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Friendships and Strategic Behavior in Labor Markets

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Abstract

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Abstract

This paper examines the ways in which organizations use employee networks to contend with strategic behavior in labor markets. We predict that in labor markets where strategic behavior is a concern, job-seekers with friends in the organization are more likely to receive job offers than those without friends. We find support for the strategic behavior hypothesis in a study of entry-level professionals in business and law. Organizations were significantly more likely to offer jobs to candidates with friends than to those without. Follow-on analyses provide insight into when organizations are most attentive to strategic behavior and thus most likely to weigh friendships in their offer decisions. The implications of this study for research on labor markets, networks, and inequality are discussed.

"It might be a factor to say, 'hey it looks like you've formed some really great friendships. These other people are also receiving offers and coming back. Hopefully you can continue on with these relationships if you come back."

HR Hiring Manager

It is well-established that social networks have widespread effects on labor markets. Social networks lead to the acquisition of jobs as often as formal job search methods (Marsden and Gorman, 2001; Granovetter, 1995), and a significant portion of organizations on the demand-side of the market use social networks to recruit and screen job candidates (Fernandez and Galperin, 2012; Kalleberg et. al, 1996). A primary explanation for why organizations utilize networks focuses on the assurances they provide employers about the quality of prospective employees. According to classic literature in labor economics, incomplete information is provided in standard hiring criteria such as the school one attended, work experience and grades. Organizations prefer to offer jobs to candidates with social ties to members of the hiring organization because their quality can be verified by a first-hand source (Saloner, 1985; Simon and Warner, 1992). Sociologists, too, have argued networks provide information about quality that may aid in selection (Granovetter, 1981; Moss and Tilly, 2001; Marsden and Gorman, 2001; Yakubovich and Lup, 2006) and that organizations may have assurance that even if lower quality candidates are selected, these individuals become better through the aid of their social contacts post-entry (Fernandez, Castilla and Moore, 2000; Castilla, 2005).

Building on these prior studies, this paper proposes that organizations use networks on the demand-side not only to attend to quality but to job-seekers' strategic behavior. Strategic behavior has long been recognized as a facet of labor markets in the economics literature on job search (e.g. Stigler, 1961). In traditional conceptualizations of labor markets job-seekers accept or reject offers serially or 'on the spot'. However in many labor markets (e.g. newly minted MBAs) job offers from employers arrive in parallel (Roth and Xing, 1994; Tang, Bearden and Tsetlin, 2009). In these labor

markets job-seekers may rationally seek offers from multiple employers. While this may improve the economic prospects of job-seekers, it imposes additional recruiting costs on organizations.

In this paper we suggest organizations utilize a specific type of network in an attempt to mitigate the costs associated with strategic behavior: friendships between employees and job-seekers. Friendships are close, interpersonal relationships comprised of sentimentality and obligation (Silver, 1990). Unlike instrumental relationships that exist purely for economic gain, friendships are affective relationships maintained for reasons outside of economic concern. Organizations may lean on the sentiments and obligations in friendships in anticipation that this lowers the possibility of strategic search behavior. As a result, job-seekers with friends in the organization may be more likely to receive job offers than those lacking friends.

Testing the above hypothesis requires isolating the use of friendships to avoid strategic behavior from aforementioned explanations on why friendships might affect employers' job offer decisions. To do this we use a unique context: trial employment. Most extant theories on networks and labor market outcomes implicitly or explicitly assume that networks would not be utilized by organizations if information about the quality of job candidates were directly available (for an exception, though see Castilla, 2005). When quality can be revealed *ex ante* networks become redundant and no longer affect the likelihood candidates are offered jobs. Leveraging this insight, we study the effect of friendships on offer decisions after a period of trial employment. Trial employment refers to a period of time in which individuals work for an employer before more permanent hiring decisions are made (Houseman, Kalleberg, and Erickcek, 2003; Cappelli and Keller, 2013). Because information about prospective employees is available through direct observation during trial employment, any network effects that arise are unlikely to be attributable to concerns about job-seeker quality.

The trial employment context in this study is internships that new business and law professionals complete prior to graduation. After graduate students in business and law finish one or two years of professional education, internships serve as a several week 'extended job interview' (Baron and Kreps, 1999; Beenen and Rousseau, 2010), and provides a realistic job preview (Wanous, 1980) to candidates and employees. We conduct a multi-stage survey among nearly 160 business and law interns attending a private university that completed internships in 2009. Participants were surveyed about the relationships they had with employees in their internship organization and their job offer outcomes after their internship was complete. Our analysis offers support for the strategic behavior hypothesis. After internships were over organizations were significantly more likely to offer jobs to candidates with friends in the organization than to those lacking friendships with employees. Follow-on analyses reveal the robustness of the hypothesis against alternatives and provide insight into when organizations may be most concerned about mitigating strategic behavior.

Strategic Behavior in Labor Markets

The economics literature on job search has long recognized that strategic behavior on the part of job-seekers is possible (Stigler, 1961). In traditional search models, the job-seeker seeks out offers with the intent of maximizing some future income stream. She does so by accepting or rejecting offers serially or 'on the spot.' However, in many labor markets, including those for new MBAs and law associates, offers from more than one employer may be considered in tandem (Roth and Xing, 1994). Accordingly, it is rational for job-seekers to pursue multiple offers in parallel. Doing so increases bargaining power with employers, permits job-seekers to optimize fit within a distribution of jobs, and increases the probability of employment post-graduation (Mortensen, 2011). The pursuit of multiple offers comes at a low cost because centrally-organized career

centers relay information about job opportunities, and because asymmetry in the market keeps the pursuit of multiple offers by job-seekers hidden from employers.

