opportunities to confirm or correct the information that emerged from network surveys.

Table 3: Survey Questions According to Finkelstein’s Colleagueship Functions

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>SURVEY QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>With whom have you co-taught a course?</td>
</tr>
<tr>
<td></td>
<td>With whom have you collaborated in course development?</td>
</tr>
<tr>
<td></td>
<td>Who do you go to for help with teaching-related concerns, such as classroom</td>
</tr>
<tr>
<td></td>
<td>dynamics or course assignments?</td>
</tr>
<tr>
<td></td>
<td>Who comes to you for help with teaching-related concerns, such as classroom</td>
</tr>
<tr>
<td></td>
<td>dynamics or course assignments?</td>
</tr>
<tr>
<td>Research</td>
<td>With whom have you collaborated on funded research?</td>
</tr>
<tr>
<td></td>
<td>With whom have you co-authored publications or conference papers?</td>
</tr>
<tr>
<td></td>
<td>With whom have you co-presented at conferences?</td>
</tr>
<tr>
<td></td>
<td>Who gives you critical feedback on your ideas and writing?</td>
</tr>
<tr>
<td></td>
<td>To whom do you give critical feedback on their ideas and writing?</td>
</tr>
<tr>
<td></td>
<td>With whom do you engage in consulting projects?</td>
</tr>
<tr>
<td>Institutional Linkage</td>
<td>Who provides you with information about institutional/departmental policies?</td>
</tr>
<tr>
<td></td>
<td>To whom do you provide information about institutional/departmental policies?</td>
</tr>
<tr>
<td></td>
<td>Who provides you with information about institutional/departmental politics?</td>
</tr>
<tr>
<td></td>
<td>To whom do you provide information about institutional/departmental politics?</td>
</tr>
<tr>
<td></td>
<td>With whom have you collaborated on service activities?</td>
</tr>
<tr>
<td>Disciplinary Linkage</td>
<td>Who has helped you identify funding sources and/or wrote grant proposals?</td>
</tr>
<tr>
<td></td>
<td>Who have you helped to identify funding sources and/or wrote grant proposals?</td>
</tr>
<tr>
<td></td>
<td>Who has sponsored and/or nominated you for academic positions and/or positions in disciplinary associations?</td>
</tr>
<tr>
<td></td>
<td>Who have you sponsored and/or nominated for academic positions and/or positions in disciplinary associations?</td>
</tr>
<tr>
<td></td>
<td>Who has introduced you to other scholars in the discipline?</td>
</tr>
<tr>
<td></td>
<td>Who have you introduced to other scholars in the discipline?</td>
</tr>
<tr>
<td>General Support &amp; Friendship</td>
<td>Who provides you with general support and encouragement?</td>
</tr>
<tr>
<td></td>
<td>For whom do you provide general support and encouragement?</td>
</tr>
<tr>
<td></td>
<td>Who provides you with career advice?</td>
</tr>
<tr>
<td></td>
<td>Who do you provide with career advice?</td>
</tr>
<tr>
<td></td>
<td>Who do you confide in with regard to your personal problems?</td>
</tr>
<tr>
<td></td>
<td>Who confides to you his or her personal problems?</td>
</tr>
<tr>
<td></td>
<td>Who do you socialize with outside of work?</td>
</tr>
</tbody>
</table>

Qualitative Data Collection

Qualitative data collection took the form of semi-structured interviews, in which standard interview protocols were used for each participant, but the order and wording of questions were flexible and fluctuated slightly for each interview (Krathwohl, 1998).
Interviews were transcribed, resulting in rich data that provided the detail and variation necessary for illuminating participants’ experiences (Maxwell, 2005). Rich data provide a level of reliability through the thoroughness of participants’ descriptions and the degree to which findings can be transferred to their experiences or research interests (Merriam & Associates, 2002).

During the interviews, participants received visual representations (sociograms) of their personal networks within the department. The sociograms were used to examine structural network positions in greater detail, including patterns, groups, outliers, and links between network members (Mehra, Kilduff, & Brass, 1998). The first part of the interview protocol focused on participants’ descriptions of their careers and their history within the department. The second part of the interview related to information presented in the sociograms. The third part of the protocol included both descriptive questions about departmental interactions and interpretive questions about the meaning of these interactions for participants that are aligned with the research questions included in this study. The interview protocol is included as Appendix D.

Data Analysis

This study used a multiple-case sampling in order to conduct analysis of networks at two levels – the personal intradepartmental networks of individual faculty members and academic departments as complete networks comprised of individual members’ networks. The interactions of faculty members in a defined network were compared within a controlled context, while the use of two different departments allowed for a point of comparison between cultural and structural contexts. Isolating and contrasting
two different settings increased the opportunity for analysis of faculty members’ networks within and across the processes of interest.

First, within-case analysis focused on the networks of each faculty member within his or her academic department in preparation for individual interviews. For this type of analysis, the departmental and individual influences on personal networking strategies were highlighted. Second, interview data were then analyzed to explore networking goals, strategies, and outcomes, as well as the departmental and individual factors that affected network development. In the third stage of data analysis, additional network analysis was conducted on egocentric networks across colleagueship functions to further elucidate themes and patterns. Findings from all three stages of analysis were then applied to the conceptual framework to develop and refine the model. Pseudonyms are used for all participants.

**Stage One: Preliminary Network Analysis**

Social network analysis is an appropriate research method for analyzing relational data (Monge & Contractor, 2003; Scott, 2007; Scott & Davis, 2007; Wasserman & Faust, 2008). “Because network measurements give rise to data that are unlike other social and behavioral science data,” wrote Wasserman and Faust, “an entire body of methods has been developed for their analysis” (p. 21). The software program Ucinet (Borgatti, Everett, & Freeman, 2002) was used to conduct social network analysis. Sociometric notation, a way of measuring relationships by indicating interactions through two-way matrices, was used to denote ties between department members. Data were then analyzed according to selected measures (Wasserman & Faust).
The first stage of analysis included organizing survey data into an adjacency matrix, which indicated whether each pair of actors is connected according to each type of network resource. Adjacency matrices of each type of resource were then aggregated according to colleagueship functions to create function-specific networks as well as the overall network of each participant. Survey data were then used to create sociograms of participants’ intradepartmental networks, with the use of the software program NetDraw (Borgatti, 2002). Sociograms are visual representations of networks that include network members and the relationships between members, or actors and ties (Wasserman & Faust, 2008). They are useful for examining network positions in detail, showing cliques and groups, identifying links between members, and revealing patterns within networks (Mehra, Kilduff, & Brass, 1998).

Once the egocentric network images were created, these networks were broken down and analyzed further according to each colleagueship function, including teaching, research, service, institutional ties, departmental ties, and general support and friendship. Although Finkelstein’s categorization of colleagueship functions includes service as “sponsorship for committee assignments” under institutional linkage, ties related to departmental or institutional service were removed from the analysis of institutional linkage. Participants tended to report connections with different colleagues for service than for the other questions in the institutional linkage category since service-based interactions are often prompted by committee assignments or other non-voluntary reasons. Isolating service as its own category of interaction also allowed participants to review their sociograms in the traditional categories of teaching, research, and service. Summary reports were then prepared for each participant, which included sociograms
representing each type of colleagueship in his or her egocentric network in the
department. A sample page from a summary report is included as Figure 3.

Figure 3: Selection from Sample Summary Report

The sociograms and summary reports that resulted from the first stage of data
analysis provided an understanding of how colleagues were interacting within the
department, how each participant’s egocentric network was constructed, what resources
were being exchanged, and by whom. They revealed, for example, what the dominant
types of interaction were both for each participant and within the department. They were
also used as prompts in the second stage of data collection, the individual interviews. In
addition to discussing each participant’s summary report with him or her, each interview
protocol was tailored to address the unique characteristics of the participant’s network
structure. Interviews were conducted using not only the interview protocol, but also the
summary reports, sociograms, and list of function- and colleague-specific interactions unique to each participant.

Stage Two: Qualitative Analysis

Qualitative data analysis began with the establishment of an a priori coding structure, based on the themes and topics described in the conceptual framework. Each interview was recorded, transcribed verbatim, and then coded according to the initial coding structure. Codes were then further analyzed, refined, and revised, as recommended by Miles and Huberman (1994). With the use of NVivo software (QSR International, 2008), coding continued as themes were refined to produce both broad categories and detailed descriptions of themes. Through multi-level coding, these themes were then used to analyze data from individual participants, to compare participants within each case, and finally, to make cross-case comparisons. Cross-case analysis led to the refinement of themes across cases, as well as a comparison of similarities and differences between network interactions in two departmental and disciplinary contexts. This pattern of analysis led to the development of propositions towards the construction of an explanatory framework (Miles & Huberman, 1994). Propositions resulting from this study address networking goals, strategies, and outcomes in academic departments.

Within-department analysis focused on comparing participants in each network were also used for an investigation of the networking strategies that faculty members use in their academic departments as part of their efforts to obtain career success and satisfaction.

Stage Three: Individual and Structural Network Analysis

In the third and final stage of data analysis, social network data were further analyzed for both individual actors and departments. Two social network measures were
used to assess participants’ individual networks, including degree centrality and multiplexity. Degree centrality is the number of ties an actor has to other actors (Monge & Contractor, 2003, p. 37). An actor with a large degree is connected to many other actors in his or her network and is considered to be a highly central member in that network. Wasserman and Faust (2008) describe network members with high centrality as “recognized by others as a major channel of relational information, indeed, a crucial cog in the network, occupying a central location” (p.179). Centrally located network members are those who, by the extent of their connections to other network members, have the resources they need to meet their network goals. This also makes them key contacts within the network, as their power, influence, and access to resources are sought by others who are attempting to meet their own career objectives (Knoke, 1990; Laumann, Marsden, & Galaskiewicz, 1977; Sparrowe, Liden, Wayne, & Kraimer, 2001; Stevenson & Greenberg, 2000). Degree centrality is a useful indicator not only of the number of ties an actor has, but also of the actor’s activity within the network and the actor’s choices for interaction, thus it is a measure of one’s power and access to resources (Brass & Burkhardt, 1992). Six measures of degree centrality were obtained for each actor: overall network ties, and network ties for each of the five colleagueship functions.

Multiplexity is the extent to which two actors are linked together by more than one relationship or connected by more than one purpose (Kilduff & Tsai, 2007; Monge & Contractor, 2003). Multiplex relationships, which may be more common among homophilous ties that among actors with significant differences, can be important tools for accessing network resources. Ibarra (1992), for example, suggested that women may be at a disadvantage in networks where they have weaker multiplex relationships than
their male peers. Multiplex ties, or scores of multiplexity, are the sum of all ties for individual purposes. Because network data were not provided by every member of the network, multiplexity was assessed according to participants’ indication of their ties to other members of the department. In the case of both participants indicating a tie between them, this tie was counted as one point in the dyad’s multiplex score. If only one participant indicated the tie, this was still counted as one point. Although multiplex ties are measures of connections between people and not measures of the individuals themselves, multiplex tie scores can provide useful information about individual network members as well as the network itself. Considering the extent to which network members have high multiplexity with his or her colleagues can reveal both individual trends in networking behavior and strategies as well as within-network patterns.

This final stage of analysis provided descriptive information about faculty members’ personal networks, such as the number of ties and types of relationships, and the departmental network as a whole, considering centrality and multiplexity in the aggregate. It also allowed for reconsideration of network data after the analysis of the qualitative data, useful for comparing themes and findings between the two types of data and further refining the analysis and resulting conclusions.

Role of the Researcher

As the sole researcher in this study, it was important for me to examine my role in this research and reflect on how my prior experiences, assumptions, and goals may affect my work. By articulating these, I aimed to become more cognizant of my biases and expectations. It was also my intent to anticipate and recognize them throughout the course of the project so that I would be better prepared to address them as they emerge.
While I have observed individual and structural characteristics that seem to be salient in faculty members’ networking strategies, and a variety of strategies for achieving their network goals, I did not enter into this work with an expectation of what I would find. Just as I understood that this research would not be generalizable to all academic departments (but rather useful for elaborating theory), I did not assume that my prior knowledge was representative of what I would learn about participants’ networking strategies and experiences or networks within academic departments.

The evolution of this study occurred over several years as I had the opportunity to observe and interact with faculty members in a variety of ways. I noticed that many of their career stories included either important access or barriers to key resources, and often a combination of the two. Faculty members also revealed a sense of agency in cultivating access and overcoming barriers. Through my doctoral coursework, I realized that faculty members had powerful stories to tell about their experiences that might illuminate strategies for achieving their goals. I also realized that by collecting some of these stories, I might begin to identify themes and typologies of action. While it was my expectation that I would learn a great deal from the faculty members who participate in this study, it was my hope that by applying a new type of analysis, I would provide them with useful information that they could use to better understand their careers, experiences, and networking strategies.

Faculty members’ willingness to tell me their personal stories, and my observations of unequal distribution of access to network resources, have made me aware of the very real outcomes of network barriers and empathetic to those who experience the negative effects of networks. I acknowledged this in the hope that I would continue to
keep this empathy, as it drives much of my work and gives meaning to what I do. I believed that participants would perceive this empathy, and may have been more likely to talk with me because of it. Given that participants would place their trust in me as they told their stories, it was important for me to express the value I placed on their stories and the respect I have for their confidentiality and any emotional responses they may have had to talking about their experiences. I realized, however, that this empathy might lead me to predetermined outcomes or assumptions about participants’ experiences, and I guarded against these.

I also intended to remain aware of potential situations when empathy was not evoked – situations in which faculty members may have seemed privileged with access to resources not experienced by their peers or unsympathetic to concerns held by those who did not feel strong support from within the department. If such situations occurred, it was important for me to remain engaged as a researcher interested in learning about the experiences of all faculty members. From this perspective, there was no incorrect experience or invalid conversation; there was only more data to inform my work.

Experiences leading up to this study gave me an opportunity to consider my own identity and the characteristics that are salient to me, as well as those that may become salient to others as they interact with me. Observable characteristics may have been the most salient as I collected my data, particularly my identity as a relatively young White woman. Faculty members of color, men, or those who are significantly older than I am, for example, may have felt less comfortable sharing their experiences with me. I could not eliminate any effects that my identity may have on data collection, but it was important for me to recognize that this research was in and of itself a series of
interactions between people that was affected by who I am as a person and how I am perceived by others. Similarly, it may have been impossible for me to remove my own experiences, opinions, biases, and limitations from this work completely, and I acknowledge that I have interpreted the data through my own lens.

Limitations

There are several limitations to this study. First, it presents a static depiction of networks in academic departments. It does not consider the development of networks over time, nor is it a longitudinal study of faculty members’ experiences within their departments. The structure and functions of networks in academic departments are likely to change as the membership of departments change and as members’ career stages and networking goals evolve. Second, data collection was based on participants’ perceptions and self-reported data about relationships; observations of networking behaviors were not included. Individual experiences, however, were aggregated at the department level to compare participants’ perceptions and understand network dynamics within each department. Third, because participation was voluntary, the study does not include data from every member of the departments included as research sites. This limitation prohibits certain types of network measurement and analysis, but the measurements and analysis that could be used were nonetheless useful for exploring individual faculty members’ networks and for developing the theoretical and conceptual framework that guided this study.

Fourth, the study was conducted at one institution and does not specifically consider the effects of institution type or institutional culture. Although the goal of this study was not to generalize across departments and institution types, but to inform future
studies of networks within academic departments and careers, this is a limitation because the setting – a research-intensive institution – shapes faculty members’ work lives, and promotes particular kinds of activities (e.g., research) that are not equally emphasized in other types of institutions. The study does not compare networks across similar institutions, or include a comparative exploration of networks across different institution types.

Finally, an original goal of the study was to explore the experiences of faculty members from underrepresented populations. Most of the faculty who volunteered for the study, however, were men and most were White. Although the experiences of women and non-White participants, as well as those of foreign nationals, pointed to the salience of characteristics such as gender, and nationality in interactions and networks, the small number of participants from ethnic and racial minority groups made explorations of patterns related to these characteristics impossible.

Presentation of Findings

I present the analysis and key findings from this study in the following three chapters. In Chapter 4, I discuss the Business Department and the departmental factors and individual factors that shaped interactions among participants in that department. I then review the nature of interactions and relationships according to each of Finkelstein’s (1982) colleagueship functions, before closing with a brief summary of the chapter. In Chapter 5, I discuss the Social and Behavioral Sciences Department in the same way. Chapter 6 considers the behavioral strategies, benefits, and patterns of access to resources that emerged from both departments, and Chapter 7 concludes with a summary of the study and key findings, as well as implications for future research.
I do things strategically, which I think is fine. I don’t have a problem with that. That’s what’s funny about these networks. A link means different things in different contexts.

- Scott, assistant professor

This chapter provides a network profile of the Business Department, based on findings from participant interviews and social network data. This network profile includes a summary of the cultural and structural characteristics of the department, and the individual characteristics of its members, that participants perceived to influence their relationships and interactions within the department. The framework for exploring departmental and individual factors in network development comes from Ibarra’s (1993) model of integrated factors that contribute to the development of networks for women and minorities in management. Her framework is adopted, and slightly modified, for this study. First, the departmental factors that influenced participants’ networking behaviors and networks are described. Then, the individual factors that affected study participants’ networks within the department as also described. Considering both departmental and individual aspects allows for a more complete understanding of the needs faculty members have within their departments, the relationships they cultivate to meet those needs, and the outcomes of those relationships.
The Business Department is characterized by a culture of productivity and high tenure demands that shaped it members’ professional expectations of themselves and their colleagues. These high expectations coincided with a culture of collegiality, which participants adopted in an effort to counterbalance the focus on research and the stress of earning tenure. Many professional ties between participants were organized around the three research areas in the department. General support and friendship formed between members of the same areas, but also across areas. Rank and tenure status affected interactions within the department as well. Professional characteristics and personal characteristics affected study participants’ decisions about whom to interact with, and who they viewed as similar to or different from themselves. The combined influence of departmental and personal characteristics resulted in a dynamic network through which faculty members exchanged resources for a variety of purposes. Study participants viewed different characteristics as salient and had different networking goals and strategies, resulting in differences in their connections to colleagues in the department and the resources they exchanged through those connections.

The profile of the Business Department as a social network also includes a description of participants’ explanations of the network benefits they exchange with colleagues in the department, organized according to Finkelstein’s five functions of colleagueship. Finkelstein’s framework of colleagueship, or “the reciprocal fulfillment of needs or exchange of services that takes place in the course of faculty-faculty interaction” (1982, p. 6), evolved from his research of faculty interactions. The five functions include teaching, research, institutional linkages, disciplinary linkages, and general support and friendship. Each of these is explored in this chapter, as well as a sixth function added for
this study, committees and service. Considering how and why participants interact with
departmental colleagues for each of these functions is important for understanding the
network resources that are exchanged within the department. Understanding the nature of
colleagueship in the Business Department helps to explain how departments serve as
networks through which important personal and professional resources are exchanged. In
the concluding section, major themes and findings are summarized.

The Business Department

The Business Department prepares undergraduate students for a range of careers. It
also prepares Ph.D. students for academic careers at top research universities. The
department has a total of 21 members (four women; 17 men), including both tenure-track
and non-tenure track faculty: eight full professors, four associate professors, three
assistant professors, five instructors (teaching faculty), and one research center director
who teaches classes and conducts research in the center, but does not participate in
departmental activities such as committee work, advising graduate students, or hiring
decisions. Potential participants in this study included the fifteen tenured and tenure-
eligible members of the department. Of this group, eleven faculty members participated
in this study. Non-tenure-track faculty members were excluded from the sample because
they have different roles and involvement in the Business Department than tenure-track
faculty. Many non-tenure-track department members had training, career paths, and
career objectives that differed from the tenure-track research faculty. Focusing only on
the interactions of tenure-track faculty members facilitated the study of the personal and
professional interactions of one subset of the professoriate with specific career structures,
career goals, and responsibilities.
The Business Department is subdivided into three research areas, which coincide with the three major subdivisions within the field: the behavioral group, the quantitative group, and the managerial group. Faculty members in the department are organized in these major research areas, with several people engaged in scholarship that bridges these areas. While there is no formal designation of area membership, the faculty was organized into these three area-specific groups for their teaching, research, and service. Members collaborated within areas for responsibilities such as oversight of graduate students (serving as students’ chairs and advisors, teaching relevant courses, serving on doctoral committees), hiring decisions and promotions, and research projects.

According to the participants, the Business Department experienced a time of considerable stress, which lasted for about five years, roughly fifteen years prior to this study. Several members of the department were engaged in a disagreement that became personal and hurtful. Factions developed within the department. Eventually one of the major contributors to the conflict left the institution. Those who had been at the department during the conflict spoke of it often, albeit in vague terms, when referencing the culture of the department and the interaction of its members. Senior faculty believed the culture of the department had improved because of their deliberate efforts to learn from their mistakes after the conflict was resolved.

The Business Department as a network of relationships is depicted in Figure 4. All ties among the eleven study participants are included in this image. This representation of all ties shows participants to be well-connected to each other. Arrows depict whether one or both people in a tie indicated the relationship. For example, Jean
indicated that she exchanges resources with Kyle, but Kyle did not indicate a relationship with Jean.

**Figure 4: Ties Between Participants, Business Department**

Most full professors also have administrative responsibilities within the department. Don is an associate dean in the college. Michael and Ryan are the director and associate director, respectively, of the research center. Sidney is the director of graduate programs in the department, and Rodger is the chair of the department.

Participants include six full professors, three associate professors, and two assistant professors. Two female faculty members and nine male faculty members from the Business Department participated in this study.

Faculty members’ interactions in the Business Department were reportedly affected by multiple departmental factors and individual factors. Faculty members relied on their colleagues for each of the five colleagueship functions, and also interacted around the sixth function of committee and service work. The following sections report how participants are connected, and for what purposes.
Departmental Factors

The nature of the Business Department as a network within which faculty members exchange resources was influenced by the cultural and structural characteristics of the department itself. Specifically, the departmental factors that were influential in shaping participants’ interactions included a reputation for productivity, a commitment to collegiality, tenure expectations, the influence of the discipline, resource allocation within the department, and proximity or the physical space of the department.

**Productivity:** “*There is no dead wood.*”

The Business Department is highly ranked nationally, and its members pride themselves on their productivity and scholarship. The greatest strengths of the department, as described by all participants, were research productivity, a strong positive reputation within the discipline, and the high quality of its faculty, both in terms of scholarship (such as diversity of research interests and range of research strengths) and colleagueship.

Participants spoke of the culture of the Business Department favorably. Don, a full professor and director of the research center, felt that the department had recovered from the earlier period of internal strife: “In the past we have had problems…But right now I think the department may be at its ideal stage.” All participants reported they were pleased with the culture of the department overall, and several indicated that it was the best that it had ever been. Speaking of the department’s culture of productivity and collaboration, Ryan said, “The challenge we have is to keep it up, as opposed to changing it.”
When asked to describe the culture of the Business Department, nearly all participants focused on research productivity. Brad, an assistant professor in the managerial group, said, “This culture is productivity. Research productivity. There is only one culture. Research productivity. You have to publish.” Sarah explained the level of productivity as a function of a shared set of values:

My department is incredibly productive. Everybody is very good at what they do, and they’re all making contributions. I think that we all share that kind of research value of, you know, you need to do it right and you need to do it well. You need to continue to make contributions in whatever way you can. I mean, there is no dead wood.

Sarah viewed helping colleagues as one way of advancing the goals of the department, “If you can facilitate someone being productive, do it…if it doesn’t impede your ability to be productive.” Ryan, too, saw productivity as an important characteristic of the department. When asked to name the greatest strengths of the department, he replied, “I think the research productivity of the department, and a close second would be the diversity in research.”

Study participants suggested that high expectations for productivity were made clear and reinforced consistently. They also suggested that those who did not share a commitment to productivity were not likely to thrive in the department, or be hired in the first place. Most participants expressed a commitment to this component of the departmental culture and pride in their personal contributions to it. One full professor, however, hinted at concerns about how he measured up to his colleagues and fit within the group,
You better pull your weight here, research-wise, if you want to be respected. It's a meritocracy and that's, at times, been a challenge for me. The last couple years, I've been very productive. And so, it doesn't feel like quite the challenge now because I have been productive….I feel safe in the sense of, I suspect that my research productivity is pretty darn good and therefore, most people are not going to doubt my abilities or anything like that.

This excerpt makes clear how the culture of productivity – a departmental characteristic – interacts with individual characteristics (such as self-perceptions) in a way that has the potential to influence decisions about whether and whom to seek out for resources such as advice, support, and collaborative opportunities. This professor’s concerns may have been alleviated by another cultural characteristic of the Business Department, collegiality.

*Collegiality: “We are in this together.”*

Collegiality was a close second to productivity in terms of participants’ descriptors of departmental culture. Don, a full professor in the quantitative group, said, “We prize creativity, we prize individuality. At the same time, we also understand the value of the department as a collective. We are in this together.” Scott, an assistant professor, also emphasized the interrelationship between high demands and high support, “People want to work together and want to help each other out. I think that’s an important strength. I think that makes life here much better….I find the collegiality in the department very high. Everybody tries to help you out, tries to give you a clear path towards tenure. The demands are high, but they try to smooth it out as much as possible.

In part, the collegiality of the Business Department was a deliberate response to the challenging period in its history. When asked to describe the culture of the
department, Sidney said, “Collegial. Attempts pretty hard to listen to all voices. A lot of that’s come out of that war. Nothing comes without a price.” He explained,

I think there was a commitment to a better way. We have conflict. We’re not good at managing that now because we try to avoid it. We don’t want to be bloody. We don’t want to go back there. And we’re right – we shouldn’t go back there. It was bad. But the cost of that is sometimes it’s hard for honest disagreement to get effectively expressed.

Other effects of the conflict included sensitivity to lingering concerns when creating doctoral committees or making departmental recommendations. Sarah, who was not a member of the department during the conflict but knew its history, said, “Every once in a while I have to remind myself, ‘Oh, that’s not going to work because of – you know.’”

Junior faculty indicated knowing little about this conflict. Brad noted, “I’m not aware of [departmental politics]. I think the senior people are very careful, talking about those things.”

A key attribute of the collegial culture of the Business Department was the perceived absence of scholars labeled “superstars” or “prima donnas,” who were concerned about their own egos above the good of the department. This was particularly important as the department tried to recover from the challenging time in its past. Don stated, “If somebody is really not going to be a personable and friendly person, I doubt that person will ever get hired in our department. It doesn’t matter how strong they are in their research. But it’s very strategic. I wouldn’t say it’s accidental.” This hiring practice included recruiting and retaining faculty members who would share a similar commitment to the department. Participants saw the maintenance of a positive and
collaborative culture as a responsibility. They seemed to believe that such a culture made life better for them individually, and was a strong component in the collective success of the department as well. As Michael described it,

One of the things I don’t want here are colleagues who are – I remember George Carlin said one of his ten commandments was, ‘Stay away from grouches. They’ll bring you down.’ And grouches in the academic world, there are a number of people who are very, very smart, who are very, very productive, and who are incredibly selfish and are disruptive to harmony.

Michael explained that the former dean of the college had shared this perspective and had aggressively fostered a positive culture by removing faculty members who were “disrupting departmental climate.” He recalled,

She knew that something was wrong with the sociology of the department. And she found out who the most troublesome members are…those people are gone.

She wanted excellence for the place. But she realized that for the good of the whole, you really want folks who you can turn your back on and not worry about needing some armor back there.

The commitment to hiring and retaining exceptionally strong scholars who were also friendly and collegial was one of the most strategic and deliberate actions that faculty members engaged in as a department.

