Shared Education Affiliations and Workplace Relationships*

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ABSTRACT
This study examines how organizations contribute to the horizontal stratification of higher education institutions. We propose that organizations affect horizontal stratification by allocating employees to work groups and work relationships based on education affiliations. To examine this claim we analyze industry-level data on law firm practice groups, and also conduct a quantitative case study on work ties within a single law firm. Within the same firm and firm-office, we find that two lawyers who graduated from the same law school are more likely to be allocated to the same practice area than are two lawyers who attended different law schools. Within our single case study firm and its offices, the likelihood of a hierarchical work relationship between a partner and an associate is greater for two lawyers who attended the same law school than for two who did not. Implications of this study for research on intra-organizational inequality and, more broadly, stratification are discussed.
Introduction

As the socioeconomic returns to higher education increased over the past few decades, enrollments at U.S. postsecondary institutions rose dramatically (Goldin and Katz, 2007; Hout, 2012; NCES, 2012). The higher education-socioeconomic attainment relationship is examined from a variety of disciplinary perspectives, but sociologists (e.g., Charles and Bradley, 2002; Gerber and Cheung, 2008) consider variance in educational returns along dimensions both vertical (i.e., quantity of schooling) and horizontal (i.e., quality of school). Holding the vertical dimension constant, research probing the horizontal dimension examines why educational returns vary so substantially by institution attended. For example, socioeconomic attainment is generally increasing with the prestige of one’s degree-granting institution (e.g., Trusheim and Crouse, 1981; Useem and Karabel, 1986; Ishida, Spilerman, and Su, 1997; Eide, Brewer, and Ehrenberg, 1998).

Horizontal stratification research is notably disconnected from the study of how organizations stratify the workforce through the allocation of work (e.g., Kanter, 1977; Sørensen and Kalleberg, 1979; Bielby and Baron, 1980; Baron, 1984; Bielby and Baron, 1986; Reskin and Roos, 1990; Kalleberg and Van Buren, 1994; Reskin, McBrier, and Kmec, 1999). Organizations stratify employees by providing them with differential access to workplace resources by, for example, allocating employees to work groups and work relationships (Stainback, Tomaskovic-Devey, and Skaggs, 2010; Kalev and Dobbin, 2006; Castilla, 2011). These work structures affect with whom employees interact while doing their jobs (Baron, 1984; Kalleberg & Van Buren, 1994) and, consequently, governs employee access to valued resources like information, support, and workplace visibility (Burt, 1992; Baron and Pfeffer, 1994; Podolny and Baron, 1997; Sparrowe and Liden, 2005; Kalev, 2009; Castilla, 2011; Briscoe and Kellogg, 2011).
We believe that organizational scholars can offer important insights on the horizontal stratification of educational institutions since organizations shape the returns to education through the division of labor and the assignment of work. Therefore in this paper, we extend work on how educational credentials influence individuals’ careers (e.g., Ishida, et al., 1997; Rivera, 2011) by applying social closure theory (Weber, 1978[1922]) to the study of intra-organizational allocation mechanisms. Recent research documents how educational credentials affect the way individuals and organizations are matched for reasons not fully attributable to the signal value of educational prestige (e.g., Becker, 1964; Spence, 1973). For instance, employment in professional services is restricted not only on the basis of prestige but, more specifically, by institution attended (e.g., Oyer and Schaefer, 2010; Rivera, 2011, Rider, 2012). Other research similarly implies institutional specificity in the career returns to education (e.g., Cohen, Frazzini, and Malloy, 2010; DiMaggio and Garip, 2012; Kacperczyk, 2013; Shue, 2013).

Building on this prior work, our core proposition is that organizations allocate employees to work groups and to work relationships based on their affiliations to specific educational institutions. As a consequence, graduates of some institutions are better-positioned for workplace opportunities than others. A classic focus of organizational theory is how to allocate work to employees (e.g., Gulick and Urwick, 1937). Organizations generally structure work groups based on beliefs about who will perform specialized tasks satisfactorily and – in joint production tasks – who will work well together (Simon, 1947; March and Simon, 1958). We argue that such intra-organizational allocations of labor are based on common beliefs that educational institutions train their graduates to perform some tasks better than others. This argument implies two empirical regularities within a focal organization: (1) two individuals who share an education affiliation are allocated to the same work group more often than two who do
not and (2) two individuals who share an education affiliation are allocated to the same hierarchical work relationship more often than two who do not.