From the standpoint of organizations, strategic search increases the likelihood that the offers they provide candidates go unrealized. This is costly to organizations for a number of reasons. Research on HR recruiting practices indicates that organizations expend resources on personnel selection that increase when candidates that have survived prior screening stages reject offers (Ployhart, 2006). Another cost is that employers miss the opportunity to make offers to other candidates while outstanding offers are considered (Roth and Xing, 1997). Employers may try to deal with this difficulty by attaching expiration dates to offers. However, 'exploding offers' is against the norm in many professions (Niederle and Roth, 2009), and offers with a short fuse may lead to adverse selection (Ely and Siegel, 2011).

Another tactic employers may use to deal with strategic behavior is to recruit candidates earlier (Kagel and Roth, 2000). Here, the difficulty is that when all employers have incentives to recruit early, the labor market may unravel to the point in which uncertainty about quality is too high to produce efficient matching. For example, in the legal profession in the early part of the last century, the entry-level law market unraveled to the point in which offers were made several months before law students completed their education – i.e. before grades could be used to determine the quality of applicants (Roth and Xing, 1994).

Additionally, unrealized offers are problematic to employers because it may influence an employer's hiring opportunities in the future. Hiring choices are symbolic acts that carry meaning beyond direct impacts related to the employer-employee match (Kunda, 1992). The status of organizations is intertwined with their hiring choices (Burriss, 2004). When candidates reject offers, this may have a detrimental effect on subsequent recruiting efforts by organizations (Burton, Sørensen and Beckman, 2002; Rider, Negro, and Roberts, 2011).

Given these costs, hiring managers may try to assess the underlying interests that candidates have in job opportunities. Doing so may be difficult, however. Candidates know to express a strong interest in employment opportunities if their applications are to be considered. Moreover, due to changes in technology related to job search, it has become increasingly easier for job-seekers to act strategically (Cappelli, 2001). Organizations may look inward toward employee networks as a way to circumvent costs stemming from strategic behavior.

Friendships and Offer Decisions

While the definition varies, friendships are generally recognized as affective relationships that are voluntary in nature (Rubin, 1985). They are bonds that exist outside of the province of material or financial needs (Silver, 1990). That is, while some relationships are formed and maintained for the purpose of instrumentality, friendships are formed and maintained 'for their own sake' (Lincoln and Miller, 1979). Friendships trigger mechanisms such as trust, empathy and social control that are not present in ties purely based on instrumental exchange.

From an early age, people hold a normative view about friendships that consists, in part, of the notion that people should not maximize their own personal benefit in their relationships with friends (Asher and Gottman, 1981). There is much evidence to support that this norm exists. Economists find that in a game theory experiments, participants share significantly more financial compensation with a person who is deemed a friend rather than an acquaintance (Montgomery, 1998). In a study of industry peer networks, Sgourev and Zuckerman (2011) find that individuals continue with membership in networks due to their loyalty to friends, even though this may counter economic gain.

Given the normative beliefs surrounding friendships, organizations may view friendships between employers and job-seekers as pathway to more efficient matching. First, organizations

may believe that having a friend in the organization encourages prospective employees to accept a job offer. Organizations may use the sentimentality in friendships to encourage employees to accept jobs. Friendships are looked upon as 'valuable in their own right' (Lawler, 1992), and a job opportunity that permits the chance to interact with friends is apt to be viewed favorably by candidates (Baron and Pfeffer, 1994). Additionally, friends are perceived to be similar on 'deep-level' dimensions, such as beliefs and values (Lazarsfeld and Merton, 1954). Because the candidates' friends chose to join the organization from a set of employment options, organizations may believe their friends would choose in kind.

Second, organizations may anticipate that the presence of friendships in the organization circumvents strategic behavior even when a candidate rejects an offer. As discussed above, if an offer is going to be rejected, organizations would prefer to learn this sooner rather than later so that they can recruit other employees. Organizations may believe they are apt to receive early notification of rejections when candidates have personal ties to organizational members. Although it may be personally beneficial for the candidate to 'hold on' to an offer for as long as possible to improve her negotiating position with employers, in the presence of affective relationships candidates may forgo this option out of reputational concerns for their friends (Rees and Shultz, 1970; Burt and Knez, 1995).

In sum, organizations may view the presence of friendship as providing a significant advantage as they try to mitigate strategic behaviors. Organizations may anticipate that candidates with friends in the hiring organization are more apt to accept job offers than candidates without friends. In addition, organizations may believe candidates with friends are more likely to relay information that improves efficiencies in employer-employee matching. As a result, we predict that *job candidates with friends in the hiring organization are more likely to receive job offers than job candidates without friends.*

RESEARCH SETTING AND DATA

The strategic behavior hypothesis outlined above is examined in the context of business and law internships. Internships are short-term work assignments that are used to match employers to employees (Baron and Kreps 1999; Wertheim, 1988). During internships employers assess an intern's skills and abilities over a number of weeks and then determine whether or not to provide a job offer for post-graduate employment. In this way, internships are a form of trial employment (Houseman, Kalleberg, and Erickcek, 2003; Kalleberg, 2000) that organizations use to screen prospective employees on quality before more permanent employment decisions are made.

