The Strength of Many Kinds of Ties: Unpacking the Role of Social Contacts across Stages of the Job Search Process

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To cite this article:

Published online in Articles in Advance 22 Apr 2015

http://dx.doi.org/10.1287/orsc.2015.0978

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The Strength of Many Kinds of Ties: Unpacking the Role of Social Contacts Across Stages of the Job Search Process

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The topic of job mobility has received increasing attention in recent years. Yet, surprising in light of the wealth of research on social networks and job attainment, we do not have a unified model of the impact of different kinds of social contacts on job search success. In this paper I show that contacts are differently beneficial for job seekers depending on the stage of the job search process that job seekers are engaged in. Specifically, three stages of the job search process can be distinguished in which social contacts fulfill different roles for the job seekers: deciding the types of jobs for which to apply, submitting job applications, and preparing for interviews. I propose that contacts who are spread across different occupations are conducive to applying to more types of jobs, yet it is contacts who are more focused across occupations that are beneficial for being invited to more interviews—relative to the number of job types applied for—and for converting the interviews into offers. In addition, contacts with lower relationship depth with the job seeker are more helpful for getting invited to interviews, whereas contacts who have more frequent interactions with the job seeker are more helpful for converting interviews into offers. Analyses using a unique longitudinal data set on the job searches of 226 participants in an MBA program offer robust evidence in support of the hypotheses. The results suggest that external mobility is best enabled when job seekers engage with—and learn from—different kinds of contacts across stages of the job search process.

Keywords: job search; stage process; matching; external labor market; careers; mobility; managerial jobs; MBA; occupations; social contacts; social networks; tie strength; network range

Introduction

How workers get jobs is a question that has gathered increasing attention among practitioners and scholars. Changes in the organization of work, hiring practices, and occupational composition of the workforce have increased the extent to which people change jobs through external mobility (Arthur and Rousseau 1996; Cappelli 1999, 2008; Hall 2002; Hollister 2011; Tolbert 1996); analysts indicate that whereas in earlier periods upwards of 90% of vacancies were filled internally, today as many as two-thirds of all vacancies in large U.S. corporations are filled by outside hires (Cappelli 2008). Against the background of these evolutions, our understanding of the drivers and mechanisms of external mobility is still incipient (e.g., Bidwell and Briscoe 2010, Dokko et al. 2009, O’Mahony and Bechky 2006).

A particularly striking missing piece—and a promising avenue for extending this field of inquiry—is a detailed understanding of the role of social contacts in job attainment. Despite its extensiveness (for reviews, see Granovetter 1995, Lin 1999, Marsden and Gorman 2001), this body of research offers conflicting conclusions as to which kinds of contacts are most useful. The bulk of studies indicate that contacts who span a range of occupations (Campbell 1988; Campbell et al. 1986; Higgins 2001; Lin 1999, 2002) and those who are weak ties (Granovetter 1973, 1995; Lin et al. 1981; Wegener 1991; Yakubovich 2005) are most helpful for job search success. More recent work, however, suggests that contacts from the targeted work domain and those who have strong relationships with the job seekers may be more beneficial for job search success (Mouw 2003, McDonald 2011, Obukhova 2012). Although some contingencies have been proposed—for instance, that strong ties are more valuable than weak ones when information about job opportunities is highly valued or not readily available (Bian 1997, Murray et al. 1981)—the need to disentangle and systematize these findings persists.

I suggest that progress can be made toward this goal if we look at job searches as processes rather than one-stage events. The benefit is that by treating job search as a series of distinct screens, we gain visibility into when and how different social forces may influence success. This approach has already proved its usefulness in examinations of other labor market issues such as inequality or segregation. We have learned, for example, that the effectiveness of referrals varies with the screening mechanisms in place at different stages of the hiring process (Fernandez and Weinberg 1997, Fernandez et al. 2000, Yakubovich and Lup 2006) and that occupational segregation may be best understood as the result of an early-stage, rather than late-stage,
The Three Stages of the Job Search Process

Selecting the Types of Jobs for Which to Apply. Theories suggesting that job searches occur in stages (Blau 1993, Rees 1966, Soelberg 1967) concur that search activities change sequentially and systematically over the duration of the search, such that job seekers first search broadly to identify appropriate opportunities (Barber et al. 1994). Thus the initial search involves casting a broad, extensive (Rees 1966) net to learn about what types of jobs might be available, the quality of these opportunities, and the potential fit with the needs and skills of the job seeker (Blau 1993). Quick information about many different options is preferred to comprehensive information about few options (Barber et al. 1994). In the MBA job search process, this stage is often prolonged and intensive, with considerable time and effort spent on sifting through and evaluating different job types, thinking about what kinds of jobs are most appropriate, interesting, and/or likely to yield offers. The efforts made in this stage result in a preliminary set of job types that the job seeker intends to pursue, which will be further refined subsequently as job seekers and recruiters engage in iterative decision making.
Applying for Jobs. Once job seekers identify the types of opportunities they want to pursue, they locate openings and apply for those jobs, typically by sending a résumé and cover letter. At this stage in the job search process, job seekers benefit from learning about lesser-known openings and for getting a foot in the door. Here, referrals by company insiders might be particularly helpful (Castilla 2005); a job seeker whose résumé is “quickly separated from the thousands the firm receives every week because she was referred by a current employee” (Schwartz 2013, p. A1) is more likely to receive an interview than one whose résumé did not stand out.

Also, being invited for interviews requires having at least some knowledge about the position so as to present oneself as a plausible candidate through one’s résumé and cover letter. Thus, job seekers devote energy to acquiring in-depth information about the jobs (Blau 1993, Soelberg 1967), in particular intensive information that is sensitive and difficult to formalize (Rynes and Gerhart 1990) such as precise job requirements and procedures for applying. A successful application results in an invitation for interviews (Saks 2006, Turban et al. 2009).

Preparing for Interviews. Preparing for interviews is the last stage of the job search process. Performing well in an interview means demonstrating, among other things, fit with the position beyond a generic level of employability for any organization (Rynes and Gerhart 1990). Studies of highly credentialed job seekers concur that assessments of fit during interviews involve more than evaluation of knowledge, skills, abilities, and past accomplishments, since, in general, applicants who make it to this stage are regarded as at least minimally qualified for the position. Rather, interviewers tend to assess fit via a variety of subjective factors, such as interpersonal skills and future goal orientation (Rynes and Gerhart 1990) or experiential homophily (Rivera 2012). During this stage job seekers may therefore seek to find out recruiters’ “hot buttons” (Finlay and Coverdill 2007) and attempt to frame their prior experience in terms that allow for translation to the desired job (O’Mahony and Bechky 2006).

Job seekers may now also seek to engage in personal learning in order to handle the interviews successfully. By personal learning, I refer to the sense of increased professional competence, identity, and effectiveness (Kram 1985) that will help job seekers overcome the last hurdles of recruiting. For instance, job search self-efficacy and positive emotions have been shown to predict success in the job search process at the interviews-to-offer stage (Côté et al. 2006, Turban et al. 2009). Following the interviews, the company will decide to either extend a job offer to the applicant or reject the applicant.

Dimensions of Social Contacts Relevant in Job Search

The literature on social networks in job search has focused its analytical attention on two aspects of a job seeker’s social contacts: range of contacts across social contexts and tie strength. Network range is the extent to which an actor’s contacts link him or her to diverse other actors, where diversity of actors has most often been operationalized as diversity of the contacts’ occupations (Campbell et al. 1986, Lin 1999). For instance, Granovetter (1973) defined the concept in terms of its indicators, suggesting that, on an “intuitive” basis (p. 1361), “the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie,” but he indicated that “[d]iscussion of operational measures of and weights attaching to each of the four elements is postponed to future empirical studies” (p. 1361). Whereas initial work assumed that tie strength is unidimensional, research has increasingly shown that the concept appears to be multidimensional (Marsden and Campbell 1984, Matthews et al. 1998; Wellman and Wortley 1990).

At least two aspects of tie strength appear to be distinct: the “depth” of the relationship and the “time” spent in a relationship (Marsden and Campbell 2012, Matthews et al. 1998). How deep a relationship is has to do with how affectively close, from an emotional intensity point of view, the ego feels relative to the contact (Marsden and Campbell 1984). By contrast, time spent in the relationship has to do primarily with how often the parties interact (Marsden and Campbell 1984), an indicator that is in turn related to how the two parties know each other and in what social contexts they interact. The time dimension of strength seems, therefore, to capture the cumulative knowledge the parties acquire of each other. For instance, by virtue of engaging in frequent, even if brief, exchanges, updates can be offered, ideas bounced around, and opinions shared. Based on these arguments, I treat relationship depth and interaction frequency as distinct theoretical and empirical dimensions of job seeker’s social ties.