*Disciplinary Influence: “A very broad field”*

When asked to describe if and how the discipline influenced the Business Department, many study participants described the division of research areas at the disciplinary level into behavioral, quantitative, and managerial groups, which formed the
organizing structure of the department as well. Among the study participants from the Business Department, Jean, Rodger, and Sarah are in the behavioral group. Don, Jim, Kyle, and Scott are in the quantitative group. Brad is in the managerial group, as are Sidney, Ryan, and Michael. Sidney is also in the behavioral group. Ryan is in all three groups, and Michael is in both the managerial group and the quantitative group.

The “fragmented” nature of the discipline, as Sarah, an associate professor in the behavioral group, referred to it, created clear boundaries between the research groups within the department, with some faculty members acting as bridges who connected the groups (of the participants, this included Michael, Ryan, and Sidney). Scott said, “[This] is a very broad field. You have a lot of different types of researchers, which makes it interesting but also sometimes makes it harder to appreciate each others’ work. You have a lot of clique-forming. It’s hard.”

Another way in which the department mirrors its broad discipline is in the various types of research methods and approaches to collaboration. Rodger, a full professor in the behavioral group and chair of the department, indicated that he had worked with a small group of scholars throughout his career. When asked if the discipline was one in which scholars collaborated in small groups as he had, Rodger replied, “I think it really depends. There are people who work mostly with their Ph.D. students. Some people work with a lot of different folks in the field. I don’t think [my approach] is necessarily representative of what other people do.”

High expectations for teaching also revealed disciplinary norms in the department. Ryan, a full professor who bridged all three research groups, said, “In business schools, the pressure to teach is way higher than in other schools. Teaching
takes a long time to prepare. You have to keep your cases up to date. In business, things
change dramatically. You have to stay current.” The need to spend a great deal of time on
both teaching and research left many participants, particularly those who had not yet
achieved tenure or a full professorship, feeling that they had very little time to devote to
relationship-building or socializing with colleagues.

Resource Allocation: “It does help if you know the right people.”

The distribution of resources across the three research areas, particularly for
hiring new faculty, appeared to be viewed as a potential source of departmental tension.
For example, Scott said, “There are different opinions. There are very different types of
research that we do so that sometimes conflicts, for instance, in terms of who we should
hire.” Sarah provided some insight into how these dynamics have evolved and changed
over time,

For a long time, the behavioral area was the dominant area and people who were
quantitative felt like sort of second-class citizens. Just before I arrived, two of the
senior behavioral people left and there were some retirements. The power in the
department shifted over to the quantitative side. Some of the folks started research
centers, so they started getting more resources. All of that coalesced and now, the
behavioral side is kind of the second-class citizen.

Resource allocations among research areas were acknowledged as imperfect, but not to
the point of being problematic. As Don said, “Sometimes we get [resources], sometimes
somebody else gets them….Is there a rational way? By and large, yeah. Is it perfect? No.
Is it equitable? No.”
One of the most productive members of the department, Ryan expressed frustration with the allocation of resources, such as research funding and preferred course assignments, to less productive members of the department. Ryan was consistently cited by participants as having a highly effective networking strategy, as being prolific in his productivity, and as being one of the key members of the department. Brad’s respect for Ryan was evident:

Ryan came here and, very quickly, he became very successful. He is full professor ten years after he started the Ph.D. He is the associate director of [a research center]. He is very well-known in the field. So if there is one person worth emulating, it is him.

Commenting on Ryan’s reputation in the field, Sidney predicted: “He's going to leave. He's going to get a huge chair somewhere and he's going to deserve every bit of it.” Yet, Ryan felt he had not received the same support that his colleagues had. When asked to explain why this was occurring, he replied,

My guess is that to some extent, it was personal relationships which determined that. I won’t get into specific relationships. I think people thought that others needed more support. You know, ‘This person needs to be protected. They’re not doing well. What will happen to them? Let’s protect them. But this other guy is doing fine, let’s forget him.’ Or her. Or whatever….There’s always a taken-for-grantedness feature that comes into the picture. Like, ‘yeah, he’ll be fine.’

One might expect that someone in Ryan’s position would receive more resources than his less productive colleagues, particularly given the concerns of the full professor, described earlier, that the department was a “meritocracy” that rewarded productivity. From Ryan’s
perspective, this was not the case. He expressed his frustration, feeling that his productivity was potentially less rewarded than the behaviors of his colleagues,

Sometimes you feel a little bad about that. I could have done with that as well.

More research money, a sweeter teaching deal, things like that which are given to other people. But in the larger realm, those are minor things. But at that specific time, you’re like, ‘Why the hell are they doing that? I’m being the productive one. Shouldn’t I be rewarded, instead of that person being protected?’ But I can see their point of view.

Ryan attributed the differences in resource allocation to relationships as well as productivity,

Sometimes if you have certain relationships, they have some value. That’s social capital. They have their own value. And I think sometimes people don’t realize they’re doing it.

Ryan’s experience points to the ways that interpersonal relationships and individual perceptions can affect the allocation of resources within academic departments just as much, or more than, formal policies and practices. He perceived that faculty members’ social networks afforded them resources he would have liked to receive – resources he felt he had earned based on merit, service to the department, and self-sufficient productivity, or, the formally recognized goals of the department and its members. Don, a senior member of the department, perceived a disparity in resource allocations, arguing that merit was not appropriately recognized in the department. He said, “We need to put more money, more resources, towards people who are more successful and less towards others, not to the extent that it will create disharmony, but certainly more than it’s done
right now.” Like Ryan, Don acknowledged the role of relationships in the resource allocation process,

Those who take the time to build up connections and network with the right people do get more. Yeah, it does help if you know the right people. It does help if you take the time to build connections. People will not put down their friend in a meeting.

Rodger, the department head, dismissed the seriousness of the issue, saying, “I wouldn’t say that someone in the department ever got really upset because somebody got something and they didn’t get it. Some of that would be natural, but I don’t think it’s created any real problems.”

Most study participants in the Business Department did not perceive that they had received resources their colleagues had not, or that they did not have access to resources that colleagues received. Some participants acknowledged that resource allocation was an imperfect process. While participants were generally satisfied with the formal processes for distributing resources within the department, some faculty members noted that the social capital that comes from interpersonal relationships does influence who receives which forms of support. What these participants identified is the role that both departmental policies and interpersonal relationships can have in the distribution of resources within academic departments.

Tenure Expectations: “I’m under a lot of pressure.”

The most stressful component of participants’ careers in the Business Department seemed to be the quest for tenure, and was thus present almost exclusively among the assistant professors, Brad and Scott. Brad, in particular, was highly concerned about
managing the stress of tenure, “If you look at the tenure record, it’s not very good. Most people don’t make it. So I probably won’t make it either. I realize that. I’m under a lot of pressure, I can tell you.” Scott stated that he knew he should spend every weekend of the next two years working, but understood that as part of the job and felt supported by the department. His ability to manage the stress, however, did not come without effort, It’s really hard to get rid of that pressure. You really have to watch out for that. I didn’t always realize that. My first two years here were extremely hard. When that realization hits you out of grad school, it’s like, bang, like a big wall. Now, it’s ok. You accept how it is.

While assistant professors were naturally the most concerned with tenure requirements in the department, their tenured colleagues reported being invested in the success of their junior colleagues, and thus also affected by the high tenure demands placed on assistant professors. The senior members of the Business Department tried to support assistant professors as they focused on developing their research agendas and obtaining tenure. The main tactics for supporting pre-tenure faculty were keeping them faculty free from committee work, steering them clear of departmental politics, and giving them manageable teaching assignments.

Assistant professors had some committee assignments in the Business Department, but committee work was deliberately kept to a minimum for these faculty members in order for them to focus on their research productivity. An associate professor said, “This department is really good about protecting junior people from serving on a bunch of committees and doing a lot of service.” Committee work and service roles were
seen as the responsibility of the senior faculty, for the most part, and expectations for service increased once someone had earned tenure.

Junior faculty members recognized that part of their protected status was exclusion from departmental politics, which they welcomed. When asked if he was involved in departmental politics, Brad said, “No. No. Really, no. Not interested. No one is interested in that because their own situation with tenure is precarious.” He went on, “People here don’t care much for politics. It’s much more about the research that you are doing. The problem is having sufficient time to revise, resubmit, and get those publications.”

Teaching responsibilities for junior faculty were monitored in terms of the quantity and types of courses they were expected to teach, and senior faculty worked with assistant professors to ensure they were meeting tenure standards in terms of the quality of their classroom teaching. For some senior faculty, this meant taking the time to support their pre-tenure colleagues. Sarah said, “It’s not clear to me that Scott is going to get tenure. But at least very early on, Ryan was the one who said, ‘You need to talk to Scott about his teaching. You need to help him get his teaching ratings up.’ Ryan and I are of a similar mindset. It’s better if people can be successful and productive.” Expectations for earning tenure in the Business Department were high, and caused the two participating assistant professors to invest substantial time and energy into meeting those expectations and managing the stress that came with such demands. Tenured colleagues recognized these demands, and helped assistant professors manage the tenure process by providing advice, friendship and support, opportunities for collaboration, evaluation of teaching, and other types of support. Such resources became central in assistant professors’
networks, and often established the causes for interaction between tenured and untenured participants.

_Proximity:_ “In this building, it’s really hard.”

Proximity was often cited by participants as a cause of interactions and the exchange of network resources, particularly advice and support. As Scott said, “It helps. It’s probably important. Close proximity probably matters. I don’t think it’s the only thing, but in the beginning it can help build up something.” Similarly, when asked why they did not have ties to certain colleagues, faculty members commented that a lack of proximity affected connections and relationships. Brad noted, “A lot of it is geographical. You don’t run into them.” Referring to particularly strong connections depicted on his sociograms, he continued, “These two, Scott and Anne, are the assistant professors who sit by me. Kyle is here [next to me] and I run into him all the time.” He relied on similar explanations when discussing whom he approached for help with teaching, indicating that interactions were caused by similarities such as rank or research interests, but also by the convenience of who was nearby.

The department had recently relocated to a new building, and the dean had deliberately distributed academic departments across the building to promote interaction between departments. An unanticipated effect, however, was the reduction of informal interactions within departments. Many participants felt that the physical distribution of office spaces had a negative effect on interactions within the department. Sarah explained, “To be honest, in this building it’s really hard. The department bookends this building. So you’re walking for literally five minutes to go see somebody. It’s awful.” She noted that the change in proximity had affected some of her relationships, such as
with Hunter, a colleague in the department, “I mean, Hunter and I talk. He was in the
office next door to me [in the former building] so I would see him all the time…Now we
don’t have a lot of occasions to talk about work-related stuff.” Sidney’s office was not
close to any of his colleagues’ offices. He attributed his relative physical distance from
his departmental colleagues as a major factor in his feeling disconnected socially,
“Frankly, moving has more contributed to that, rather than less contributing to that. I
have a lot to do and that means I eat a lot of lunches at the desk.” As he considered the
move, Sidney said, “it will probably bring me back more into the social – or at least the
interactive – side of the department.” He was hopeful that assuming the role of
department head in the near future, and subsequent relocation to the central
administrative office in the department, would help to improve his connections to his
colleagues.

Individual Factors

Just as the structure of the Business Department characterized interactions, the
professional and personal characteristics of faculty members also shaped networking
behaviors and homophilous (as well as non-homophilous) relationships. Professionally,
research interests, rank and tenure status, and administrative roles affected study
participants’ networking goals and behaviors. Personal characteristics, including gender,
family status, nationality, and age, affected networking behaviors in the Business
Department.

Research Interests: “This is a research school. That is most important.”

Similarities related to research interests and a dedication to high-quality
scholarship were the most frequently cited type of homophily, or similarity to others,
during conversations with participants. Participants also indicated less interaction with colleagues whose research interests were dissimilar from their own. For example, Rodger explained his lack of ties to colleagues who had different research interest than his, “I don’t do any kind of managerial research so if someone is focused on that, there’s no common interest. Same with modelers. I wouldn’t work with people from that area. I’m not interested in it.”

Research areas provided opportunities for interaction through collaborative projects and shared oversight of Ph.D. students. When asked to talk about his research network in the department, Scott said, “Well, this is a research school. That is most important.” There were several bridges, Sidney, Ryan, and Michael, whose work spanned across most or all of the research areas in the department. These bridges formed research-based ties with a greater number of colleagues than those in specific research areas, and helped connect otherwise unrelated groups.

Several participants described research as a social activity that facilitated interaction, and felt that their research was better when it involved collaboration and conversation about ideas. Don said, “I feel that research is not something you [do alone]. You don’t sit behind a desk, in front of a computer, lock your office and work. I don’t do that when I work. I like to mingle, talk, throw out ideas.”

*Rank and Tenure Status: “In the same boat”*

Given the culture of productivity and the rigorous demands for tenure in the Business Department, individual differences in rank and tenure status affected participants’ networking goals and strategies. There was less difference across rank in the networking behaviors of associate professors and full professors, but substantial
differences between the strategies of tenured faculty members and those of their untenured colleagues.

One rank-based difference was interactions within groups compared to between groups. In other words, assistant professors interacted with each other differently than they interacted with associate and full professors, and vice versa. These differences manifested themselves most frequently through the types of resources exchanged, with assistant professors receiving resources from their fellow junior colleagues as well as from senior colleagues. Tenured faculty, on the other hand, received some research-related resources (mainly through collaboration) and general support and friendship from their fellow senior colleagues. They tended to see themselves as independent scholars needing few resources from their departmental colleagues, but responsible for providing resources to junior faculty or to the department as a whole. Sidney said, “My interaction with Kyle and Ryan, for example, both of them have moved from junior, trying-to-develop scholars into developed, serious scholars. They don't need a mentor now. They need a friend.”

The role of senior faculty in the department seemed to be understood by their junior colleagues as well. Brad explained that tenured faculty members tend to have greater access to resources, and the ability to distribute or share those resources with junior faculty. He said, “Tenure is legitimacy. You can guide people. Their relationships [with each other] differ from those with the faculty to whom they are providing those resources…they’re not offering those resources to the tenured faculty.” He speculated that tenured faculty tended to engage in friendship and collaboration with each other as the result of a shared history and commitment to the department, “Maybe there’s this
issue of long term, you know, both having the same setup. But for the newbie like me, there’s no real, granted, long-term tie.” Brad’s comment illustrates how junior faculty members tended to view themselves as new entrants who had not yet been “granted” a place in the network, while tenured faculty had a different kind of security, as well as a different investment in the department. These differences shaped the reasons faculty members interacted, as well as the structure of their relationships.

To some extent, junior faculty reported relying on their fellow assistant professors for help with teaching, friendship and support. They were relatively free from disciplinary and institutional responsibilities, and relied on their former advisors from graduate school or senior colleagues in the department for research-related resources such as mentoring, co-authoring, and funding. Brad described how his relationship with Anne, another assistant professor, differed from those he had with Rodger, Ryan, and Sidney because of rank,

She is just ahead of me by a couple of years. So she is in the same boat and it is very good to get a different type of opinion from her, [compared to] these guys who are tenured and senior. These three, I seek out because they might have something valuable to offer through experience.

Michael, a full professor in the managerial and quantitative groups, also spoke about the differences between his interactions with assistant professors and those with other senior faculty in the Business Department,

I'm mentoring some of the junior faculty. I think the issue with them is different than with Don because of my connection with Don. I'm still senior to these other
people. Next to Don, my closest colleague here is Ryan. We are interconnected on a host of research, doctoral students, and institution-building activities.

Senior faculty participants provided explanations of how tenure afforded them a certain amount of influence and freedom. Sarah provided the example of her efforts to create lab space in the building that she could use for her research, “I started getting more traction when they realized they weren’t going to be able to get rid of me because I was going to get tenure.” Michael said, “Since I have tenure, I've got complete control over my relationships, the research I do, and how I allocate my time.” Michael explained that he was able to provide resources within the department based on what he had acquired throughout his career. “I’m well connected. The resources,” he explained, “are my experiences.”

Michael continued,

I’ve been the director of [the research center] for 25 years. I’m networked with well over 1,000 academics around the world. I have been a president of professional societies. I’ve edited journals. I’ve got the connections and I know all the editors. I’m well connected in a lot of different ways….And we run a multi-million dollar operation through [the center] and we give out research grants. So from that standpoint I've got resources as well.

Some participants did not perceive rank to be a differentiating factor among department members. Don, a full professor, said, “I think our department has been generally supportive of most people and we don’t have too many rank-based distinctions.” Other tenured participants, such as Ryan and Kyle, indicated that while the department supported assistant professors, they are ultimately responsible for their own success.
Ryan said, “I personally think they’re faculty so they should be able to stand on their own. They’re not students anymore.” Others, such as Scott, expressed a differential that placed junior faculty members at a potential disadvantage, “You get more pressure as a junior, because all these seniors are so freaking damn good….if you’re junior, you tend to be a little quieter, perhaps, than you should.” The assistant professors reported engaging in impression management as they sought tenure, which affected their relationships in terms of whom they were willing to approach, and for what resources. As Scott described it,

The good thing is that this is an extremely good department. The bad thing is that this is an extremely good department. And they want to stay good. If you want to make full, you have to signal that you want to go for it. And that doesn’t always match what’s in your head or in your personal life. So then, it’s like, who do you talk to? You don’t want to talk to the ones that are pulling the ropes up there. They might be like, “Wait a minute. This does not match the philosophy of the department. Is this the right way to go?” So at that point, you do things strategically.

Administrative Roles: “Not the normal kind of departmental position”

Faculty members’ interactions and networking strategies in the Business Department were affected by senior members’ administrative responsibilities, both within the department and its affiliated research center, and at the college level. In this department, Don, Michael, Rodger, Ryan, and Sidney had administrative responsibilities. Administrators were often hired explicitly for the purpose of managing programs or centers, or were pulled away from the traditional faculty responsibilities of teaching,
research, and service in order to focus on their administrative responsibilities. As Michael said of his role, “It’s not the normal kind of departmental position that you'll find with the other professors.”

Administrative responsibilities were cause for interactions and resource exchanges, resulting in interpersonal relationships. For example, Rodger said of Sidney, He did some administrative things. I was director of the graduate program before department head. He took over that role, and now he’s taking over as department head. So we have some things to discuss and, yeah, I rely on him for advice because we’re at the same stage.

These responsibilities were a potential barrier to interactions between senior faculty members and their junior colleagues, who did not have administrative responsibilities and were focused on earning tenure. At times, their responsibilities also seemed to hinder administrators from interacting with colleagues informally. Explaining her weak tie to Don, Sarah said, “Don has become the senior associate dean. But he and I don’t tend to overlap a lot in terms of areas either. And he is a man on the move. He does tons of special programs, and he was running the research center.” For Sarah, forming a connection to Don was harder to achieve because his responsibilities seemed to decrease the likelihood of casual conversations.

Administrative roles also positioned senior faculty members as valuable colleagues sought out by their peers due to the resources they controlled. For example, describing why he chose Rodger to observe his teaching, Brad said, “We can request anybody, any tenured faculty. I chose Rodger because he is the chair and he should see [my teaching]. Instead of somebody telling him, why not let him see it for himself?”
Describing interactions between faculty members and the department chair, Michael said, “Let’s suppose that Chairman A comes in versus Chairman B, and Chairman A likes me much better. If I’m a faculty member, I might want to really support Chairman A because maybe he’ll take care of me a little bit more or give me a higher salary or a better teaching load.” Some participants perceived access to administrators to include access to the resources they controlled.

**Gender: “A nice girl”**

Gender affected interactions in the Business Department in several ways. A female associate professor noted that while women are in positions of power and leadership in the disciplines (as heads of disciplinary associations and editors of journals), the field is still male-dominated. She saw tenure as a carry-over from a time when faculty members were all men, and stressed both her commitment to supporting female scholars and the difficulty of “finding the right woman at the right time with the right credentials.”

The male-dominated department, in a male-dominated discipline, displayed some traditional gender biases in terms of language, assumptions, and support structures. Some male faculty members used masculine nouns and pronouns when referring to their colleagues, such as noting that the department seemed to be free of “the sort of guy who cares about departmental politics.” When asked how he determined who to go to for help with teaching, a male participant replied, “Usually the women have a much better intuition for teaching so I talk to them.” Another referred to his female colleague as “a nice girl.” It is worth noting that both of these participants were from countries other than the United States. While it is of paramount importance to not generalize or make
assumptions based on this fact, it is also important to consider how participants’ cultures and beliefs are contextualized within their countries of origin and lived experiences. It is also important to consider how these beliefs and experiences serve as points of similarities or differences within networks.

While male participants never cited gender as the reason for their interactions or gender-based support, women did. Jean recalled how the women in the department had been very helpful when she relocated and joined the department, providing her with the names of their babysitters, for example. Yet, she noted that because she had small children, she had little time to network. Jean focused making herself visible to, and interacting with, the people in her research area, regardless of gender. For Jean, seeking out relationships with other women or other female academics was “not as relevant” within the boundaries of the department as it was in her life and career in general.

Both Jean and Sarah, the two female study participants in the Business Department, pointed out that women in their field tend to be in the behavioral research area, while men tend to be in the quantitative area. Sarah provided anecdotes of informal and social interactions with women in the department that strengthened their ties to each other,

I remember the very first week I was here. I moved into my office, and there was all this tape and everything on the inside of the drawers. And I went into Cindy’s office and I said ‘I have a really strange question for you. Do you have any nail polish remover?’ And she burst out laughing, and said ‘Oh my gosh, I’ve been waiting for someone to ask me that!’…I feel very close to Cindy.
Some male faculty members expressed interest in knowing more about the experiences of their female colleagues. Rodger said, “It would be interesting to see how women view it. Often times we [men] aren’t even aware of it. I know we’re trying to do more. Jean is trying to organize lunches [for female faculty and staff] and things like that.” Yet, Rodger’s example of how the department was trying to do more to support women was a comment about Jean’s efforts to facilitate connections between the other women in the department. Other male participants, like Ryan, observed that the women in the department tended to interact as a group but he did not seem aware of what caused those interactions or how they affected women’s careers. When asked if there were any formal social groups in the department, Ryan replied,

Women faculty are close to each other. Even if they are across areas, they talk to each other a little bit more. So, the area affiliation is there but there are other factors that come up for them…The female thing is there. The male thing, I don’t think, would be there.

Most male participants in the Business Department seemed unaware that women might have different experiences than them, but at the same time, several male participants singled out female colleagues as providing access to particular resources (such as help with teaching and networking opportunities for other women) specifically because of their gender. Men may have also unintentionally cultivated homophilous relationships, in which gender was a salient characteristic that contributed to perceived similarity with colleagues. Both female participants spoke about the influence of gender in their networks. Gender represented a type of homophily in which women perceived
themselves to be similar to other women in the department, including those who were not tenure track faculty.

*Family Status: “That whole spousal issue”*

Families and marital status provided homophilous ties for some faculty, but separated some participants from others. Located in a rural area, the department is situated in a town that is known for being family-friendly. It was equally well-known as being a challenging location for single people. Regardless of their individual experiences, participants expressed a sense of community and support within the department that fostered a positive approach to families and personal responsibilities. As Ryan noted,

> Most people here value family, and family time. Those are consistent. They understand. There have been cases when they have stepped in. Sidney fell ill a few years back and people stepped in to fill his classes. Things like that. They grant you your personal space.

Several other faculty members provided similar examples that corroborated Ryan’s perception that personal support and respect for members’ personal lives contributed to a positive culture. Sarah recalled feeling comfortable about not attending a recent department picnic, “I was visiting my parents. My brother and his family were there and I didn’t want to miss out on time with them. But, you know, [my colleagues] understand that.”

For some faculty, it was important to spend their personal time with family to counter long hours devoted to teaching and research. This left little time for cultivating personal relationships with colleagues. Brad, for example, realized that spending his time on his research or with his family separated him from other colleagues, who socialized
together during and after work, but his research and his family were his highest priorities. He valued success in both, as well as balance between the two. “I can’t just take all my time and do this. Then [my family] is not happy. That is not fine. I realize that,” he said, “If I fall, somebody will support me, though family takes time from research. I really appreciate having that.”

Other participants developed lasting personal relationships with colleagues in the department because of similarity in family structures or time spent with each others’ families. In one instance, a prior friendship had been influential in a hiring decision, which resulted in a subsequent long-term mentorship and professional relationship. Sidney had become friends with Sarah through his friendship with her brother, and had suggested that she apply for an open position in the department. She was hired, and both spoke of the close personal and professional ties that had evolved between them since then. Rodger described his personal ties to former departmental colleagues. He recalled,

> There was one couple. They actually lived across the street from us. I would do things with her professionally. When I came here, we wrote a couple of papers together. But I also liked them personally. We were good friends. My wife is still in contact with her, and they come for visits sometimes.

Ryan also noted that several strong friendships had developed in the department based on similarities in personal lives. He said,

> There used to be a faculty member here. He was a very close friend of Michael’s. And that was because they had similar interests – wine, movies, things like that. Michael was an empty nester and had been for a while. This other guy didn’t have
any kids. Those kinds of things just sort of gel. So, they had a really good
friendship.

For single faculty members in the department, the absence of children or partners in their lives seemed to reduce their interactions with faculty members whose family lives differed from theirs. When asked how she was different from her departmental colleagues, Sarah replied, “Certainly being single.” She later said,

These folks all get together a lot, and their spouses hang out together. I feel that whole spousal issue. I’m the odd duck. That’s fine….but I feel like it’s easier for me to connect with people who don’t have all of that built-in stuff.

Scott, too, spoke of the challenges of developing personal ties in the department as a single person. After describing his research, he described his personal life, “Ah, well. That is a totally different thing,” he said, “given that I am single at the moment, it’s a bit of a challenge. I see that with other people in the department and the college, as well.”

Speaking of his approach to cultivating friendships, Scott said,

Obviously, you look for your same demographic group, which, if you look at our department, it’s automatic that the young folks seek each other out. And you figure out really quickly what the situation is. Is the person married? Do they have kids or not? Not that it matters, but you do different things with those people.

Nationality: “I lost all my community.”

In the Business Department, some study participants from countries other than the United States perceived their nationality or country of origin to be important components of their identities, and subsequently their interactions with others in the department. Rodger, the department chair, was from Europe. Although he said he did not deliberately
seek out personal or professional ties with other foreign nationals, they constituted much of Rodger’s network. He said,

Mostly, I work with people in Europe. Those are my closest collaborators….This guy who left for Australia, we would go to coffee really often. When the Indian couple was here, we did a lot with them. Another couple, he was Indian and she was Mexican, we would meet outside of school every once in a while. But I don’t really do that [anymore]. There was another Indian couple that were our friends. There were others, a guy from Israel that I worked on a project with.

When asked if it was easy for him to connect with other international scholars, Rodger replied, “Yeah. It is kind of natural for me to interact with them, because of some of these common interests.” Scott remarked that part of his connection to Rodger was that they were both European, and that Rodger knew some of Ryan’s friends and contacts from his home country. Later, he explained that one of the negative aspects of not living in a big city was the difficulty of making connections to other people,

I mean, for me, being a foreign national, you try as many things as you can and what sticks, sticks….you have less opportunity to meet people than in a bigger city, [less] groups that you can associate with.

The stress of investing in a profession that kept him physically far from his family weighed heavily on one participant, “I’m away from my parents. That’s a big loss to me and to their grandchildren. I lost all my community, all my network when I came here. We have no relatives here. My daughter doesn’t know our language.” He concluded,

It’s very important for kids to know their history, where they came from, why they came, what they are. That gives you a sense of distinction and pride and tells
you who you are, how you are different. That has been lost. The soul of the family has been lost. It’s all about the work.

In the Business Department, several participants from countries other than the United States referred to their nationalities as sources of shared identities or common interests and experiences with other foreign nationals, which helped them to forge connections and foster relationships. This may have been to their advantage in some ways, when personal connections led to the exchange of professional resources. For example, Scott’s sense of similarity with Rodger was based on their both being European, which seemed to facilitate a professional relationship that may not have otherwise existed between a new assistant professor and a department head. For other foreign nationals, however, this component of their identities set them apart from their colleagues and caused them to feel disconnected from their networks. These examples point to the individual differences that emerge based on faculty members’ unique experiences and identities. Within the shared context of their departments, what serves as a point of similarity between some people can also serve as a point of difference between others, which may lead to different access to network resources.