We test these arguments with data from the U.S. legal services industry, which is an appealing empirical context for several reasons. First, across law firms, lawyers are similarly grouped into practice areas so comparisons across firms are feasible and meaningful (Galanter and Palay, 1991). Second, because most law firms expect associates to learn their trade by working with colleagues (Pisano, 1994; Lazega, 2001), allocation to practice areas and to supervising partners strongly influences a junior lawyer’s chances of developing the skills expected of a partnership candidate (Beckman and Phillips, 2005; Gorman, 2005; Gorman and Kmec, 2009; Briscoe and Kellogg, 2011). Third, well-established law school rankings (e.g., Sauder, 2008) enable us to account for alternative explanations for allocation based on educational prestige (e.g., Useem and Karabel, 1986; Ishida, et al., 1997; Burris, 2004).

We analyze two data sets. The first consists of data on over 85,000 lawyers employed by 267 of the largest U.S. law firms and the second consists of over 30,000 possible partner-associate work relationships within a single large international law firm. We first examine how shared education affiliations influence the likelihood that two lawyers employed by the same firm or firm-office are assigned to the same work group—i.e. area of legal practice. We then examine how shared education affiliations influence the likelihood that an associate and a partner employed by the same firm or firm-office work together in a hierarchical relationship. Although some organizations may allocate employees in a seemingly random manner (e.g., Briscoe and Kellogg, 2011), our analyses indicate that intra-organizational divisions of labor and work assignments vary systematically with affiliations to specific educational institutions. By modeling how education affiliations influence the allocation of employees, we demonstrate how
organizations reinforce the horizontal stratification of educational institutions by limiting interactions between individuals and groups.

Horizontal Stratification and Higher Education Institutions

Educational institutions are primary producers of inequality in modern societies (see Stevens, Armstrong and Arum 2008 for a review). During the primary, secondary, and post-secondary stages, educational institutions allocate students into learning tracks that shape their aspirations and achievements (Spring, 1976, Mare, 1991, Shavit and Blossfield, 1993; Kerckhoff, 1995; Lucas, 2001). At the post-secondary stage, students are largely allocated horizontally across institutions that vary in prestige and type (e.g., community colleges, Ivy League schools). Graduates of these institutions are further stratified into occupations that offer varying socioeconomic rewards (e.g., Shaumann, 2006; Buchmann, DiPrete, and McDaniel, 2008; Torche, 2011).

This link between education and socioeconomic inequality has long been noted in the social sciences, but the notion of horizontal stratification gained prominence as researchers found that qualitative dimensions of education (e.g., prestige), as opposed to quantitative dimensions like years of schooling, increasingly influenced educational returns over the last few decades (Eide, Brewer and Ehrenberg, 1998; Brand and Halaby, 2006). Since social origins strongly influence rates of college attendance and the prestige of one’s degree-granting institution (Blau and Duncan, 1967; Hauser and Featherman, 1976; Shavit and Blossfeld, 1993), higher education institutions operate as ‘social sieves’ that govern access to socioeconomic opportunity (Jencks and Riesman, 1968; Grodsky, 2007). For example, research from the National Education Longitudinal Study (NELS) indicates that college admission and enrollment depend largely on background factors like parent’s education and
high school location (Karen, 2002). Other studies document wide gaps in admission to four-year institutions based on family income (Ellwood and Kane, 2000; Gerber and Chung, 2008). Statistics like these inform the sociological view that higher education institutions amplify societal inequality through admission processes that vary across institutions.

Increasing interest in the horizontal stratification of higher education institutions is motivated, in large part, by rising post-secondary enrollments and concerns about educational debt. From 1955 to 1970, the number of college graduates increased by 60 percent in the U.S., largely due to increasing demand for higher education by baby boomers’ children (Duffy and Goldberg, 1998; Schofer and Meyer, 2005; Alon, 2009). Attendance rates decreased during the 1970s but increased in the 1980s as the wage premium of college education increased (Clotfelter, 1993). In parallel, higher education required increasing financial commitments – often in the form of loans – that raise concerns about disparities in educational access for students who differ in their ability to finance such investments (e.g., Dwyer, McCloud, and Hodson, 2012; Houle, 2014). For example, noting the burden that debt puts on educational returns an April 2014 article in The Economist was bluntly titled: “Is college worth it?” (Economist, 2014). Other efforts, like PayScale’s “College ROI Report” or Forbes’ business school rankings, calculate institution-specific returns on educational investments that are based on total attendance costs and alumni earnings. These efforts document wide variance across institutions in the returns to equivalent levels of education.

Notably disconnected from this work on horizontal stratification in postsecondary education is the organizational literature on stratification (e.g., Kanter, 1977; Baron and Bielby, 1980; Sørensen and Kalleberg, 1981; Baron, 1984; Bielby and Baron, 1986; Reskin and Roos, 1990; Kalleberg and Van Buren, 1994; Reskin, McBrier, and Kmec, 1999). Yet, the labor
market outcomes documented in much horizontal stratification research are determined by organizations that employ institutions’ graduates. Perhaps one reason for the existing disconnect is the difficulty of following graduates’ careers in organizations. For example, population-level data sets such as the National Longitudinal Survey of Youth (e.g. the 1979 and 1997 NLSY cohorts) and the aforementioned NELS provide rich data on education and labor market outcomes, but lack data on organizational processes. As a result, we know much about education’s effects on earnings and employment (see Hout, 2012 and Stevens, Armstrong, and Arum, 2008 for reviews) but much less about intervening organizational processes.