The main sample is Masters of Business Administration (MBA) students at a private university that completed internships during the summer of 2009. The MBA students were recruited for the study during a professional development course in the spring. The sample is limited to non-sponsored MBA students, or those pursuing a MBA degree without the sponsorship (i.e. financial support) of an employer. The list of eligible participants was obtained from the MBA Career Management Center (CMC). The Center carefully monitors which non-sponsored students have internships in order to provide data on internship placement data to a national agency. The CMC provided a list of 126 MBA students that were eligible to complete internships that year.

In the late spring prior to the start of the internship, the interns were mailed a link to a survey about their internship employer and the relationships they had with employees in their internship organization. A total of 114 out of 126 MBA students participated in the pre-internship survey, a 90% response rate. Three months later students that completed the first survey were sent a link to a post-internship survey. There were 103 students that completed the post-internship survey for a total response rate of 83% over both rounds of research.

In the fall of 2009 the study was extended to include a second sample of interns from the university's law school that completed internships during 2009. These students took a single

survey. Overall 93 third-year law interns participated in the study out of 267, a 34% response rate. Given that the law interns completed the survey after they returned to campus, we took steps to reduce retrospective bias that might exist as interns recalled their relationships with employees. The majority of the third year students interned as associates in law firms. We gathered information about the names of the employees using the *Martindale Hubble Directory*. This information was used to create rosters of the employees in the internship organization and we provided this roster to the respondents as they completed the survey.

Across the two samples observations were removed if respondents had an internship that extended beyond the summer into the fall, had not received notification of their offer status by the spring of the following year, or had other data that was missing or incomplete. After removing these observations, 90 observations remain in the business sample and 68 observations in the law sample, for 158 total observations. In addition to these quantitative data, we conducted 18 interviews lasting up to 45 minutes with business and law interns, and six interviews of the similar length with HR managers responsible for internship programs. In the analysis below we draw on these field interviews to aid in our understanding of the mechanisms influencing the offer decisions of employers.

Dependent Variable

The dependent variable *offer* is dichotomous, equal to 1 if the intern received a post-graduate job offer, else 0. The offer data was collected in the post-internship survey. If the interns had yet to receive notification of their job offer status, they noted this on the survey. During the following spring we contacted these interns and recorded their offer status at that time. The offer we collected on the survey and through follow-up was compared to data collected by the CMCs at the business and law schools. The CMCs keep track of the students offer status in order to report

this statistic to a national agency. In all cases the offer outcome reported on the survey or during the follow-up phase was the same offer status that the CMCs had recorded.

Independent Variable

The *friend* variable is dichotomous, equal to 1 if the respondent had at least one friend prior to starting, else 0. On the survey respondents were asked to list all the individuals that they knew in the organization prior to starting. Knowing someone was defined as someone they could “recognize by sight and by name” that worked in the organization. Next, respondents indicated the frequency of interaction, duration, and closeness between themselves and each person listed. Finally, respondents were asked to categorize each person listed as a friend, relative, acquaintance, mentor, recruiter, internship supervisor, internship colleague, or alumnus, and this categorization was used to determine which interns had friends.

In this setting business and law students are told to ‘network’ *ad nauseam* to secure internships, raising the possibility that interns’ unobserved characteristics might lead them to have friends that in the organization. In this study many structural characteristics of friendships marshal against this concern. For one, the friendships listed pre-dated the internship search: more than 80% percent of the time the respondent reported knowing the friend for longer than a year.

Furthermore, interviews with the interns brought to the fore the non-strategic nature of these relationships. For instance, one intern mentioned that the friend listed was a ‘friend of the family’, while another person mentioned the person was a ‘sports buddy from college’, and another a ‘sorority sister.’ Nevertheless, to further mitigate concerns about endogeneity we removed any contacts respondents listed as knowing for less than a year when constructing the friend variable and then ran the analyses below. Doing so did not have a substantive effect on the results, so we include all those categorized as friends.

Individual-Level Controls

A number of variables are included as controls that might make the effect of friendships on job offers spurious if these variables were to be omitted from the models. One variable is the level of interest interns had in working for the employer after graduation. It could be that interns with friends in the organization differ in their motivation because those with friends may be 'pre-sold' on the virtues of working for an organization (Wanous, 1980). If this is the case those with friends may exert more effort during the internship. In order to address this possibility a variable is included in the models which captures the interest individuals have in working for the organization. Prior to the start of the internship respondents were asked, "if you were offered a full-time job from your internship organization right now that would begin after graduation, how likely is it that you would accept it?"¹ The answers on the scale ranged from 1-5, with 1=very unlikely to accept a job and 5=very likely to accept a job. Using this data a dichotomous variable, *no intent* was created, equal to 1 if the respondents indicated they would be extremely or very unlikely to accept a post-graduate job offer if it were to be provided, else 0.²

In addition, a variable is included in the models to control for the ability of the interns. We collected information on the grade point average of the students based on which students made the Dean's List in the Law and Business School. Because the individuals in the study attended the same university, this allowed for a measure of relative ability across individuals in the study (Chatman, 1991; O'Reilly and Chatman, 1994). A *top 20%* dummy variable was created, equal to 1 if the individual had a GPA in the top 20% of her MBA or law school class, else 0.