Age: “In a different stage in life”

Although not to the same extent as the other factors, age affected how faculty members viewed themselves and their colleagues, and subsequently shaped interactions. Many of the effects of age might be linked to the similarities and differences between colleagues associated with rank, career stage, tenure status, and administrative roles. In some instances, however, participants cited age as the specific factor that shaped their interactions. Among other factors, Rodger cited his similarity in age to Sidney as one of
the reasons they connected. Sidney reiterated this when he was explaining his own departmental network, “Rodger and I are of a similar age. We don't always agree about everything but we're of similar belief systems and of similar training and I have a lot of respect for him. In all ways, not just as a researcher.” Rodger noted that despite similarities with Scott, the difference in their ages affected their interactions, “Well, he’s a lot younger so he’s in a different stage in life. I don’t know how old he is, maybe mid-thirties. That’s almost twenty years younger than I am…he doesn’t have a family and he’s in a different stage of his life.” Age did not seem to be the defining characteristic in participants’ relationships, but it contributed to the ways in which participants identified colleagues as similar to or different from themselves.

Colleagueship Functions

Following a consideration of the characteristics of the Business Department and its members that affected networking behaviors, the next point of analysis in the conceptual framework is a review of interactions according to Finkelstein’s (1982) functions of colleagueship. These functions include research, teaching, disciplinary linkages, institutional linkages, and friendship and support, as well as a sixth function added for this study, committees and service. Each function is discussed and illustrated by the sociogram of interactions among participants according to that function. Degree centrality, or the number of ties to other members of the department, was used to explore function-specific networks in the Business Department. Centrality measures include ties to all other members of the Business Department. These data are useful for exploring relationship patterns within the department and between participants. The centrality scores of participants, as well as the average score by function, are provided in Table 4.
Table 4: Degree Centrality, Business Department

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Overall Network</th>
<th>Teaching Network</th>
<th>Research Network</th>
<th>Institutional Linkage</th>
<th>Disciplinary Linkage</th>
<th>Support &amp; Friendship</th>
<th>Committees &amp; Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brad</td>
<td>Asst.</td>
<td>11</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Don</td>
<td>Prof.</td>
<td>14</td>
<td>6</td>
<td>7</td>
<td>14</td>
<td>10</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Jean</td>
<td>Assoc.</td>
<td>15</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Jim</td>
<td>Assoc.</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
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<tr>
<td>Kyle</td>
<td>Assoc.</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Michael</td>
<td>Prof.</td>
<td>14</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Rodger</td>
<td>Prof.</td>
<td>20</td>
<td>1</td>
<td>6</td>
<td>20</td>
<td>8</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Ryan</td>
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<td>4</td>
<td>11</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Sarah</td>
<td>Assoc.</td>
<td>18</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Scott</td>
<td>Assist.</td>
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<td>6</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Sidney</td>
<td>Prof.</td>
<td>19</td>
<td>9</td>
<td>10</td>
<td>14</td>
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<td>7</td>
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</tr>
</tbody>
</table>
Research

As noted, the three research areas in the Business Department shaped the network interactions within the department. Participants’ individual research interests were commonly acknowledged sources of shared interests, formal interactions, and friendships or relationships between colleagues. Research areas also dictated committee assignments and teaching assignments, further expanding the effects of research on departmental interactions. These areas, together with the strong cultural component of productivity and research excellence, made research interest the most frequently cited cause for colleagueship in the department. Participants’ ties for research functions are depicted in Figure 5.

Figure 5: Research Ties, Business Department

The average centrality score for research networks among participants in the Business Department was 7. Those who were identified as bridges between research areas, Michael, Ryan, and Sidney, had centrality scores of 9, 11, and 10, respectively for
their research networks. Scott, an assistant professor, had a centrality score of 10 for his research network. While he collaborated with his peers in the quantitative group for research activities, he sought advice about his writing from ten colleagues within the department. Brad and Jean, the most recent members to join the department, had research networks of 3 ties and 1 tie, respectively. Don was connected to 7 colleagues for research purposes. Both Sarah and Rodger had centrality scores of 6. Jim had a score of 5, and Kyle had a centrality score of 4.

A lack of similar research interests or collaborations was the most commonly offered explanation for the absence of ties between faculty members. Brad said of several people with whom he indicated no interaction, “I don’t do the type of work that any of them do. The type of work that I do is like Michael, Ryan, Sidney, and Anne. Those are the good matches.” Rodger offered the same explanation when discussing the extent to which his research interests affected his departmental interactions, “I don’t do any kind of managerial research so if someone is really just focused on that, there’s no common interest. Same with modelers. I wouldn’t work with people from that area. I’m not interested in it.”

Teaching

Teaching was an important component of faculty members’ work in the Business Department, although to a lesser degree than research. Teaching networks include interactions with colleagues based on conversations about teaching and giving or receiving teaching-related advice. There were no instances of co-teaching or collaborative course development in the Business Department. On the contrary, Ryan
described teaching as “independent” work. Figure 6 shows the network of teaching-related ties among participants.

**Figure 6: Teaching Ties, Business Department**

The average centrality score for teaching networks was 5, the lowest score for all of the colleagueship functions (see Table 4). Jim had no teaching-based ties with his colleagues in the department, indicating that he did not interact with his peers for teaching-related purposes, and that they also did not seek him out for such purposes. While conversations with faculty members revealed rank-based differences in the functions of teaching networks, there was not a substantial difference in centrality scores across ranks. This may be attributed to the advising component of teaching networks, which involved both tenured and pre-tenure faculty members.

Because faculty members’ teaching was included as a component of their tenure reviews, junior faculty were careful to obtain the support of senior faculty for their teaching. In turn, senior faculty formally reviewed the teaching of junior faculty as a
departmental policy. Oftentimes, these formal reviews led to ongoing conversations about teaching between junior and senior colleagues. Because the senior faculty participants were interested not only in the individual success of the pre-tenure faculty, but also the success and productivity of the department, they actively engaged with new faculty to ensure their teaching was up to standards. Pre-tenure faculty also met with each other informally to discuss their teaching, compare strategies and offer support to each other. Scott and Brad both indicated, for example, that they had strong friendships with each other and with Anne (not a study participant) and often spent time talking about their teaching together.

Senior faculty were less likely to talk with each other about teaching. Not all of them were invested in that component of their junior colleagues’ careers. When asked if teaching gave department members cause to interact, Rodger said, “I don’t think so. I would say it’s more their research. Certainly I’ve never done that, talked a lot with other people about teaching or got advice from them about how they teach.” Interactions focused on teaching among study participants in the Business Department, most commonly exchanging advice or formal evaluations of teaching, seemed to be related to earning tenure as much as cultivating effective teaching practices. Exchanging teaching resources was nonetheless important within participants’ networks.

Disciplinary Linkages

Disciplinary linkages include sponsorship for positions in disciplinary associations, help with grants and funding, and introductions to other scholars. Faculty members in the Business Department did not indicate relying on each other for disciplinary linkages during the interviews, but indicated an average of 6 ties for this
purpose in the network surveys. Ties to colleagues according to disciplinary linkages are shown in Figure 7.

Figure 7: Disciplinary Ties, Business Department

It may be that participants interpreted the survey questions as inquiries about relationships over time, but focused on their current interactions and relationships during the interviews. In other words, participants would be likely to indicate on their survey responses that a colleague had introduced them to another scholar or nominated them for a role in a disciplinary association at one time or another, but would not necessarily identify this as a prominent or notable function of their intradepartmental networks.

Jim had only 2 ties and Kyle had no disciplinary ties within the Business Department. Sarah, who expressed an interest in cultivating ties with colleagues, had 12 ties for disciplinary functions. Full professors had more ties for this function, potentially the result of longer careers and opportunities to cultivate such ties over time.
Participants maintained strong networks outside of the department through their former advisors and peers from graduate school, current and former collaborators, colleagues in disciplinary associations, and through disciplinary roles such as journal editorships. Connections with former advisors remained vital to the ongoing research and publication activities of assistant professors. In some instances, junior faculty invested their time in these relationships over forming connections with the senior colleagues in their departments. When asked to name his sources of support, Scott replied that most people who “influenced” him came from outside the department, particularly his dissertation advisor. “They are way more important for me and for my visibility in the field at this point that any of these guys here,” he said. Brad, too, relied on his advisor for collaborations on publications, introductions to contacts in the discipline, and general advice and support about his career and the tenure process. Study participants’ disciplinary ties extended beyond the boundaries of the Business Department, but colleagues in the department provided important access to scholars and resources in the discipline. This access seemed to emerge through incidental connections and was a valuable, if not central, component of participants’ intradepartmental networks.

**Institutional Linkages**

Institutional linkages are defined as the exchange of resources with departmental colleagues related to policies or politics at any level within the university. The average size of institutional-based networks within the department was 8, but there was a range in network sizes for this function across participants. Institutional linkages between participants are shown in Figure 8.
Rodger and Sidney, the department chair and the director of graduate programs, had the highest centrality scores (20 and 14) for institutional linkages, the result of their providing policy-related information and oversight to department members. Don, an associate dean, also had 14 ties. Sarah had 12 ties in her network for this function, while other members had between 1 and 10 institutional linkages within the Business Department.

Senior faculty participants tended to have connections across the college and the university, primarily through research collaborations or committee assignments, but did not tend to view these connections as resources which they could share with their departmental colleagues. Similarly, few participants sought out any resources related to institutional linkages. Due to his longstanding appointment on the college’s promotion and tenure committee, Michael often provided junior faculty with advice about their tenure dossiers. Sarah provided several examples from her time in the department of going to colleagues on certain committees for information that she would not have
otherwise had access to, such as her own tenure case, her lab space, and interactions between other colleagues in the department. She said, “Ryan and Sidney are much more connected in terms of if I want to find out what’s going on in the executive committee. Ryan is very connected can share information when someone’s really unhappy. He taps into a whole other element than, basically, the rest of the department. Sidney is my go-to person for information about what’s happening college-wide.”

Support and Friendship

Ties based on support and friendship include exchanging resources such as career advice and general support, which would include mentoring activities between senior and junior faculty members, as well as peer support between junior faculty members. Friendship and support was generally one of the stronger colleagueship functions in the department, according to network size, and also the function with the most consistent size across participants. Support and friendship ties are shown in Figure 9.

Figure 9: Support and Friendship Ties, Business Department
Jim had 4 ties to colleagues for this function, and Kyle had a centrality score of 3 for support and friendship. Rodger had 19 (a function of his formal role as chair more than his personal networking behaviors, as he explained). All other participants had networks of 7-12 for friendship and support purposes. While participants reported there was a general climate of supportiveness and friendliness in the department, several particularly strong dyads were evident. This included the mentoring relationship between Sidney and Sarah, the friendship between Michael and Don (and Ryan, to a lesser degree), and Rodger’s friendships with Sidney and Scott.

Participants differed in their perceptions of the extent to which departmental colleagues provided personal support and friendship to one another. Individual perceptions of departmental norms tended to coincide with, and perhaps reinforce, people’s own behavioral strategies and networking goals. For example, when asked if his departmental network was most influenced by his cohort and research interests, Ryan said, “Yeah. Other than a few close friendships in the department, that’s pretty much the model.” In contrast, Michael said there was “quite a bit of overlap” between his personal friendships and professional connections in the department. Support ties were common within and across rank, evidence of the collegial culture of the Business Department.

Friendship ties, such as the noted dyadic relationships, seemed to form around perceived similarities in both personal and professional characteristics. Sidney and Sarah shared common ties through their churches, and he was friends with her brother. Michael and Don were administrators of similar ages and family structures, who were both involved in the department’s research center. Rodger was similar to Sidney in age and administrative roles in the department (both had been appointed to the same multiple
administrative positions at various times), and he was similar to Scott in that they were both European and had some of the same personal interests and hobbies. Personal friendships reveal the diversity of differences among department members and the role that perceived similarity has in cultivating relationships. Different participants rely on different connections with colleagues, which result in friendships and professional relationships that provide access to resources.

Committees and Service

In the Business Department, interactions based on committees and service included administrative committees at the department and college level, and doctoral committees for evaluating students at various stages. Shared committee work was particularly common within research areas, and the same small group of people was likely to be involved in all the committees for students within a given area. These ties are included as Figure 10.

Figure 10: Committee and Service Ties, Business Department
Assistant professors had fewer connections for this function; Brad had a score of 5 and Scott had a score of 7. Jim and Kyle reported no ties for committees and service activities. Don had a score of 6; his administrative role at the college level likely removed him from many departmental committee responsibilities. Other tenured faculty members had between 10 and 20 ties to departmental colleagues for committees and service. Junior faculty felt that they had little room to turn down committee responsibilities assigned to them by Rodger, but that they were protected from undue committee and service assignments until after they had earned tenure.

While senior faculty members indicated that they held an unspoken right of refusal to committee assignments, most stated that they were invested in the good of the department and did not turn down assignments without reason. Sidney said, “I tend to do whatever I’m asked to do as well as I can. The service and teaching are not rewarded much and yet they’re important, too. I mean we are a university, for Heaven sakes.” Michael explained that once faculty members earn tenure, they’re “expected to carry some of the administrative load,” and described service-based activities in the department, “What committees have you been chairing? Which Ph.D. students have you supervised? Have you taken on some mentorship role of some sort?”

Many participants described their ties to others as mandated interactions resulting from committee responsibilities. Similarly, a complete lack of ties between department members was often explained as a lack of either research interests or committee work. For example, while Brad appreciated collegial relationships with his colleagues, he did not seek out opportunities to get to know them better personally or professionally through committee meetings and similar interactions. Rodger indicated a similar outlook, “In
terms of service, I don’t think there are that many kinds of service obligations where you
could really get to know people. I didn’t feel like I ever served on a department
committee where I [got to know people personally].” Committees and service did not
seem to provide otherwise unavailable opportunities for interaction within the Business
Department, but they may have strengthened ties and created opportunities for informal
interaction among colleagues.

Summary

Faculty members in the Business Department were motivated by efforts to
maintain the positive reputation of the department and by efforts to cultivate career
success for each member of the department. The culture of productivity and collegiality
provided the expectations of success, and important resources for achieving success
collectively. For full professors, this often involved providing resources to junior
colleagues, serving administrative and leadership roles within the department, and relying
on each other for friendship and support. Associate professors contributed to supporting
junior colleagues in their tenure goals, serving on committees and service roles, and
providing informal leadership and support within the department (as well as some formal
leadership roles). Associate professors were still focused on career-related concerns, such
as remaining productive and being promoted to full professor and receiving resources
appropriate for their levels of contribution and productivity. Assistant professors were
highly motivated by and focused on earning tenure, and sought resources from senior
colleagues as well as their peers that would help them meet that goal. Proximity to peers
affected the likelihood of participants interacting with others informally. Participants
were more likely to have informal conversations with or seek advice from faculty members who were nearby.

Participants’ characteristics also influenced interactions within the Business Department. Professionally, research interests, rank and tenure status, and administrative roles affected networking goals and behaviors. Personal characteristics, including gender, family status, nationality, and age also affected the development of participants’ networks.

The culture of the Business Department, participants’ professional characteristics, and their personal characteristics all influenced their networks and relationships. Participants referred to a range of professional and personal characteristics when explaining why they did, or did not, have relationships with certain colleagues, pointing to the salience of individual characteristics in the development of networks within academic departments.

Based on perceived similarity, or potentially advantageous differences (such as access to someone of a higher rank or in an administrative position), faculty members interacted with each other across the range of colleagueship functions proposed by Finkelstein (1982). Participants’ networks included each function of colleagueship proposed by Finkelstein (1982), as well as a sixth function, committees and service. The strategies participants used to cultivate relationships in the department, the benefits of those relationships, and patterns of access to network resources are explored in Chapter 6.
CHAPTER 5
The Social and Behavioral Sciences Department

Informal channels lead to formal things. That’s how social networks tend to work, and they very much work like that here.

- Amanda, assistant professor

Productivity and collegiality characterized the Department of Social and Behavioral Sciences, as they did in the Business Department. In addition, the interdisciplinary nature of research in the department and its close affiliation with several prominent research centers in the university influenced the interactions of faculty members. Professional and personal characteristics also affected the development of ties within the department. Participants forged ties to their departmental colleagues for a variety of purposes. Informal personal ties overlapped with formal professional ties, resulting in multifaceted relationships that facilitated the exchange of resources within the Social and Behavioral Sciences Department.

The network profile of the Social and Behavioral Sciences Department is based on findings from participant interviews and social network data. It summarizes the cultural and structural characteristics of the department, as well as the individual characteristics of its members, that participants perceived as influencing their relationships and interactions. As in Chapter 4, Ibarra’s model of integrated factors is used to analyze the departmental and individual factors that influence participants’ interactions within the department. The profile of the Social and Behavioral Sciences
Department also includes a description of network benefits exchanged within the department, organized according to Finkelstein’s five functions of colleagueship and the sixth function added for this study, committees and service. In the concluding section, major themes and findings are summarized.

The Social and Behavioral Sciences Department

The Social and Behavioral Sciences Department trains students for careers in human services in settings such as public and non-profit agencies, business, and government. It also trains Ph.D. students to conduct research. The department is focused on the development of new knowledge and the application of that knowledge to relevant professional fields. The department has 37 members, including both tenure-track and non-tenure track faculty. This includes 16 full professors, 11 associate professors, and ten assistant professors. Twenty-eight faculty members hold full tenured or tenure-track status as research professors. The other nine members, despite designations as associate or assistant professors, are considered teaching faculty. There are 19 women and 18 men in the Social and Behavioral Sciences Department. Ten of the 28 faculty members who met the criteria for inclusion in the study participated.

The department is strongly characterized by a focus on interdisciplinary research. It is ranked as one of the best departments in the nation within its field, a reputation its members work hard to deserve and maintain. Participants’ interactions in the Social and Behavioral Sciences Department are shaped by many faculty members’ affiliations with several large research centers within the university, which tend to organize faculty members’ individual research and collaborative endeavors.
The Social and Behavioral Sciences Department was established after separating from a college within the university. It evolved into a successful department and eventually was re-integrated into the college, which had since been renamed and reorganized, and had embraced a new mission and curriculum that aligned with the work of the department. Since its departure from its founding college, the department has made deliberate efforts to cultivate excellence, innovative approaches to research, and a supportive environment for its members.

Bill, a current administrator in the department and former chair, was recruited to the newly-founded department several decades earlier by its original founders. When asked if he remembered any deliberate efforts to cultivate a certain ethos or culture in the department, he replied, “Absolutely.” He described how the founding faculty members sought to help the faculty feel comfortable with transitioning to the new model, while also establishing a precedent for interdisciplinarity and innovation.

The people who developed the idea for this department were mindful of the fact that there were advanced interests, faculty who were worried about what would happen to them. And they went out of their way to create an atmosphere that permitted those who had been here in the old system to flourish if they chose to and to bring in new people who could give the whole program a new, fresh direction.

Bill praised the leaders of the department for the success of the transition and for continued success. He recalled, “Exceptionally good leadership…created an atmosphere of collegiality and cooperation, and a lively social enterprise where people not only work together but they like each other and they spend time together.”
One of the goals of the department’s founding faculty members was interdisciplinary research and teaching. These faculty members realized that interdisciplinarity was an innovative concept that might present challenges to a young department. Bill said of creating an interdisciplinary department, “It’s difficult to build interdisciplinary, non-traditional programs, and it takes a lot of attention and leadership to do that.” He noted that a conceptual framework had been developed by the department’s founders, which “guided our hiring and our program decisions.” The early efforts and ideals of the department’s founding faculty resulted in a history of excellence and pride that continued to characterize the department. A member of the department pointed out that it had produced “all these wonderful people” who had influential careers in the field, which made the department, as he said, “the central location of people who want to study [what we study]. And given its reputation,” he continued, “I mean, I only applied to three places. This was one of them.” Most participants pointed to its reputation for excellence in interdisciplinary research as one of the main reasons they wanted to join the department.

Like the Business Department, the Social and Behavioral Sciences Department had experienced a difficult time in its history. Several participants described this time as being characterized in part by poor leadership, which resulted in an atmosphere of tension and negativity. Mollie, an associate professor, recalled,

There were some tough tenure decisions that were made during that time [of poor leadership]. That’s part of the reason that some colleagues were lost….I think we all felt like the department lost some resources during that period of time. And I don’t really think we feel like we’ve regained that. That was a stressful time.
Mark, the chair of the department, was also on the faculty at this time. He said, “Some of that has healed. Some of it hasn't.” When asked who was affected by the negative consequences of the conflict, Mark said, “Everyone in the college.” He explained that the problems stemmed from only meeting one of the department’s goals during that period, and implied that fostering productivity at the expense of collaboration and morale during that period had done more harm than good. Some study participants felt that these challenges had lingering negative effects on interactions in the department. Liam, a junior professor, said, “There’s some historical stuff which has happened in the department, which has caused splits in different ways. Figuring out how to eliminate those would be useful.”

The faculty of the Social and Behavioral Sciences Department had reacted to that period by intentionally changing the culture. David, a full professor and director of a research center, described the challenging time and the faculty’s reaction,

It was bad….There was a lot of egoistic fighting among senior men in this area. And it was taken over by what I call a benevolent matriarchy. Melissa and Laura sort of engineered it, I think. They were here for a long time. And they said, ‘Enough is enough. Let’s do things differently. We must take control.’ These efforts resulted in “more of a sense of community and less ego and infighting among the faculty,” according to David. Other participants also acknowledged the takeover of the “benevolent matriarchy” as a key transition point, when ineffective leaders were removed from power and the department returned to its founding goal of supportive leadership in a collegial and productive culture. From that point forward, the department had remained dedicated to selecting members that would continue to advance
that culture. Junior faculty members who had not experienced the challenging period in the department were also aware of the value placed on collegiality and how it had been cultivated. One assistant professor explained,

There are smart people who are nice and smart people who are not nice. The selection process to get into the department and to stay in the department requires that you be a nice person. That decision was made at an administrative level [decades ago]….That’s the central piece of the culture, which was chosen and has been fostered.

Participants’ interactions in the Social and Behavioral Sciences Department were reportedly affected by multiple departmental factors and individual factors. Participants relied on colleagues for each of the five colleagueship functions included in Finkelstein’s framework, and also for the sixth function of committees and service work. The network of relationships between participants is shown below in Figure 11. The departmental factors and individual factors that affected relationships in the department, and the functions of those interactions, are described in the following sections.
Departmental Factors

The first component of the analysis of faculty interactions in the Social and Behavioral Sciences Department is consideration of the departmental factors that were influential in participants’ interactions and relationships. These included a reputation of excellence in research, a commitment to collegiality, interdisciplinarity, affiliation with several research centers, tenure expectations, and proximity.

Research Excellence: “We aspire to hire the best there is”

The Social and Behavioral Sciences Department is known for high research productivity, research excellence, and its highly qualified faculty. Participants noted a high level of commitment to the scientific pursuits of the department and to innovative thinking. When asked how they saw themselves as being similar to their colleagues in the department, several participants cited reasons related to inquiry and learning. David said that he was similar to his peers in that he liked to “cross lines and think about things I don’t know too much about.” Justin explained his similarity to colleagues as “a
commitment to doing good science and helping the department be a really strong, or the strongest, [social and behavioral sciences] department in the nation.” Mark replied, “I respect the science of the field. I want to see it develop. I want to see us do a good job training graduate students. I think those are all shared values.” Bill said of his similarity to his colleagues, “They're curious about how to have synergy among the different skills and interests that are represented in the department.”

Bill, a tenured professor and administrator in the department, explained its recruitment strategy, “We aspire to hire the best there is at whatever rank. And we went through a long period where we were never turned down by someone we made an offer to….We get our people because this is viewed as a fairly desirable place to be.” Justin described the result of this selection process as a department populated by “brilliant people with great research ideas, and highly capable of carrying them out.” The positive reputation of “doing good science” in the Social and Behavioral Sciences Department, as Justin described it, was a key factor in many participants’ decisions to work there. The shared commitment to research excellence, both through their individual work and the collective productivity and reputation of the department, also served as a type of homophily or similarity that helped facilitate interactions and relationships within the department.

Collegiality: “Mean people don’t fit very well”

Collegiality – which participants also described as a commitment to peer support and departmental citizenship – was another key characteristic of the Social and Behavioral Sciences Department, and one that was mentioned by all participants. When asked to describe the greatest strength of the department, Bill provided a reply similar to
those of many of his colleagues, “Well, I think it’s the cooperativeness, the general helpfulness of people combined with excellence in what they do.” Such statements show an expectation and a commitment by its members that the culture of the department would include collaboration and mutual support. Mark, the chair of the department, said, “People work together. They get along together. They're not stabbing each other in the back.” The department leadership cultivated this commitment to collegial interactions for some time, and continued to reinforce it as a key departmental value to its members.

The culture of the department led its members to deliberately recruit and select peers who, in addition to being excellent researchers, would reinforce those characteristics. Those who did not value collegiality were reportedly not hired, nor were they encouraged to remain within the department. Bill said, “I think we’ve been pretty successful in pursuing a policy of hiring not only really good people but nice people, too – and the two are not incompatible.” He explained his personal investment in that policy, “I live in this department, and I don’t want to have to deal with a bunch of jackasses who are out for themselves and not collaborative.” David described how the department’s hiring practices reflected its culture,

There’s clearly an attitude that if people don’t look like they are going to be good collaborators, they probably don’t belong here because it’s the ethic of the department to do that…. And that’s a real culture here. It’s pretty clear.

Everybody knows what it is.

Amanda agreed, saying, “It is just a department full of nice people. People are friendly.”

She echoed the emphasis on faculty collegiality, “I think they select people into the
department based on that. Mean people don’t fit very well, and they leave.” Justin similarly commented,

Academia is a very ego-centric enterprise and you get departments that are just filled with huge egos, fighting over who’s smarter, or whose research is better, who’s more productive. We don’t have that here. We have internationally renowned researchers who know it, but are humble. They’re invested in doing good work and passing that on.

Beth also noted the absence of academic prima donnas, “This department is very highly ranked. We have a lot of superstars. There’s not a lot of room for one person thinking they can wear the crown.”

The culture of collegiality among renowned scholars with considerable expertise influenced interactions within the department. It was understood that people were willing to do what they could to help a peer succeed. This understanding helped to establish behavioral norms for both those who might need resources as well as those who might offer them. Beth described the expectation that faculty members would seek help or other resources as needed, “You’re a grown-up and you can take care of yourself. And if you ever need help, you can come ask for it. But we’re not going to give it to you unless you ask for it.” Mollie’s shared Beth’s understanding of the need for proactive behavior. She said, “Ask senior colleagues for help when you need it. Don’t wait for people to come and offer support, because sometimes it’s hard to know when people need it.” Asked if there was an understanding within the department that senior colleagues, in particular, would provide expertise or mentoring to junior faculty members, Mark replied, “Oh, yeah. Everybody sees that as our role.” The shared commitment to collegiality within the
department was reinforced among its members and resulted in a willingness to share ideas and offer support. Participants reported that this collegiality was an important and valued characteristic of the department.

Interdisciplinarity: “We’re much freer about how we think”

The faculty in the Social and Behavioral Sciences Department is committed to interdisciplinarity. Participants identified this commitment as part of the culture of the department. When asked how the discipline influenced the department, Mark replied, “The department isn't a discipline. It isn't like psychology.” He went on to explain this, as well as its appeal,

Most of us are here because we don't want the constraints of a discipline-based department. We're much freer about how we think, about how we construct our research, about where we publish it. We can cross disciplinary boundaries when there are better ways of doing things or thinking about things. So it really gives us more freedom. People work together a lot more than in a typical department.