Organizations might contribute to educational stratification solely through selective recruitment or hiring based on educational credentials (e.g., Rivera, 2011). It is similarly possible that organizations contribute to stratification after individuals are hired (e.g., Ishida, et al., 1997). We investigate one intra-organizational mechanism that could reinforce the horizontal stratification of higher education institutions by affecting employee access to social resources: the allocation of employees to work groups and work relationships.

Education Affiliations and Allocation to Work Groups

Social closure theory describes how populations are stratified based on membership in social groups (Weber, 1978[1922]). The thrust of social closure theory is that some individuals, by virtue of group affiliations, are in better positions to access resources than others because institutional processes selectively include or exclude certain groups from socioeconomic activity (Zhou, 2005; Weeden, 2002; Abbott, 1988). For example, social closure theory informs the study of how one’s social position within a technical division of labor creates barriers that affect access to resources and opportunities (Parkin, 1979; Collins, 1979; Tilly, 1998).
Exclusion can be based on observable characteristics, such as race, religion, or gender (Weber, 1978:342), but scholars note exclusion based on observable characteristics is increasingly being replaced by “individualistic criteria such as educational credentials” (Weeden, 1992: 55), because these are a more legitimate basis of exclusion (Meyer and Rowan, 1978; Castilla and Bernard, 2010).

In organizations, social closure processes selectively exclude some people from desirable positions by restricting their access to workplace resources (Reskin, 1988; Tomaskovic-Devey, 1993; Tilly, 1998; Kalev and Dobbin, 2006; Stainback, Tomaskovic-Devey, and Skaggs, 2010; Castilla, 2011). Perhaps the most common way this occurs within organizations is through the allocation of employees into the work structures – i.e. work groups and work relationships. Typically, work groups and work relationships are hierarchical in nature (O’Reilly, Caldwell, and Barnett, 1989; Baron and Pfeffer, 1994; Kalev, 2009). Some employees are allocated to marginalized groups and/or work relationships that place them in a supporting role (Baron and Pfeffer, 1994; Ely, 1994; Petersen, Saporta and Seidel, 2005; Kalev, 2009; Huffman, Cohen and Pearlman, 2010). Other employees are placed into work structures that offer access to valued resources, such as information, advice, and visibility that influence one’s job performance and perceptions of it, typically as a precursor for career advancement (Burt, 1992; Ibarra, 1993; Podolny and Baron, 1997; Gabby and Zuckerman, 1998; Mizruchi, Stearns and Fleischer, 2011; Reagans, 2011; McGinn and Milkman, 2013).

We focus on two organizational allocation decisions that substantially influence the peer and hierarchical relationships that employees form within organizations. First, we study employee allocations to work groups that situate individuals among co-workers. Second, we study allocations to hierarchical relationships that place one employee under the supervision of
another. Because both allocations occur post-hire, we assume that all employees were hired
based on expected productivity above an organization-specific threshold and are further
allocated based on more subtle differences in expected performance on specific work tasks
post-entry.

When employees perform tasks they typically do so within sub-units or work groups
that are bounded according to the organization’s division of labor (Galbraith, 1973; Tsai,
2001). Work groups align tasks with specific employees (Selznick, 1948; Katz and Kahn, 1978;
Gargiulo, Ertug, and Galunic, 2009) so that tasks are situated among employees deemed
capable of performing the work. Even in cases where all employees are capable of performing
the work, organizations divide their labor to take advantage of task specialization (e.g., Simon,
1947; Argyris, 1957). For example, groups may be organized by function (e.g., cost
accounting), geography (e.g., European sales), or product (e.g., technical support) so that those
employees considered capable of performing relevant tasks receive such assignments.

Many organizations hire graduates of multiple educational institutions (Oyer and
Schaefer, 2010). Because educational institutions differ in curriculum and matriculation
requirements (Daymont and Adrisani, 1984; Paglin and Rufolo, 1990; Shauman, 2006), their
graduates are differentially prepared to perform various tasks within the division of labor
(Soskice, 1993). For example, investors who graduated from the same college invest their
portfolios more similarly than do investor-graduates of different institutions (Massa and
Simonov, 2011). Employers might, therefore, reasonably expect employees with different
education affiliations to perform work differently.