The demographic background of the respondents is also included as a control. This includes dummy variables for *female*. Dummy variables for U.S. racial minorities (i.e. *African-American*, *Hispanic-American* and *Asian-American*) are also included. Finally there are a number of non-U.S.

¹ This question was asked of the business interns only.

² The dichotomous variable rather than a continuous variable was used because it correlates most strongly to receiving an offer. .

citizens in the business school sample, and thus *foreign* is included as a dummy variable, equal to 1 if the individuals originated outside of the United States, else 0.

Organizational and Industry-Level Controls

A number of organizational-level control variables were also included. Since a non-paying internship may indicate the organization lacks financial resources, *pay* is included as a dichotomous variable equal to 1 if the intern was paid during the summer for employment, else 0. An *organizational size* variable is included to control for differences in financial resources across the organizations at which the interns worked and the slack they have to make offers (Barber, Wesson, Roberson, and Taylor, 1999).³ Given the turbulence in the financial industry during 2009, a *financial industry* dummy is included if the respondents worker for organizations in the banking, investment, or insurance industry.

The logged *number of alumni* in the organization is also included as a control. The number of alumni may indicate the tendency the organization has to recruit individuals from targeted schools (Oyer and Schafer, 2010; Parkin, 2006). The count of alumni was gathered from looking up the organization's name in the business and law school's alumni database, and counting the number of employees listed. The counts are skewed so a log transform of the number of alumni is included in the models.

ANALYSES AND RESULTS

Table 1 describes the means and correlations for the variables for the main business intern sample. Less than half of the business interns received full-time offers from their employers (45%). In this sample 19% of the interns are ranked in the top 20% of their MBA class, indicating that this sample is representative of the MBA population at the university. Most interns (88%) were paid

³ Pretesting indicated that respondents had an approximate understanding of the size of their local organization so categories were provided. In the survey, respondents were asked the size of their local organization with a category of responses (e.g. 0-10, 11-20, and so on).

during their internships and 17% of the interns in the sample worked in the finance industry. The majority of interns (55%) worked in offices with over 150 employees, while fewer than 20% worked in offices with fewer than 40 employees. Forty-four percent of the sample is female. The percentage of African-Americans, Asian-Americans, and Hispanic Americans in the sample is 7%, 8% and 2% respectively, while 44% of those in the sample originated from outside of the United States.

[INSERT TABLE 1 ABOUT HERE]

Table 2 presents multivariate analysis with linear probability models. We obtain the same results when we use logit models, but we show the linear probability models because the results are easier to interpret. Because the hypothesis is directional, all hypothesis testing is showed with one-tailed tests. In Model 1 the job offer variable is regressed on the friend variable. This model indicates that having a friend in the organization has a positive and statistically significant effect on the likelihood of receiving an offer ($p < 0.01$). Model 1 does not include the individual, organizational, and industry-level control variables however. In Model 2 we regress the job offer variable on the friendship variable with the individual-level controls included. Notably, each control variable is statistically significant and in the expected direction. Interns in the top 20% of the MBA class are significantly more likely to receive job offers than interns lower ranked. Interns with a lack of interest in working for the internship organization after graduation are significantly less likely to receive offers. After inclusion of these variables the positive and statistically significant effect of friendships on offers remains ($p < 0.01$).

[INSERT TABLE 2 ABOUT HERE]

Next, the firm and industry-level variables are included in Model 3. Again, all the variables are sensible. The size of the firm and an intern receiving pay during the internship increases the likelihood that the firm will provide a post-graduate job offer, while doing an internship in the

financial services industry has a marginal negative effect ($p < 0.1$). As in the previous models, the impact of having a friend is positive and statistically significant.

Model 4a shows the full model with all controls, including the demographic variables. The individual demographic variables are not shown, but none had an impact on receiving a job offer with the exception of the Asian-American ($p < 0.05$) and African-American dummy variables ($p < 0.1$), both of which were negative and statistically significant. In this full model, the positive and statistically significant effect of having a friend on receiving offers remains. The model shows that a person with a friend in the internship organization is 36% more likely to receive a post-graduate job offer than a person without a friend.

The friend effect is assessed further among a second sample – law interns that completed internships during the same time period. Among the sample of law interns the effect of friendships on offers is positive and statistically significant ($p < 0.05$). Among the law interns the likelihood of receiving an offer increased by 28% for those with a friend.⁴ In Model 4c the effect is shown in the combined sample of law and business students. Consistent with every other model presented, the friend effect is positive and statistically significant. The effect of having a friend on getting an offer is substantial relative to other factors, including being in the top 20% of the MBA or law school class.

The Value of Affective Relationships

The results above provide evidence that after controlling for individual, firm, and industry level factors, friendships improve the likelihood that individuals receive job offers. The results hold even after including factors that could make the relationship between friendships and job offers spurious, such as the intent to work for an employer. Importantly, this effect is seen in the context

⁴ In the law sample analysis the financial industry dummy variable was dropped because law interns did not work for this industry, and the no intent variable was not included the law data was collected after the internship was complete.

of internships, a setting in which organizations are able to observe candidates prior to making job offers, which helps rule out an alternative explanation that employers are leaning on friends of the job-seekers to provide information about quality.