The focus on interdisciplinary is so strong that several participants questioned if and how discipline had meaning in the department. For example, Beth wondered,

Well, what am I? Am I a psychologist because that was my Ph.D.? I’m in Social Science now. Does that dictate my discipline? I think of myself more as a neuroscientist. Does that dictate my discipline? If I go meet another neuroscientist but they happen to be in psychology, is that interdisciplinary?

The interdisciplinary nature of the department attracted participants and was one of the ways they determined they were a good fit in the department. For example, when asked how he was similar to his colleagues in the department, Liam replied, “I totally believe in
Participants valued being able to work among colleagues who shared an interest in interdisciplinarity, as well as having the freedom to think creatively in a department that supported collaboration. Amanda noted, “This department is full of people who like to cross disciplines, who like to read widely and who think it’s interesting to pull something from some totally different literature and apply it. This department has a lot of people in it who think it’s fun to think, and that’s a good thing. Interdisciplinarity, however, required effort. Bill explained the need for a positive and supportive culture:

In an interdisciplinary program where the program emphasis is more or less up for review continually, if you have people who are out to build their own empires and to hell with everybody else, you die as a real interdisciplinary program. We want people who can link to other people in the department and in other departments in the college….We expect people to contribute to the good of the program.

Mark pointed out the challenges of interdisciplinary work, “A lot of review groups [can] be very protective with disciplinary boundaries. So sometimes we've suffered.” He also noted, however, that the department’s research portfolio had “continued to grow [due to] the interdisciplinary nature, our ability to form teams of experts to get a grant.” Amanda noted another kind of challenge, explaining that because of her interdisciplinary research, most of her colleagues were outside the department; her departmental peers don’t work in her area, attend the conferences she attends, or review her work from an informed perspective. For Amanda, interdisciplinarity provided both a point of similarity to her
colleagues in the department and something that might decrease her interactions with them.

Interdisciplinarity was a feature of the Social and Behavioral Sciences department that had the potential to facilitate and hinder the cultivation of relationships and the exchange of resources among its members. While participants did not share the same disciplinary training or research interests, and may have therefore found it difficult to exchange some resources, they shared a commitment to interdisciplinarity that seemed to facilitate collaboration and negate most potential barriers to interactions caused by disciplinary differences.

**Affiliation with Research Centers: “A larger network of scientists”**

Research centers affiliated with the Social and Behavioral Sciences Department affected the structure of the department, formalized the interactions of its members, and influenced the distribution of resources. These effects were caused primarily by the leadership and support of center directors, shared research and collaborations between their members, and the increased availability of financial and other resources. Some faculty members in the department participated in the work of one or more large research centers at the university. These centers organized the work of the faculty and provided access to resources. Some faculty members’ positions were partially funded by research centers, while others had affiliate positions within the centers or other formally recognized connections to the centers that provided additional resources for their work. Beth, who was co-sponsored by a center, described it as a “super-departmental institute that is designed to fund and support research that’s going on in different areas and to
provide resources that would be more available." She described the support provided by the centers,

What [the university] wants is the best science to come out of the institution. And if that means putting two bright minds together, they’re willing to do whatever administrative junk that means in terms of the right credit, the right grant money, things that are a little bit difficult. It produces better research projects, more funding, more publications, better science. They’ll take that burden on and free that for their faculty members to do what they need to do. And that gets repeated a lot here, ‘Tell me what you need to make your science better.’

A few participants saw the centers as having a potentially divisive and negative effect on the department. Mollie felt that being affiliated with centers was an advantage that some people had over others,

I know for some people, [the centers] really do organize their relationships. But then there are some people who are more peripheral to the centers….I think people who are in the centers probably have some advantage because there is a center director who’s a little bit more invested in that person’s success.

Beth explained that while her affiliation with a center provided her with more resources, it also limited her interactions with colleagues, a perception shared by several other participants. She said, “We have people who are more interested in that kind of population-level work. In that sense, I interact with them – never. They use different resources. They use [another center].” Some participants perceived the centers as competing with the department. Liam said,
Currently, the focus is not on making the department #1. Primary stakeholders are focused on making their centers #1. There was a decision to allow centers, which created fractioning and it’s all about money. Money and ego. It might be that the research centers affiliated with the department involved a level of politics and self-interest that was not reported at the department level. Participants’ concerns about potentially negative effects of the centers on interactions within the department illuminate the ways that structural and cultural factors at the institutional level can affect interpersonal relationships and the distribution of resources in academic departments.

Tenure Expectations: “Do everything really well, and don’t die in the process”

As in the Business Department, standards for tenure and promotion were high in the Social and Behavioral Sciences Department. Junior faculty reported feeling stressed by these standards. Amanda noted that despite its positive culture, expectations for productivity in one of the most highly ranked departments in the country were “extremely high and it’s very hard to meet those expectations working a human number of hours.” She wryly described what is required to earn tenure, “Publish more than anyone could possibly publish, bring in as much money as you can, be an acceptable teacher, do everything really well, and don’t die in the process.” Liam identified being on the tenure track as the main challenge he experienced in the department. He explained, “You never, ever do enough. You always have the feeling that you’re not doing enough. [You] just keep trying to do more and more.” Nicole also expressed concerns about the tenure process, “It’s not easy. You struggle from day to day, thinking ‘I should be doing this,’ or ‘I should be doing that.’” High expectations for tenure influenced interactions by
establishing priorities for junior faculty members in terms of their productivity and general citizenship in the department. Junior faculty utilized their ties to colleagues to help manage the pressures associated with tenure and promotion. Senior colleagues’ interactions with junior peers were also influenced by high expectations, which led them to observe assistant professors’ performance and behavior in the department, as well as provide advice, support, research opportunities, and other resources that would assist junior faculty members in their tenure and promotion cases. For example, when asked why he accepted an additional term as department chair beyond his original commitment, he said, “I think the main reason is we've hired several junior faculty who are very promising and I'd like to see them through to tenure.”

*Proximity: “Keeping our culture together as a department”*

Proximity affected the networks and interactions in the Social and Behavioral Sciences Department. The department had been largely consolidated in one main building, but faculty members were scattered over several floors of that building, as well as other buildings across campus. The importance of proximity and physical space in facilitating interactions was apparent. Amanda recalled, “There was a group of us who used to be over at [another] building. So, I knew all of those people better and there were more opportunities [to interact]. Now there are much fewer opportunities.” When asked why he interacted with some colleagues differently than others, David said, “Well, some of it is proximity. I hang out with people in the hallway, you know?” Asked whether casual conversations in the hallway led to professional collaborations such as grant-writing or research projects he replied,
They occasionally do. It has an effect, definitely. And that’s been a historical problem in our department. We’ve been split up across different buildings and so it’s a big mess. [Proximity provides] a sense of culture. Keeping our culture together as a department.

Being able to approach a colleague at the spur of the moment for advice, stop by someone’s office to chat about personal or professional matters, and initiate conversations in hallways and communal spaces were interactions that could serve as the building blocks of relationships. The absence of these options caused a barrier to interactions and the resources exchanged through such interactions.

Individual Factors

The effects of individuals’ professional and personal characteristics on networks and resources emerged from participants’ descriptions of their interactions in the Social and Behavioral Sciences Department. Professional characteristics included rank and tenure status, research interests, and administrative roles. Personal characteristics included family status, gender, race, and age.

*Rank and Tenure Status: “What can go in the dossier and what can’t”*

Rank and tenure status affected faculty members’ interactions within the Social and Behavioral Sciences Department. The related professional characteristics of rank and tenure status shaped relationships in terms of mentoring and advising between senior faculty and junior faculty and in terms of peer support, friendship, and informal career-related conversations within and across rank-based groups. This was particularly salient within cohorts – groups of faculty who joined the department at the same time, and had often been at the department for many years together. For example, Liam said of his close
friendship with another assistant professor, “See, Beth and I are in the same boat. So there’s an exchange of ideas and ranting about what things are like.”

Bill believed that rank did not cause any differentiation in interactions within the department. He said, “As a matter of fact, we’ve made deliberate attempt to not segregate faculty by rank.” Bill’s statement about avoiding rank-based differences seemed to be related to his administrative role in the department, which included fostering transparency, participation, and collegiality. While his efforts were in line with the culture of the department and the expressed goal of its leadership in fostering that culture, participants’ accounts of their interactions indicated that rank did affect whom they sought out for which resources, or to whom they made those resources available.

Junior faculty members were cognizant of their relationships with senior colleagues, and how these relationships might shape their tenure cases. When reviewing a list of colleagues and describing her relationships in the department, Amanda said, “I have very little contact with Amy, which – oh. I have to invite her to lunch. As it turns out, she’s on the tenure committee and I somehow have been here for four years and have never talked to her.” When asked to explain why it was important for her to cultivate that relationship, Amanda replied:

People have impressions of each other and they’re based on incredibly small data points….When you go up for tenure, that is woefully inadequate….And then they’re in charge of getting you fired. It seems like you ought to manage that process a little bit more.

Beth said of her relationships with senior faculty, “All of these decisions come down to a committee of six people who discuss your productivity every two years. And yes, there is
a political element of what you want them to think of you.” For example, Beth was cautious about relying on tenured colleagues for personal advice and friendship. She explained that her status as an untenured faculty member superseded other factors such as similar family structures, “Justin has kids and they play with my kids….At the same time, there’s a different quality to the socialization in that I would never forget that they are senior.”

Liam described how tenure shaped his decisions about who he collaborated with, “A lot of it is driven by what can go in the dossier and what can’t, as well as who has power in the university.” He provided an example,

Recently, a woman [from another department] came in and sat down and said, ‘Can you work on my grant as a consultant?’ and I said, ‘Ok, let’s take a look at it and see what it’s about.’ So she tells me and five sentences into the conversation she says, ‘You know, I’m chair of the university tenure committee.’ You don’t have any option then, right? I’m going to do it, and I’m going to do a good job. You’re in a position where it doesn’t matter what you think of the work anymore. That’s something that you have to do.

Justin, a recently tenured associate professor, described how his network within the department changed once he had earned tenure. Prior to tenure, he said, “I was connected with the department and I think I was a good departmental citizen, but I clearly wouldn’t have had these kinds of ties [that exist currently]. The support was more unidirectional – senior members giving me support.” Once he was granted tenure, Justin “shifted roles to provide guidance and support” to junior faculty. Justin’s ability to reflect on the differences between his interactions before and after he earned tenure demonstrate how
rank and tenure status shape faculty members’ priorities and networking goals, as well as the resources they seek or offer within their networks.

_Research Interests: “More likely to have interactions”_

Research interests affected who participants interacted with, and for what reasons. Research ties were the most clear-cut types of interactions within the Social and Behavioral Sciences Department. Participants were certain about what constituted their research-based networks, and often attributed ties to colleagues as research-based. When describing their connections to colleagues, participants provided concise and clear explanations of research-based interactions, whereas they struggled to clearly define ties of other types. Bill noted that he had connections of one type or another to most people in the department, but that there were people in the department who he did not have close relationships with or see often. He contrasted these ties with those to people in his research network, saying of the latter, “I’m more likely to have interactions with them because I would talk to them about my research and about my work.”

The interdisciplinary nature of the Social and Behavioral Sciences Department led faculty members to interact for research-related purposes in nontraditional and flexible ways. It also led them to interact with colleagues outside the department as well as with those within the department. Similar research interests and research collaborations led to the creation of ties between department members. Most people identified the core group of colleagues with whom they collaborated or discussed research, but noted that their main research collaborators were outside the department or institution. Some noted that their research was independent work that did not require a great deal of collaboration.
Despite being segments of much larger research networks, research ties within the department were central to participants’ work.

*Administrative Roles: “People who earned the respect of the faculty”*

Holding an administrative position was another factor that affected faculty members’ networks and networking behaviors within the Social and Behavioral Sciences Department. Several participants held administrative roles in the department. In addition to Mark, the department chairperson, Justin coordinated the academic program. Bill was an associate dean in the college, and David directed one of the research centers.

Due to their shared responsibilities, shared history in the department and university, and similarities in age, rank, and oftentimes family lives, faculty members in administrative roles tended to interact with each other frequently and rely on each other for friendship and support. These faculty members were also much less likely to need resources from junior faculty, or to need resources related to career development such as help with teaching or research.

Administrative roles were correlated with rank and tenure status, and senior faculty with administrative roles had very different networking goals than their junior colleagues. Administrative responsibilities often contributed to senior faculty members’ efforts to support the work and careers of their colleagues and the success of the department as a whole. Through their participation and investment in a highly collegial culture, administrators were proactive in advancing the goals of the department and supporting the careers of its members.

One administrator, for example, had very clear ideas about leadership and power in the department. He felt that in addition to advancing the work of the department and its
members, as well as their own academic careers, administrators were successful when they fostered positive relationships within the department,

The power afforded to leadership in academic settings is in direct relationship to the power that’s earned by the person who holds the administrative position. And those who are really successful in those roles are people who earned the respect of the faculty and the staff.

Other participants also noted that formal administrative roles must be matched with a collaborative and approachable attitude in order to be effective. Speaking about the professor who coordinated the academic program, Amanda said,

If you have a problem with a student, that’s who you are going to go to. It is their role, and they will help. They will have good ideas. So, the formal role matched what you would want to do and what they’re supposed to do, how they’re supposed to help you.

Some junior faculty members saw those in administrative positions as being valuable because of their access to substantial resources. Liam said of the associate dean,

He hired my mentors. If I need to know something about how the political system of the university works, he’s the keeper of all that knowledge and he’s very willing to share it. So, anything political or administrative, when I want to know what the story is, he will tell me. At all levels. All the way from the department up to the president’s offices. He’s connected to all these networks.

A few participants felt that they had no reason to take up administrators’ time, that administrators had made no effort to interact with them, or that administrators may have had the desire but not the time to reach out to their colleagues. This led some junior
faculty, in particular, to have fewer ties with faculty members in administrative roles.

Nicole provided an example of her tendency to not interact with administrators, which she attributed to her perceptions that they were too busy as well as their failure to reach out to her, “Well, one’s our dean. So that’s a very careful relationship. And then others, yeah, they’re just very hard to schedule and pin down.”

Administrators in the department took their responsibility to help others seriously, and were often well-connected for many colleagueship functions, particularly institutional linkages and friendship and support. Administrators often developed friendships with each other due to similarity across several personal and professional factors. They often provided resources specifically to junior faculty members, who relied on them for this purpose, but some untenured participants indicated that it was more difficult to form ties with administrators because of their busy schedules and leadership responsibilities.

*Family Status: “She and my wife have things in common.”*

As in the Business Department, marital and family status had an effect on faculty interactions in the Social and Behavioral Sciences Department. Many participants identified the culture of the department as being very supportive of families, and also noted that the institution was located in a family-oriented community. Beth said of her experience, “I was told in my interview by another faculty member, ‘When they give you the offer, demand a spot at the daycare center.’ I forgot to do it and the department head said, ‘There’s something else you’re supposed to say here!’” This support was important to those faculty members who had young families or were interested in starting families.
Faculty members who were married, and particularly those with young children,
tended to interact with each other over common interests and experiences. For example,
when asked if there were reasons why he chose to interact with some colleagues in the
department more than others, Justin replied, “Well, for friendship reasons, sure. There are
some people I just get along with better and have more in common with, even if that is
our children.” Many participants relied on family-based connections to help explain
relationships with colleagues. Bill said, “Judy, I’ve known her for a long time, and she
and my wife have some things in common.” Amanda said of Judy, “I have a lot of
contact with her. She lives in my neighborhood. I see her three times a week! Sometimes
we talk teaching, sometimes we let the dog lick the baby.” Beth noted that she had shared
professional interests with Liam and respected him as a colleague, “and on top of that, he
came over last night for pizza. He goes riding with my husband. We hang out all the
time.” Of Amanda, Beth said, “The network of people she would overlap with
professionally is not the same as mine. She also has a child. Her son and my son are good
friends, so we interact almost exclusively around them.”

Amanda was cognizant of the complex balance between work and family, and
how that affected her relationships in the department. She explained that her current
interactions within the department had substantially decreased during and after her recent
pregnancy,

The only person I see socially right now is Beth because she has a kid that’s the
same age as my oldest and they like to play together. I just don’t have the time….I
sort of dropped out of that social world.
Having young children was what connected Amanda to Beth, but it also removed her from regular interactions within the department and the social network of which she previously felt part.

The tendency to interact around family-related issues contrasted with the experiences of single, often younger, faculty members who had a harder time developing social networks in the community. When asked how she perceived the experiences of single academics who relocated to the area to join the institution, Amanda said, “It’s brutal. Terrible.” Mollie noted that she had a difficult time transitioning to the area as a single young woman, “There were two other people hired the year I was, but they both had families. We were somewhat friendly. It wasn’t necessarily going to turn into a circle of friends.” She noted that her experiences had changed over time, in part because she was now married and had children, “It really has grown on me. And now that I have a family here, I feel like it’s a nice place for a family.” Nicole described her social life in straightforward terms, “I have several friends that I socialize with outside of work.” Nicole continued, “I’m single and I don’t have children. That’s pretty much it. Pretty boring!” When asked if he was satisfied with life outside the department, Liam laughed, “There isn’t a lot of it, I would say. Between working a lot and then, there is a little group of people here who are [single]. So much of the town is off-limits in terms of being segregated out as a professor, intentionally segregating yourself out. There’s not a lot of socializing across borders, by intention.

Participants often formed ties with colleagues’ family members, or established and cultivated ties with peers based on similar family structures. Faculty members without young children, particularly those who were single, were not as likely to develop
the same kinds of ties, and expressed feelings of isolation. Social ties, like most, do not
exist exclusively within the boundaries of the department; however, personal
characteristics like family status that affect members’ networks outside of the department
also have the potential to affect relationships and networks within the department.

*Gender: “The benevolent matriarchy”*

There was greater gender balance in the Social and Behavioral Sciences
Department than in Business, a greater presence of female scholars in the discipline, and
a history of attention to gender issues in the department. The history of the Social and
Behavioral Sciences Department influenced gender dynamics and members’
understanding of gender as an individual difference. Two of the senior faculty members,
both female, had intervened and taken control of the department at a time when in-
fighting and destructive behavior among the all-male leadership was negatively affecting
the department. Their actions, supported by their peers, changed the nature of leadership
within the department and became a distinct component of its history and culture. David
described how this “benevolent matriarchy” changed the department, a change he
attributed to both personality and gender dynamics, “There was more of a sense of
community, less ego and infighting among the faculty who didn’t want to be in the same
room.” Although an assistant professor with a relative short career in the department,
Liam also knew of this time in the department’s history. He felt that any negative
consequences of being a woman in the department were “purposefully eliminated to some
extent, back in the ‘70s.” He explained, “I mean, I don’t know. I’m not a woman in the
department so I can’t speak from that perspective. But if you look at the power, the
people who hold power in this department, and who have held power since the 1980s,
there are a lot of women in those positions. That was purposefully done.”

As in the Business Department, there were instances of gender stereotypes and
gender-based interactions evident in participants’ descriptions of their departmental
networks. One male professor spent some time questioning why gender was included as a
variable of interest, “I don’t think [gender] actually is very relevant in this context, in the
culture of the department. That’s why it’s interesting to see it there, because it’s not one
that I think is particularly visible.” Yet, he later described his relationships with a male
mentor and a female mentor in the following way,

Allen is my main mentor here, I would say, from an academic perspective. One of
the reasons I came here was to work with him. He’s a senior mentor, mostly all
intellectual stuff. Laura serves as a mother figure. She’s very much fostering my
career….She sits in a very powerful position. She has the resources to give me
and foster what I’m doing.

Both mentors were senior scholars in the department who were very successful and
highly regarded by their peers, but they were distinguished by the participant as a “senior
mentor” sought out by the speaker and, in contrast, a “mother figure” who looked over
his professional development.

Despite the majority perception of a positive, and somewhat nontraditional,
history of women in the department and the current sense of equity and diversity among
its members, three of the four female participants expressed gender-related concerns
about their careers and their interactions with colleagues. For example, when talking
about how personal characteristics affected how she was perceived in the classroom,
Nicole said, “Well, one thing I know for sure. Men in the classroom versus women in the classroom are approached very differently.” Nicole was upset not only by the effects of gender-based perceptions in the classroom but also how gender issues were handled in the department and the college,

No one talks about it. They have these workshops on how to be a good teacher, how to balance teaching and research, but there is yet for someone to admit that there is a difference between a young female professor and an older male professor approaching the classroom.

Nicole explained how gender affected who she interacted with in response to her concerns, pointing out that she approached other women for support because she saw them as being willing to talk about it. She said of her male colleagues, “I don’t think the males are so much attuned to it and they don’t care – care is not the right word – it’s almost as if I’m bringing up an unimportant topic.” The result of gender issues being an “unimportant topic” to men in the department was clear to Nicole, “it doesn’t get discussed.” Amanda recalled being concerned about the structure of her tenure committee and the implications of her weak ties with its members. These concerns seemed to be exacerbated when she realized the gender-based composition of the committee. She said, “And when I looked at the list, then, it was almost entirely men. Melissa was in charge and she was the only woman. The rest were men.” Amanda explained that her fears were alleviated over time once she had the opportunity to get to know the committee members, but her concerns added a layer to the challenges of tenure that her male peers might not have experienced.
Not every female participant perceived negative aspects of being a woman in the department, “I guess I feel like it’s a little bit less important in a department like this where it’s so female,” Mollie said. “It doesn’t feel like it’s this active need….It feels less explicit [here].” What Mollie may be identifying is the benefit of being in a department where she was not a minority because of her gender and could identify peers and superiors who were also female. Gender may have been less salient to her than it may be in a male-dominated department or discipline, yet Nicole’s experiences left her to conclude that gender was salient in shaping departmental interactions. Their contrasting accounts illuminate the effects that perceived homophily have on faculty members’ experiences and interactions.

**Race: “Not part of their main identities”**

As Nicole continued to describe her experiences in the department, she addressed race as another characteristic that “definitely influence[s] interaction,” pointing out that “it used to be all older white men teaching classes.” One other participant mentioned race as something that influenced his interactions. As he described his relationships with specific colleagues, he referenced two other professors in the department from underrepresented racial minorities, Amy and Ashley. He said, “Amy and I have a little bit of contact. There’s a little bit of minority contact there…Ashley is a minority connection.” At first, this participant made no other comments about race that might help explain his perspective. Prompted by a question about how this “minority connection” played itself out, he replied, It’s simply a response…you just get an extra nod for being a minority. Besides that, there aren’t any resources that are flowing around because of it. Simply just
saying, ‘Ok, you get that it’s hard living in this town, too.’ I don’t think it adds much. All these people have made it, not because they are minorities. It’s not part of their main identities….For me, it’s a card that I play when I need to play it. And I believe in fostering minority students so, in that way, I will invest some resources into it.

It is important to note that participants speak from their own experiences and may not interpret their colleagues’ feelings or perceptions about race correctly. Because Amy and Ashley did not participate in this study, it is not possible to compare their perspectives with Liam’s. Productive and highly invested in his research, this participant viewed his career as “a big game” to be played. He maintained a precise understanding of who was connected to what resources, and consequently if and how he should become connected to those people. Given this approach, race seems to be one of many factors, such as access to financial resources, reputation, information, and tenure status that this participant considered when fostering relationships in the department. It is worth considering, however, how race affects different people in different departmental contexts as a key point of similarity and difference, and is thus a notable component of resource exchanges and relationships.

Age: “Nice to have colleagues in my own demographic”

As in the Business Department, age influenced faculty members’ interactions within the Social and Behavioral Sciences Department, but was not one of the most common types of homophily. It is possible that any effects of age on network interactions can be explained by rank, tenure status, and family status, which tend to coincide with age. A few participants noted that age had some effect on interactions. When asked if
there were any divisions among the faculty across rank or tenure status, David replied, “Yeah, well I think age-wise they hang out more. [Junior faculty] have kids that are little and so they are going to preschool together and they’re hanging out.” Amanda said of the influx of junior faculty members who arrived several years after she was hired, “It’s nice to have colleagues in my own demographic all of a sudden.” Nicole expressed some concern about age-based differences within the department, particularly related to the recognition of effective teachers and teaching practices. She said,

I’m not convinced that we’re acknowledging the right people all the time. I feel like it’s still ingrained – old boys’ network is not the right word – but some people have been targeted from twenty years ago [as great teachers] and since then, teaching has changed. Students have changed. Technology has changed. Perhaps that’s not the best approach.

Nicole’s concerns point to the potential effects of homophily. When those who are evaluating teaching are similar to those being evaluated, they are likely to support and promote such approaches. This validation can contribute to promotion and tenure decisions, salary increases, course assignments, recommendations, and other career factors affected by evaluators’ perceptions. Those who are different from the colleagues they evaluate might be less likely to view their approaches in such a positive light and might therefore be less likely to provide crucial endorsements and resources.

Colleagueship Functions

Having reviewed the salient departmental and individual characteristics in the Social and Behavioral Sciences Department, the following section discusses how participants interact according to Finkelstein’s colleagueship functions. These functions
include research, teaching, disciplinary linkages, institutional linkages, and friendship and support, as well as committees and service. Each function is illustrated by the sociogram of interactions among participants according to that function.

I used degree centrality, the number of ties participants indicated having to other members of the department, to explore function-specific networks in the Social and Behavioral Sciences Department. Centrality measures include ties to all other members of the Social and Behavioral Sciences Department. These data are useful for exploring relationship patterns within the department and between participants. The centrality scores of all participants are provided in Table 5.
<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Overall Network</th>
<th>Teaching Network</th>
<th>Research Network</th>
<th>Institutional Linkage</th>
<th>Disciplinary Linkage</th>
<th>Support &amp; Friendship</th>
<th>Committees &amp; Service</th>
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<td>8</td>
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<td>1</td>
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<td>12</td>
<td>13</td>
<td>4</td>
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<td>11</td>
<td>3</td>
<td>28</td>
<td>9</td>
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<td>11</td>
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</table>
Research

Research ties have the potential to be enduring and meaningful relationships for faculty members in the Social and Behavioral Sciences Department, in part due to the centrality of research in their work. While participants engaged in collaborations outside the department because of the interdisciplinary nature of their work, they still relied on and supported their departmental peers through research-related tasks, such as collaboration on funded research or consulting, giving or receiving critical feedback on writing or grant proposals, and co-authoring publications or presentations. The research ties between participants are shown in Figure 12.

Figure 12: Research Ties, Social and Behavioral Sciences Department

According to centrality scores, the average number of ties to colleagues for research purposes is 7, of a possible 36. Mark, the department chair, and Liam, a methodologist who bridged research areas and seemed to be highly strategic in his networking, both had the most research ties, 13. Matthew had the lowest centrality score, 2. Bill, who spent much of his time focusing on his administrative responsibilities, had the smallest research-based network, with only 3 ties in the department. None of his ties
were with other study participants, thus Bill appears as an isolate in the research-based network. Beth and Justin also reported 3 research ties. Beth worked with a small group of collaborators, and Justin focused more on teaching and administrative responsibilities. He also had research collaborators outside the university. Other participants had research-based centrality scores between 6 and 9.

Participants acknowledged that they were more likely to interact with colleagues with common research interests or with whom they collaborated, providing an example of homophilous ties within the department. For example, when asked if he interacted with colleagues differently for different components of his career, Justin replied,

I would say that the research collaborations are deeper in some ways. The departmental ties happen less frequently. Institutional ties – not less frequently, but at a different kind of level. It’s not the deep level that research is. Some of the teaching is and some of the service is, too.