Organizations may operate according to beliefs of differential preparation across
institutions and, accordingly, allocate employees to work groups by institution attended. For
example, organizations may hire graduates of business schools that emphasize “hard” skills with the expectation that such employees will be adept at solving quantitative problems like forecasting sales, while those that attended business schools that emphasize “soft” skills will be adept at more qualitative problems like selling products. Although organizations that value both skill sets may recruit business grads from both types of institutions, those from schools emphasizing “hard skills” are likely to be assigned disproportionately to finance work groups while those from schools emphasizing “soft skill” are likely to be assigned disproportionately to sales work groups.

Employees who graduate from the same educational institution may be allocated to the same work group because – more specific than “hard” or “soft” skills – they are considered more adept at some tasks than graduates of other institutions. Especially in industries that employ advanced-degree holders from fields that require extensive education, schools tend to develop generalized reputations for producing strong practitioners in specialized sub-fields (Spilerman and Lunde, 1991; Grusky, 2005; Rivera, 2012). For example, the *U.S. News* rankings of medical schools exhibits great variance in the rank order of schools across medical specialties like family medicine, geriatrics, internal medicine, pediatrics, and women’s health. Rankings of business, engineering, and law school specialties exhibit similar variation.

In sum, higher education institutions are generally thought to vary in terms of how well they prepare their graduates to perform specific work tasks. We expect intra-organizational divisions of labor to reflect such common beliefs. Therefore, we propose that organizations allocate employees to work groups based on institution attended. This leads to the following hypothesis.
Hypothesis 1. Within an organization, two employees who share a prior education affiliation are more likely to work in the same group than are two employees who do not.

Education Affiliations and Allocation to Hierarchical Relationships

Organizations structure work not only at the group level, but also the dyadic level. Work is coordinated hierarchically through vertical bureaucratic processes and reporting relationships (Weber, 1947). Higher ranking individuals assign work to subordinates; in turn, subordinates report on task performance. From supervisors, subordinates gain opportunities to develop skills and to demonstrate task proficiency and, importantly, to gain credibility with influential co-workers (Kalev, 2009; Briscoe and Kellogg, 2011).

We think that organizations use education affiliations to allocate employees to hierarchical relationship based on the expectation that same-institution graduates will work more productively together than different-institution graduates will. Anecdotal evidence suggests that organizations do indeed hold such expectations. For example, Pfeffer found that managers at one firm used education affiliations to integrate new employees into the workforce, stating “[the firm] hires a larger number of new engineers and faces the task of getting these new hires rapidly integrated into the firm and up to speed. They use college affiliations as a way of helping this social integration process. For instance, if you are a graduate from Georgia Teach, the company helps you meet and socialize with other Georgia Tech graduates. By helping people find others who share common backgrounds, the corporation seeks to smooth and hasten their integration into the firm,” (Pfeffer, 1985: 75).

We think that such practices are common because educational institutions transmit institutional values, norms, and beliefs to attendees in ways that intertwine attendees’ identities with those of their degree-granting institutions (Rafaeli and Vilnai-Yavetz, 2004; Stevens,
As a consequence of shared beliefs, organizations may expect those with same school affiliations to work well together. For example, prior work indicates that institutional identification encourages prosocial behaviors directed towards others affiliated with the institution (e.g., Mael and Ashforth, 1992). Within groups populated by graduates of multiple institutions, employees are likely to identify with those who share their affiliation – even when there are many such employees allocated to the work group – because similarity influences one’s identification with employees (Beckman, 2006; Reagans, 2011).

Common experiences that facilitate co-worker integration and communication are generally thought to enhance workforce productivity (e.g., Lazear, 1998; Hayes, Oyer, and Schaefer, 2006; Mas and Moretti, 2009). To the extent that shared education affiliations constitute such experiences, we expect that organizations attend to education affiliations not only when allocating employees to work groups, but also when allocating employees to hierarchical relationships. We predict the following.

**Hypothesis 2.** Relative to two employees who do not share a prior education affiliation, two employees who do are more likely to work in the same hierarchical relationship (dyad).

Research Methods

We test these predictions in the context of the U.S. legal services industry. We begin by studying the firm-level allocation of lawyers into practice areas by analyzing data obtained from the Martindale-Hubbell Law Directory in August of 2009. The sample was constructed by starting with the largest U.S. law firms (by headcount) based on the 2008 *National Law Journal* rankings. That list was augmented with all additional law firms listed on LawPeriscope.com (Oyer and Schaefer, 2010). For each law firm we obtained a list of all lawyers employed by the
firm, according to Martindale-Hubbell, and recorded each lawyer’s level (e.g., associate, partner), legal practice area(s), office location, and law school attended. In all, this data set covers over 107,000 lawyers employed by 267 U.S. law firms in 1,179 firm-offices.