To further assess the strategic behavior hypothesis we conducted twenty-four interviews with interns and HR managers responsible for internship programs. In interviews with interns, it was readily apparent that internships are used for strategic purposes. Individuals said internships are sought in order to ‘open doors’ to alternative post-graduate opportunities that could very well reside outside of the employment opportunities presented by the internship organization. In most cases, job offers from the employer came with a window of time for acceptance (e.g. a decision date of several weeks after individuals returned to campus). This allowed individuals to continue to search for jobs for a number of weeks after the internship was complete.

In interviews with HR managers it was clear that they value internships because it gives supervisors and others a chance to observe prospective employees first-hand. The managers stated that interns are ‘known commodities’ in terms of their skills and abilities after an internship, which abates uncertainty about the quality of candidates that exists in a traditional hiring process. However, they reported that it was difficult at times to assess interns’ interests in job opportunities. When the managers were asked if they thought friendships with employees might influence whether or not the intern accepted a post-graduate job offer, the HR managers suggested they believed that it would. Some suggested they use friendships as a way to move an intern toward accepting an offer (see leading quote on pg. 1). Moreover, they expressed that they factored in the probability of an offer acceptance in their decision about whether or not to provide offers *ex ante*. One manager put it this way,

“If you’re between two students and you think that the likelihood of one accepting is lower, you might go with the student that you think has a higher chance of accepting if they’re equal in all other ways.”

Overall, the field interviews provide evidence that strategic behavior is top of mind for those on both sides of the hiring process. To continue with our investigation of how employers address this concern, we use quantitative data to assess the strategic behavior hypothesis further. Our contention above was that organizations draw on affective relationships to try to circumvent strategic search behavior. We may surmise, therefore, that organizations draw on other types of relationships with affective content to do the same.

We find evidence that this is the case. On the internship survey respondents listed all their social contacts in the internship organization, and placed these individuals into categories. We include these categories of relationships between employees and the interns in the offer regression in Models 5a and 5b in Table 3.⁵ In the first model the friend variable is dichotomous (for comparability to the earlier models), and in the second model the friend variable is the count of the number of friends the interns had in the organization.

[INSERT TABLE 3 ABOUT HERE]

First turning to the influence of friendships on offers, the effect of friendships is positive and statistically significant in both models, consistent with the models presented previously.⁶ Turning to other types of social contacts, none of the instrumental relationships have a positive and statistically significant effect on an intern getting an offer. This would be surprising in a traditional hire study, where quality is difficult to verify *ex ante* and any social contact might be relied upon to do so. Here, the lack of a positive effect for the other types of relationships suggests that this is not how organizations are utilizing social contacts.

⁵ We did not include the ‘relatives’ category because there were almost none listed as contacts in the survey.

⁶ The regression analysis is performed using data from the combined business and law intern sample. Regression analyses conducted with the separate samples are consistent with what is shown in Table 3.

Turning to relationships with affective content, the results in Table 3 are consistent with what we would expect if the strategic behavior hypothesis holds. An affective relationship that has a positive effect on offers is alumni relationships. The number of alumni an intern knows in the organization has a positive and statistically significant effect on an intern receiving an offer ($p < 0.05$). This finding is consistent with prior studies that indicate shared educational affiliations have important effects on labor market outcomes (Cohen, Frazinni, and Malloy, 2010; Rider, 2012; Rivera, 2011). When individuals attend the same university they gain a shared identity with others that is rooted in a common world view (Ashforth and Mael, 1989). When individuals share an identity with a group they are less apt to be viewed as those that would act strategically to maximize their own gain (Tajfel, 2010). Thus, an inspection of the other types of relationships provide support that employers are weighing those most likely to remit strategic behavior.⁷

A Treatment Effect?

In further analyses we examined additional explanations for the friendship effect. While the setting does much to parse out competing explanations, it does not eliminate the possibility that the friendship effect is driven by treatment – i.e. that interns with friends in the organization might have become better through the aid of their friends during the internship. If this is the case, obviously this would increase the likelihood that those with friends receive post-graduate job offers.

⁷ Given the strategic behavior hypothesis we might also believe that mentors would have a positive effect on offers. The mentors interns had in this setting were, by and large, formally assigned before the internship begins. Interviews with interns suggested that individuals listed as mentors were typically mentors in ‘name only’ and did not consist of close interpersonal bonds.

We investigate if a treatment effect is present by examining if there is a mediating variable present. Prior theory suggests that those with social contacts in the organization pre-hire may be more 'socially enriched' post-entry (Fernandez et. al, 2000; Castilla, 2005). Consistent with this idea, we use a normative proficiency scale by Morrison (1995) to assess if interns with friends were more socialized than interns. The normative proficiency scale measures an individual's understanding of an organization's norms, goals, and values (Feldman 1981). The interns were asked the extent to which they received information from others during the internship (1=none at all, 2=to a very little extent, 3=to a moderate extent, 4=to a great extent, 5=to a very great extent). The scale items include information on appropriate ways to behave and interact with organizational members, what it takes to succeed in the organization, the organization's customs and rituals, promotion or hiring criteria in the organization, the organization's philosophy, goals, and values, the history of the organization, and the behaviors and attitudes the organization expects. Cronbach's alpha for the scale is 0.91 and confirmatory factor analysis indicates that the items from the scale load on a single factor.