Faculty members who saw themselves as having similar research agendas to certain colleagues were likely to establish connections with those colleagues, which could then lead to further instrumental ties, such as allocation of resources and mentoring, as well as expressive ties, such as friendship and social relationships outside of work. Explaining why she had strong ties with a particular group of colleagues, Mollie said, “That’s related to areas of research. If you have related areas of research then you teach the same classes, do similar research, supervise the same students, and serve on similar committees.” When asked how he would define the ties that made up his closest network in the department, David replied, “Mostly shared science, shared scientific questions.” When asked later about colleagues who appeared on his sociograms as isolates, or those he had no
connection with, David explained, “No, they’re not isolates. It’s just that they do different kinds of [research] than me. I have contact with them. I just don’t work with them at all.”

Justin described the ways in which certain members served as bridges across research areas in the department, noting that bridges’ diverse and flexible research interests provided an important resource by connecting colleagues. Explaining whether he interacted with people differently for different purposes, one of these bridges said, “I don’t think that I interact with them differently, but the focus of those interactions is different. As a methodologist, that’s easier for me than it is for other people.”

**Teaching**

Like research, teaching was a distinct professional task that formed the basis for interaction between faculty members in the Social and Behavioral Sciences Department. There was a core of teaching faculty in the department who did not conduct research and were responsible for a majority of the undergraduate courses. Tenure-track research faculty taught undergraduate and graduate courses. Teaching ties are shown in Figure 13.

**Figure 13: Teaching Ties, Social and Behavioral Sciences Department**
The average number of teaching-related ties was 5, although this was affected by Justin and Mark’s scores of 11 and 8, respectively. As the coordinator of the academic program and the chair of the department, their strong teaching networks are not surprising. The remaining participants had centrality scores between 2 and 6 for their teaching networks. Some faculty had small teaching networks because they had grants or other resources that allowed them to “buy out,” or get released from, their teaching responsibilities to focus on their research. Junior faculty members also received departmental resources for course releases that allowed them to invest more time in their research. A few senior faculty members, such as David, were in administrative roles and did not have any teaching responsibilities.

While several participants pointed out that there were clear expectations related to teaching in the Social and Behavioral Sciences Department, there were also indications that teaching was not as high a priority as research for tenure-track faculty. This was reflected in faculty members’ use of their teaching-related networks within the department. They seemed to value these connections, but did not cultivate them in the same ways that they cultivated their research networks or support networks.

Several faculty members seemed to struggle with the lesser value placed on teaching. Justin, who stated that his commitment to undergraduate education set him apart from his peers, was disappointed by his colleagues’ perspectives on teaching, “Our tenure-line faculty are sometimes disparaging to our undergraduates….they don’t like to teach undergraduate courses.” Mollie and Nicole expressed similar concerns about undergraduate teaching in the department, but most participants adopted the dominant culture in the department regarding teaching, which was to do well enough in the
classroom but primarily focus on research productivity. Asked to describe the culture of teaching in the Social and Behavioral Sciences Department, Mark said,

For junior people in today's climate, they can't get over-involved in teaching or they'll never make it. The demands are so high that they have to keep their eye on the goal and write grants and write papers. As long as they can go into the classroom and be credible….Once they get tenure they'd have more time to develop things.

Junior faculty sought advice and support related to teaching from both senior faculty members and from each other, but faculty members beyond their first few years in the department did not tend to seek out this resource. Senior colleagues were available to provide teaching-related help to their junior colleagues, and occasionally drew ideas from exceptional teachers in the department. For example, the chair of the department said that he occasionally observed another full professor’s teaching, “With Judy, I just get inspiration. I get emails from the students every year saying, ‘She changed my life.’ She gets over-the-top evaluations. It's a gift.”

Finally, teaching-related ties were often the result of formal roles such as shared responsibility for program oversight or course development. Amanda explained that faculty with teaching concerns were handled with the help of the coordinator of education, who was Justin at the time of this study. She said, “Most of the problems that we have with teaching in the department, times when you would really need help, have to do with student issues, which is what makes these formal roles important.” She noted that informal and formal roles related to teaching sometimes blended together, “Dan is now formally doing some mentoring for teaching for junior faculty. That came out of informal
“work that he was doing anyway.” In Dan’s case, his informal interactions around teaching were formalized as he offered support to his colleagues for this component of their work. Mollie stated that she, too, had met with Justin in his role as coordinator of education to discuss revising one of her courses. She described other formal interactions related to teaching such as observing tenure-track faculty in the classroom. “But,” she said, “I don’t feel like there’s as much networking around teaching. It hasn’t been in my experience.”

**Disciplinary Linkages**

Disciplinary linkages, including sponsorship for positions in disciplinary associations, help with grants and funding, and introductions to other scholars, were the least frequently cited reasons for interacting with colleagues in individual interviews. This is not surprising, given the emphasis on interdisciplinarity in the Social and Behavioral Sciences Department. The average centrality score for disciplinary linkages was 7, with individual scores ranging from 1 to 13. Full professors indicated more disciplinary ties with colleagues than assistant professors. The presence of relatively strong networks for disciplinary purposes does not necessarily contradict participants’ statements that they interact with departmental colleagues infrequently for these purposes. Unlike research collaborations, friendship, and other functions of colleagueship, disciplinary linkages are often comprised of one-time interactions, such as introducing someone to a colleague or being sponsored by someone for a disciplinary position. Figure 14 shows the disciplinary ties between participants.
Participants discussed the formation of relationships with individuals or groups based on similar research areas, but this was never contextualized as links to the discipline. Some pointed out that their networks crossed disciplines, both within and beyond the university. No one described intradepartmental connections as links to disciplinary resources such as sponsorship for positions or involvement in disciplinary associations. Beth said, “I was brought into this department to fill a disciplinary niche they did not have anyone doing. They had very little coverage that tapped into [my area]. I don’t see a lot of people in my discipline in the department.” Amanda explained, “Most people in the department work outside of my area. They don’t go to the same conferences that I go to and they can’t sponsor me for the things that I do.” In an interdisciplinary department like theirs, disciplinary ties might not be as likely to emerge as in those with strong disciplinary communities, publication outlets, and professional associations.
Institutional Linkages

Institutional linkages (Figure 15) are resources related to policies or politics at any level in the university. The average centrality score for institutional linkages, 12, was the highest among all functions. Study participants sought out administrators and informal mentors for information and advice about departmental and institutional policies, and also relied on each other for information about politics and informal interactions.

Figure 15: Institutional Ties, Social and Behavioral Sciences Department

Study participants reported between 5 and 36 ties for institutional linkages. Some participants explained that institutional linkages were not the most important resources in the department. Amanda said, “I know what the rules are and what the politics are. I know who everybody is. I don’t have a lot of questions about what’s expected of me or what the norms or rules are.” Nicole noted that she also had an intentional approach to politics in the department. Referring to her sources of help with any political issues in the department, she said, “Politics is interesting. I try not to go with anybody within the department. I try to do that outside of the department with someone who knows the
department, but is not in the department. [I do this] to filter out the question and figure out what I need to be doing.”

Other faculty members, however, relied on their colleagues in the department for information and advice related to policies and politics. These participants noted that there was a political element to their careers and to interactions in the department, for which institutional linkages could be quite helpful. Liam expressed an awareness of departmental politics in his career, and thought that his previous career in finance had prepared him for the realities of academic life. He said, “The politics of being in a department is very natural [to me]. I understand the way it all works. Having been in the business world for years, academia pretends like it’s something different, but it’s not.”

Administrators had greater roles in participants’ networks for institutional connections. Mark and Justin were connected to all members of the department for institutional purposes through their administrative positions, and both had centrality scores of 36. People went to the chair of the department for help with maternity leave, tenure and promotion, time away for personal reasons such as a death in the family, and other formal policies. The coordinator of academic programs recognized that he was a valuable resource to others because of his formal role as well as his informal mentoring practices, “They seek me out for policy and institutional questions because that’s my job, kind of providing policy information.”

Although he had a centrality score of 7 for institutional ties, lower than those of other administrators, Bill noted that some of his interactions were based on resources he had through his connections across the university – a consequence of various administrative roles throughout his career. He said, “I see myself as more a generalist
who knows the university better than most and who knows how to get things done. I think people come to me because of that.” Formal roles connected participants in administrative positions to all or most of their colleagues for institutional linkages.

**Support and Friendship**

Ties with colleagues for general support and friendship were relatively frequent in the Social and Behavioral Sciences department. The average centrality score for friendship and support, 11, was the second highest of all functions, after institutional linkages. Support and friendship ties among participants in this department are depicted in Figure 16.

**Figure 16: Support and Friendship Ties, Social and Behavioral Sciences Department**

The lowest centrality score for this function was 6 (Amanda, Bill, and Matthew), and the highest score was 26 (Mark). Amanda’s score may be explained by her comments about recently having a child and being away from the departmental network. Bill focused on administrative responsibilities, and maintained friendships with a few
colleagues who had also been in the department for many years. Matthew did not indicate being close to many people in the department, and they did not indicate being close to him. Justin, who expressed both a personal and professional interest in supporting his colleagues – often through his work as coordinator of education – had a centrality score of 17, followed closely by Liam who reported 16 ties of support and friendship. David and Beth reported 13 and 9 ties, respectively; Mollie and Nicole each had centrality scores of 7 for support and friendship. On average, women had lower centrality scores than men for this type of interaction. This may also be associated with rank, however, as Amanda, Beth, and Nicole are all assistant professors and Mollie is an associate professor. It was not clear whether gender, rank, or other characteristics resulted in their relatively low centrality scores for support and friendship compared to male participants.

Support and friendship ties were prevalent both within cohorts and across cohorts. For example, Bill characterized his friendship network as the result of many years of “living in the department,” as he described it. Assistant professors tended to rely on each other for support and friendship related to various aspects of their careers, as well as social ties outside their professional roles. Amanda recalled, “There’s a lot of informal – when Nicole and Beth first started, there was a lot of after-hours wine and chatting about teaching and how you deal with students.”

Mollie’s survey results indicated that she had strong ties with both senior colleagues who had been in the department long before her and with junior colleagues. When asked if this range of ties was intentional, she explained, “Well, when I came, I had really good support from senior colleagues like Laura and Melissa. And so I think like that’s made me cognizant of trying to be a good resource to the junior people.” She went
on to explain that many of the people who joined the department when she had were no longer there, which changed her social networks, particularly related to friendship and support. This included “other junior, recently tenured people” like her, Mollie explained, “people who I socialized with and that I would have gone to for some advice.”

Describing how she and Liam recently discussed relationships in the department, Beth recalled, “We talked about, you know, as a junior faculty member, who do you go to? Who can you trust to give you advice; who can trust you?” Beth’s questions illustrate the perceived limitations of on personal support across rank and tenure status, as well as (and perhaps consequentially) the ease with which assistant professors tended to rely on each other for such support.

Much of what constituted friendship and support ties between assistant professors and their tenured colleagues was career-related support and advice. This was also the case between associate and full professors. David provided one example of the importance of senior faculty supporting junior faculty, “It’s really a bad idea for junior faculty to send grants in that senior faculty haven’t seen. Because they don’t know how to do it yet. It’s a trade that you have to learn.” Amanda recalled how Melissa had helped her during her first year in the department,

She started as a senior advisor on a grant proposal I was working on.…That kind of mentoring is very helpful in your first year and isn’t quite as necessary later. She sat down with me and reviewed my second-year letters and decoded them a little bit. You know, ‘What are they really saying, do I have to do anything, is everything ok?’ You can read something and know that there are codes, and that you don’t know what they mean. She has played very instrumental roles like that.
Beth also noted how her interactions with senior colleagues changed over time. 

You start to get a sense of, ‘Who has a personality that I’m comfortable with? Who do I think would hold my confidence versus retain a loyalty to the department?’ Those things evolved kind of organically in terms of, who I just have positive interactions with.

Beth’s explanation of “just feeling out the boundaries of that comfort zone” reveals the role that perceptions, homophily, and individual networking goals can have on interactions and relationships.

Committees and Service

Originally in Finkelstein’s definition of institutional linkages, ties related to committees and service were included as a separate colleagueship function for this study. The ties related to committees and service are depicted in Figure 17.

Figure 17: Committee and Service Ties, Social and Behavioral Sciences Department

Study participants had the fewest ties to colleagues in the department for teaching and committees and service, with an average centrality score of 5 for these colleagueship
functions. Bill, Justin, and Liam each had scores of 11. Bill’s and Justin’s service is a result of their administrative roles in the department, while Liam’s is a likely combination of his efforts to earn tenure, his interest in building his network in the department, and his usefulness as a committee member that results from his methodological expertise. Other participants had centrality scores between 0 and 5 for their committee and service networks.

Despite their relative infrequency, committee assignments provided an important type of interaction for members of the Social and Behavioral Sciences Department. Sometimes, committees were the only instance of interaction that faculty members had with each other. When asked what the department does to promote interaction among colleagues, Nicole replied, “You know what’s funny? I think one of the things is actually service. I think they put us on committees so we get to know individuals we would not otherwise talk to.” As an assistant professor, Nicole said she looked forward to the ways in which new committee assignments would help her get to know some of her colleagues.

Participants reiterated the importance of service in the culture of the department. Justin said, “As you’re going through the tenure process, you need research and teaching and service. And you need to be able to balance that.” Bill explained that there was an expectation of departmental citizenship, “We expect people to contribute to the good of the program. And they do that, in part, by serving on committees.” Like Mark, Bill was deliberate about capitalizing on committee work as an opportunity for faculty members to interact and participate in the work of the department.

I always told faculty that they could sit in on any committee except promotion and tenure. If they felt like they wanted a voice and they weren’t on the committee,
come to the meeting, join. Of course, they never do. But I think transparency’s very important when it comes to support and resources and things like that.

Like proximity, the opportunities for informal interactions through committees often let to new ideas or collaborations, supportive and friendly conversations, and casual chats that allowed faculty to get to know one another better. Amanda explained this in depth:

A lot of informal conversations happen when you’re on service committees. The informal shuffling that happens on committees, particularly intensive committees when you’re there a lot, it builds rapport with people who you might not have another reason to have rapport with. That definitely opens up informal channels that lead to formal things. That’s how social networks tend to work, and they very much work like that here….That informal shuffling is incredibly important for connecting people.

Later, Amanda made an addendum to her statement, “Should you take this information and say we should do more service? Please don’t do that. That is not the recommendation that should come from this. I do not have any more time to do service.”

Summary

As in the Business Department, faculty members in the Social and Behavioral Sciences Department formed multifaceted relationships with colleagues that were shaped by departmental and individual factors and involved multiple components of their careers. The culture of research excellence and collegiality established standards for productivity and peer support that served as the foundation for many interactions. A focus on interdisciplinarity and the demands of earning tenure also influenced participants’ reasons for forming relationships. Departmental characteristics, such as affiliation with
research centers and proximity, influenced the development of networks. Individual factors also contributed to the development of ties and the exchange of resources among participants, demonstrating the salience of identities and individual characteristics within departmental contexts. These included professional characteristics, such as rank and tenure status, research interests, and administrative roles, as well as personal characteristics, such as family status, gender, race, and age. Perceived similarity and homophilous ties can be observed according to each of these characteristics. Participants interacted with their colleagues for each function of colleagueship proposed by Finkelstein (1982), as well as for committees and service. The strategies they used to cultivate relationships in the department, the benefits of those relationships, and the patterns of access to network resources are explored in the following chapter.
CHAPTER 6

Strategies, Benefits, and Patterns of Access

This chapter includes an analysis of the data from the Business and Social and Behavioral Sciences departments as they relate to the second half of the conceptual framework – participants’ network development strategies, the benefits or resources they obtained and provided through those relationships, and the patterns of access to resources that evolved through intradepartmental networks. These data address the final two research questions included in this study, “What networking strategies do faculty members develop and use within their departments?” and “What patterns of access to resources, if any, are revealed within departmental networks?”.

Network Development Strategies

While the proposed network development strategies included in the conceptual framework are useful for illuminating the roles of instrumental and expressive ties in networks, collegial relationships described by participants in this study were more complex than can be explained by these proposed categories. An alternative approach to classifying faculty members’ networking behaviors is to draw from study participants’ perceptions of networking, the complexity of their relationships (multiplexity), the number of colleagues they are connected to, and their tendencies to provide and receive resources through network relationships. After reviewing the strategies proposed in the conceptual framework, I explore these sources of information and present an initial classification of network development based on Finkelstein’s (1982) functions of colleagueship as motivators of network interactions.
Instrumental and Expressive Relationships

People develop and enact networking strategies in order to obtain the resources they desire from their network of relationships. The three network development strategies suggested by Ibarra (1993) – functional differentiation, maximizing instrumental relationships, and maximizing expressive relationships – are included in the conceptual framework as possible networking strategies employed by participants. Instrumental network benefits are job-related, while expressive relationships provide friendship and social support. Functional differentiation involves cultivating distinct networks for separate purposes, such as one network of friends with whom one socializes and a separate network of colleagues that provide information and advice. The framework also included two other possibilities – maximizing both instrumental and expressive relationships within networks (as opposed to maintaining separate networks through functional differentiation), and other strategies that might have emerged from the data.

Study participants provided examples of functional differentiation, instrumental network development, and expressive network development. I found examples of purely instrumental and expressive relationships within networks, but no one had completely differentiated networks. For example, Sarah was connected to fifteen members of the Business Department through instrumental ties. Of these fifteen, she was connected to ten colleagues for expressive purposes. In all cases, task-related networks overlapped with connections based on friendship, advice, socializing, and general support. As Scott said, “It’s really hard to disentangle those effects. What’s personal? What’s work? Work and personal lives are so interwoven.” This conflation of identities may be particularly common for academics, who often link their professional and personal identities.
Perceptions of Networking

Some participants seemed to consider networking as calculated or self-serving behavior, and did not identify themselves as engaging in such behavior. Viewing networking as something they were not good at or did not want to do might also point to participants’ perceptions that networking was not a characteristic of collegial interactions in their departments.

Most participants reported that they did not view networking as a useful and necessary component of career development, or did not discuss their interactions in this way. They did not see themselves as employing specific networking strategies to form relationships and acquire resources. Some participants appeared to view strategic networking as separate from collegial relationships. These participants described themselves as poor networkers, or described networking as something that did not interest them. Mollie, who indicated she did not view relationships as something that should be strategically managed, said,

I’m not really a networking, schmoozing kind of person. That’s just not my personality or the way I work. I don’t really think about networking as something that I strive for. It’s not something I’ve thought about all that much.

Rodger said, “I’m not good at networking. I’ve never been good at that and I don’t care for it.” Kyle said, “Networking is such a dirty word. I’m conscious of politics. I’m a straight shooter. I respect my colleagues…Why should I care about networking? It’s more important to have a good co-authorship strategy.” Jean, an associate professor in the Business Department, said, “I’ve always gotten jobs by who I know, but I’m never
strategic about getting to know the right people….I’m not good at networking, but I know it can be good for careers.”

The data nonetheless illuminate behavioral choices (observed through participants’ explanations of the decisions and interactions) that affected their networks. These behavioral choices often revealed more of a strategy than participants recognized, or felt comfortable acknowledging. Participants’ perceptions that networking was something they should not or would not engage in suggested a lack of awareness about how relationships affect their work. Rodger, a shy person and “not a good networker,” was connected to every member of the Business Department through his role as department chair. His leadership affected the culture of the department and the attitudes and behaviors of its members. Mollie, who did not think about networks or see herself as a “networking, schmoozing” kind of person, had received strong support from senior colleagues that had influenced her commitment to departmental citizenship and to providing resources to junior colleagues. Kyle, who described networking as “such a dirty word,” did not recognize the inherent value of connections to colleagues that allowed his “co-authorship strategy” to be effective. Jean believed that she was “never strategic about getting to know the right people,” but acknowledged that she’d always received jobs through personal connections.

Other study participants recognized the role of collegiality in their career development. Asked to describe an ineffective approach to networking with colleagues, Mark described someone who would “work on their own rather than gaining anything from colleagues,” noting, “it has a negative effect on their career.” Discussing how faculty members interact with each other in the Social and Behavioral Sciences
Department, Bill claimed, “they want to be as helpful as possible, not only because they’re nice people, but also because it creates a better environment for yourself if you project that kind of attitude.” Don said,

Those who take the time to build up connections and network with the right people do get more. Yeah, it does help if you know the right people. It does help if you take the time to build connections.

David, a senior faculty member in the same department, said that success came from both research productivity and relationships, “You really need to get connected right away. You can get [resources] that you could never create.” Amanda described how a perceived gap in her network created stress as she prepared for her tenure review, “My biggest challenge is this idea of who’s on the tenure committee and whether I have any ties to those people or not…network-wise, department-wise, that is the most daunting thing.”

Liam recognized that he had greater access to resources because he had been trained by two extremely well-connected scholars in the field who had in fact been instrumental in the establishment of the Social and Behavioral Sciences Department. Because he was viewed as being well-connected and well-mentored, Liam perceived senior colleagues to be proactive about supporting his career, “For me personally, there’s a lot of people helping me along. And that comes with a lot of possibilities that are afforded to me and I’m given a lot of affordances…I think that certainly has helped a lot.” Liam’s quote demonstrates his recognition that networks can provide differential access to resources based on participants’ characteristics and perceptions. In his case, his academic “heritage,” as he described it, was a characteristic that his colleagues’ perceived to be relevant in their decisions to interact with him.
Anecdotes about faculty members’ experiences with tenure and promotion often point to the role of collegiality as the fourth requirement of tenure, in addition to teaching, research, and service. Such accounts often refer to the notion of collegiality when describing how well someone does, or does not, get along with others. Anecdotes about collegiality can be one way that faculty members frame conversations about networks, interpersonal relationships, and the exchange of resources in a way that is familiar and makes sense to them. The topic of collegiality as a tenure requirement came up with a full professor in the Social and Behavioral Sciences Department, who said,

It's not a requirement. If someone was a difficult person and they were on the border, it would work against them. If someone ruffles feathers the wrong way as a junior faculty member, they're not very bright in some ways. Now, if they're over the top brilliant, you'd have to give it another look. But certainly for someone on the border, it would probably go the other way.

This statement reinforces the ambiguous nature of collegiality in higher education settings. Perceptions of one’s collegiality can work for or against an individual in tenure decisions and careers. It also reinforces the role that social networks can play in that process. For those who cannot rely on positive relationships with colleagues for access to resources, or who are perceived to “ruffle feathers the wrong way,” the intradepartmental network (or lack of one) may be a barrier to earning tenure and promotion.

It may be of little consequence if faculty members do not perceive themselves as networkers or call such behavior networking, as long as they are able to cultivate the relationships and access the resources they need. What is of consequence, however, is the failure to recognize the effects that networks and relationships in academic departments
can have on careers. Assumptions that networking does not occur in academic
departments, that networks are not present among colleagues, or that strategic networking
behavior is counter to ideals of collegiality and the academic workplace ignore the reality
that few, if any, components of academic careers are outside the influence of networks.
Networks provide access to resources. They can also create barriers to resources for those
who, for whatever reason, are not connected to key networks.

*Multiplexity in Network Relationships*

One way to explore networks in academic departments is through the network
measure of multiplexity. Multiplexity is the extent to which two people are linked
together by more than one relationship or purpose (Kilduff & Tsai, 2007; Monge &
Contractor, 2003). It can help explain the degree of complexity in faculty members’ ties
to each other. As shown in Chapters 4 and 5, multi-purpose, relationships were common
in both departments. Study participants exchanged resources with colleagues across each
collegeship function (Finkelstein, 1982), but not every relationship included every
function. For example, Mollie indicated that she had many ties to her colleague, Barbara,
which served four different collegeship functions. When asked if she had a strong
relationship with Barbara, Mollie laughed,

I knew that’s what you were going to say. We have a grant together. So we
definitely work together the most. We also socialize outside of work, too. We
have a lot of mutual connections. And we have similar areas of research so we
teach a lot of the same classes. And her office is right next door.

Mollie’s relationship with Barbara illustrates the multiplexity, or multiple purposes, of
relationships that were common among study participants.
Multiplex scores for participants in each department are included in Table 6 (Business Department) and Table 7 (Social and Behavioral Sciences Department). Respondents are listed along the first column; their participating colleagues are listed across the top row. Multiplex scores reflect the number of colleagueship functions each participant indicated in each relationship with other participants, with a maximum score of 6. Each function represents one point in a multiplex score. For example, a relationship that included co-authorship and friendship has a multiplex score of 2. The average multiplex scores for all relationships reported by and about each participant are also included.

Pairs of actors do not always have the same multiplex scores; scores are based on participants’ perceptions as indicated by survey responses. One person in a relationship may define it differently than the other. For example, Sidney indicated that he interacted with Don for two purposes; Don indicated interacting with Sidney for three purposes. Ryan indicated interacting with peers for an average of four functions, but his colleagues in the Business Department indicated interacting with Ryan for an average of three functions.

Table 6 and Table 7 show variation in multiplexity, indicating many types of relationships in each department. While most relationships served more than one purpose, each had unique characteristics and combined functions. Some dyads, such as the one between Sarah and Jean (Table 6), included interactions for all six colleagueship functions. Others, such as the connection between Amanda and Bill (Table 7), served only one function.

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1 As a reminder, the functions of colleagueship are teaching, research, service, institutional ties, disciplinary ties, and general support and friendship.
Table 6: Multiplexity of Ties, Business Department

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<th>Jean</th>
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<th>Michael</th>
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$x̄$ indicates no tie between participants

Table 7: Multiplexity of Ties, Social and Behavioral Sciences Department

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$x̄$ indicates no tie between participants
Participants had individual average multiplexity scores ranging from 2 to 5 in the Business Department and average scores between 1 and 4 in the Social and Behavioral Sciences Department. Because the Social and Behavioral Sciences Department is larger than the Business Department, and a smaller percentage of eligible members (36%) participated in the study, the multiplexity scores for that department do not include as many of the relationships between department members as those of the Business Department, which included 73% of all eligible participants. This may result in an underestimation of the multiplex scores for members of the Social and Behavioral Sciences department. For example, no one in the Social and Behavioral Sciences Department reported interacting with another participant for all colleagueship functions; there are no multiplex scores of 6 between participants.

Participants in both departments consistently described departmental cultures of collegiality and peer support, but two-thirds of participating faculty members reported that they were not connected to all other participants. Other than the two department chairs, who interacted with everyone for policy-related purposes, participants were not connected to all colleagues in their departments. This finding does not contradict qualitative data about friendly climates and collegial interactions in these departments; rather, it adds another layer of information. All participants seemed invested in maintaining positive departmental cultures. This general colleagueship or friendliness with most colleagues (saying hello to colleagues in the hall or chatting before a meeting, for example) seemed to be different, however, from cultivating particular friendships and professional relationships with colleagues, through which resources were exchanged.
Multiplexity scores reinforce qualitative data about relationships between participants. Sidney and Scott both noted that they were not connected during their interviews, and indicated no relationship between them in their survey responses, as shown in Table 6. Sarah described exchanging resources through particularly close relationships with Sidney, her friend and mentor; Rodger, the department chair and member of the same research group; and Jean, a member of the same research group and the only other female participant in the Business Department. Table 6 shows that each of these participants have multiplex scores of 6 with Sarah, reinforcing her accounts of these relationships.

No participants in the Social and Behavioral Sciences Department mentioned a relationship with Mollie when talking about their networks in the department. While they did not express negative perceptions about her, neither did they indicate any connections to her when discussing their relationships. Mollie indicated that she was satisfied in the department, and was closely connected to some non-participating members (one was Barbara, for example; another was her husband, whom she met through the department), but she did not describe close relationships with other participants. Table 7 shows that six participants did not indicate relationships with Mollie, two participants indicated interacting with her for one purpose, and one participant indicated interacting with her for two purposes. Like the analysis of degree centrality and interview data, the analysis of multiplexity indicates that participants developed relationships and exchanged resources inconsistently across their networks. In other words, participants did not seem to adopt one specific behavioral strategy or style of interaction with colleagues, but reported different kinds of ties to different colleagues, which fulfilled different purposes or
colleagueship functions. This finding may point to the role that individual characteristics and homophily play in the creation and intended purpose of ties between network members.