We further restricted this data set to only lawyers who listed at least one practice area in Martindale-Hubbell and also listed degree-granting law school. We, therefore, retained approximately 80 percent of all lawyers (n=85,914) from the data before constructing a dyadic data set of all possible co-employees, defined as all dyads composed of two lawyers i and j who are employed by the same firm. This resulted in a data set of over 18 million co-worker dyads.

In a more fine-grained analysis, we also restricted this data set to only employees assigned to the same firm-office. We do this in acknowledgement of the possibility that practice area allocations often occur at the office level within firms. To the degree that the composition of offices are also influenced by their geographic proximity to law schools, this more restricted sample also enables us to address the possibility that our results may be due to the concentration of schools within local offices. Restricting our analysis to the same firm-office produced a data set of over 5 million dyads.

This industry-level analysis allows us to investigate allocation at the level of a work group (i.e. practice area). But, the M-H data does not allow us to observe work relationships directly. Therefore, we collected a second data set to examine the allocation of individual employees into hierarchical work relationships. Our setting is a large international law firm that is headquartered in a large U.S. city. Although we cannot provide more identifying information about the firm due to a confidentiality arrangement, in terms of practices, office locations, work structure, and recruitment practices, this law firm is reasonably similar to other large corporate
law firms that comprise the M-H sample. In 2010 (i.e. the year the study was conducted) the law firm was listed in National Law Journal’s 250 (NLJ 250) largest law firms in the United States. Like most major law firms it has a partner-associate hierarchy, including an “up or out” policy for associates.

In the spring of 2010 we met with a partner of this firm that introduced us to the partner responsible for professional development. This individual sponsored our study. In the early summer of 2010 the sponsor sent an email asking associates to participate in the research. A link to an electronic survey was included in the email. After this initial request for participation, two additional requests for were made, the first by the sponsor, and a second by a senior associate in the firm. These requests followed within a month of the initial survey being administered. In order to encourage participation, a $250 gift card was randomly awarded to one associate and the researchers provided a report of the study’s findings to employees in the firm.

The survey took approximately fifteen minutes to complete. On the survey the associates listed the first and last names of the partners that they worked for over the last 12 months. Respondents also indicated the portion of time that they had worked for each partner in the previous year, the frequency with which they had spoken with each partner, the length of time they had worked for each partner, their primary practice area, the law school at which they received their law degree, the office where they worked and the respondent’s demographic information.

A total of 139 associates completed the survey. The sponsor of the study indicated that our response rate was in line with other recent surveys conducted at the firm.¹ After excluding

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¹ To keep the identity of the law firm confidential we do not report a response rate. However, the response rate is in line with response rates in recently published articles (e.g. Ou, et. al, 2014; Park and Westphal, 2013).
non-U.S. based associates and respondents with missing data, 111 associates remained. The demographic composition of the respondents is given in Table 1. Along key demographic dimensions (e.g. race and gender,), there were no statistically significant differences between responding and non-responding firm associates.

[INSERT TABLE 1 HERE]

Dependent Variables

To analyze the extent to which lawyers are allocated to specific areas of practice by law school attended, we identified all instances in which two lawyers work in the same area of legal practice. Martindale-Hubbell lists 125 unique practice areas, but Heinz, et al. (2005) aggregate legal practice into 28 unique practice areas based on their 1995 study of urban lawyers. Due to great variance across firms in the number of practice areas listed, it was necessary to reduce the number of Martindale-Hubbell practice categories in order to ensure that we identified lawyers within the same firm who work in similar areas of practice regardless of firm reporting conventions. We started with the Heinz, et al. (2005) scheme and modified it to reduce redundancies and to reflect changes in legal practice since their scheme was created. For example, we combined “Business Real Estate” and “Personal Real Estate” into a single “Real Estate Category.” We also created categories like “Alternative Dispute Resolution” and “Technology” to account for the large number of lawyers in Martindale-Hubbell who practice such law. These modifications resulted in the 37 unique areas of legal practice listed in Table 2.

[INSERT TABLE 2 HERE]

According to our practice categorization scheme, the median lawyer in the sample lists three unique areas of practice (mean = 2.97). The most common areas of practice are Labor &
Employment (9.7 percent of lawyers in the sample), Insurance (8.6 percent), Finance (8.3 percent), Intellectual Property (7.4 percent), Corporate Law (6.4 percent), Real Estate (5.1 percent), Securities (4.6 percent), Government (4.0 percent), and Litigation (3.6 percent). We coded a dependent variable for each dyad that equals 1 if the two lawyers work in at least one of the same practice areas within the same firm and 0 otherwise. Likewise, for the firm-office analysis, we coded a dependent variable for each dyad that equals 1 if the two lawyers work in at least one of the same practice areas within the same firm-office and 0 otherwise. We analyze over 18 million same-firm and over 5 million same-firm-office dyads to test Hypothesis 1.