Role of Social Contacts in Selecting the Types of Jobs for Which to Apply

The first stage of job search consists of selecting the kinds of opportunities to pursue—a task of considerable
ambiguity. People tend to resolve issues of uncertainty and ambiguity by adopting the behaviors and attitudes of their reference set (Festinger 1954). Contacts who work in different job domains will generate more diverse ideas about future possibilities by serving as possible role models, guides, or sounding boards and by providing different career reference points (Ibarra et al. 2005, Lawrence 2006). Thus contacts who are spread across more job types will demystify career paths that perhaps the job seeker would not have necessarily considered, turning them instead into attractive paths for the job seeker to pursue. To illustrate, among a number of exploratory interviews I conducted with job seekers to understand their experience of the job search process, one of my informants, an actuarial expert, traced his interest in trading jobs to two university friends who had gone into investment banking and who conveyed their enthusiasm about their work when he had confessed having grown dissatisfied with his. Another of my informants advised job seekers, “Ask people, what would I do good at?” Thus, branching out one’s contacts into different occupations is likely to generate more career path ideas, leading job seekers to identify more types of jobs to pursue than they otherwise would.

Hypothesis 1 (H1). Job seekers whose contacts are less occupationally focused will pursue more types of jobs.

Role of Social Contacts in Applying for Jobs

The next stage in the job search process is applying for jobs, with the hope of obtaining interviews. Having insider knowledge about lesser-known jobs and being referred will facilitate this task. As the initial intuition behind the “weak tie” suggested, help is more likely to come from ties with lower relationship depth, such as acquaintances. Such contacts are better conduits of novel information than are deep ties, chiefly because of their ability to provide access to nonredundant information. For instance, Yakubovich (2005) showed that among the different ties that Russian job seekers could have used for job search, lesser-known contacts were more likely than familiar contacts to be the tie from which the worker first learned about the job he or she eventually acquired. In terms of mechanisms, acquaintances may know of openings that are not yet advertised, or they may indicate to whom the job seeker should send his or her curriculum vitae (CV). To illustrate, many of the MBA participants I interviewed talked about contacting alumni—people they had never met before—to conduct “informational interviews” as a way to assess whether there were any interesting openings there and whether they could leverage their school connection into an interview. Job seekers engaged extensively in such conversations, although the return on that effort was not immediate; as one informant said, “Alumni are very busy people.” But some of the alumni contacted initially for an informational interview went a step further and passed the CV of the job seeker to the appropriate hiring contact for the company. Another job seeker, with a background in law, said, “I talked to this one guy in Milan [who works for Google], he wrote to the HR [human resources] and played up my technical background. I got the first interview.” To reach contacts who had the capacity to help in this way, my informants showed creativity and persistence. For example, one informant described how he reverse engineered the email address of a hiring partner at the top-tier consulting firm he was aiming for.

In sum, I expect that social contacts with lower relationship depth will be more helpful for job seekers at the job application stage, resulting in more job interviews.

Hypothesis 2 (H2). Controlling for the number of job types applied for, job seekers with lower relationship depth with their contacts will receive more interviews.

Help at the application stage is also more likely to come from occupational insiders. Insiders will know of more appropriate job openings and will be more likely to share that information (Marin 2013). They will also enable job seekers to write more appropriate cover letters and résumés so as to present themselves as more plausible candidates. In the literature on occupational communities, for instance, it has been established that occupational insiders impart knowledge about the field, share job tips, and offer career support to would-be members (Kunda et al. 2002). To illustrate, one of my informants, an engineer seeking to transition into consulting, said, “I sent my CV to all the McKinsey people I was comfortable with, MBAs, three other folks I know there, and even one or two alumni”; a second informant said, “Classmates were great for helping me prepare CVs and interviews.” Finally, insiders might function as referrers. My respondents assumed that having an insiders’ view would help them submit more appropriate CVs and cover letters and improve their chances of getting interviews. Their assumption is corroborated by findings from the referral literature, which has substantiated that applicants referred by organizational members tend to submit more timely applications, report a higher level understanding of the job, and are more likely to be invited to interviews than applicants who had not been referred (Fernandez et al. 2000). It follows that the more concentrated the job seeker’s social network is around insiders to the types of jobs he or she is interested in, the more likely it is for the job seeker to obtain the kind of specific, job-relevant information that will lead to more appropriate and, consequently, more successful, applications. Thus, I predict the following.

Hypothesis 3 (H3). Controlling for the number of job types applied for, job seekers whose contacts are more occupationally focused will receive more interviews.
Role of Social Contacts in Preparing for Interviews

The last stage of the job search process focuses job seekers’ attention even further on a few select opportunities. Job seekers aim to perform well in interviews and get offers, and to that end, they may engage in personal development and learning what is required of successful candidates for the job.

I argue that contacts that have frequent interactions with the job seekers will be particularly effective for helping job seekers convert interviews into offers because they will enhance job seekers’ personal learning during that last stage of job search. Personal learning is enabled by contacts that provide developmental, or mentorship, support, such as counseling, acceptance, and confirmation (Higgins and Kram 2001, Kram 1985). Counseling, for instance, involves providing a sounding board for self-exploration, offering personal experience as an alternative perspective and helping resolve problems and enhancing personal growth through feedback, guidance, and listening (Cotton et al. 2011). Such contacts need not be insiders to the desired jobs in order to be helpful, nor do they need to be especially close contacts on the affective front; instead, the most effective mentoring seems to result from frequent exchanges characterized by mutual (cognitive) trust and reciprocity (Kram 1996). In the setting I studied, my informants talked often about the importance of contacts who functioned as sounding boards for their interview preparation. To illustrate, one informant, speaking about a staff member of the career services office who was offering periodic “checking-in” sessions with interested job seekers, said, “It’s very helpful to have somebody as support. Career switches, they take a lot of time and energy”; another said, “It’s not just talking to people that helps, but also [the act of talking] crystallizes what I am thinking for myself.” I therefore predict the following.

Hypothesis 4 (H4). Controlling for the number of interviews obtained, job seekers with higher interaction frequency with their contacts will receive more job offers.

Furthermore, an occupationally focused network will help enhance job seekers’ knowledge of what is expected of them in the interviews. Successful mobility depends on job seekers having well-defined performance expectations, and such expectations are more likely to arise from social contacts who can reinforce the sense of personal belonging within a collectivity and consistent normative expectations associated with one’s role (Morrison 2002, Podolny and Baron 1997). The odds of informal recruitment for a person into an occupational field improve with the diversity of the person’s connections within that field (McDonald 2011, Mow 2002), and newcomers to a job obtain more information to clarify their role and master their jobs when they draw on a small, tight group of insiders (Morrison 2002), but not when they seek out a more diverse group of contacts. In fact, evidence shows that interviewees, referrals, or job seekers with insider contacts are more than 1.5 times more likely to receive a job offer than interviewees who do not have insider contacts (Fernandez et al. 2000).

Furthermore, contacts who are not insiders may have a negative effect of converting interviews into offers. Social reinforcement is enhanced by interconnected contacts but weakened by disconnected ones (Centola and Macy 2007). Contacts who are not aligned with the normative expectations for a certain job may exert countervailing influences as skeptics, cynics, or champions of other jobs, such that job seekers may experience role conflict (Kahn et al. 1964) and self-presentation dilemmas (Leary 1996). The influence of noninsiders may diminish the ability of job seekers to develop the particular “soft skills” required by each job type pursued, a process that seems to require full dedication. One of my informants referred to the two months he spent learning the lingo and particularities of one type of job that he was interested in, investment banking (IB), as “living and breathing IB.” Another told me how he listened to the company’s investor relations news conference to learn more and be able to demonstrate his commitment in interviews. And a third one said, “You need to have your priorities well defined. You can’t really go into consulting when you’ve put yourself in an investment-banking state of mind. You won’t have the motivation to prep for them both equally well.”

Based on these arguments, I expect the following.

Hypothesis 5 (H5). Controlling for the number of interviews obtained, job seekers whose contacts are more occupationally focused will receive more job offers.