**Classification of Network Development Strategies**

From this study, I had hoped to get a clear understanding of networking behaviors that would result in a typology of behaviors to be applied to studies of other departments. What I found instead is that the complexity of relationships within this limited sample precludes generalization. I did find, however, that Finkelstein’s (1982) functions of colleagueship (teaching, research, institutional ties, disciplinary ties, support and friendship, and the added function of committees and service) were useful for conceptualizing and categorizing the primary motivations of networking behaviors.

For participants in this study, perceptions about the primary functions of their networks influenced their interactions. This classification, based on functional focus, is one potential way of conceptualizing network development strategies. By reviewing participants’ indications of ties and descriptions of their relationships, perceptions about networks and networking as described in their interviews, and individual patterns of interaction, I developed a classification of the combinations of colleagueship functions that influenced study participants’ networking behaviors (Table 8). Seven categories are included, representing the combinations of functions that motivated interactions. Interview data from Matthew and Jim were not available, so I categorized their approaches based on their survey data. Table 8 is not intended to present a complete typology of all possible faculty networking behaviors; rather it is an initial classification based on findings from this study, and must be developed through further research.
As shown in Table 8, research was a “functional focus” of all participants’

networks; research ties were reportedly extremely important and organized much of

participants’ work and interactions. Influenced by research-focused departmental

characteristics such as the topical research areas in the Business Department and the

interdisciplinary teams and research centers in the Social and Behavioral Sciences

Department, participants formed ties with those with whom they collaborated, or with

those who conducted similar types of research.

Some participants, such as Brad, Jean, Jim, Kyle, and Matthew described only

interactions with a single functional focus (i.e., “Research”). For Bill, Michael, Rodger,

and Ryan, the functional focus of their interactions can be categorized as “Research /

Institutional Ties.” These participants’ interactions focused on research, but their

networks were also used for institutional linkages; this is primarily the result of their roles

<table>
<thead>
<tr>
<th>NAME</th>
<th>RANK</th>
<th>GENDER</th>
<th>FUNCTIONAL FOCUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amanda</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Support &amp; Friendship / Committees &amp; Service</td>
</tr>
<tr>
<td>Beth</td>
<td>Assoc.</td>
<td>F</td>
<td>Research / Support &amp; Friendship</td>
</tr>
<tr>
<td>Bill</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Institutional Ties</td>
</tr>
<tr>
<td>Brad</td>
<td>Prof.</td>
<td>M</td>
<td>Research</td>
</tr>
<tr>
<td>David</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Institutional Ties / Support &amp; Friendship</td>
</tr>
<tr>
<td>Don</td>
<td>Asst.</td>
<td>F</td>
<td>Research / Institutional Ties / Support &amp; Friendship</td>
</tr>
<tr>
<td>Jean</td>
<td>Prof.</td>
<td>M</td>
<td>Research</td>
</tr>
<tr>
<td>Jim</td>
<td>Assoc.</td>
<td>M</td>
<td>Research</td>
</tr>
<tr>
<td>Justin</td>
<td>Assoc.</td>
<td>M</td>
<td>Research / Support &amp; Friendship / Teaching / Institutional Ties</td>
</tr>
<tr>
<td>Kyle</td>
<td>Asst.</td>
<td>M</td>
<td>Research</td>
</tr>
<tr>
<td>Liam</td>
<td>Asst.</td>
<td>F</td>
<td>Research / Support &amp; Friendship</td>
</tr>
<tr>
<td>Mark</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Institutional Ties / Support &amp; Friendship</td>
</tr>
<tr>
<td>Matthew</td>
<td>Prof.</td>
<td>M</td>
<td>Research</td>
</tr>
<tr>
<td>Michael</td>
<td>Assoc.</td>
<td>F</td>
<td>Research / Institutional Ties</td>
</tr>
<tr>
<td>Mollie</td>
<td>Assoc.</td>
<td>M</td>
<td>Research / Support &amp; Friendship / Committees &amp; Service</td>
</tr>
<tr>
<td>Nicole</td>
<td>Asst.</td>
<td>F</td>
<td>Research / Support &amp; Friendship / Teaching</td>
</tr>
<tr>
<td>Rodger</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Institutional Ties</td>
</tr>
<tr>
<td>Ryan</td>
<td>Prof.</td>
<td>M</td>
<td>Research / Institutional Ties</td>
</tr>
<tr>
<td>Sarah</td>
<td>Asst.</td>
<td>M</td>
<td>Research / Support &amp; Friendship</td>
</tr>
<tr>
<td>Scott</td>
<td>Asst.</td>
<td>M</td>
<td>Research / Support &amp; Friendship</td>
</tr>
<tr>
<td>Sidney</td>
<td>Assoc.</td>
<td>F</td>
<td>Research / Institutional Ties / Support &amp; Friendship</td>
</tr>
</tbody>
</table>
in department administration. Interactions described by David, Don, Mark, and Sidney were motivated by research and administrative responsibilities, which they met through institutional linkages, but they also seemed to be motivated by the colleagueship function of friendship and support. These administrators in the “Research / Institutional Ties / Support & Friendship” category provided support to colleagues, both through their formal leadership roles as well as their personal commitments to peers support and their friendships with colleagues.

Several other participants were focused on their research, and also seemed motivated to interact with colleagues to both receive and offer support, but did not have administrative responsibilities that led them to focus on institutional linkages. Beth, Liam, Sarah, and Scott are included in the “Research / Support & Friendship” category. Amanda and Mollie were also motivated by the functions of research and support and friendship to develop their networks, and were also invested in their service and citizenship roles. They are included in the category of “Research / Support & Friendship / Committees & Service.”

Finally, Nicole and Justin seemed to interact with others for research and support, as well as teaching, which set them apart from their colleagues. Justin was also heavily committed to his administrative responsibilities. Nicole’s functional focus is categorized as “Research / Teaching / Support & Friendship,” and Justin’s is categorized as “Research / Administration / Teaching / Support & Friendship.”

Study participants focused primarily on the colleagueship functions of research, institutional ties, and support and friendship when describing their interactions and relationships within their departments. Few participants focused on committees and
service or on teaching, and no one expressed a focus on disciplinary ties. For participants in the both the Business and Social and Behavioral Sciences departments, research, administration, and support seemed to be the functions of colleagueship most emphasized in interactions and networking behaviors.

Network Benefits Obtained and Provided

One of the final components of the conceptual framework is network benefits obtained and provided through relationships with departmental colleagues. Chapters 4 and 5 include detailed discussions of the departmental and individual factors that influence network development strategies and behaviors. Those chapters also explored the role of colleagueship functions and networking goals in participants’ networks.

The data presented in Chapters 4 and 5 suggest that participants exchanged resources related to each colleagueship function. The data also pointed to the complex interactions of departmental and individual characteristics, networking goals, and behaviors that result in the exchange of resources within departments. In this chapter, I focus on two factors that were particularly influential in the exchange of network benefits. These include culture, a departmental characteristic, and academic rank, an individual characteristic. By focusing the discussion on these two factors, I illustrate how resource exchanges are influenced by the contexts and members of departments. I begin by analyzing the exchange of resources within departments.

*Exchange of Resources*

In addition to describing the purposes of participants’ network relationships according to multiplexity of ties and functional areas of focus, considering whether participants use network ties to provide or receive resources reveals the strategic purposes
of ties. Table 9 summarizes the exchange of resources among participants. This summary includes information on participants’ rank and gender, percentage of department members in their personal networks (“Percent of Department Members in Network”), percentage of ties through which they provided resources (“Resources Provided”) and percentage of ties through which they received resources (“Resources Received”), according to self-reported data from network surveys. The percentage of members in participants’ networks was calculated using degree centrality, the number of colleagues to which participants are connected. The percentages for “resources provided” and “resources received” were calculated by dividing the number of each type of exchange by the total number of resource exchanges each participant reported. Exchanged resources do not include non-directional interactions, such as socializing or co-teaching.

Table 9: Exchange of Resources, All Participants

<table>
<thead>
<tr>
<th>NAME</th>
<th>RANK</th>
<th>GENDER</th>
<th>PERCENT OF DEPARTMENT MEMBERS IN NETWORK</th>
<th>RESOURCES PROVIDED (as % of resources exchanged)</th>
<th>RESOURCES RECEIVED (as % of resources exchanged)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amanda</td>
<td>Asst.</td>
<td>F</td>
<td>47</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Beth</td>
<td>Asst.</td>
<td>F</td>
<td>31</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>Bill</td>
<td>Prof.</td>
<td>M</td>
<td>50</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>Brad</td>
<td>Asst.</td>
<td>M</td>
<td>55</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>David</td>
<td>Prof.</td>
<td>M</td>
<td>42</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Don</td>
<td>Prof.</td>
<td>M</td>
<td>70</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Jean</td>
<td>Assoc.</td>
<td>F</td>
<td>75</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>Jim</td>
<td>Prof.</td>
<td>M</td>
<td>35</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Justin</td>
<td>Assoc.</td>
<td>M</td>
<td>78</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Kyle</td>
<td>Assoc.</td>
<td>M</td>
<td>25</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Liam</td>
<td>Asst.</td>
<td>M</td>
<td>56</td>
<td>41</td>
<td>59</td>
</tr>
<tr>
<td>Mark</td>
<td>Prof.</td>
<td>M</td>
<td>100</td>
<td>82</td>
<td>18</td>
</tr>
<tr>
<td>Matthew</td>
<td>Assoc.</td>
<td>M</td>
<td>31</td>
<td>26</td>
<td>74</td>
</tr>
<tr>
<td>Michael</td>
<td>Prof.</td>
<td>M</td>
<td>70</td>
<td>68</td>
<td>32</td>
</tr>
<tr>
<td>Mollie</td>
<td>Assoc.</td>
<td>F</td>
<td>47</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>Nicole</td>
<td>Asst.</td>
<td>F</td>
<td>47</td>
<td>28</td>
<td>72</td>
</tr>
<tr>
<td>Rodger</td>
<td>Prof.</td>
<td>M</td>
<td>100</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Ryan</td>
<td>Prof.</td>
<td>M</td>
<td>75</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>Sarah</td>
<td>Assoc.</td>
<td>F</td>
<td>90</td>
<td>57</td>
<td>43</td>
</tr>
<tr>
<td>Scott</td>
<td>Asst.</td>
<td>M</td>
<td>75</td>
<td>27</td>
<td>73</td>
</tr>
<tr>
<td>Sidney</td>
<td>Prof.</td>
<td>M</td>
<td>95</td>
<td>74</td>
<td>26</td>
</tr>
</tbody>
</table>
The summary of resources exchanged shown in Table 9 helps explain individual participants’ relationships in their departments, their networking behaviors, and resource-related outcomes. Table 9 shows that eight participants are reportedly connected to less than half of their departmental colleagues and 13 participants reported being connected to half or more of their colleagues. Of those 13, ten reported connections to at least 70% of their colleagues. No participants reported being connected to less than 25% of departmental colleagues. This finding, that almost half of participants are connected to 70% or more of their colleagues, supports two findings from the analysis of interview data, specifically that participants were generally well-connected to other members of their departments, but that not all participants are connected equally within intradepartmental networks.

The nine participating full professors were connected to between 35 and 100% of their colleagues, with six connected to 70% or more of the members of their departments. Full professors reported providing more resources to colleagues than they received, with the exception of Ryan, who appears to receive and give resources in roughly equal proportion. Mark and Rodger, the department chairs, were both connected to all colleagues in their departments. Data about full professors reinforce findings that full professors are important connections for each other and for junior colleagues because of the relatively high amount of resources they can provide. They also reinforce findings about the high connectedness of department chairs to their colleagues.

The six participating associate professors reported connections to between 25 and 90% of their departmental colleagues. Two associate professors, Justin (an administrator in the Social and Behavioral Sciences Department) and Sarah (a self-professed
“facilitator”) indicated that they provided more resources than they received. Jean, Mollie, Kyle, and Matthew reported receiving more resources than they provided. These findings support conclusions that associate professors seek resources related to their career goals and needs, and provide them to colleagues, particularly assistant professors. The fact that four of the six associate professors received more resources than they provided serves as a reminder that while they have tenure and might serve in administrative roles, associate professors still rely on resources from departmental colleagues.

The six assistant professors in this study reported connections to between 31 and 75% of their colleagues. All assistant professors reported receiving more resources than they provided, with the exception of Amanda, who reported receiving 49% of the total resources she exchanged. This may be due to the fact that Amanda joined the Social and Behavioral Sciences Department a few years before Beth, Liam, and Nicole arrived, and had actively provided resources to them. Both Brad and Kyle reported that all of their exchanges involved receiving resources from other members of the Business Department. Assistant professors reported a slightly lower range of connectedness from their tenured colleagues. As other findings from this study suggest, this may be due to their focus on earning tenure, relatively little focus on providing resources, and relatively few years (and time to cultivate relationships) in the department.

Two of the six female participants were connected to half or more of colleagues in their departments. Eleven of the 15 male participants (about three-quarters) were connected to departmental colleagues. Two women reported providing more resources than they exchanged, but only by a small margin, Amanda (51% provided) and Sarah
Nine men reported providing more resources, and six men reported receiving more resources. Findings that, on average, women were less connected and received more resources than their male peers reinforce findings that gender was a salient characteristic of network connections in the Business Department and the Social and Behavioral Sciences Department.

**Departmental Culture and the Exchange of Resources**

The culture of productivity and excellence that characterized both departments influenced interactions by establishing working styles that were collaborative and supportive, but also independent and focused. An emphasis on maintaining a positive reputation, productivity, and excellence in research also resulted in high expectations for tenure and promotion in both departments, which further influenced networking goals and interactions. This culture reinforced expectations that department members should be productive, which directed participants’ attention towards their own teaching, research, and administrative responsibilities. As Beth said, “We’re not worried about what everyone else is doing or worried about other people’s business because we’re too busy to be bothered.” The influence of this culture in both departments might have helped to direct the energy of participants, and might have also made it difficult to notice when colleagues needed support. This culture might have been all the more challenging for those particularly in need of resources or concerned that they were not fitting in with cultural norms. Recall, for example, the comments from a full professor in the Business Department who had at times experienced doubt about his fit in such a productive department, “You better pull your weight here, research-wise, if you want to be respected. It's a meritocracy and that's, at times, been a challenge for me.”
There was at least one example of a faculty member unable to acquire the resources she needed to be successful, potentially as a consequence of the high demands of the department. Although I did not interview Cindy, she was referenced by other study participants. Cindy was an assistant professor in the Business Department who was offered a clinical professorship (which removed her from the tenure track) that allowed her to focus exclusively on teaching responsibilities. Participants described her as “extremely successful in her teaching” and many participants were connected to her for teaching, friendship, and other purposes. Cindy’s lack of a research-based network, according to one participant, caused substantial challenges for her. According to the professor who described Cindy’s case, she was disconnected to her colleagues by her research, which was methodologically and topically different from theirs. This participant said of Cindy,

She became an island. That was an issue. She was a qualitative researcher in [her research] group. She was the only one. She tried to work with one or two people, but it didn’t materialize into much. That was a case of isolation in the department. We realize that.

For faculty members who were different from the majority in terms of research, the culture of research excellence and productivity in both departments might have contributed to the inability to establish the relationships needed to succeed in those environments and acquire critical network resources.

The collegial culture of both departments established expectations that faculty members would seek the resources they needed from their peers, or provide them to those who needed them. Among participants, these expectations influenced interactions by
communicating the importance of providing or requesting advice, financial resources, information about policies, and other resources exchanged within the departments. This culture facilitated the establishment of behavioral norms according to formal roles, with senior faculty members demonstrating a commitment to advancing their departments and helping their colleagues, particularly untenured faculty members. Junior members, as well, understood the importance of seeking assistance from each other and from their senior peers, and indicated a willingness to do so. Networking behaviors were often attributed to learning from examples within the department, adopting roles participants had observed, and forming opinions about effective strategies or role requirements based on predecessors or mentors. When asked how she had cultivated her approach to mentoring junior colleagues and offering resources such as support and advice, Mollie said, “Well, when I came I had really good support from senior colleagues…that’s made me cognizant of trying to be a good resource to the junior people.”

Anyone who was not perceived to embrace the culture of either department was not well-received by the majority. Participants in both departments referenced cases of former colleagues who left the department due to a poor fit. At times, the decision to leave was influenced by formal actions such as the denial of tenure, negative evaluations, and a lack of support from department heads and deans. For example, Michael recalled a former dean’s words to tenured faculty members who were not viewed as supporting the Business Department, “I can't fire you, but you've got no future at this place. If you're around in a year, you'll be sitting in another building. That I can do. I can certainly avoid giving you any salary increases.” At other times, informal actions seemed to place faculty members on the periphery of the departmental network, or out of it altogether. Justin said
of one faculty member who, according to participants, was not well connected to colleagues in the department, “She does her duty and she teaches the courses but she’s not that invested much more than that…I think that’s unfortunate.” By choosing not to invest in the department, as Justin suggested, the faculty member disconnected herself from many interactions that cultivated relationships. Participants viewed her as someone who did not fit with the culture of the department.

A commitment to peer support is likely to benefit any academic department and its members, yet it raises questions about potentially negative outcomes for those who are unlike the majority. In departments with strong cultures such as the two included in this study, there also appear to be benefits of working among supportive and collegial peers who excel in their work. The purpose of recruiting colleagues who will contribute to such norms and goals is also clear. Strong cultures, however, have the potential to reinforce specific behavioral strategies and approaches to interaction and cultivate homophilous relationships to the detriment of those who are different in ways that appear to upset the status quo. For example, there were expectations in both departments that those seeking resources (often junior faculty members) would approach those who had access to such resources (often senior faculty members). An unintended consequence of such an approach, as Mollie pointed out, is that “it only works for people who feel assertive enough to seek that out.”

Mollie’s comment points to the role that personal style and even backgrounds and experiences play in academic success. All things being equal, faculty members who are generally less assertive, as Mollie noted, and more shy or introverted may be less likely to cultivate relationships with colleagues and therefore have less access to network
resources than more outgoing colleagues who are comfortable with social interaction and networking behaviors. All things not being equal, faculty members who perceive themselves to be different from their colleagues or different from the majority may be less inclined to cultivate personal and professional ties within their academic departments. This challenge of connecting with colleagues may be present for all faculty members who have a sense of minority status, “otherness” or poor fit within their departments, but may be more salient for those who are visibly different from the norm or from those in positions of power (e.g., women in a male-dominated department or faculty of color in a predominantly White department).

In both departments, periods of conflict had resulted in some faculty members leaving the institution. For those academics, not fitting in to the majority or the dominant culture was challenging enough to warrant departure. In some cases, these departures may be good for a department and even good for the individual who finds a better fit elsewhere. Regardless of whether such departures result in benefits for departments or the departing faculty members, this study suggests that those who do not fit in to the cultural majority or seem to uphold the key values and norms of their departments might be removed (or choose to remove themselves) from their departments as a consequence.

Cindy’s case provides an example of what might happen when someone does not demonstrate the same fit or values as the collective department in some important way, but connects with colleagues in other ways. Cindy did not establish a standard of research productivity that met departmental expectations. According to the faculty member who described Cindy’s experiences, she had not successfully collaborated with departmental colleagues and had not produced sufficient research and publications. This
faculty member noted that this may not have been Cindy’s fault entirely, and that others in the department had learned from her situation. Despite Cindy’s shortcomings in her research, arguably the most valued activity of the department, she connected to her colleagues is at least two other important ways. First, they considered her to be a resource for teaching-related help, such as advice and conversations about teaching practices. Second, she had personal friendships with many of them. As Sarah said, “I feel very close to Cindy.” Scott said of his relationship with Cindy, “We’ve always been very close in a lot of different ways. I always talk to her about teaching and a lot of different things.”

For Cindy, who had not yet earned tenure, her failure to meet a key departmental value could have resulted in her dismissal from the department. Through her network of colleagues, however, she provided other valuable resources and cultivated positive relationships. It seems that these network ties were important in Cindy’s reclassification as a member of the teaching faculty. Her case demonstrates how a lack of fit can be based on departmental norms, not necessarily a failure to be collegial. It also illuminates how a perceived lack of fit can be resolved by alternatives to departure through relationships with colleagues. Cindy’s network of relationships seemed to provide resources and connections that fostered fit in other ways beyond research values and productivity.

**Academic Rank and the Exchange of Resources**

Rank was a highly influential factor in the exchange of resources among study participants. Prior research has emphasized the importance of access to supportive colleagues throughout academic careers, particularly during stages that require emotional and intellectual support, such as tenure review. The commonalities shared by junior faculty members during such times can also help to forge ties between them. Individual
factors influence the development of these interactions, and perceived similarities can be as important as professional needs in the exchange of resources (Finkelstein & Lacelle-Peterson, 1992; Menges & Exum, 1983).

Full professors tended to provide resources to junior colleagues, and to focus on the advancement of those colleagues and of the department as a whole. They also had close friendship ties with some of their fellow full professors. Senior faculty members tended to recognize their roles in the department as providers of resources and acknowledged a responsibility for helping junior faculty members. These participants tended to form personal ties with other senior colleagues based on a shared history in the department and similar personal interests. They also had well-developed research agendas and were fully integrated into research teams, collaborative projects, or their own independent projects. Faculty members at this stage in their careers have already established their networks and for the most part, are not concerned with identifying ways to access resources. Associate professors adopted many of the mentoring and administrative behaviors that their senior colleagues exhibited, but were also concerned with their own career development, such as being promoted to full professor, cultivating and expanding their research agendas, and obtaining administrative and leadership roles in their departments.

Assistant professors tended to focus on their own careers (specifically, the quest for tenure), on supporting other junior colleagues, and on fostering positive relationships and collaborations with their senior colleagues. Concerns about earning tenure were a substantial reason for a number of assistant professors’ approaches to interacting with colleagues in the department in a way that did not drive the networking behaviors of their
tenured peers. Assistant faculty members, including Scott, Brad, Amanda, Beth, Liam, and Nicole, demonstrated much more strategic behavior in their interactions within their departments than their tenured colleagues. Each of them discussed the ways that they attempted to manage their relationships, how they made decisions about who to interact with for what purposes, and how their goals affected those behavioral choices. Liam said, “I spend a lot of time watching what’s happening. I mean, it doesn’t take long to sit in a few meetings and know who holds the power and who doesn’t, who has resources and who doesn’t.”

The administrative positions and leadership roles held by some senior members contributed to rank-based differences in both departments. Many senior scholars discussed a commitment to being “institution builders” and “helping the department” that included providing a range of resources to their colleagues. Greater access to resources was a likely outcome for faculty members who could connect to those in the administrative positions. Faculty members who did not have personal or professional connections to these colleagues may not have had the same advantage. Although all members of the department benefit from the contributions of faculty members who fulfill administrative duties for the department, relationships with administrators who control resources, for assistant professors in particular, may result in an imbalanced distribution of these resources. This is one example of the complex interaction of formal roles and informal relationships in academic departments, as well as how interpersonal ties can contribute to resource distribution beyond the cultural and structural characteristics of departments. The following section explores patterns of access to network resources.
Patterns of Access to Network Resources

Homophily, one of the main theoretical principles of this study, is central to the discussion of patterns of access in academic departments. People tend to develop relationships with those they perceive to be similar to themselves (Fischer, 1982; Marsden, 1987; Burt & Ronchi, 1990). The more similar people are to each other, the stronger their relationship is likely to be (Granovetter, 1973). Faculty members’ beliefs about others influence behavior and access to resources (Blackburn & Lawrence, 1995). Network research has shown that researchers cannot fully determine a priori which characteristics will guide homophilic behaviors within networks. The investigation of homophily in this study was based on the principle that participants define for themselves which professional and personal characteristics are salient in perceptions of similarity and the subsequent cultivation of relationships and exchange of resources.

Homophily Based on Professional Characteristics

After a review of the literature, it became clear that intellectual interests, skills, and experiences, as well as departmental and disciplinary goals, were likely to be salient in network interactions in the context of academic departments. This proved to be the case in this study; research ties were one of the strongest types of collegial relationships, characterized by clearly defined purposes, ongoing collaborative interactions that often spanned substantial amounts of time, shared skills and interests, and an exchange of resources between colleagues (particularly from senior faculty members to their junior peers). Research ties seemed to correspond with all other types of collegial relationships, including those focused on institutional and disciplinary linkages, teaching, service, and general friendship and support.
Because research ties are formed around one of the most prominent professional characteristics of academics’ identities, who they are as scholars, faculty members are likely to enter departments with a degree of familiarity and comfort with this component of their identities and how it will influence their collegial interactions. Structurally, reliance on research interests as one of the defining characteristics of academic networks also makes sense, as departments are organized at least broadly around academic specializations. In the case of the Business Department, this organization included the three major groups of researchers. The Social and Behavioral Sciences Department included interdisciplinary research teams and groups of scholars who worked together through the organizing oversight of several of the university’s interdisciplinary research centers.

The salience of formal networks organized by departmental research areas and individual research skills and interests emerged as an important finding in this study, but prior research also suggests that faculty members rely on informal networks to accomplish their work as well. Formal networks do not provide a complete picture of interactions and organizational behavior; informal and interpersonal relationships that can affect resource exchange in academic departments.

*Homophily Based on Personal Characteristics*

Full consideration of faculty interactions in academic departments must move beyond the dominant formal characteristics of departments and their members and explore the equally important influence of personal characteristics in collegial interactions. Findings from this study show that while all participants were affected by similar individual and departmental components, such as department size, tenure, rank,
research interests, and methodologies, a range of personal characteristics such as gender, race, nationality, age, and marital or family status also affected how resources were exchanged, and among whom. Judging by the number of ties created or fostered by informal interactions and participants’ emphasis of the importance of these relationships, the naturally occurring informal networks that evolve from members’ preferences and voluntary interactions seem to be as influential as the formal components of the same networks, which are based on hierarchies, position descriptions, and task-related communication.

Participants revealed the effects of homophily according to personal characteristics when describing their relationships. For example, when explaining the process of establishing ties within the department, Scott said, “Obviously, you look for your same demographic group.” He was referring to colleagues who were like him – specifically, younger faculty members who were single and did not have children. Equally important as Scott’s interest in finding peers in his “group” is the fact that he, like everyone, constructed his own definition of what constituted similar peers, or those who fit within his group. Scott’s assumption that this process was “obvious” reveals the inherent tendency to rely on perceived similarities when forming relationships.

Participants also made assumptions about others’ interactions based on perceived similarity. For example, there were subtle but important gender-based interaction differences in both departments. The two female participants in the Business Department spoke of gender-related issues and gender influences in their relationships with colleagues, as did three of four female participants in the Social and Behavioral Sciences Department. It may be, as suggested through the accounts of several male participants,
that male faculty members did not perceive that women had experiences different from their male peers; yet, several men (possibly inadvertently) spoke of women and men in contrasting ways. Most male participants did not discuss gender when talking about their networks, or did not indicate any awareness that women may have different experiences from men. A few men speculated about women’s experiences and noted that they may be different from men’s experiences in the department. Others revealed gender-based assumptions that affected their reliance on colleagues for resources and their understanding of the networks of relationships within the department. These assumptions included viewing female mentors as mother figures, perceiving women to want to interact with each other simply because they were of the same gender, referring to female colleagues with labels such as “a nice girl,” and assuming that women were better teachers than men.

One participant explicitly stated that gender issues were not discussed because they were not important to the men in her department. One male participant said of the women in the Business Department, “As a department, we try to say, ‘Ok, they talk to each other.’ So, the female thing is there.” His use of the word “we” to describe the department and “they” to describe the support that he assumed female faculty members were providing to each other reveals his assumptions about gender as a salient point of homophily between members. A male faculty member’s gender-based assumptions and language may go unrealized or unchallenged by male peers, but may be a deterrent for female colleagues who respond with hesitation to interact with such a colleague and a heightened sense of difference from him.