For the analysis of hierarchical relationships at a single firm, we constructed an associate-partner matrix by including each partner in the firm who was listed in Martindale-Hubble as an employee of at least one of the firm’s U.S. offices and all responding associates. Most partners were easily identified in the survey. But, two partners had the same first and last names. Because we were unable to decipher between these partners in the data we excluded both from the analysis. In this matrix’s cells, we coded cells as 1 if the partner and associate worked together in the previous 12 months and 0 otherwise. Of 30,525 partner-associate dyads represented in the matrix, where each “i” associate is paired with each of the possible “j” partners, 583 worked together (1.9 percent). We analyze these 30,525 dyads to test Hypothesis 2.

Independent Variable

Our key independent variable is a binary indicator that takes a value of 1 if the two lawyers obtained their JD from the same law school and 0 otherwise. In a few instances, partners at the firm pursued a specialized degree (e.g. an L.L.M.) after receiving a Juris Doctor (J.D.). In all cases the institution where the lawyer received a J.D. was used in the construction of
the education affiliation variable. Hypothesis 1 predicts that dyads who share this law school affiliation will be allocated to the same practice area more often than dyads who do not. Similarly, Hypothesis 2 predicts that dyads who share this affiliation will be allocated to the same hierarchical relationship more often than dyads who do not.

Control Variables

We include a number of control variables to account for other bases of allocation into practice area in the industry-level analysis. We include a dichotomous variable that equals 1 if the two lawyers work in the same firm-office and 0 otherwise. Additionally, because partners tend to work in more practice areas than do associates (3.3 versus 2.5) we also include two dummy variables: (1) one takes a value of 1 if both lawyers are partners and 0 otherwise (approximately 20 percent of all dyads) and (2) the other takes value of 1 if both lawyers are associates and 0 otherwise (approximately 16 percent of all dyads). The baseline category in this specification includes dyads composed of one partner and one associate or lawyers with other titles (e.g., counsel).

Prior work suggests several factors can lead to firms employing a greater proportion of lawyers from a particular law school (Oyer and Schaefer, 2010). Therefore, we control for the availability of same school affiliates within firms in two ways. First, we include a variable at the firm level that controls for the number of other lawyers at the firm that went to i or j’s law school (divided by 100). Second, because the opportunity to be placed into practice areas with same school affiliates is based on the prevalence of school affiliates within the industry, we create a mean law school-practice affiliation variable, which is a dyad average of the percent of all lawyers assigned to i or j’s practices that graduated from i and j’s law schools.
Finally, we account for the propensity of individuals to be allocated into various practice areas by including the mean value of the dependent variable for all dyads in which either \( i \) or \( j \) appears, excluding the \( ij \)th dyad (Lincoln, 1984). This variable accounts for otherwise unobserved heterogeneity in the prevalence with which \( i \) or \( j \) is allocated to practice areas with other lawyers (Stuart, 1998). Some firms or firm-offices assign many lawyers to a small number of practice areas while others assign but a few lawyers to a large number of practice areas. This measure controls for such heterogeneity in allocation.

In the single-firm analysis we are interested in how education affiliation influences allocation, net of working in the same practice area. Thus, we include a same practice variable, equal to 1 if associates work in any one of the same practice areas as a partner, else 0. For the same reasons as stated above for the industry-level analysis, we include a dichotomous same office variable. We also generated two demographic similarity variables. We created a same gender variable equal to 1 if both the partner and associate are the same gender, else 0. We did the same for race. Information on the demographic background of respondents was gathered from the associate survey. _Martindale-Hubble_ does not list demographic information for the partners. We asked an individual knowledgeable about the demographic background of the firm’s partners to indicate each partner’s race (e.g. Caucasian, African-American, Hispanic, Asian-American) and gender, and used these designations to construct the variables. Additionally, as in the industry analysis, we control for the availability of same school affiliates within the firm. We include the number of partners that graduated from an associate’s law school as a control variable in the models.

Finally, it is possible that the influence of prior education affiliations on partner-associate work ties is driven by prestige sorting in law firms. Graduates of more prestigious law schools
tend to work for the industry’s more prestigious and profitable firms. Figure 1 shows the profits per equity partner across law firms based on prestige rankings in the Vault 100 and mean law school rank of the firm’s employees. Law school numeric rank is decreasing in prestige, meaning that the most prestigious law schools are ranked lower than less prestigious law schools. Firms in the top decile recruit from the most prestigious law schools and offer the greatest financial rewards, while lower-decile firms recruit from lower ranked law schools and offer lesser rewards.