Data

Testing the hypotheses above requires following job candidates through their job search process and gathering data on which jobs they applied for; how they prepared for those jobs, including information on the social networks they mobilized; and, finally, how many interviews and offers they were eventually offered in each of the job types they applied for. I used the job search process of participants in an MBA program to gather this information. The specific research site is a large business school that regularly appears near the top of the global business school rankings. A one-year MBA program is an advantageous setting for studying the kinds of questions that this study raised because in this setting, job seekers typically look for jobs in several work domains, and their job searches unfold within a limited time, facilitating a longitudinal data collection process. I relied on the features of this particular labor market to collect the kind of detailed data set that allowed me to illuminate aspects of the relationship between social networks and job search outcomes that prior research had not been able to address.
I examined three cohorts of MBA students. Two particularities of the setting and timing of this data collection are worth mentioning. First, there are two cohorts of students who enter the program every academic year, one in September and one in January. The September cohort graduates the following June and the January cohort graduates the following December. Because of this setup, only students enrolled in the January cohort are able to intern during their MBA program. I collected my data on two September cohorts and one January cohort. Second, all of the students in this sample applied for and were offered jobs before the 2008 financial crisis. Although a small minority of these students may have returned to their former employers after graduation, most searched for a job during the MBA program.

Data Collection
The data set used in this study consists of the 226 individuals for whom I have data on all aspects of their job search process and outcomes. These data came from four sources: an entry survey, a job search process survey, a job search outcome survey, and archival data. Table 1 presents an overview of the four data sources and the measures constructed from them.

The Entry Survey. The first survey, which I refer to as the entry survey, was conducted during the first week of classes. I solicited students’ help through a personal plea, asking for their cooperation in developing a better understanding of how MBA students get jobs and guaranteeing confidentiality of their answers. The survey was made available online to the entire population of the three MBA cohorts I studied, 859 students in all. I sent the response link via email and followed up personally with reminders. Of the 859 students solicited, 484 answered the survey, representing a response rate of 56%. This response rate is well within the norm of 48–56%. This response rate is well within the norm of 48–56%. The respondents did not differ significantly from nonrespondents on any individual characteristics except gender: respondents were more likely to be men (81% versus 76%; \( p < 0.05 \)).

The Job Search Process Survey. Next I conducted a survey to gather information about the students’ job searches, in particular their social networks. Because I wanted to capture this information as the students undertook their job search, I distributed this survey when the job search process was at its most intense. Since the MBA program where this study took place is one year long, this survey was distributed eight months into the program. I distributed this survey to the 484 students who filled out the entry survey. As before, the survey was made available online, and the response link and remainders were sent via personal email; 288 respondents filled out the second survey for a response rate of 60%. The respondents were similar to nonrespondents on most characteristics but were more likely to be married (29% versus 21%; \( p < 0.05 \)).

The Job Search Outcome Survey. Finally, I used data from a survey conducted at the end of the MBA program by the school’s career services office to gather information about the job search outcomes. The career services office had routinely conducted a survey of every cohort to gather statistics about the final jobs that students entered. I redesigned the survey to add questions about the kinds of jobs that students applied for and were offered in order to separate the effects of students’ decisions from those of employers. All graduating students were asked by the school to fill out their job status in an online survey. The survey asked questions about the respondent’s job status, details of the job accepted if there was one, and details of the application process. Three months and six months after graduation, the career services office followed up with those students who had not entered any information previously, those who had previously reported that they had not received a job offer, and those who had reported receiving job offers but had not yet accepted an offer to remind them to fill out the survey. Through this process, I obtained detailed job

| Table 1 Overview of Data Collection: Three Cohorts of Students Enrolled in a Top One-Year MBA Program |
|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------|
| Timing of collection                                         | Uses in this study                                           | Variables constructed                                        | Archival data                                                 |
| Entry survey                                                 | Job search process survey                                    | Job search outcome survey                                    | Archival data                                                 |
| First week of classes                                        | Eight months into the program                                | Graduation time (10 or 12 months into the program)           | Main analyses                                                 |
| Main analyses and robustness checks                          | Main analyses                                                | Main analyses                                                | Demographics (gender, age, marital status, GMAT)              |
| Propensity to use social contacts                            | Self-monitoring                                              | Number of job types applied for                             | Quantitative training                                         |
| Identification with job type                                 | Characteristics of social networks                           | Number of interviews (overall and by job type applied for)   | Type and years of work experience                             |
|                                                               |                                                               | Number of offers (overall and by job type applied for)       |                                                               |

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Organization Science, Articles in Advance, pp. 1–19, © 2015 INFORMS
search outcome information for 226 of the 288 students who had also provided information on the two prior surveys (response rate of 78%). The 226 respondents were more likely to be male (85% versus 75%; p < 0.1) and more likely to have higher GMAT scores (710 versus 695; p < 0.01) and quantitative educational backgrounds (60% versus 40%; p < 0.01) than the students who completed the first two surveys but did not provide outcome data.

To investigate the possibility of sample bias, I compared respondents with nonrespondents on other indicators of job search success. I have information on the job status of all 288 students who completed the first two surveys—namely, whether they had accepted a job, whether they were pursuing entrepreneurial careers (as firm founder, working for a family firm, or working as an independent consultant), whether they had not yet received an offer, or whether they had not yet accepted an offer received. The 226 individuals who also responded to the third survey were as likely as nonrespondents to not have received an offer and were equally likely to not have accepted an offer received. The significant differences were that respondents were marginally more likely than nonrespondents to have accepted a job among offers received (91% versus 82%; p < 0.1) and less likely to pursue entrepreneurial careers (3% versus 10%; p < 0.05). In addition, the 226 respondents were less likely to have an offer in hand when they began the MBA program (32% versus 50%; p < 0.05). This pattern of results suggests that those people who had responded to the first two surveys but did not provide full job search details on the last survey had more atypical job search processes, whereby they embraced an entrepreneurial direction or returned to a position they had already secured prior to starting the MBA program, and as a result, they were less likely than respondents to have interviews and thus report on offers. These insights alleviate sampling concerns.

The final sample size on which I ran analyses is 226. The numbers of observations vary slightly across tables because of missing data for particular items.

Archival Data. In addition to survey data, I used archival data from the MBA admissions office about students’ demographics, prior work experience, and educational background, which I matched to the survey data by student identification number.

Measures

Dependent Variables. In the job search outcome survey, respondents were asked to report their degree of success in each of the different kinds of jobs they had been pursuing. Once a job type description was entered, a follow-up question asked for the number of interviews and the number of offers received in the respective job type. The question was repeated for each type of job pursued, and the numbers of interviews and offers in each were recorded separately.

To describe the types of jobs they had pursued, students were asked to provide the industry and functional role of each, using an open-ended format; examples provided include “consultant, management consulting,” and “marketing manager, cosmetics.” Respondents could enter up to three different job types, based on exploratory interviews with MBAs, career services staff, and career counselors I had conducted, which indicated that three was the maximum number of distinct new career options to which a job seeker could realistically devote attention. Note that respondents did not provide information on the specific positions to which they had applied, only details of the different kinds of jobs to which they had applied.

The open descriptions of the jobs applied for were subsequently coded into a detailed list of 19 job types. The list was developed from the categories used by 10 major international business schools to report their MBA placement and validated in preliminary. I enlisted the help of a Ph.D. student in management to code the job types, and our results showed good interrater reliability (κ = 0.86); we resolved all outstanding differences by agreement. As a last step, I condensed the job types into 11 categories to facilitate the matching of application data to data on social contacts’ occupations. The final job-type category list used in analyses consists of business development, consulting, engineering, entrepreneurship, finance, human resources, management, marketing, operations, higher education and career counseling, and other.

I constructed the dependent variables for the analyses in this paper as follows. For analyses pertaining to the selection of job types for which to apply (the first stage of the job search process), the dependent variable is Number_of_job_types_applied_for. For analyses pertaining to interviews obtained, the dependent variables are the Total_number_of_interviews_obtained and the Herfindahl_index_of_interviews. The latter captures the extent to which the interviews obtained are concentrated in one or more job types and was used to investigate in more depth the effects of the contacts’ occupational focus on job search success at the interviews stage. The formula used was

\[
\text{Herfindahl\_index\_of\_interviews\_for\_job\_seeker\_j} = \sum_{i=1}^{n} \left( \frac{\text{Number\_of\_interviews\_in\_job\_type\_i}}{\text{Total\_number\_of\_interviews\_obtained}} \right)^2
\]

where \( n \) is the total number of job types applied for by \( j \).