According to their accounts of how personal characteristics affected relationships,
study participants perceived themselves to be different from their peers for multiple and sometimes contradictory reasons. For example, Amanda expressed that having young children made her most different from her colleagues in the Social and Behavioral Sciences Department. Nicole, however, identified herself as different from others because she did not have children. At other times, having (or not having) children served as a point of similarity that fostered relationships between network members. This was true for Beth, who interacted with Justin, Amanda, and other members of the department for reasons related to their children. Just as perceived similarities can lead faculty members to identify colleagues as being in their “groups,” perceived differences can lead faculty members to place themselves out of groups within networks, or to place others outside of their groups. Perceived similarities and difference affect the development of relationships through interactions and the exchange of network resources.

**Combined Effects of Professional and Personal Characteristics**

The networks in the academic departments included in this study developed from the complex interactions of formal and informal characteristics. Connections between participants for both personal and professional reasons resulted in relationships based on similarities across multiple characteristics. For example, based on his other comments about Don and Ryan, it is clear that Michael considered them his closest colleagues for a variety of reasons, including rank and tenure status, leadership roles in the department, research interests and collaborations, and the resulting friendship and peer support that developed through their interactions. This combination of influences is as important as the individual similarities and differences that constitute such relationships. Such
relationships result in access to more, and different types of, resources than those that served a single, formal, purpose.

The differences between Brad and Scott’s relationships with Rodger highlight the effect that perceived similarity and complex interactions can have on relationships. Brad wanted Rodger to observe his teaching because Rodger was chair of the Business Department, and he relied on Rodger for communicating formal departmental policies. Brad offered no resources to Rodger, however, and received few resources from him beyond evaluation of his teaching and policy-related information. Scott, also an assistant professor, was connected to Rodger for every type of colleagueship function and indicated that he felt closest to Rodger among departmental colleagues because of perceived similarities. As Scott explained the relationship,

> Obviously, he’s the department head. But socially, I think I connect with him well. We both like to drink beer. We both play soccer. We’re both European. We know a lot of the same people from Europe. When he steps down as department head, I will still consult him. Just because I get along really well with Rodger.

Relationships that may have formed from obvious formal ties often did not always occur in participants’ networks if personal factors impeded them and established perceived differences between colleagues. Although part of Scott’s relationship with Rodger was based on Rodger’s role as chair of the Business Department, he did not have the same relationship with Sidney, who was about to take over as chair. Pointing to Sidney’s position as an isolate in his network with whom he had no interaction, Scott said, “I think the new department head is, um, yeah. I don’t connect well with him.” Sidney said of Scott’s position as an isolate within his network, “That’s probably right. I have not had
significant links with Scott. He's probably the only one I haven't actually sat down and tried to help guide or done something with.” Asked how faculty members can foster relationships with colleagues, which he viewed as crucial for careers, David said, “Well, it depends on the person. You have to get to know a person and what their anxieties are. Part of it’s personality.” Liam described Judy as being in “a separate social network. It’s an interesting one,” he said, “because potentially she could be in my teaching network, because she teaches the same classes that I taught. But there is not any connection there.”

Rodger pointed out the importance of perceived similarity in his relationships within the department,

I wouldn’t work with people I didn’t like personally. That’s why I work with those two guys from Europe. There is a lot of commonality there. I don’t have to be very close with someone at work, but I don’t have to work with people I don’t like. So with those two guys from Europe, we have a lot in common.

These examples demonstrate how the unique influences of departmental and personal, and formal and informal, characteristics shape access to resources in unpredictable and complex ways. They also point to the role that perceived similarity has in fostering relationships and access to resources.

**Patterns of Access**

Among the study participants, relationships were very important in providing access to resources, yet there were few clear patterns of access. Notable exceptions would be a) the increased access to resources experienced by department administrators (and those who were connected to them), due to their formal roles and the networks they had developed over time, and b) the access experienced by participants who were both high-
performing and well-connected. Liam and Ryan are examples of such cases. Women tended to provide support to each other, although not all women viewed gender as a salient characteristic in their networks. Full professors seemed to have access to the resources they needed and wanted. Associate and assistant professors indicated satisfaction with access to resources, or generally positive experiences marked by some concerns. For example, Nicole struggled to obtain the support she needed as she developed her teaching practice, particularly from tenure-track colleagues and from men in the department. While women supported each other, there may have been unintentional differences in the way their male colleagues acted with each other and the way they interacted with women. Although not the focus of this study, non-tenure-track faculty seemed to have vastly different networks from their tenure-track colleagues, which may have resulted in barriers to the network resources that tenure-track faculty accessed.

Some participants acknowledged that not all department members were connected in the same ways. For example, Bill perceived faculty in the Social and Behavioral Sciences Department to have effective networks, “in different ways and with different goals,” he said, “some people are more central and socially active than others.” Bill described differences in networks as differences between those who were “introverted” and those who were “popular.” He said, “I don’t think there is anyone who is isolated by others deliberately, who is excluded…maybe one.” Such explanations of differences based on social activity suggest that participants viewed network status as the result of action and choice, and did not acknowledge that some people may be poorly connected despite desires to the contrary. This perspective might be problematic in masking barriers to resources that might be encountered by those who are not well-connected. Among
study participants, no one indicated that they wished to be better connected to their colleagues or were unsuccessful in developing relationships with peers. This may not be the case for all faculty members, however.

Summary

The analysis of participants’ networking development strategies, the exchange of network resources, and potential patterns of access to network resources suggests that relationships and resource exchanges within academic departments are complex and interrelated. Participants’ relationships were multifaceted, and often included both personal and professional components. It is not clear whether one type of relationship facilitates the other; in other words, whether professional ties lead to personal friendships or whether personal ties lead to the exchange of professional resources or collaborations.

Most participants were not comfortable viewing their interactions with colleagues as strategic, and tended to favor a perspective of shared commitments and collegial relationships when explaining their networks within their departments. These perspectives seemed to be reinforced by the culture of the departments, the leadership styles of deans and other administrators, and a general collective commitment to a supportive and collegial atmosphere. Study participants’ interactions with colleagues seemed to be motivated by one or more colleagueship function. Research activities and interests were a source of interaction and resource exchange for all participants. Participants’ professional and personal characteristics also seemed to motivate the cultivation of relationships. Rank and tenure status, in particular, influenced the types of relationships participants cultivated and the resources they sought or offered within those
relationships. Further research is needed to explore the influence of homophilous (and non-homophilous) relationships in the creation of access and barriers to key resources.

Ibarra (1992) pointed to the need for more research on the interaction of strategies, context, and action. Findings from this study show that these three components of network development are interwoven, caused by and causing complex relationships. Participants’ networking behaviors were influenced by departmental characteristics, individual characteristics, personal networking goals and needs, and perceptions of networking. Influences such as departmental culture and academic rank affected participants’ abilities to exchange resources, as did perceived similarities with and differences from colleagues. These themes and others are discussed as areas for future research in the concluding chapter.
CHAPTER 7

Conclusion

Who are your colleagues? How often do you consult with them and on what matters? The answers to these questions may well determine whether you succeed in your academic career.


Summary of the Study

As the demographic profile of the U.S. professoriate has changed over the past 35 - 45 years, researchers have begun to investigate how faculty careers have changed, as well as devising new ways to understand those changes. The addition of new participants into the professoriate from historically underrepresented groups has initiated its diversification by gender, socioeconomic class, race, and a range of other characteristics. Interactions among faculty within this changing context lead to the development of formal and informal networks that provide access to resources pertinent to faculty work and careers, as well as potential barriers to those resources.

Researchers who study faculty careers have long called for investigation of the networking behaviors of faculty members, the role of academic networks in faculty careers, and the processes by which these networks provide access to information, opportunities, financial support, and other resources. Researchers have also pointed to the need for studies of how network interactions might create differential access to resources. In response, this study drew from and integrated several distinct bodies of research, including literature on social networks, networking and colleagueship in academic
careers, homophily and its relevance in academic contexts, and networking strategies to
develop a new conceptual framework for studying the role of networks in academic
departments.

Nohria and Eccles (1992) contended that “all organizations are in important
respects social networks and need to be addressed and analyzed as such” (p. 4). The
availability of resources and networking opportunities are significant contributors to
faculty members’ perceptions of career success (Peluchette, 1993). This study contributes
to network research by applying a networks lens to a previously unexplored context,
academic departments in higher education institutions. Gappa and Leslie (1993)
identified departmental culture as the key variable in positive faculty attitudes about their
work. Relationships within academic departments become central in faculty members’
careers as sources of day-to-day conversation, support, advice, information-sharing, and
mentoring. Griffin (2008) found that departmental climate, as much as campus climate,
affected the experiences of underrepresented faculty members. As much as positive
relationships can provide access to such resources, negative relationships or exclusion
from relationships can cause stress, barriers to information, feelings of isolation, and
missed professional opportunities such as participation in co-teaching, research, or co-
publishing.

Research about both networks and faculty careers has attempted to bridge the gap
between the individual and structural – or organizational – levels and integrate the two
perspectives. Blackburn and Lawrence (1995) noted that prior research on faculty
behaviors is split along two lines: some researchers focus on organizational
characteristics of colleges and universities while others focus on personal characteristics
of faculty. This study built on the recognized importance of both individual and structural characteristics, and the integration of the two, to explore how departmental and individual factors affect networking behaviors and networks in academic departments.

Finkelstein (1981, 1982) conducted one of the few empirical studies of social networks in academic careers. Referring to these connections not as networks but as colleagueship, he discussed the importance of faculty members’ personal and professional connections with peers and mentors. He defined collegial interaction as “the reciprocal fulfillment of needs or exchange of services that takes place in the course of faculty-faculty interaction” (1982, p. 6). Finkelstein’s research resulted in the generation of five need categories that faculty members fulfill through network relationships, 1) help in teaching; 2) help in research; 3) institutional linkage; 4) disciplinary linkage; and 5) general support and friendship. Finkelstein wrote that despite the importance of collegial interaction, “we know very little about how colleagueship works – its structures and dynamics in the worklife and development of the individual professor” (1981, p. 4). The current study was, in part, a response to Finkelstein’s call for further investigation of the functions of colleagueship. In part, it was a response to the need for research on how perceived similarities and differences affect faculty careers.

There are many types of difference and underrepresentation within the professoriate, particularly in light of its growing diversification across demographic, social, and familial characteristics (Schuster & Finkelstein, 2006). In his study of institutional reputations and faculty salaries, Hargens (1969) challenged the notion of “the academic community as a system wherein universalistic achievement norms are realized” (p. 19) and called for research about interpersonal relationships among faculty
members and unacknowledged differences in experiences within the professoriate. Ibarra (1993) encouraged researchers to look past “anecdotal accounts of perceived exclusion” to examine network structures and outcomes, patterns of interaction, the potential for differences in access or opportunity (p. 57). This study responded to these calls by exploring how faculty members perceived themselves to be similar to or different from their peers and the department within which they work, and how perceived fit, with colleagues and within the department, might affect access to important career resources.

The behaviors people use in forming and cultivating relationships are important in creating access to network resources (Kilduff & Krackhardt, 1994; Obstfeld, 2005; Stevenson & Greenberg, 2000). Just as people differ in experiences, skills, and goals, they differ in their “willingness to use those skills and abilities to acquire and exercise power, or whatever network resources they desire” (Brass & Burkhardt, 1993, p. 447), and their “assessments of whether gaining access to certain benefits is worth the cost of access” (Ibarra, 1993, p. 74). This study built on prior research of networking strategies by exploring how departmental and individual factors affect the development of networking strategies, and subsequent access to resources, in academic departments.

Research Questions

Although the theory and research on networks is well developed, researchers have only recently begun to apply this theoretical perspective and set of methods to academic institutions. The goal of this study was thus to begin to develop a theory of networks in academic departments. The dimensions of theory development included 1) gaining new insights into the ways that departmental and individual factors shape the development of networking behaviors, 2) beginning the development of a typology of network strategies...
employed in academic departments, and 3) observing whether patterns of access to network resources emerge in academic departments. The research questions were as follows:

1) How do departmental characteristics affect faculty members’ networking strategies?

2) How do individual characteristics affect faculty members’ networking strategies?

3) What networking strategies do faculty members develop and use within their departments?

4) What patterns of access to resources, if any, are revealed within departmental networks?

_Conceptual Framework_

The conceptual framework I developed for this study incorporated three theoretical components, including homophily, network development, and colleagueship functions. I adapted Ibarra’s (1993) model of integrated factors that contribute to the development of networks for women and minorities in management for the academic context. The framework assumes that both departmental and individual factors (including perceived similarities and differences) affect networks within academic departments. These organizational and personal characteristics also influence the functions that networks serve in departmental contexts, and the strategies participants use to obtain resources. Finkelstein’s (1982) model of the functions of colleagueship provided the classification of network benefits that participants might exchange with colleagues. The final component of the conceptual framework assumes that individuals obtain network benefits from strategic interactions within departments and that differential patterns of access to network resources may result from variations in networks.
Research Procedures

This study focused on faculty members’ relational experiences within the contexts of their academic departments, using a mixed methods approach that combined network analysis research methods and qualitative research methods. Network analysis was based on data from network surveys, which produced scores and sociograms derived from carefully selected network measures. Network data (in the form of sociograms) were shared with participants during interviews, and thus facilitated data collection about participants’ interactions within departments by providing a feedback tool that helped participants reflect on their departmental networks.

The qualitative component of this study consisted of semi-structured interviews with each participating member of the departments under investigation. These phenomenological interviews focused on faculty members’ networking behaviors in their departments, how they made meaning of these experiences, and the actions they took (Bogdan & Biklen, 2007; Maxwell, 1996). In addition to considering participants’ experiences and meaning-making, phenomenological approaches attempt to discern themes in the data as well as commonalities and differences among participants (Miles & Huberman, 1994; Patton, 2002). The individual interviews data thus contextualized and enriched the analysis of the network (survey) data.

Case study selection for this study was guided by Miles and Huberman’s (1994) and Patton’s (2002) suggestions that small, purposive samples be used for case studies in order to provide actual examples of and insights into the phenomena of interest. A review of the literature suggested two key criteria for purposeful sampling in this study: department size (about 15-30 tenure-track members) and disciplinary type. Selection of
the departments was informed by Biglan’s (1973) classification of academic disciplines, which facilitated the selection of two contrasting disciplinary contexts within which to investigate networks. Two departments in the same research university served as the research sites for the study. To protect the identity of participants, the departments were identified only as the Business Department and the Social and Behavioral Sciences Department.

Once the departments were selected, I contacted the dean of each department by email to explain the study, and request permission to approach the department chairperson and recruit participants. With the deans’ permission, I then contacted the chair of each department by email, explained the study, and requested permission to recruit participants. (A list of tenure-track faculty was obtained from each department’s public web site, and confirmed with each department chairperson.) The chair of each department then contacted potential participants by e-mail to describe the study, using a prepared recruitment script (Appendix A). Faculty members interested in participating contacted the researcher directly to indicate their willingness to participate. This step was taken to ensure sufficient participation in each department before data collection began.

Those who volunteered for the study then received a confirmation email with a secure link to the network survey, which included the consent form approved by the Institutional Review Board (Appendix B). Participants were encouraged to print the consent form for their records before beginning the survey. Completion of the survey provided implied consent for the study. Once participants completed the online survey, I contacted them by email or phone to schedule an individual interview. Participants were offered copies of the consent form before their interviews.
Eleven of a total eligible participant pool of 15 tenure-track faculty members in the Business Department participated in the study. Ten tenure-track faculty members (of 28 eligible participants) from the Social and Behavioral Sciences Department participated. Non-tenure track faculty members were not included in the study because their training, career objectives, and roles and involvement in academic departments differed from those of the tenure-track research faculty.

Data collection for this study occurred in two phases. First, tenured or tenure-track faculty members who indicated their willingness to participate in the study received links to their individual online network surveys. Participants completed surveys indicating the types of resources they received and provided in their departmental networks, and with whom they interacted according to the functions of colleagueship set forth by Finkelstein (1982). These include teaching; research; institutional linkage; disciplinary linkage; and general support, intellectual stimulation, and friendship.

Participants then participated in one-on-one interviews, which focused on their experiences and interactions in their departments. During these semi-structured interviews, standard interview protocols were used for each participant, but the order and wording of questions were flexible and fluctuated slightly for each interview (Krathwohl, 1998). In addition, participants reviewed sociograms, or images of their networks, during each interview to obtain feedback about participants’ intradepartmental networks and to provide opportunities to confirm or correct the information that emerged from network surveys. All interviews were fully transcribed for analysis.
Data Analysis

Within-case analysis focused on the networks of each faculty member within his or her academic department in preparation for individual interviews. For this type of analysis, I highlighted the departmental and individual influences on personal networking strategies. I then analyzed the interview data to, seeking information on networking goals, strategies, and outcomes, as well as the departmental and individual factors that affected network development. In the third stage of data analysis, I conducted additional network analysis on egocentric networks across colleagueship functions to further elucidate themes and patterns. To refine the conceptual model, I compared findings from all three stages of analysis to the components of the model to determine whether the components and the relationships among components were empirically supported.

Limitations

There are several limitations to this study. First, it presents a static depiction of networks in academic departments. It does not consider the development of networks over time, nor is it a longitudinal study of faculty members’ experiences within their departments. The structure and functions of networks in academic departments are likely to change as the membership of departments change and as members’ career stages and networking goals evolve. Second, data collection was based on participants’ perceptions and self-reported data about relationships; observations of networking behaviors were not conducted. Third, because participation was voluntary, the study does not include data from every member of the departments included as research sites. This limitation prohibited certain types of network measurement and analysis, but those measurements and analysis that could be used were nonetheless useful for exploring individual faculty
members’ networks and for developing the theoretical and conceptual framework that
guided this study.

Fourth, the study was conducted at one institution and does not specifically
consider the effects of institution type or institutional culture. Although the goal of this
study was not to generalize across departments and institution types, but to inform future
studies of networks within academic departments and careers, this is a limitation because
the setting – a research-intensive institution – shapes faculty members’ work lives, and
promotes particular kinds of activities (e.g., research) that are not equally emphasized in
other types of institutions. The study does not compare networks across similar
institutions, or include a comparative exploration of networks across different institution
types.

Finally, an original goal of the study was to explore the experiences of faculty
members from underrepresented populations. Most of the faculty who volunteered for the
study, however, were men and most were White. Although the experiences of women and
non-White participants, as well as those of foreign nationals, pointed to the salience of
characteristics such as gender, and nationality in interactions and networks, the small
number of participants from ethnic and racial minority groups made explorations of
patterns related to these characteristics impossible.

Summary of Key Findings

In this section, I revisit the conceptual framework and describe changes to the
framework made after the conclusion of the study. I then outline the key findings of this
study, included as propositions for further research. I also outline other implications for
future research that were generated from this study.
Revisiting the Conceptual Framework

The primary purpose of this research was the refinement of a conceptual model of networking behaviors and outcomes in academic institutions that can be used to understand and explore the influence of networks in departmental contexts. Relying on Ibarra’s (1993) model for network development and Finkelstein’s (1982) typology of colleagueship functions, together with an emphasis on homophily theory, this study set forth a preliminary model for researching the role of networks in academic departments and faculty members’ careers. Several minor but important changes to the conceptual framework, based on this research, will strengthen its usefulness in future research. The revised framework is included below as Figure 18.
Figure 18: Revised Conceptual Framework

- **Networks in Academic Departments**
  - Departmental Factors (Institutional Factors)
  - Individual Factors

- **Perceived Network Resources**
  - Help in Teaching
  - Help in Research
  - Institutional Linkage
  - Disciplinary Linkage
  - Support, Intellectual Stimulation, & Friendship
  - Committees & Service

- **Networking Behaviors**
  - Maximize Instrumental Relationships
  - Maximize Expressive Relationships
  - Maximize Instrumental & Expressive Relationships
  - Alternative Strategies

- **Exchanged Network Resources**

- **Patterns of Access to Network Resources**

(Institutional Factors)
The investigation of departmental and individual influences on networks in academic departments was crucial. Participants’ descriptions of the characteristics of their departments, their colleagues, and themselves were the foundation for understanding interactions in academic departments. The first change is including institutional factors in the consideration of departmental factors that affect networks in academic departments. While this may not require formal designation on the conceptual framework, I did not collect data about institutional factors or consider them in the analysis. The reason for this was to focus specifically on the academic department as the unit of analysis and to isolate it from the broader institutional context. Many participants, however, discussed the type and structure of the institution, institutional leadership, and their extra-departmental involvement in the institution when describing their relationships and their experiences in their departments. Most frequently, participants discussed the influence of the institution’s geographic location in a rural area as having an influence on their interactions and experiences. For example, participants referred to seeing colleagues at the grocery store or at their children’s daycare centers and noted how these informal, personal interactions often facilitated professional interactions. Similarly, people who felt that they were in the minority, such as foreign nationals and single faculty members, often talked about the challenges of identifying others who were similar to them and forming meaningful personal and professional connections with them. This point reinforces findings from previous research about minority status and isolation in the academic career, but in regard to the previously unexplored context of geographic location. While it is useful and important to understand the context of academic departments in faculty members’ lives and careers, this does not need to exclude the
broader context of the institution. In fact, consideration of the institutional context will likely lead to greater understanding of the factors that affect faculty members’ networks and access to resources.

The second section of the conceptual framework was originally labeled *Network Benefits Sought/Offered*, drawing from the language of Ibarra’s (1993) model. This has been changed to *Perceived Network Resources*. I also changed the label in the fourth section, *Network Benefits Obtained/Provided*, to *Exchanged Network Resources*. While all network resources are presumably beneficial, the language of “benefits” suggests the passive receipt or one-sided offering of valued goods within one’s network, as opposed to the mutual and ongoing exchange of resources within networks of relationships. I now focus more clearly on “perceived network resources,” which more accurately conveys the role of the faculty member in identifying the resources that may be of value, then actively cultivating relationships through which to exchange those resources. Within the second section of the framework, I added *Committees and Service* to the list of colleagueship functions that classify the types of resources faculty members exchange in their departments. This was done to clarify the distinction between voluntary (advice about politics) and non-voluntary (serving on a departmental committee) roles in faculty careers in order to explore similarities and differences in the types of interactions that occurred through both functions.

In the third section of the framework, I changed the label from *Network Development Strategies* to *Networking Behaviors*. Most participants were not comfortable acknowledging a strategic approach to their interactions and tended to view strategic networking as antithetical to collegial interactions. Using the more general
language of “behaviors” allows for a broader investigation of faculty members’
behaviors, including but not limited to clearly strategic choices. Non-strategic or
unintentional outcomes of interactions are better understood within the revised section. It
also removes potentially off-putting terminology, which might (and in this study,
sometimes did) hinder faculty members’ explanations of their interactions and
relationships. For some faculty members, describing their friendships and professional
relationships in strategic terms is off-putting and not conducive to the goals of this
research. Also in the third section, I removed the proposed network development
strategies (Functional Differentiation, Maximize Instrumental Relationships, Maximize
Expressive Relationships, etc.). As noted earlier, this categorization was not fully
explanatory of faculty members’ network development behaviors. Further research is
needed to determine whether such behaviors can be classified into a useful typology.

Propositions for Future Research

Key findings from the study are presented as propositions to be tested in future
research. In addition, I discuss implications for methodological and theoretical
approaches to researching networks in academic departments.

Proposition 1a: Networks affect faculty members’ access to resources in academic
departments.

The first key finding from this study is that departmental networks matter. This
finding may seem obvious at face value, but previous theory and research on faculty
work has focused on the academic field as the crucial organizational and cultural context
in faculty work. Especially in research universities, faculty are portrayed as
“cosmopolitans,” with more ties to those outside their institutions (but within their
disciplines) than to their local colleagues (Gouldner, 1957). While considerable research supports the importance of academic disciplines in shaping faculty work, much less research explores the departmental context.

The findings from this study suggest that faculty members rely on their departmental colleagues for many different types of resources, and provide those resources to colleagues as well. Local contexts and departmental settings appear to be sites for collegial interactions and resource exchanges. Consistent with Finkelstein’s work on colleagueship functions, participants relied on colleagues for incidental tasks, such as resolving problems with students and reviewing drafts of grant proposals, and long-term tasks, such as earning tenure and conducting research. Relationships between colleagues provided access to information; advice; mentoring; financial resources; professional opportunities; physical resources such as space; evaluations and recommendations for tenure and promotion; scholarly outcomes such as grants and publications; visibility within departments, institutions, and disciplines; and general support and friendship. The role of relationships and networks in faculty members’ careers and in providing access to multiple types of critical resources was evident among study participants.

We like to think of academic institutions as places where intellectual merit is the criterion for judgments about faculty rewards (promotion and tenure) and resource allocation. This study suggests that other factors may influence these decisions. Further research is needed to understand if, when, and how departmental networks control resource allocation. Connections among faculty members appear to affect faculty members’ abilities to get the resources they need to do their jobs well.
Proposition 1b: Departmental culture influences faculty members’ networking behaviors and exchange of resources.

This study supports prior research that both structural and individual perspectives are important for understanding networks. Findings clearly suggest that interactions in academic departments are complex and are affected by a variety of both departmental (structural) and personal (individual) characteristics. Departmental characteristics, such as proximity, disciplinary influence, and the culture of the department, appeared to influence the interactions of all faculty members. Departmental factors affected interactions and resource exchanges formally, through policies, committees, course assignments, administrative structures, and research areas. In addition, departmental features such as the proximity of offices, as well as departmental cultures, politics, and informal leadership appeared to affect faculty members’ interactions and resource exchanges. Among the departmental factors, perceptions of departmental culture seemed to be an especially prominent influence on participants’ interactions.

Proposition 1c: Rank and tenure status influence faculty members’ networking behaviors and exchange of resources.

In addition to the effects of departmental characteristics, individual differences seemed to influence interactions by contributing to the ways in which participants identified themselves as similar or different to their colleagues, and how they developed behavioral responses to departmental characteristics and the personal and professional characteristics of their colleagues. Many types of individual factors appeared to be influential, including research interests, rank, gender, family status, age, and nationality.
Individual factors affected interactions and resource exchanges formally, through research collaborations, rank and tenure status, and administrative roles. Individual factors also affected informal interactions, such as friendship, advice-seeking, support, socializing, and mentoring. Among the individual factors, rank and tenure status seemed to be the most influential characteristic in participants’ networking behaviors.

Proposition 2: In academic departments characterized by collegial cultures, strategic networking approaches to relationships with colleagues are less common than collegial approaches.

Participants in this study developed behavioral strategies by observing their surroundings and interpreting them through their own lenses. These interpretations of context and subsequent behaviors influenced the development of ties with colleagues and the exchange of network resources. Participants navigated departmental contexts and interpersonal relationships to foster the types of ties that provided the resources they needed, such as mentoring, information, collaboration, advice, financial resources, and general support.

Some participants, however, attributed a negative connotation to the term networking and did not perceive themselves to be effective networkers or to have deliberate networking strategies. Participants easily described their relationships with colleagues, the interactions that constituted those relationships, and their functions in participants’ lives and careers, but they were less able to describe the behavioral strategies that they employed in efforts to cultivate such relationships. Those who did describe their approaches did not tend to view them as strategic. Many participants seemed uncomfortable with the notion of strategic networking and contrasted it with
productivity and collegiality – two characteristics that they seemed to view favorably when describing themselves, their peers, and the general cultures of their departments.

The departments included in this study were characterized by research productivity, excellence in research, and collegiality. Participants indicated that they were generally satisfied with their departments and their interactions with colleagues. It might be the case that in academic departments characterized by collegial cultures, faculty members do not call into question the processes by which resources are allocated and do not approach interactions and attempts to acquire resources from a strategic perspective. It might also be the case that in collegial departments, faculty members are uncomfortable with notions of strategic behavior.