We, therefore, include a variable – educational prestige differential – that measures the absolute difference in prestige in the law school attended for the partner-associate dyad. We do this to address the possibility that a same school effect might be more appropriately considered a prestige effect. Namely, law firms may group lawyers into groups based on client’s demands, firm activities and other factors related to prestige. The prestige score is an average of the U.S. News and World Report’s law school ranking of the top 100 law schools each year from 2000 to 2010. Law schools that were unranked were given a score of 150.

Additionally, because prestige sorting may also occur based on the undergraduate institution instead of the law school, we calculate a second prestige differential based on undergraduate institutions using the U.S. News & World Report’s 2011 worldwide rankings of the top 400 global universities. These rankings are produced in cooperation with QS Quacquarelli Symonds, an organization that has produced international education rankings since 2004. The maximum score is 100 and the 400th-ranked school received a score of 29.2. We assigned all unranked schools a score of 28.0. M-H was more limited in listing undergraduate
institution, and thus the sample size is reduced due to missing data. Therefore, we include the prestige score based on law school affiliation for the main analysis, and incorporate the prestige score based on undergraduate institution as a robustness check.

Analyses

For the industry-level analysis, we estimate logit models of the likelihood that two lawyers are allocated to the same area of legal practice within a firm, which occurs in approximately 46 percent of the dyads. For the single-firm analysis, we estimate rare event logit models on the likelihood that two lawyers are allocated to a hierarchical relationship because work ties between partners and associates (i.e. the “1’s” in the matrix in the single-firm analysis) are realized for only 1.9 percent of dyads. Therefore, we use King and Zeng’s relogit procedure in Stata 12 to generate standard errors that are adjusted for rare events bias.

Results

Industry-Level Same Practice Analysis

Summary statistics and correlations for all variables included in the “same-firm” and “same-firm-office” co-worker dyad analyses are summarized in Table 3. Among lawyers working in the same firm, 46 percent work in the same practice area, 28 percent work in the same office and 5 percent of the lawyers attended the same law school. Among lawyers working in the same firm-office, 9 percent attended the same law school.

[INSERT TABLE 3 HERE]

Figure 2 compares the proportion of co-worker dyads assigned to the same practice area for lawyers that share a law school affiliation and lawyers that do not. At the firm-level, 48.8
percent of dyads who share a prior education affiliation are allocated to the same practice area; this figure is 3.1 percent higher than it is for dyads who do not share a prior education affiliation and the difference is statistically significant (p<0.01). At the firm-office level, the respective figures are 48.8 percent and 46.6 percent and that difference in means is also statistically significant (p<0.01).

[INSERT FIGURE 2 HERE]

Table 4 presents results of same-firm, dyadic analyses of assignment to same practice area. Model 1 includes only our independent variable of interest. As predicted, two lawyers employed by the same firm are more likely to be allocated to the same practice area if they graduated from the same law school than are two lawyers who graduated from different law schools. Subsequent models probe the robustness of this pairwise correlation by accounting for other factors that might be associated with the allocation of lawyers into firm-practices by law school attended. Model 2 includes the same-firm-office indicator variable. Two lawyers who work in the same firm-office are more likely to work in the same area of practice than two lawyers who work in separate firm-offices, indicating some firm-level practice specialization by local office. Model 3 includes the “both partner” and “both associate” indicator variables to account for lawyers’ tendencies to expand their areas of practice as they gain experience. Consistent with this tendency, two partners are more likely to work within the same firm practice area than are two lawyers of different ranks, whereas two associates are less likely to work within the same firm practice area than are two lawyers of different ranks. The effect of the same law school indicator variable is robust to the inclusion of these controls.

[INSERT TABLE 4 HERE]
These models might merely capture the availability of same-school affiliates within firms. To probe this possibility, we include variables in Model 4 that control for the number of other lawyers in $i$ or $j$’s law school, and the mean law school-practice affiliation for $i$ and $j$ within the industry. The key coefficient magnitude is reduced with their inclusion, suggesting that some same-school allocation into practice areas is attributable to affiliate availability. But, after inclusion of these variables the law school affiliation variable remains statistically significant. In Model 5, we include the mean DV variable, which accounts for unobserved heterogeneity in the allocation of partners and associates into many or few practice areas. Again, support for Hypothesis 1 is maintained: lawyers employed by the same firm are allocated to specific areas of practice based on law school attended.