For analyses of the offers obtained, the dependent variable is the Number_of_offers_obtained.
Independent Variables. The data on job seekers’ social networks were collected through the job search process survey. Respondents were asked to list, by initials or first name, “the key people who had helped with [their] career decision making and job search process.” To aid their recall process, they were provided with four name-generating questions, chosen on the basis of prior research (Burt 1992, Higgins 2001, Podolny and Baron 1997) and adapted to address more explicitly the different aspects of the job search process that were important to this study, such as generating leads and securing jobs. Respondents could list up to five names in response to each name generator for a total possible of 20 contacts; they could also list the same individual in response to different name-generating items. The upper limit of 20 contacts was set based on my initial interviews, which had surfaced that the average network used for the job search process contained about 7 individuals, and checked against other studies of job search networks in MBA settings (e.g., Higgins 2001 reported an average network size of 4 contacts). A set of follow-up questions then asked for details on each of the contacts entered, including the contacts’ primary occupation and a set of questions about the strength of the relationship between the contact and job seeker.

Occupational focus of the contacts: For each contact entered, the respondent indicated the contact’s occupation in open-ended responses. These responses were coded into the same 19 job types used to classify the job options pursued (intercoder reliability was 0.90) and subsequently reduced to 11 categories.

The primary measure of occupational focus of the contacts in this study was the Number of occupations in the network of a job seeker, with more occupations in the network taken to indicate lower occupational focus of the contacts. This follows the approach taken in foundational social network studies on the effects of job seekers’ network diversity on their job search outcomes (e.g., Campbell et al. 1986).

I also calculated the Herfindahl_index_of_contacts as an alternative measure of the contacts’ occupational focus. The Herfindahl as a measure of the concentration of social contacts is gathering momentum in social network research, since it is considered that it “captures the concentration of sources of incoming flows and therefore serves as a constructive baseline for measuring the fragility of social positions” (Bothner et al. 2010, p. 950). I calculated this measure using the following formula:

\[
\text{Herfindahl} = \sum_{i=1}^{n} \left( \frac{\text{Number of contacts in occupation}_i}{\text{Total number of contacts}} \right)^2,
\]

where \(n\) is the total number of occupations represented in \(j\)'s network.

Average relationship depth: The variable Average relationship_depth was operationalized as the average level of emotional closeness the job seeker feels with his or her contacts (Marsden 1990). Respondents to the job search survey indicated how affectively close they felt to each of their contacts. For each contact, respondents answered the question, “How close do you feel to this person?” on an answer scale of 1 to 5, where 1 was “very distant” and 5 was “very close.” I averaged the responses to this question across all the contacts in the job seeker’s network.

Average interaction frequency: The variable Average interaction_frequency was measured as the average frequency of interaction with the contacts in one’s network. To construct this measure, I used answers to the question, “How frequently have you interacted with this person since you started the MBA program?” Possible responses ranged from 1 to 5, where 1 was “once” and 5 was “daily.” I averaged the responses across all the contacts in the job seeker’s network.

Control Variables. I controlled for factors at both the network and individual levels.

Network size: The total number of contacts in respondents’ network, the Network_size, is a basic indicator of benefits deriving from social relationships (Marsden 1990).

Individual attributes: Variables at the individual job seeker level might influence both the characteristics of the social network mobilized for help and the results of the job search process. In this case, it would be difficult to draw inferences about the causal effect of social networks on job search success (Mouw 2003, 2006). A solution is to make an inference about the process of network formation and explicitly model this in regressions predicting job search outcomes using data on individual attributes (Mouw 2003). I include two variables in my analyses that could be related to both characteristics of the social contacts and of job search success:

• Self-monitoring: Prior research has shown that self-monitoring, defined as the extent to which people are responsive to and adapt to situational appropriateness, is a personality antecedent of both network formation and of attainment success (Kilduff and Day 1994, Mehra et al. 2001, Sasovova et al. 2010). In the job search survey, I used an 18-item self-monitoring scale (Snyder and Gangestad 1986) to obtain a measure of self-monitoring; the Cronbach’s \(\alpha\) for the 18 items was 0.94. I averaged the 18 items to obtain the measure for each individual.

• Propensity to use contacts for career help: I also included a variable that specifically taps respondents’ propensity to use contacts for career help (Mouw 2003). In the entry survey, before the students had a chance to engage in socialization activities with other program participants and with the school’s career services, respondents were asked whether people who have taken an
interest in their professional well-being advised them to do an MBA. The measure was set to 1 if the answer to this question was “yes” and 0 if the answer was “no.”

Other controls: These include demographic information (age, gender, and marital status), GMAT score (standardized test score used in MBA applications), as well as two measures of educational background and work experience. Quantitative training was set to 1 if the respondent had earned any undergraduate or graduate degree in science, mathematics, or engineering fields and 0 otherwise. Prior work experience was the total number of years of work experience.

Analyses and Results
Descriptive statistics indicate that job seekers who apply to more job types obtain, on average, more total interviews and offers than those who apply to fewer job types: job seekers who apply to one job type obtained 3.9 interviews and 1.2 offers; those who apply to two job types, 6.4 interviews and 1.7 offers; and those who apply to three job types, 8.2 interviews and 1.9 offers. Although intuitive, these findings leave open the question of what allows people to be successful in each successive stage, conditional on what they already achieved in the prior stage.

I begin by presenting a tabulation of the main variables used in the analyses for this study. Table 2 provides the basic summary and correlation statistics.

The statistics in Table 2 provide preliminary evidence that the relationships between characteristics of the social contacts and success vary with the stages of the job search process. The number of occupations in the network is positively and highly significantly correlated with the number of job types applied for ($r = 0.3, p < 0.01$). Average relationship depth is negatively and significantly related to total number of interviews obtained ($r = -0.13, p < 0.05$), and average interaction frequency is positively and significantly related to the total number of offers obtained ($r = 0.18, p < 0.05$). I explore these relationships in detail below.

Selecting the Types of Jobs for Which to Apply
Hypothesis 1 proposed a negative relationship between the occupational focus of the contacts and the number of job types pursued. To test this relationship with count dependent variable, I ran Poisson regressions (Greene 2003). The results are shown in Table 3.

Model 3 in Table 3 shows the effect of the number of occupations in the network on the number of job types applied for. The effect is significant ($p < 0.05$) in the expected direction: the more occupations in the network (i.e., the less occupationally focused the contacts), the more job types the job seeker applies for. The marginal effect is 0.2, meaning that job seekers apply to 2.4 instead of 2.2 job types (an increase of 9%) when the
Similar results are obtained when using the Herfindahl index as a measure of the contacts’ occupational focus (Model 4); the more concentrated the contacts are, the fewer job types the job seeker applies for. The results support H1.

Applying for Jobs
I next test H2 and H3, on the effects of average relationship depth and occupational focus of the social contacts on success at job interviews. Table 4 shows the results of these analyses.

I test H2, the effect of average relationship depth on the number of interviews obtained, using as a dependent variable the total number of interviews obtained by the job seeker and controlling for the number of job types applied for. I use negative binomial regressions for these analyses. The results are shown in Models 2–4 in Table 4. Model 2 shows that the average relationship depth has a marginally significant ($p < 0.1$) effect on interviews in analyses where the average interaction frequency is not taken into account. However, as Model 3 shows, once I include the average interaction frequency in analyses, the effect of average relationship depth is significant in the predicted direction ($p < 0.05$); the marginal effect is 0.7, meaning that job seekers receive, on average, 7.4 instead of the 6.6 interviews (a change of 10%) when they use contacts with lower average relationship depth by one unit. These results also offer empirical evidence supporting the theoretical distinction between relationship depth and interaction frequency as different dimensions of tie strength. Model 4 in Table 4 shows that the effect of average relationship depth is also robust to the inclusion in the analysis of the number of occupations in the network. Thus, Hypothesis 2 is supported.