This study suggests there is a difference between deliberate networking strategies, or efforts to cultivate relationships, and collegial relationships that evolve over time based on regular interactions. It also suggests that preferences for collegial interactions contribute to perceptions of networking as negative behavior. Further study of the deliberate strategies and the non-strategic interactions that occur in academic departments might enhance our understanding of the patterns of access to resources within departments.

**Proposition 3:** Faculty members in formal leadership roles have a strong influence on departmental culture, collegial interactions, and the exchange of resources.

In this study, departmental leaders, including chairs, administrators who oversee curriculum or academic programs, and directors of research centers, affected interactions and resource exchanges in their departments. Departmental leaders influenced the culture
of their respective departments through distributing resources, forming committees, developing and enacting policies, and overseeing tenure and promotion and hiring decisions. They also interacted with all subgroups within departmental networks across rank and position type, including non-tenure-track faculty and administrative and support staff. Faculty members in formal leadership positions shaped departmental culture through their leadership and management styles, modeled collegial interactions, and demonstrated their commitment to the advancement of the department. They reinforced the values of their departments by addressing any problematic behaviors, rewarding productive faculty members, and supporting those who experienced personal and professional challenges. Administrators influenced departmental networks in these ways, even when they expressed preferences for working independently, perceptions of networking as negative behavior, reticence to serve in leadership roles, or little interest in forming personal ties with colleagues.

Proposition 4: Faculty members are more likely to cultivate relationships and exchange resources with colleagues they perceive to be like them, and less likely to interact with colleagues they perceive to be different from them.

Findings from this study support and extend literature about the role of homophily and salient characteristics in the exchange of resources. Reflecting the diverse identities that faculty members enact within their networks and the preference to interact with similar others (homophily), a variety of professional and personal characteristics emerged as salient for the development of collegial relationships. Prior research has found that people tend to interact with others who are similar to them. Study participants made unique and personal decisions about which characteristics are salient when cultivating
relationships with colleagues. Participants in this study developed homophilous relationships based on the salience of research interests, rank and tenure status, gender, family status, nationality, and age. Due to limitations in the sample, I was not able to study the role of race and ethnicity, beyond consideration of one participant’s comments pertaining to race.

Faculty members in this study cultivated interactions with colleagues based on a range of perceived similarities. The relationships that resulted from these interactions with similar others led to the exchange of critical resources for participants’ careers. What we may believe anecdotally, but have not tested empirically, is whether perceived similarities and differences between faculty members produce differential distribution of key resources. Empirical studies are important for illuminating any patterns of differential access and recommending alternatives that reduce or remove inequitable access to resources in faculty careers.

Implications for Future Research

I began this study to explore whether the theoretical and methodological concept of networks was a fruitful tool for understanding faculty members’ interactions in their departments and the effects of these networks on their professional lives. The findings suggest that applying a networks perspective to the study of academic departments is useful in its potential to reveal multiple aspects of departmental interactions, including the influences of departmental and individual characteristics on faculty members’ interactions and networking strategies, the functions of colleagueship and the role of homophily in interpersonal interactions, and faculty members’ individual and combined efforts to exchange resources within academic departments.
This research initiated development of a theory of network behavior and outcomes in academic departments, which needs to be further developed and tested. The study extends knowledge of faculty careers by illuminating the role of networks in acquiring resources that are central to faculty work. Several areas for future research related to understanding networks in faculty careers and academic contexts emerged. Findings from this study suggest that future research would be helpful in understanding the structures, development, and outcomes of networks in academic departments.

Specifically, three types of research studies could be useful – studies that continue to develop and test the theoretical framework put forth in this study, studies that explore additional components of networks in academic departments, and studies that apply a networks perspective to other areas of faculty careers and postsecondary contexts.

_Ibarra’s Model of Network Development_

The conceptual framework developed for this study was based on Ibarra’s (1993) Summary Model of Factors that Shape the Personal Networks of Women and Minorities. Ibarra’s (1993) model served as the foundation for the conceptual framework used in this study, and was central to the investigation of networks in academic departments. Reliance on her model was instrumental in developing a linear model for studying a complex interactive process.

One of the contributions of Ibarra’s model to this study was the integration of both departmental and individual factors in the development of networks in academic departments. Incorporating network development strategies, as well as benefits desired and obtained, as components of the framework allowed me to explore participants’ behaviors and sense of agency in network development and interactions. Future research
should continue to explore the roles of departmental factors, individual factors, and networking behaviors in the development of networks and exchange of resources in academic departments. Additional research that uses Ibarra’s model of network development as a conceptual foundation would contribute to the development of a conceptual framework for understanding networks in academic departments.

**Finkelstein’s Concept of Colleagueship**

Finkelstein’s (1982) typology of colleagueship functions was an important tool for conceptualizing and organizing an investigation of complex interactions. Findings from this study led to the expansion of the categories established by Finkelstein and an evaluation of their fit within a theory of networks in departmental contexts, which allowed for potentially new functions to emerge. No new functions of colleagueship emerged from this research, although interactions based on committees and service were separated from the institutional linkages function. This was done to clarify the distinction between voluntary (advice about politics) and non-voluntary (serving on a departmental committee) roles in faculty careers in order to explore similarities and differences in the types of interactions that occurred through both functions. While all participants did not interact with all colleagues for all purposes, most participants had networks of colleagues for each function. Disciplinary linkages were the least frequently cited reasons for interacting with colleagues during individual interviews. While it might be expected that disciplinary ties would not be strong in departmental networks, there was support for this function of colleagueship between participants.

Future research should continue to test the usefulness of Finkelstein’s (1982) model of colleagueship in understanding interactions and networks in academic
departments, particularly when extending the framework to other disciplinary and institutional types, to explore whether different functions emerge as more or less salient in different disciplines and institutions. Future research might continue to develop the framework used in this study and explore how departmental and individual characteristics influence function-specific interactions such as seeking help with classroom management (teaching), establishing new collaborations (research), or socializing (general support and friendship). Additional research should also explore in greater detail the role of each function in network development and resource exchanges.

**Strength of Ties and Directionality**

Findings from this study suggest that faculty members frequently exchange resources with colleagues in their departments, and that they maintain ties with colleagues for multiple reasons. While the data provided information about the presence or purposes of relationships, this study did not explore the relative strength of ties, or relationships. For instance, participants’ indications of collaborating with a colleague on a research project, helping a colleague with classroom management, and recommending a colleague for a position in a disciplinary association were each reported as simply a tie in the network surveys. Data on the duration or strength of ties were not provided through network surveys. More information about the strength of ties between faculty members would be helpful in understanding networks in academic departments. Examples of areas for future research include studies of what constitutes a tie between two faculty members, whether one type of tie (such as a friendship) is a predictor of another type of tie (research collaboration, for example), how ties evolve over time, and whether and when some ties are more important sources of resources than others.
Data on the directionality of ties indicate the initiation of interaction between two people; whether the origin of a tie is from one person or the other (Wasserman & Faust, 1994). This study included data regarding the directionality of ties, but I did not consider directionality when exploring relationships between faculty members, other than the analysis of each person’s networking behaviors and strategies. Further consideration of the directionality of ties between faculty members would be helpful in understanding how relationships begin and evolve in academic contexts, and how they provide access to network resources. For example, do junior faculty members tend to seek out resources from senior colleagues, or do senior colleagues approach junior members of their departments with advice, support, opportunities, and other resources? More nuanced explorations of the relationships between department members in particular, and faculty members in general, is needed to advance research in this area.

*Networking Strategies*

Participants often hesitated to describe and define their own strategic behaviors with colleagues, particularly when they perceived such behaviors to be a type of networking they were uncomfortable with or in contrast to collegiality. The methodological approach used in this study was helpful in elucidating participants’ networking behaviors. Surveys were instrumental in obtaining data on networking behaviors, patterns, and relationships between participants. Interviews included a series of indirect questions that provided respondents with opportunities to think about and describe networking behaviors with less influence of any negative associations to networking or strategic behavior. This included, for example, asking participants to
describe their approach to cultivating relationships within the department and advice they would give to new colleagues about how to be successful in the department.

Participants seemed comfortable with this line of questioning and willing to describe their reasons for the relationships they cultivated, the interactions they had with colleagues and the functions they served, the goals and outcomes of such relationships, and reasons why they might or might not connect to particular colleagues. Responses to such question often focused on the importance of cultivating relationships and a positive reputation of collegiality as a strategy for being successful. Given that participants were at times uneasy with the notion of networking and strategic behavior, this method of data collection might be helpful in future studies of networks in academic departments and broader contexts.

Research about networking strategies in academic contexts should include methods for obtaining data in both direct and indirect ways. Reliance on strategic categories related to instrumental and expressive ties, as originally proposed in the conceptual framework, was not the best way to conceptualize and categorize ‘network development strategies.’ Future research should continue to explore network development strategies and possible ways of identifying and classifying them in the context of academic departments.

Mixed Methods Research Design

Obtaining multiple data sources about participant interactions and relationships, and using multiple methods to analyze these data, was crucial for understanding the networks among participants in these two academic departments. Network data contributed to an understanding of how actors were socially embedded in their
departments, and interview data were useful in understanding the meanings of participants’ choices and experiences. Social network analysis answers the questions of what networks exist, who their members are, and to a certain extent, how they interact; but it does not explore why people choose the actions they do. Interview data described in detail the nature of collegial relationships and interactions, including how participants saw themselves as similar to and different from their department colleagues. Interview data also included participants’ perceptions of others, their networking behaviors, and why they interacted with certain peers for specific reasons. Data from network surveys were instrumental in the development of customized interview protocols, which facilitated in-depth and focused discussions of participants’ networks and networking behaviors. Future research about networks in academic departments should include data from multiple sources that can be analyzed through multiple methods, such as network surveys and interviews.

*Longitudinal Research Designs*

Personal and professional relationships, careers, and academic departments change over time. Some participants discussed how their close ties had evolved over time, and others recognized that their relative lack of history in the department had not yet provided opportunities for cultivating strong ties. During their interviews, participants indicated that they used different strategies at different points in their careers. Others reflected on times when collaborators and close friends who had since moved on were important parts of his departmental network, his career, and how he spent his time. As researchers have acknowledged in other network research, additional studies are needed to explore the development and outcomes of networks within this context over time.
Longitudinal approaches to the study of academic departments and faculty careers would be helpful in explaining changes over time and dynamic processes in social networks.

*Heterogeneous Departments*

It is important to consider the experiences that are not represented in these cases—stories from nonparticipating members of these two departments, those of additional faculty from underrepresented groups, and those in departments without the effective leadership, strong reputations, and positive cultures that the Business Department and the Social Sciences Department share. One way of doing this is to conduct studies that include all members of an academic department, in order to have complete data on departmental interactions. Another approach is to select departments with high rates of turnover or other measures of dissatisfaction or problematic cultures (although identifying such departments and collecting data from them can be challenging). This work is helpful in advancing a framework for exploring intradepartmental interactions, but needs to be expanded to other contexts to better understand the experiences of faculty members in academic departments, particularly those who may be outside the majority and those who have not persisted in their departments and institutions. Finkelstein’s (1982) research suggests that there may be networking behaviors, strategies, and outcomes unique to those faculty members who do not “fit the mold” (p. 19).

*Types of Faculty Appointments*

Additional research about networks and networking strategies in academic departments would be useful for exploring specific components of faculty careers, such as tenure and promotion, rank-based networking needs, research productivity, intent to stay, skill development, and research agendas. Future research should also apply the
conceptual framework to the investigation of more inclusive networks in academic departments; that is, by including full-time administrators, adjunct instructors, teaching faculty, and other non-tenure-track members who may have ties to tenured or tenure-track faculty. Focusing only on the interactions of tenure-track faculty members facilitated the study of the personal and professional interactions of one subset of the professoriate with specific career structures, career goals, and responsibilities.

Extra-Departmental Networks

This research is a step forward in understanding networks in academic departments. Future research should explore additional networks that supplement, or possibly substitute, departmental networks. Future research should explore other networks that affect faculty careers, including developmental networks through which faculty members acquire the skills and knowledge necessary for their work (for example, the relationship between dissertation advisor and student), as well as disciplinary and interdisciplinary networks. Faculty members often refer to colleagues at other institutions, or broader networks of scientists and researchers, as important contacts who facilitate their work. It would be beneficial to learn more about resources faculty members obtain from these networks, and how they facilitate access to career resources.

Salient Characteristics

Additional research should also advance the exploration of salient characteristics that was included in this study. As the professoriate continues to diversify, the role of homophilic relationships and the influences of personal characteristics in network relationships and access to resources should be explored. Such studies might help explain further how faculty members cultivate and rely on their relationships with colleagues in
their careers. This includes additional research about how faculty members perceive
themselves to be similar to or different from their peers and the department within which
they work, and how these perceptions affect network-building strategies and access to
important career resources.

Conclusion

The purpose of this study was to develop a conceptual framework of networks in
academic departments, and to apply network theory and research to the exploration of
academic departments in higher education contexts. Through identifying and describing
the interactions of departmental characteristics, individual characteristics, homophily, and
colleagueship in the academic departments included in this study, it offers a conceptual
framework for exploring the complex interactions of departmental networks and their
outcomes, with a particular focus on access to network resources. There are several
avenues of research that can advance this line of inquiry. This research might lead to
greater understanding of how to recruit, retain, and support a diverse population of
postsecondary faculty members.

Learning more about the role of departmental networks in accessing resources
relevant to faculty careers might enable administrators, faculty members, and researchers
to better understand the challenges and opportunities that faculty members experience in
their daily lives and careers. Knowledge of the outcomes of departmental networks on
academic careers also allows faculty members and their department chairs to understand
how contacts and interactions in their departments, as well as their own networking
behavior, might facilitate or hinder career success and satisfaction.
Prior research has suggested that employees who rely on informal networks for training, promotion, and other resources experience differential access to such networks, establishing an informal system that reinforces formal inequities within organizations (McGuire, 2000). While the participants in this study had mostly positive experiences in their departments, this might not be the case for faculty members in other departments. For those faculty members in the minority, it can be more challenging to connect to colleagues, to feel supported, and to acquire the resources that are desired and needed for their careers.

While the sample of participants in this study precluded a thorough investigation of the experiences of faculty members who are in the minority (as defined by both the broader national context and the specific professional, institutional, and departmental contexts), this work sets forth the development of a conceptual model that facilitates research about their experiences and opportunities to improve the recruitment, retention, and satisfaction of a diverse professoriate.

As the quote at the beginning of this chapter stated that interactions with colleagues “may well determine whether you succeed in your academic career” (Hitchcock, Bland, Hekelman, & Blumenthal, 1995, p. 1108). This study takes one step toward understanding networks in academic departments and their effects on faculty members’ careers in the traditional, yet changing, norms and social conditions of the professoriate.
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NVivo qualitative data analysis software; QSR International Pty Ltd. Version 8, 2008.


doi:10.1002/asi.4630250206
APPENDIX A

Email Recruitment Script

Networks in academic departments: Individual strategies & patterns of access
Meghan Pifer (mjp359@psu.edu)

My name is Meghan Pifer and I am a Ph.D. candidate in the Higher Education Program at Penn State. For my dissertation, I am conducting a research study on networks in academic departments. With the support of [dean] and [department chair], I would like to include this department as one of two cases in my study. An overview of my study and the details of participation, as well as next steps for potential participants, follows.

Study Description and Purpose: While previous research has explored networks in different contexts, little research has been conducted on networking strategies in colleges and universities. What little research has been done has focused on professional outcomes of network relationships, such as collaboration and productivity, independent of social context. This study will explore academic departments as social contexts and the strategies that faculty members develop to obtain and provide network resources in their departments.

Practical Implications and Benefits: Findings from this study will reveal behavioral strategies and patterns of access to network resources in academic departments. Knowledge about how networks in academic departments are used to recruit, support, and retain faculty members from diverse backgrounds can be helpful to faculty, department chairs, and others who seek to enhance the academic environment, faculty productivity, and faculty satisfaction. Reflecting on personal networks and networking behaviors will allow participants to understand their own network connections and actions, and their outcomes. It will also allow participants to understand the exchange of resources within their departments, reflect on their personal network connections and networking strategies, and receive customized feedback on strengths and areas for improvement in their departmental networks. Information that may be harmful or that may identify participants will not be reported back to the department.

Participation: Eligible participants include full-time tenured or tenure-track faculty members within the selected departments. Participants will be asked to submit a current copy of their CV, complete a networking survey online at [insert url here], and participate in one interview. The total time required for participation will be less than two hours.

Because complete network analysis relies on data from each member of the selected network, a high completion rate is critical. In the event that all or most of the eligible participants are not willing to participate in this study, I will select another department for my analysis. If you are willing to participate in this study, please email me (mjp359@psu.edu) to let me know by [date]. I will reply by email within one month to let you know whether or not your department will be included as a research site.
Once I am able to confirm that there is sufficient interest to include this department as a research site, I will contact you by email to provide you with a link to the online survey and to obtain a copy of your CV. I will follow up with you after you have completed the survey to schedule a time for the interview. During the interview, I will provide you with a sociogram, a visual depiction of your network, based on the information you provide in your survey. This sociogram will be used to prompt interview questions about the types of relationships you have within the department, as well as their personal and professional outcomes (e.g., friendship and co-teaching). You will receive a copy of this sociogram for your records.

Please feel free to contact me if you have any questions about participating in this study. Thank you for your time!
APPENDIX B

Consent Form

Networks in Academic Departments: Individual Strategies & Patterns of Access

**Purpose:** You are invited to participate in a research project regarding the relationship between faculty members’ departmental networks and academic careers. The results of the research will provide important information about individual networks as well as patterns of access to network resources. This research is being conducted as a dissertation project by a Ph.D. candidate in the College of Education at Penn State.

**Procedures:** You will be asked to submit a copy of your CV electronically, to complete this online survey, and to participate in one interview. The survey will take about 25 minutes to complete. The interview will take 60-90 minutes to complete. You must be 18 years of age or older to participate. Your CV will be used to provide information about your educational background and career path, and potential similarities or differences between yourself and your departmental colleagues (such as formerly working in or graduating from other institutions together or having similar research interests).

During the interview, I will provide you with a sociogram, a visual depiction of your network, based on the information you provide in your survey. This sociogram will be used to prompt interview questions about the types of relationships you have within the department, as well as their personal and professional outcomes (e.g., friendship and co-teaching). You will receive a copy of this sociogram for your records.

**Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the survey and interview questions ask about interpersonal relationships in the department and may cause some discomfort. The focus of this study is not on negative experiences. During the interview, the researcher will rely on the interview protocol to keep the conversation focused on the study objectives. In the event that any questions asked are disturbing, you may stop responding to the survey or stop the interview at any time.

**Benefits:** The results of the survey and interview will provide important information and feedback about your personal networks within your academic department. Through the collection and analysis of information about your departmental network, participating in this study has the potential to help you understand and manage your career, relationships, and networking strategies. It may also yield information on effective networking strategies for faculty members and suggest how departments can support their faculty members.

**Statement of Confidentiality:** Your participation in this research is confidential. Please answer the questions as openly and honestly as possible. You may skip questions that you are uncomfortable answering. Please note that you can choose to withdraw your responses at any time before you submit your answers.
Your confidentiality will be kept to the degree permitted by the technology used. No guarantees can be made regarding the interception of data sent via the Internet by any third parties.

Only the Principal Investigator will know your identity. In the event of a publication or presentation resulting from the research, no personally identifiable information will be shared. Quotes from submitted comments will be used throughout the report to give voice to the quantitative data, although quotes will not be linked to participants.

To help ensure confidentiality, the interview will take place in your office or in a private location that is convenient for you. Information from your survey and CV will not be shared with anyone else, and your sociogram will only be based on the information you provide about yourself.

As a participant, you will be assigned a pseudonym, which is how you will be identified throughout the study. A master list of pseudonyms will be used to link surveys to interviews, and will be destroyed after the completion of the interviews. This master list, copies of CVs, and audio recordings of interviews will be housed on the Principal Investigator’s personal computer and will be password protected. The computer is also password protected. Only the Principal Investigator will have access to the master list of pseudonyms, CVs, and audio recordings. The survey results will be submitted directly to a secure server where any computer identification that might identify participants is deleted from the submissions. Audio recordings will be destroyed as soon as they are transcribed, no later than December 2012. Transcriptions will use pseudonyms and will not include identifying information. CVs will be destroyed upon the completion of data analysis, no later than December 2012.

**Voluntary Participation:** Participation in this research is voluntary. If you decide to participate, you do not have to answer any questions on the survey or in the interview that you do not wish to. Individuals will not be identified. By completing the survey, your informed consent will be implied. Please note that you can choose to withdraw your responses at any time before you submit your answers. Refusal to take part in this research study will involve no consequences.
Right to Ask Questions

You can ask questions about this research. Questions concerning this project should be directed to:

Meghan Pifer
202 Business Building
University Park, PA 16802
Office: 814-867-2385
Cell: 617-592-9295
mjp359@psu.edu

Advisor:
Dr. Lisa R. Lattuca
400 Rackley Building
University Park, PA 16802
(814) 865-9754
lattuca@psu.edu

Questions concerning the rights of research participants should be directed to:

Office for Research Protections
The Pennsylvania State University
201 Kern Graduate Building
University Park, PA 16802-3301
Phone: 814-865-1775

You can also call this number if you feel this study has harmed you.

The following may review and copy records related to this research: The Office of Human Research Protections in the U.S. Department of Health and Human Services, the Social Science Institutional Review Board and the PSU Office for Research Protections.

If you agree to take part in this research study as outlined in the information above, please click on the “Continue” button below, which indicates your consent to participate in this study. It is recommended that you print this statement for your records, or record the address for this site and keep it for reference.

ORP OFFICE USE ONLY – DO NOT REMOVE OR MODIFY: This informed consent form (Doc.#1) was reviewed and approved by the Social Science Institutional Review Board (IRB#30490) at The Pennsylvania State University on 05-12-09. It will expire on 05-04-10. (LSY)
APPENDIX C

Network Survey

1. In what department is your primary academic appointment?
   □ [Department A]
   □ [Department B]

2. How long have you been in the department?
   □ Less than 1 year
   □ 1-2 years
   □ 3-4 years
   □ 5-6 years
   □ 7 years or more

3. What is your rank?
   □ Assistant Professor
   □ Associate Professor
   □ Professor
   □ Other (please specify) ____________________________

4. Do you have tenure?
   □ Yes
   □ No

5. When did you receive your doctoral degree?
   □ Less than 5 years ago
   □ 6-10 years ago
   □ 11-14 years ago
   □ More than 15 years

6. How many years of experience as a faculty member did you have prior to joining this department?
   □ No prior experience
   □ 1-2 years
   □ 3-4 years
   □ 5-6 years
   □ 7 years or more

7. At what institution did you receive your doctoral degree?

8. In what discipline and/or concentration is your doctoral degree?
9. What is your age?
- 20-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70 or older

10. What is your gender identity?
- Woman
- Man
- Transgender

11. What is your racial identity (please check all that apply)?
- African
- African American / Black
- Asian
- Asian American
- Southeast Asian
- Caribbean / West Indian
- Indian subcontinent
- Latino(a)/Hispanic
- Latin American
- Middle Eastern
- Native American Indian (please specify Tribal affiliations)
- Pacific Islander / Hawaiian Native
- White
- Other (please specify) ________________________________

12. What is your relationship status?
- Married
- In a committed relationship
- Divorced
- Widowed
- Single

13. What is your current parental status?
- No children
- Adult children
- Single parent
- Pregnant
- Co-parent with a partner/spouse
- Co-parent with an ex-partner/spouse
- Other (please specify) ________________________________
14. Do you have any other dependents?
   ☐ No other dependents
   ☐ Parent
   ☐ Grandparent
   ☐ Sibling
   ☐ Other (please specify) ___________________________________

15. Was and/or are any of the following family members a faculty member at a college or university?
   ☐ Spouse / Partner
   ☐ Mother
   ☐ Father
   ☐ Sister
   ☐ Brother
   ☐ Daughter
   ☐ Son
   ☐ Other (please specify) ___________________________________

16. Please review the following roster [of tenured and tenure-track faculty in the department] and check the box for each departmental colleague with whom you interact according to each question.

   16a. With whom have you co-taught a course?
   16b. With whom have you collaborated in course development?
   16c. Who do you go to for help with teaching-related concerns, such as classroom dynamics or course assignments?
   16d. Who comes to you for help with teaching-related concerns, such as classroom dynamics or course assignments?
   16e. With whom have you collaborated on funded research?
   16f. With whom have you co-authored publications or conference papers?
   16g. With whom have you co-presented at conferences?
   16h. Who gives you critical feedback on your ideas and/or writing?
   16i. To whom do you give critical feedback on their ideas and/or writing?
   16j. With whom have you engaged in consulting projects?
   16k. Who provides you with information about institutional and/or departmental policies?
   16l. To whom do you provide information about institutional and/or departmental policies?
   16m. Who provides you with information about institutional and/or departmental politics?
   16n. To whom do you provide information about institutional and/or departmental politics?
   16o. Who has helped you identify funding sources and/or write grant proposals?
   16p. Who have you helped to identify funding sources and/or write grant proposals?
   16q. Who has sponsored and/or nominated you for academic positions and/or positions in disciplinary associations?
16r. Who have you sponsored and/or nominated for academic positions and/or positions in disciplinary associations?
16s. Who has introduced you to other scholars in the discipline?
16t. Who have you introduced to other scholars in the discipline?
16u. With whom have you collaborated on service activities?
16v. Who provides you with general support and encouragement?
16w. For whom do you provide general support and encouragement?
16x. Who provides you with career advice?
16y. For whom do you provide career advice?
16z. Who confides to you her/his personal problems?
16aa. Who do you confide in with regard to your personal problems?
16bb. Who do you socialize with outside of work?

17. Other than the departmental colleagues in Question 16, who might you seek out for the following resources?
17a. Help with teaching
17b. Help with research
17c. Promotion and tenure advice
17d. New projects or collaboration
17e. Funding opportunities
17f. Political issues in the department
17g. Political issues in the discipline
17h. Political issues in the institution
17i. General career advice
17j. Help with personal problems
17k. Social interaction
17l. Job opportunities
17m. Friendship
17n. General support and encouragement

☐ Other Instructors in the Department
☐ Colleagues in your Field
☐ Colleagues in Other Departments
☐ Administrative Support Staff
☐ Graduate Students
☐ Undergraduate Students
☐ Adviser / Mentor
☐ Friends from Graduate School
☐ Other ________________
18. Other than those listed in Question 17, who might you seek out for the above resources?

18a. Help with teaching
18b. Help with research
18c. Promotion and tenure advice
18d. New projects or collaboration
18e. Funding opportunities
18f. Political issues in the department
18g. Political issues in the discipline
18h. Political issues in the institution
18i. General career advice
18j. Help with personal problems
18k. Social interaction
18l. Job opportunities
18m. Friendship
18n. General support and encouragement

- Your Parents
- Your Siblings
- Your Spouse / Partner
- Your Children
- Friends Outside the Professoriate
- Neighbors / Community
- Other ____________________
APPENDIX D

Interview Protocol

1. Tell me about how you got here. Why work here?

2. [show sociograms of individual networks] This image, or sociogram, can provide useful information about your departmental network. I will use the information depicted in this image to ask several questions about the basic structure of your departmental network.

3. This is what your departmental network looks like based on the information you gave me. Does the diagram look like an accurate depiction of your network to you? Why or why not?

4. How would you describe your interaction with colleagues in the department?

5. How do you see yourself as compared to others in your department?

6. How would you describe the culture of your department?

7. What opportunities and support, if any, have you received in the department? Why do you think that happened?

8. Tell me about your ties outside the department. You indicated on your survey that you receive support from [other people/groups].

9. Is there anything else about your department or your relationships with your colleagues that you would like to talk about?

Thank you!
VITA
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