We show the second stage of the mediation test in the appendix. First, to see if there is a relationship between socialization and friendship, we regress the socialization variable on the friendship variable, other social contacts and the covariates. We find that those with friends were not more socialized during the internship than those with other types of relationships in place. To further assess if there socialization is a mediating variable we include it in a second stage job offer regression. The inclusion of the socialization variable does not influence the effect of friendships on offers.

When Do Organizations Attend Most to Strategic Behavior?

The above results suggest that in labor markets where strategic behavior is possible, friendships lead to an increased likelihood that job-seekers with friends receive offers. The friendship effect does not appear to be rooted in organizations lacking the opportunity to gain first-hand information about candidates, nor in the friendships generating a treatment effect. Even after first-hand information about the candidates is available, organizations weigh the presence of friendships in their offer decisions.

Our field interviews confirmed just how top-of-mind strategic behavior was for both candidates and HR managers. These interviews led us to pursue an additional investigation around when managers might be relatively more concerned about strategic behavior. We reasoned that employers might be more concerned about strategic behavior when there is a low likelihood of a candidate accepting an offer. When organizations perceive there is a higher likelihood that candidate would reject an offer if provided it, friendships may matter more.

We investigated the impact of propinquity on the importance of friendships between employees and job-seekers. Literature on geography and labor markets indicates that employees attend to the location of prospective employees in firms' hiring decisions (Hanson and Pratt, 1995; for a review, see Fernandez and Su, 2004). Evidence indicates that employers doubt the interest of job applicants in employment opportunities when jobs require them to relocate from further distances. Given this, when prospective employees must relocate from farther away, a friend in the organization may be a more important factor in the organization believing that an offer would be given serious consideration.

In Model 6 we include two additional variables in the models. First, we add a variable that indicates whether or not the interns completed an internship in the same state as the university they were attending. Second, we include an interaction of the same state variable with the number

of friends the intern has in the organization. We expect the effect of friendships on offers to weaken when the individual works in the same state as the university. Consistent with this expectation, the coefficient on the interaction term is negative and statistically significant ($p < 0.05$). As we suspected, the influence of friends on the offer decisions of employers is dampened with geographic proximity. We plot the impact of having a friend on the likelihood of receiving an offer based on location in Figure 1. What this implies is that the availability of nearby social capital replaces the need for social capital within the organization as an indication to organizations that a candidate would give a job offer serious consideration and not just use it for strategic gain.

[INSERT FIGURE 1 HERE]

CONCLUDING REMARKS

There is a longstanding interest among students of labor markets in how and why social networks affect labor market outcomes. While early work in this domain focused on the impact of social networks on supply-side job search (Granovetter, 1973), over the past fifteen years there has been much interest in why social networks affect employer selection on the demand-side of the labor market (Fernandez and Galperin, 2012). A common theme emerging is that uncertainty about job-seeker quality provokes employers to rely on employee networks during selection, and that employee networks provide assurances about the quality of applicants through a number of mechanisms that operate pre- and post-entry. As Fernandez and colleagues have noted (2000), organizations appear to be ‘social capitalists’ that utilize employee networks for strategic human resource advantages.

We add to these insights by demonstrating an impactful, robust, and well-behaved relationship between friendships and job offers that is rooted in employers using friendships to avoid strategic behavior by job-seekers. While prior work suggests rational behavior is muted in the context of friendships, to our knowledge this is the first study to examine how networks are

used by organizations to mitigate rational search behavior. In markets where job-seekers seek to exploit structural features (e.g. timing) for their own gain, individuals with friends in the hiring organization have an advantage accruing job offers.

These findings echo labor market theories that indicate how criteria unrelated to the quality can make its way into the logic and decision-making frameworks in organizational hiring decisions. For example, literature on statistical discrimination indicates that non-merit based factors such as race or gender may be given weight in selection decisions for the sake of efficiency (Arrow, 1972; for a recent discussion see Rubineau and Kang, 2012). The argument goes that as long as the probability of an undesired behavior is distributed unequally among a population, employers may reasonably offer jobs to individuals whose probability of displaying the undesired behavior is diminished – e.g. offer jobs to men rather than women based because that they are less likely to exit the work force. Here, we invoke a similar mechanism: organizations weigh friendships in job offer decisions based on the premise those with friends are less apt to act strategically in job search afterwards. As in the case of statistical discrimination, regardless of whether or not there are *actual* gains in recruiting efficiency from attending to friendships, managers merely need to *believe* that there are for job-seekers with friends to have an advantage receiving offers.

By testing the effects of networks on selection in a study where prior theory would suggest their effects would be limited, and then providing evidence these effects persist due to the strategic behavior hypothesis, this study makes an important contribution to research on social networks and labor markets. However, we are careful not to generalize the structural effect uncovered here to labor markets of all types. The strategic behavior displayed by these job-seekers is concomitant with a ‘thick’ set of employment options when individuals have a chance to court multiple employers. Based on prior research that we highlighted above, we carefully chose our context to reflect the realities of many but not all labor markets. In future research, scholars may investigate

how strategic behavior varies across labor markets and industries, and the differing effects of social networks that ensue. These kinds of studies will help us determine further which types of relationships may be most impactful across a variety of employment contexts.

Similarly, the follow-on analyses about when employers should be more attentive to strategic behavior in this context – i.e. when individuals would have to relocate from further distances – was supported but also merits more investigation. There is a robust and growing literature on the effects of distance on employment outcomes, and studies that juxtapose variation in social capital with propinquity effects may provide useful insights (for a recent example of work along these lines see Sorenson and Dahl, 2012). Future work should more directly document if employers perceive that applicants are willing to make tradeoffs between social capital within organizations and social capital located in communities, neighborhoods or volunteer groups. These effects may vary across single and dual-income families, which researchers should additionally explore.