Hypothesis 3 argues that job seekers whose contacts are more occupationally focused will receive more interviews. I test this relationship with ordinary least squares (OLS) regressions of the effect of the Herfindahl index of contacts on the Herfindahl index of interviews to better capture how the concentration of contacts around the job types applied for relates to the concentration of interviews obtained in those job types. I show the results of these analyses in Models 5 and 6 of Table 4. The Herfindahl index of the contacts is significantly related to concentration of interviews across occupations (in Model 5, $p < 0.01$), meaning that the more concentrated the contacts are across the job types pursued, the more successful the job seekers are at obtaining interviews in those job types. Results are robust to controlling

### Table 3: Determinants of the Number of Job Types Applied For:
Poisson Regressions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td>−0.058</td>
<td>−0.039</td>
<td>−0.039</td>
</tr>
<tr>
<td></td>
<td>[0.128]</td>
<td>[0.131]</td>
<td>[0.131]</td>
<td>[0.130]</td>
</tr>
<tr>
<td>Age</td>
<td>−0.007</td>
<td>−0.008</td>
<td>−0.014</td>
<td>−0.011</td>
</tr>
<tr>
<td></td>
<td>[0.026]</td>
<td>[0.026]</td>
<td>[0.026]</td>
<td>[0.026]</td>
</tr>
<tr>
<td>Marital_status</td>
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<td>0.078</td>
<td>0.074</td>
<td>0.061</td>
</tr>
<tr>
<td></td>
<td>[0.103]</td>
<td>[0.103]</td>
<td>[0.103]</td>
<td>[0.103]</td>
</tr>
<tr>
<td>Quantitative_training</td>
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<td>−0.003</td>
<td>−0.019</td>
<td>−0.023</td>
</tr>
<tr>
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<td>[0.094]</td>
<td>[0.094]</td>
<td>[0.094]</td>
<td>[0.094]</td>
</tr>
<tr>
<td>GMAT_score</td>
<td>0.001</td>
<td>0.001</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>[0.001]</td>
<td>[0.001]</td>
<td>[0.001]</td>
</tr>
<tr>
<td>Prior_work_experience</td>
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<td>0.011</td>
<td>0.011</td>
<td>0.011</td>
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<td>[0.031]</td>
</tr>
<tr>
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<td>−0.004</td>
<td>−0.007</td>
</tr>
<tr>
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<td>[0.086]</td>
<td>[0.087]</td>
<td>[0.087]</td>
<td>[0.087]</td>
</tr>
<tr>
<td>Propensity_to_use_contacts</td>
<td>−0.046</td>
<td>−0.041</td>
<td>−0.067</td>
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</tr>
<tr>
<td></td>
<td>[0.092]</td>
<td>[0.092]</td>
<td>[0.093]</td>
<td>[0.092]</td>
</tr>
<tr>
<td>Network_size</td>
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<td>−0.021</td>
<td>−0.006</td>
<td>−0.017</td>
</tr>
<tr>
<td></td>
<td>[0.014]</td>
<td>[0.022]</td>
<td>[0.017]</td>
<td></td>
</tr>
<tr>
<td>Number_of_occupations_in_the_network</td>
<td></td>
<td></td>
<td>0.097*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[0.044]</td>
<td></td>
</tr>
<tr>
<td>Herfindahl_index_of_contacts</td>
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<td></td>
<td>−0.508*</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>[0.212]</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
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<td>0.664</td>
<td>1.044</td>
</tr>
<tr>
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<td>[1.160]</td>
<td>[1.159]</td>
<td>[1.161]</td>
<td>[1.184]</td>
</tr>
</tbody>
</table>

Notes. N = 226. The dependent variable is Total_number_of_job_types_applied_for.
Standard errors are in brackets.
$^{1}p < 0.1$; $^{*}p < 0.05$; $^{* *}p < 0.01$ (two-tailed).
for measures of average relationship depth and average interaction frequency (Model 6).

To further investigate the robustness of these findings, I also ran analyses of interview success at the job type level (not reported here), where I examined the relationship between the number of interviews obtained in each job type applied for and the number of contacts who were insiders to the respective job type, as well as the number of contacts external to the job type. As expected, I found that the number of insiders to the job type was positively and significantly related to obtaining more interviews in the job type, whereas the number of outsiders had a negative, significant effect on interviews in the job type. Taken together, the analyses support H3.

Preparing for Interviews

I turn to tests of H4 and H5—the relationships between characteristics of social contacts and the number of offers obtained—in the next set of analyses. Here, I used negative binomial regressions and controlled for the number of job types applied for and total number of interviews obtained. The results are shown in Table 5.

Hypothesis 4 proposed that the average interaction frequency with contacts is positively related to the number of offers received. I find evidence in support of this hypothesis. In Table 5, Model 2, the average interaction frequency with contacts is positively related to the number of interviews obtained (Model 6). Based on the results in Model 6, the marginal effect is 0.25, meaning that the job seeker can expect to receive 1.9 offers instead of the mean of 1.66 offers, or 15% more offers, if the average interaction frequency with his or her contacts increases by 1. Hypothesis 4 is therefore supported.

Table 4  Determinants of Success at Job Application Stage: Negative Binomial Regressions Predicting the Total Number of Interviews Obtained and OLS Regressions Predicting the Herfindahl Index of Interviews

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total number of interviews</th>
<th>Herfindahl index of interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Gender (female = 1)</td>
<td>0.219†</td>
<td>0.207†</td>
</tr>
<tr>
<td></td>
<td>[0.121]</td>
<td>[0.121]</td>
</tr>
<tr>
<td>Age</td>
<td>−0.02</td>
<td>−0.02</td>
</tr>
<tr>
<td></td>
<td>[0.025]</td>
<td>[0.025]</td>
</tr>
<tr>
<td>Marital status (married = 1)</td>
<td>0.038</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td>[0.101]</td>
<td>[0.100]</td>
</tr>
<tr>
<td>Quantitative_training</td>
<td>0.133</td>
<td>0.141</td>
</tr>
<tr>
<td></td>
<td>[0.092]</td>
<td>[0.092]</td>
</tr>
<tr>
<td>GMAT_score</td>
<td>−0.001</td>
<td>−0.001</td>
</tr>
<tr>
<td></td>
<td>[0.001]</td>
<td>[0.001]</td>
</tr>
<tr>
<td>Prior_work_experience</td>
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<td>0.041</td>
</tr>
<tr>
<td></td>
<td>[0.030]</td>
<td>[0.030]</td>
</tr>
<tr>
<td>Self-monitoring</td>
<td>0.086</td>
<td>0.099</td>
</tr>
<tr>
<td></td>
<td>[0.085]</td>
<td>[0.085]</td>
</tr>
<tr>
<td>Propensity_to_use_contacts</td>
<td>−0.117</td>
<td>−0.11</td>
</tr>
<tr>
<td></td>
<td>[0.090]</td>
<td>[0.090]</td>
</tr>
<tr>
<td>Network_size</td>
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<td>−0.015</td>
</tr>
<tr>
<td></td>
<td>[0.013]</td>
<td>[0.013]</td>
</tr>
<tr>
<td>Number_of_job_types_applied_for</td>
<td>0.311**</td>
<td>0.312**</td>
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<tr>
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<td>[0.059]</td>
</tr>
<tr>
<td>Average_relationship_depth</td>
<td>−0.104†</td>
<td>−0.157*</td>
</tr>
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</tr>
<tr>
<td>Average_interaction_frequency</td>
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<td>0.074</td>
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<td>[0.056]</td>
</tr>
<tr>
<td>Number_of_occupations</td>
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<td>0.025</td>
</tr>
<tr>
<td>in_the_network</td>
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<td>[0.047]</td>
</tr>
<tr>
<td>Herfindahl_index_of_contacts</td>
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<td>0.242**</td>
</tr>
<tr>
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<td>[0.078]</td>
<td>[0.079]</td>
</tr>
<tr>
<td>Constant</td>
<td>2.292*</td>
<td>2.732*</td>
</tr>
<tr>
<td></td>
<td>[1.126]</td>
<td>[1.146]</td>
</tr>
<tr>
<td>R²</td>
<td>0.099</td>
<td>0.106</td>
</tr>
</tbody>
</table>

†p < 0.1; ‡p < 0.05; **p < 0.01.
related to the success of offers. Controlling for the number of job types applied for and the interviews obtained, I find that the number of occupations in the network (a reverse indicator of occupationally focused contacts) has a negative, significant effect on offers (in Table 5, Model 4, \( p < 0.05 \)). Similar results are obtained when using the Herfindahl index of contacts as an alternative measure of occupationally focused contacts (in Model 5, \( p < 0.05 \)) and when including average interaction frequency and average relationship depth in the analysis (Model 6). Based on the results in Model 6, the marginal effect of occupationally focused contacts is also 0.25—that is, a job seeker who diminishes the number of occupations represented in his or her network by 1 can expect to receive 15% more offers than the average 1.66 offers. Thus, job seekers who draw on social contacts who are occupationally focused will have more success at converting interviews into offers than job seekers whose contacts are more spread out across occupations.

### Robustness Checks: Network Endogeneity, Selection Correction, and Individual Heterogeneity

To check the robustness of these results, I investigate three issues of potential concern: endogeneity of the networks, self-selection of individuals, and individual heterogeneity.

**Network Endogeneity.** Hypothesis 2 presumes that job seekers rely on their social networks to construct the set of job types they intend to pursue, and not the other way around, but one could conceivably imagine that the reverse process is happening. This would trigger a concern about the endogeneity of the social network, such that social contacts are not met independently of the job search process but are selectively sought out to suit one’s job search needs. I have reasons to believe that this is less the case than might be thought. Research has long shown that people are poor predictors of how their careers will evolve, even over the short term (Nicholson and West 1988), and studies of MBA career decision

### Table 5 Determinants of Success at Interview Preparation Stage: Negative Binomial Regressions Predicting the Total Number of Offers Obtained

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (female = 1)</td>
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<td>−0.21</td>
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<tr>
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<td>[0.164]</td>
<td>[0.164]</td>
<td>[0.163]</td>
<td>[0.163]</td>
<td>[0.162]</td>
</tr>
<tr>
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<td>−0.080*</td>
<td>−0.073*</td>
<td>−0.079*</td>
<td>−0.063†</td>
</tr>
<tr>
<td></td>
<td>[0.032]</td>
<td>[0.032]</td>
<td>[0.032]</td>
<td>[0.032]</td>
<td>[0.032]</td>
<td>[0.032]</td>
</tr>
<tr>
<td>Martial_status (married = 1)</td>
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<td>0.142</td>
<td>0.152</td>
<td>0.169</td>
<td>0.13</td>
</tr>
<tr>
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<td>[0.130]</td>
<td>[0.128]</td>
<td>[0.128]</td>
<td>[0.130]</td>
<td>[0.130]</td>
<td>[0.127]</td>
</tr>
<tr>
<td>Quantitative_training</td>
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<td>−0.16</td>
<td>−0.117</td>
<td>−0.109</td>
<td>−0.127</td>
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<td>[0.117]</td>
<td>[0.117]</td>
<td>[0.119]</td>
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<td>[0.117]</td>
</tr>
<tr>
<td>GMAT_score</td>
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<td>0.001</td>
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<td>[0.002]</td>
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</tr>
<tr>
<td>Prior_work_experience</td>
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<td>0.005</td>
<td>0.009</td>
</tr>
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<td>[0.040]</td>
<td>[0.039]</td>
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<td>[0.039]</td>
</tr>
<tr>
<td>Self-monitoring</td>
<td>−0.072</td>
<td>−0.073</td>
<td>−0.078</td>
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<td>−0.059</td>
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<td>[0.110]</td>
<td>[0.111]</td>
<td>[0.111]</td>
<td>[0.109]</td>
</tr>
<tr>
<td>Propensity_to_use_contacts</td>
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<td>0.051</td>
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<td>0.06</td>
<td>0.111</td>
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<tr>
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<td>[0.115]</td>
<td>[0.119]</td>
<td>[0.117]</td>
<td>[0.117]</td>
</tr>
<tr>
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<td>0.064*</td>
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<td>[0.019]</td>
<td>[0.028]</td>
<td>[0.021]</td>
<td>[0.028]</td>
</tr>
<tr>
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<td>0.098</td>
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<td>0.172*</td>
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<td>[0.079]</td>
<td>[0.084]</td>
<td>[0.085]</td>
<td>[0.082]</td>
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<tr>
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<td>0.042**</td>
<td>0.042**</td>
<td>0.043**</td>
<td>0.043**</td>
<td>0.043**</td>
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<td>[0.010]</td>
<td>[0.010]</td>
<td>[0.010]</td>
<td>[0.010]</td>
</tr>
<tr>
<td>Average_interaction_frequency</td>
<td>0.140*</td>
<td>0.125†</td>
<td>0.125†</td>
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<td>0.162*</td>
<td>0.162*</td>
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<tr>
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<td>[0.073]</td>
<td>[0.073]</td>
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<td>[0.073]</td>
</tr>
<tr>
<td>Average_relationship_depth</td>
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<td>0.044</td>
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<td>0.066</td>
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<tr>
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<td>[0.119]</td>
<td>[0.119]</td>
<td>[0.119]</td>
<td>[0.119]</td>
</tr>
<tr>
<td>Number_of_occupations_in_the_network</td>
<td>−0.145†</td>
<td>−0.166**</td>
<td>−0.166**</td>
<td>−0.060</td>
<td>−0.060</td>
<td>−0.060</td>
</tr>
<tr>
<td></td>
<td>[0.633*]</td>
<td>[0.274]</td>
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Notes. \( N = 215 \). Standard errors are in brackets.

\( *p < 0.1; \) \( ‡p < 0.05; \) \( **p < 0.01. \)
making have found that social influence is a determin-

ant engine of people’s job choices (Kilduff 1990). In

my context, when asked to rank the top 3 reasons for

attending the program among a list of 10, as part of the

job preferences survey, 60% of respondents listed “fig-

ure out what I want to do” as one of their top 3

reasons, next to “career change” and “learning more

about business.”

Nevertheless, I took two steps to systematically check

the extent to which this is a potential problem here. First,

I investigated the effects of social contacts on job search

success only for those contacts who had been met before

the beginning of the MBA program. Specifically, 55%

(988 of 1,802) of the contacts used by the respondents in

my sample were met before the beginning of the MBA

program. Analyses run on this smaller sample replicated

the results of the main analyses.

Second, I ran analyses to predict the probability of

applying to a certain job type, based on the level of

identification with the job type as it was measured in

the entry survey. Prior research has indicated that peo-

ple’s identities play an important role in direct and sus-

taining efforts in achievement-related choices (Cross and

Markus 1994) and in applying to new jobs (Barbulescu

and Bidwell 2013). To measure identification with the

job type, in the entry survey I asked individuals about the

different kinds of jobs they see themselves embracing in

the future (Markus and Nurius 1986). Specifically, the

entry survey asked students to rate two statements cap-

turing their identification with each job: “I often think

about working in…” and “To work in…is an impor-

tant part of who I want to be.” Agreement was rated on

a scale of 1 to 5. The Cronbach’s α for the scale was

0.89. I asked these questions of 15 different job types,

which I then mapped onto the job types used in the main

analyses, and averaged the answers to the two items to

obtain the measure of identification with each job type.

If people act according to their preferences, deciding

on job types first and selecting social contacts second,

then we should see evidence of identification behav-

ior and selection of contacts that corresponds to those ini-

tial preferences. However, this is not what the evi-

dence suggests. People turn out to be poor predictors of

their actions: the correlation between a job type being

predicted from the initial reported identification versus

being actually applied for is just 19.8%. People do not

apply to two-thirds of the job types they had highly

identified with initially but apply instead to job types

with which they had not initially identified. Furthermore,

the correlation between the number of job types highly

identified with and the number of occupations in the

network is negative (p < 0.05); in regression analyses,

the number of jobs predicted is not significantly related

to indicators of occupationally focused contacts, and the

number of jobs predicted does not mediate the effect of

measures of networks on job search success. In sum,

the evidence does not support the opposite relationship

between job-type decisions and social networks.

Selection Correction. Analyzing the determinants of

offers may be complicated by the fact that individu-

als only apply to a select set of jobs—those in which

they may expect to be more likely to obtain offers. I

tested the hypotheses using maximum likelihood probit

models with selection corrections (operationalized using

STATA’s “heckprob” command). Conceptually, this anal-

ysis first estimates the probability that an individual

will apply to a given job type, using the person’s self-

rated identification with the job type (measure described

above) as an instrument. The second-stage estimates, for

those job types that a worker applied to, the probability

that the worker actually received an offer. Those esti-

mates are corrected for biases in the kinds of jobs for

which a worker applied, using the estimates of the first

stage.

The instrument I used was the level of identifica-

tion with the job type. I surmise that identifying with

a job type will predict submitted applications but not

offers. The first-stage results show that the instrument

had a significant effect for application behavior (and it

did not have a significant effect on offers). The second-

stage results show significant effects of the measures of

occupationally focused contacts, results consistent with

those obtained when I did not correct for selection. The

Wald test indicates that the independence of equations

in these models cannot be disconfirmed, alleviating con-

cerns about selection issues.

A similar concern may be raised with respect to selec-

tion into jobs—in other words, that success in

interviews will be endogenous to success in offers such

that simply controlling for the number of interviews

obtained in regressions predicting offers does not prop-

erly account for the relationship between interviews and

offers. To address this concern, I ran analyses of offers

that correct for the probability of obtaining interviews,

using the nationality of the job seeker as an instrument.