Finally, this study makes an important contribution to research on inequality in labor markets. Since organizations are the primary distributors of income, the hiring choices of employers have a substantive effect on income inequality (see Bidwell et. al 2013 for a recent review on inequality and organizations). Work previously suggesting that inequality may be amplified in labor markets reliant on strong rather than weak connections (e.g. Montgomery, 1994) seems particularly relevant for the findings here, and suggests another reason that the most elite jobs in society may be those that are most closed off – i.e. structural (e.g. timing) features of the labor markets and the organizational response to these features make them so. While the use of employee networks by organizations may be in many ways a natural response to asymmetry and these frictions, it may disproportionately disadvantage demographic groups whose members tend to lack close relationships with employees.

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Table 1. Descriptive Statistics

	Mean	StDev	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Offer	0.45	0.50	1.00													
2.Pre-friend	0.14	0.35	0.26*	1.00												
3. Top20	0.19	0.39	0.24*	-0.12	1.00											
4. Pay	0.88	0.33	0.27*	-0.04	0.01	1.00										
5. Size	6.37	2.45	0.39*	0.04	0.08	0.33*	1.00									
6. Ln_alumni	1.69	1.44	0.23*	0.01	0.03	0.32*	0.31	1.00								
7. Foreign	0.44	0.50	-0.19	-0.18	-0.20	-0.08	-0.12	-0.07	1.00							
8. Black	0.07	0.25	-0.07	-0.11	-0.02	0.10	0.18	0.13	-0.24*	1.00						
9. Hispanic	0.02	0.15	0.01	-0.06	0.12	-0.17	-0.12	-0.06	-0.13	-0.04	1.00					
10. Asian	0.08	0.27	-0.02	0.12	-0.03	-0.02	0.01	-0.11	-0.26*	-0.08	-0.04	1.00				
11. Female	0.44	0.50	0.08	0.01	-0.03	0.13	0.07	0.11	0.01	-0.06	0.02	0.07	1.00			
12. No Intent	0.16	0.36	-0.21	-0.09	0.11	0.07	-0.05	0.03	-0.01	0.01	-0.06	-0.12	0.05	1.00		
13. Finance	0.17	0.37	-0.11	0.07	0.01	0.08	-0.07	0.14	0.14	-0.12	-0.07	-0.13	-0.16	0.05	1.00	
14. YearsExp	0.84	1.79	0.08	-0.07	-0.04	0.04	0.07	0.05	-0.02	-0.13	0.06	-0.11	-0.16	-0.03	0.24	1.00

N= 90 (business interns), p < 0.05*

Table 2. Predicting the Likelihood of Receiving a Job Offer

	Model 1 (Business)	Model 2 (Business)	Model 3 (Business)	Model 4a (Business)	Model 4b (Law)	Model 4c (Combined)
Friend	0.37 ** (0.13)	0.39 ** (0.14)	0.37 ** (0.11)	0.36 ** (0.13)	0.28 * (0.16)	0.27 ** (0.10)
Top 20%		0.38 ** (0.11)		0.31 ** (0.09)	0.12 (0.16)	0.17 * (0.09)
No Intent		-0.30 ** (0.12)		-0.30 (0.11)		
Size			0.06 ** (0.02)	0.05 ** (0.02)	0.09 ** (0.02)	0.06 ** (0.02)
Pay			0.25 * (0.14)	0.30 * (0.15)		0.31 ** (0.08)
Number of Alumni (Ln)			0.04 (0.04)	0.04 (0.03)	-0.16 ** (0.05)	-0.04 (0.03)
Financial Services			-0.18 † (0.12)	-0.20 * (0.12)		
Law						-0.02 (0.08)
Demographic Variable	No	No	No	Yes	Yes	Yes
Constant	0.40 ** (0.06)	0.37 ** (0.07)	-0.22 * (0.10)	-0.18 (0.14)	0.08 (0.11)	-0.11 (0.11)
N	90	90	90	90	68	158

Robust standard errors in parentheses.