The business school where this study was conducted is

highly international, and it is customary for students to

list their nationality and work permits, if any, on their

CVs and in a prominent place near the contact address

at the top of the résumés. I reasoned that nationality

is likely to influence the likelihood that a job seeker

will be granted interviews; in particular, since the school

is located in Europe, European Union (EU) nationals

should be more likely to get interviews. At the same
time, nationality is unlikely to influence the success of

an offer once the applicant has been invited to interview.

Analyses confirm these expectations. EU nationality is

related to the number of interviews obtained but not to

the number of offers obtained, and all the effects of

measures of occupationally focused contacts, relation-

ship depth, and interaction frequency on offers are con-

sistent with those found in analyses that do not correct
for selection; the Wald test supports the independence of first- and second-stage equations.

**Individual Heterogeneity.** It can be argued that people with more beneficial networks and better job search success are simply of higher underlying quality (Mouw 2006). Thus, any network-level results we might find could reflect differences in the underlying quality of the job seekers (an individual heterogeneity problem). This possibility was explored with individual-level fixed effects models.

Since I observed simultaneous multiple job searches for each job seeker, I had 391 job-level observations representing 196 individuals for whom I could run these analyses. I ran OLS regressions to predict the number of interviews and offers at the job seeker–job-type level, controlling for the number of years of experience the individual had in the specific job type and, in the regressions predicting offers, the number of interviews obtained in the specific job type. The main independent variables were the number of occupational insiders in the social network and the relationship depth and interaction frequency, calculated separately for occupational insiders and outsiders. Results show that the number of insiders was positively and significantly associated with the number of interviews ($p < 0.01$) and marginally associated with number of offers obtained ($p < 0.1$). However, I found no significant effects of relationship depth or of interaction frequency with either occupational insiders or outsiders.

These findings strengthen the conclusion that the occupational composition of the network has significant effects on job search success beyond the individual quality of the job seeker. Nevertheless, the results do not rule out the possibility that the effects of tie strength (both as relationship depth and as interaction frequency) on job search success may be related to underlying characteristics of the job seeker, such that certain people are able to benefit more from their contacts than others. It is plausible, for instance, that some job seekers are better than others at asking their weak ties to intervene on their behalf, whereas others are better at increasing their personal learning from interacting with their strong ties.

**Discussion**

This paper brings job search process stages into the literature on the role of social contacts for job search success to disentangle which specific aspects of job seekers’ social contacts will be more helpful across each stage. The results show that job seekers with less occupationally focused networks apply to more job types and thus on aggregate obtain more interviews and more offers, but it is job seekers with contacts who are more occupationally focused who have better success at converting their applications into interviews and then interviews into offers. The findings also indicate that tie strength is more accurately understood as a two-dimensional construct, with relationship depth having an impact early in the job search process and interaction frequency playing a role later in the process. These findings are robust to concerns about the endogeneity of social contacts with respect to the choice of job types, job seekers’ self-selection into job types and selection into interviews, and individual heterogeneity.

**Implications for Research**

This study contributes primarily to the emerging body of research on the specific processes by which social contacts influence job search outcomes (Marin 2013, McDonald 2011, Obukhova 2012, Obukhova and Lan 2013, Sterling 2014). First, it introduces and elaborates on a stage process model of job searches, replacing the one-stage models implicit in prior research on the role of social contacts in job attainment. By pointing out the opposite effects of occupationally focused contacts across stages of the job search process, and the distinct ways in which relationship depth versus interaction frequency with the job seekers’ contacts matter for job search success, this paper starts to reconcile prior findings in the literature about the effects of occupational range and strength of ties on job search outcomes.

Second, the findings here speak to the conversation in the sociological labor market literature about the precise function that social contacts fulfill in the match between job seekers and organizations. For instance, a commonly used typology comprises three functions of social contacts: creating richer applicant pools, sourcing applicants that are better matches for the job, and generating social enrichment by facilitating the job seeker’s adjustment to the organization post hire (Fernandez et al. 2000). Whereas so far the most conclusive evidence has been found in favor of the richer applicant pool and social enrichment functions of social contacts (e.g., Castilla 2005, Fernandez et al. 2000), the results of this study suggest, in fact, a new function by which social contacts contribute to the match between job seekers and jobs: through enabling job seekers’ learning. Specifically, social contacts may contribute to better matches for organizations when job seekers learn—and thus become better matches for the position, even if they were not better matches a priori—by virtue of their interactions with contacts.

For instance, I had theorized that job seekers derive an important kind of job-related learning from their social contacts—specific knowledge about the jobs they were applying for. Although my data are limited with respect to the possibility of conducting complete mediation analyses, I did run exploratory analyses to assess whether the theorized learning mechanisms are at play here. In the job search survey, I asked respondents how knowledgeable they were about the different kinds of jobs they were pursuing. For each of the job types they applied...
for, respondents were asked to rate their agreement with the statement, “I know which companies have openings for this job” (possible responses ranged from 1 to 4, where 1 was “strongly disagree” and 4 was “strongly agree”). In analyses exploring the effect of this variable on interview success, knowledge of openings was significantly related to the number of interviews in each job type applied for ($p < 0.01$), and it partly mediated the effect of occupationally focused contacts on interview success. In the job search survey I also measured job seekers’ knowledge of the selection criteria associated with each of the job types for which they were applying. I developed a new five-item scale comprising the following items: “What recruiters for this job are looking for is very clear to me,” “I know how to present myself in interviews for this job to make the right impression,” “I know what specific skills and experiences I should highlight in my CV for this job,” “I know what to expect in interviews for this job,” and “I have a compelling story for why companies should hire me for this job.” Respondents were asked to rate their agreement with the five items for each of the job types applied for (responses ranged from 1 to 4, where 1 was “strongly disagree” and 4 was “strongly agree”), and responses were averaged across the five items. Knowledge of selection criteria was significantly related to job offers in each job type pursued ($p < 0.01$) and mediated fully the effect of occupational insiders on offers, suggesting that at least part of the reason why occupationally focused contacts are helpful for offers is because they contribute to job seekers’ knowledge of selection criteria for the job.

The results thus reinforce the supposition that social contacts are effective for job search because they contribute to job seekers becoming more knowledgeable about the positions—and thus possibly better matches for the organization hiring them. This echoes recent findings that friendships may make effectual changes to job seekers’ behavior (Sterling 2014), suggesting that perhaps we need to broaden the way we understand the mechanisms by which contacts matter in job searches to more explicitly encompass learning mechanisms.

Third, the study finds support for tie strength as a two-dimensional concept. Prior work has called for attention to the differences between depth and frequency of interaction as different indicators of tie strength (Marsden and Campbell 2012, Matthews et al. 1998) but stopped short of testing for differential effects of those indicators. At the same time, because the boundary between strong and weak ties is sometimes so blurred (e.g., we may rely on coworkers as confidantes and supporters, whereas we may find that family members or even dear friends are in reality removed from small, daily-life occurrences), observers have noted that it is difficult to make systematic predictions of what contacts will be more helpful on the basis of tie strength alone (e.g., Harvey 2008). Building on these insights, I find that two different dimensions of tie strength are indeed predictive of success with different tasks in the job search process, with independent effects. These findings open avenues for the clarification and improvement of prior work on the role of tie strength in other organizational problems, such as, for instance, information acquisition and decision making, for which different aspects of tie strength may have differential effects (e.g., Saint-Charles and Mongeau 2009).

A secondary contribution of this investigation is to research on sequential models of the job search (Turban et al. 2013). Scholars working in this stream are converging on the idea that factors beyond the more traditional notion of job search quantity influence job search outcomes, and they point out in particular the importance of job search quality and persistence for enabling job seekers to advance from one stage of the job search to another (Van Hooft et al. 2013, Wanberg 2012). Building on the findings reported in this paper, future research could investigate aspects of job search quality by focusing specifically on job seekers’ actions with regard to the social contacts they mobilize for help along the different stages of the job search—for example, for their planning of goal pursuit (at earlier stages) and their goal striving (at later stages).

**Boundary Conditions and Directions for Future Research**

When generalizing these findings, several features of this setting and data set need be taken into consideration. The labor market in which job searches were conducted here was highly intermediated. Career services in business schools function as “matchmakers” (Bonet et al. 2013), connecting job seekers with opportunities and removing much of the search costs otherwise associated with job hunting. Top business schools may also be able to extract favorable offer success rates for their students from recruiters with whom they have advantageous relationships (Fernandez-Mateo 2007).

This may affect the job search process I examined in at least two ways. First, knowledge about job openings is abundant here (about half of the students reported that they found their postgraduation job through on-campus recruiting), such that the importance of contacts as leads to obtaining interviews may be smaller here than elsewhere. A concrete limitation of my data is that I do not have information on the number of distinct job applications submitted by each job seeker, and thus I could not examine what influences the propensity to apply to a greater, versus a fewer, number of positions within each job type considered. For example, some job seekers may only apply to one or two select organizations for each job type they consider (e.g., two positions as marketing manager and one as business development manager), whereas others may apply to more positions within each job type or more positions within one job type (e.g., six management consulting positions) and...
only one in another job type (e.g., general management). It would be worthwhile for future research to investigate explicitly the effects of social contacts in these two situations, especially in a setting where uncovering information about job openings is less easy and requires more “work” on the part of the job seekers. Second, there may be less scope or need for using contacts for influence purposes. This again may mean that contacts’ relationship strength may play less of a role here than elsewhere, a contingency that further research should investigate.

Furthermore, the population in this study was highly skilled and conducted their job search for managerial positions, although research suggests that the relative benefits of social contacts across stages of the job search process vary by skill level. Since employers put more emphasis on interview performance for higher-skilled jobs than lower-skilled jobs (Brown et al. 2014), aspects of the job seekers’ social networks that were relatively more beneficial for obtaining interviews here might be less relevant in job searches for lower-skilled positions.

Finally, the study also was conducted in conditions of a munificent job market: the time of the data collection coincided with an economic growth period before the onset of the financial crisis of 2008. The average respondent in the sample reported receiving 1.7 offers, and about 80% of the students had at least one job offer six months after graduation. These conditions might have made it more likely for social ties, and weak ties in particular, to be effective; someone might recommend a job to an acquaintance when there are plenty of jobs available for their friends, but not when jobs are scarce (Kadushin 2004).

One additional—and unexpected—finding that emerged from the robustness checks was that the use of weak or strong ties was not robust to fixed effects modeling. That is, individuals seem to have different propensities to activate strong versus weak ties for help. This suggests further avenues for research in the psychological determinants of networks activation (e.g., Smith et al. 2012). For example, recent research shows that trait affect—in particular, positive affect— influences success in job search at the interview, but not the offer, stage of the process (Turban et al. 2013). Researchers theorize that this is because individuals with predominant positive affect have an approach orientation (Higgins 1997) that makes them more likely to engage in goal-directed behavior, use active coping behaviors, and generally build better personal resources toward a given project or process—actions that in turn result in better applications and interview preparation. The results of my study would support this intuition and add that perhaps one way in which this happens is that positive-affect individuals are more likely to mobilize the help of more occupationally diverse as well as more relationally weak contacts, which in turn would enable them to do better in the interview stage.

At the same time, if the advancement from interviews to offers is enabled by more occupationally focused contacts and contacts with high interaction frequency, it may not be necessary for the job seeker to mobilize as broad an array of resources but to focus instead on a few quality connections that can offer the best support, which is consistent with the finding that positive affect does not directly influence job seekers’ advancement from interviews to offers. The interactions between job seekers’ individual traits, the actions they take with regard to social contacts, and job search outcomes is an area ripe for further investigation.

There are alternative explanations for the findings presented here that future research should investigate more thoroughly. One is recruiters’ assessment and interpretations. By collecting data exclusively from the applicant perspective, I was not able to establish the extent to which typecasting may play a role in the interplay between the use of social contacts and job search success. Yet we know that workers are more successful at obtaining new jobs when they present work experience congruent with preestablished recruiter categories (O’Mahony and Bechky 2006, Zuckerman et al. 2003). Supplementary analyses I conducted (not reported here) found no evidence that the number of different occupations the job seeker held in the past had an effect on job search success here, perhaps because of the norms of the recruiting process in this setting, where seeking a major job change is almost expected of job seekers, and employers might discount little, or not at all, the misfit between past work experience and intended job domain. However, such processes might shape the role of social contacts and the outcomes in other contexts.

Another possibility is that the social contacts named by the respondents here were a limited set. I used a name-generating instrument that could collect up to 20 total names, and my exploratory interviews had revealed that, when unaided by name-generating questions, informants named about 7 contacts, a result that mitigates the concern that 20 is an overly restrictive limit here. Nonetheless, it is established that people make reference to many different kinds of contacts in their organizational life and that people’s distant associations are considerably more homogeneous than their proximate ones, with the implication that career paths are influenced in different ways by distant associations than by the close ones (Lawrence 2006). Thus, from this lens, what we might have observed and classified in this study as weak ties might in fact represent “the weakest in a set of strong ties” (Lawrence 2006, p. 83). Future research should collect more detailed information on job seekers’ social contacts and investigate the possible differences between the effects of close versus more distant connections for job search success.
Implications for Practice
The study has direct implications for job seekers. It suggests that selecting job types to apply for and getting jobs in those domains are two distinct tasks, and that job seekers should focus on both, but not at the same time. In other words, opportunities will not necessarily result in offers if no specific effort will be put into converting those opportunities into offers. Furthermore, the study highlights that there are important trade-offs to be made by job seekers when using social contacts, since different kinds of social contacts are most effective for one versus the other task. Thus, contacting a breadth of the social contacts in different work domains is a good idea for generating leads prior to applying to jobs, but continuing this approach will actually harm the prospects of converting those leads into offers. Instead, once they enter the interview stage, job seekers should switch their attention to specific social contacts who themselves work in the targeted work domains; even when those contacts are mere acquaintances or distant connections, they will provide valuable information. In the end, if there is a choice to be made, the results here suggest that job seekers are overall better off by using contacts who are more, rather than less, occupationally focused and relationships that offer repeated, rather than one-off, interactions, as evidence suggests that they are most helpful for overcoming the latter-stage job search hurdles.

Conclusion
Social networks scholars are slowly moving toward the idea that different network strategies are not incompati- ble but that each is accompanied by distinct benefits and limitations (e.g., Reagans and Zuckerman 2008, Saint-Charles and Mongeau 2009, Tortoriello et al. 2012). The key to advancing in this direction is paying close attention to the specific situations and sequences of steps in which people’s needs evolve. It is the “configurations of objective elements and meaning that make possible and set the parameters for the causal effect of network structure” (Gross 2009, p. 372). Specifically, in the specific circumstances examined in this paper, individuals may do well on some dimensions of job search success but poorly on others if they do not adjust their network strategy over time, as their goals evolve. This does not mean that we should advise job seekers to radically change the composition of their networks as they advance through the job search process. It does imply, however, that people use their social networks in a dynamic way, paying attention to some contacts earlier in the job search process and to other contacts later in that process. It also suggests that social networks researchers cannot assume to fully understand the role of social contacts without accounting for the evolving configuration of people’s needs.

Acknowledgments
The author thanks Maura Belliveau, Matthew Bidwell, Rocio Bonet, Olivier Chatain, Emile Feldman, Roberto Fernandez, Charles Galunic, Martin Gargiulo, Henrich Greve, Monica Higgins, Herminia Ibarra, Martin Kilduff, Giuseppe Labianca, Lakshmi Ramarajan, Metin Sengul, Adina Sterling, and Ezra Zuckerman, as well as senior editor Beth Bechky and three anonymous reviewers, for their comments, suggestions, and support during the writing of this paper. This paper has also benefited from constructive feedback from audiences at the Academy of Management annual meeting, European Group for Organizational Studies colloquium, Amsterdam Workshop on Social Networks and Organizations, and Wharton People and Organizations Conference.

Endnotes
1 I conducted 43 in-depth interviews with job seekers to better understand the nature of the job search process in this context. The interviews were split between exploratory interviews (conducted the year prior to the survey data collection) and confirmatory interviews (post survey completion). In addition, I conducted two weeks of observations of job search activities: I attended company presentations and Q&A sessions, career services-run workshops and counseling sessions, and mock interviews run by hiring companies.
2 An alternative attribute that could relate to both networks and job search success is job search intensity. Defined as spending more time and effort on the job search process, job search intensity has been related to faster reemployment (Kanfer et al. 2001). In the job search survey, I asked respondents about the intensity of their job search for each job type for which they had applied. The variable did not have a significant effect on offers and did not change the effects of the independent variables of interest. Because of space constraints, I do not include it in the analyses shown in the paper.
3 I acknowledge one of the anonymous reviewers’ constructive suggestions for devising this analysis.
4 The scale was tested for psychometric properties on a sample of 40 MBAs from a different business school; exploratory factor analysis with varimax rotation produced one eigenvalue greater than 1 with item loadings ranging from 0.6 and 0.73; the Cronbach’s α was 0.83.

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