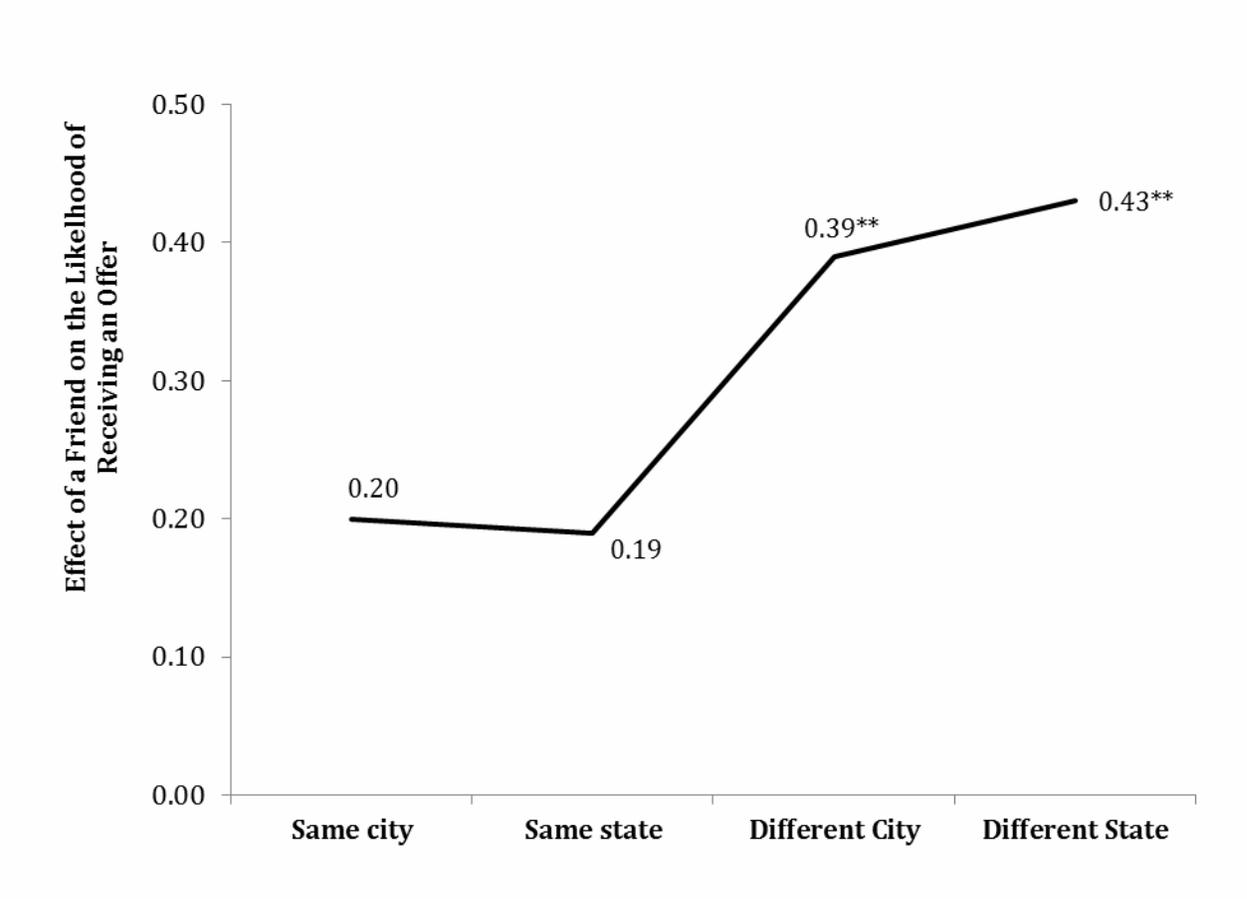
** $\rho < 0.01$; * $\rho < 0.05$; † $\rho < 0.10$; one-tailed tests.

Table 3. Various Contacts and the Likelihood of Receiving a Job Offer

	Model 5a	Model 5b	Model 6
<i>Social Contacts</i>			
Friend (0/1)	0.29 ** (0.11)		
Total Friends (Count)		0.17 ** (0.04)	0.23 ** (0.05)
Total Acquaintances	(0.06) * (0.03)	-0.06 * (0.03)	-0.06 * (0.03)
Total Mentors	0.03 (0.06)	0.04 (0.05)	0.04 (0.05)
Total Supervisors/Colleagues	0.00 (0.07)	-0.01 (0.07)	0.00 (0.08)
Total Recruiters	0.00 (0.03)	0.00 (0.03)	0.00 (0.03)
Total Alumni	0.10 * (0.06)	0.10 * (0.06)	0.11 * (0.06)
<i>Other Control Variables</i>			
Top 20%	0.18 * (0.09)	0.17 * (0.09)	0.18 (0.09)
Size	0.06 ** (0.02)	0.06 ** (0.02)	0.06 (0.02)
Pay	0.31 ** (0.08)	0.30 ** (0.08)	0.30 (0.08)
Number of Alumni (Ln)	-0.05 † (0.03)	(0.05) (0.03)	-0.05 (0.03)
Law	0.01 * (0.08)	(0.02) (0.08)	0.00 (0.08)
<i>Interaction Variables</i>			
Same State			0.02 (0.08)
Total Friends x Same State			-0.15 * (0.08)
<i>Demographic Variables</i>			
Constant	Yes -0.13 (0.10)	Yes -0.10 (0.10)	Yes -0.13 (0.11)
N	158	158	158

Robust standard errors in parentheses.
 ** $\rho < 0.01$; * $\rho < 0.05$; † $\rho < 0.10$; one-tailed tests.

Figure 1. The Likelihood of Receiving a Job Offer Based on Prior Location



**($p < 0.01$). Effect sizes are shown using the full model specification used in Table 2 (Model 4c).

Appendix

Table A. Predicting Job Offers with the Socialization Variable Included

	Offer
Friend	0.25 ** (0.10)
Top 20%	0.17 * (0.09)
Size	0.05 ** (0.02)
Pay	0.31 ** (0.08)
Number of Alumni (Ln)	-0.03 (0.03)
Law	0.00 (0.09)
Socialization	0.08 * (0.04)
Demographic Variables	Yes
Constant	-0.08 (0.11)
N	154

Robust standard errors in parentheses.

** $\rho < 0.01$; * $\rho < 0.05$; † $\rho < 0.10$; one-tailed tests.

Note: Four observations were missing socialization data and are not included.