We proceed with several additional checks of the robustness our results. One might be concerned that our between-firm comparisons obscure firm-specific factors, such as size, that make it seem as if most firms typically allocate same-school affiliates into the same practice area. We, thus, include firm-level fixed effects in Model 6 to restrict our analyses to within-firm allocations. The effect of shared education affiliation remains significant, which indicates that our results are not merely attributable to unobserved firm-level heterogeneity. Next, we consider the possibility that the same school effect may be attributable to specific law schools being particularly large in terms of alumni or specialized in certain areas of practice. We might observe a positive correlation between our same-school indicator and our same-practice outcome if we fail to acknowledge school-level specialization by area of practice. In Model 7 we, therefore, include fixed effects for the top 29 law schools represented in our data, which cover the degree-granting institutions of approximately 50 percent of the lawyers in our sample. These indicator variables take a value of 1 if either lawyer $i$ or $j$ attended one of these schools and 0
otherwise. The positive and statistically significant same-school allocation effect remains, suggesting our results are not being driven by unobserved heterogeneity in the demand for lawyers across educational institutions.

Though we have accounted for firm and law school heterogeneity, it remains that possible that unobserved difference across practices areas could be driving our results. For instance, firms with large practice areas may concentrate their recruiting efforts at schools in ways that increase the likelihood that lawyers are from the same school and the likelihood that lawyers work together in the same practice area. Practice area fixed effects models are included in Model 8. These indicator variables take a value of 1 if either lawyer \( i \) or \( j \) practices in one of the areas listed in Table 2 and 0 otherwise. The significant coefficient on the same school indicator indicates that our results also hold in the presence of unobserved differences across practice areas. Together, Models 6, 7, and 8 provide reasonable confidence that Hypothesis 1 is supported, as the effect of interest is observed within firms, within law school alumni groups, and within areas of legal practice.

To further check the robustness of our results we ran a series of models to account for the non-independence of observations in Table 5. Because individuals appear in multiple dyads, residuals are correlated across observations (Wooldridge, 2002). Therefore, we run models which cluster for each individual that appears in the dyad. In Models 9 and 10 standard errors are clustered for \( i \) or \( j \), respectively, while Models 11-13 standard errors are clustered for both \( i \) and \( j \) (Petersen, 2009). Although the estimated standard errors are larger, the coefficients in these models remain largely unchanged. The effect of shared education affiliation on same practice area allocation remains positive and statistically significant at the 1 percent confidence level for the firm and firm-office analysis.
Using the coefficients in Model 11 of Table 5 and the formula detailed in Petersen (1985), we estimate that for two partners employed in the same firm, the likelihood of being assigned to the same practice area is only 0.1 percent higher for two who graduated from the same law school than for two who graduated from different law schools. At the same firm-office level of analysis (Model 12 of Table 5), the likelihood of being assigned to the same practice area is 1.5 percent higher for same-school graduates than different-school graduates. These marginal effects indicate to us that allocation on the basis of education affiliations is more salient at the firm-office than at the firm level. To us, this seems sensible because firms typically delegate office staffing to local personnel.

The aforementioned models provide strong evidence that same school allocation into practice areas occurs within firms and, more specifically, within firm-offices. Support for Hypothesis 1, however, does not provide evidence that hierarchical work relationships are influenced by school affiliation (Hypothesis 2). To determine if this is the case we analyze data from a case study of a large international firm. Before doing so, we first assess whether or not there is partner-associate allocation within the same practice area by school. Evidence along these lines would offer preliminary evidence that allocation is not only occurring horizontally within work groups but vertically. Consistent with this expectation, Model 13 at the firm-office level indicates that across mixed associate-partner dyads those that share a law school affiliation are significantly more likely to be allocated to the same work group.

Dyadic Analysis of Partner-Associate Work Ties

In Table 6 we present summary statistics and correlations among all variables in the
partner-associate dyadic models. Across the 30,525 partner-associate dyads, 26 percent work in the same office, 46 percent are the same gender, and 80 percent are the same race. One-quarter of the dyads are comprised of partners and associates in the same practice area.

[INSERT TABLE 6 HERE]

Figure 3 provides descriptive statistics on the dyads that had a positive work tie. Across dyads that share a prior education affiliation, 4 percent of the dyads worked together. Comparatively, across dyads with a different prior education affiliation, 1.8 percent worked together, a difference that is statistically significant (p < 0.05). This same comparison is made for male and female associates in the firm. Similar to the differences in the overall sample, the proportion of those working together that share a prior education affiliation is approximately two times greater than it is for partners and associates that do not share a prior education affiliation for male and female associates.

[INSERT FIGURE 3 HERE]

We present multivariate analysis of the effect of a shared education affiliation on work relationships in Table 7. Model 1 includes only our independent variable of interest. As predicted, partners and associates are more likely to work together when they are from the same law school than a partner and an associate who graduated from different law schools. As in the industry-level study, subsequent models probe the robustness of this pairwise correlation by accounting for other factors that might be associated with allocating lawyers into hierarchical work relationships. Model 2 includes the same office and same practice area variables. As expected, partners and associates are more likely to have a work tie if they work in the same practice area. They are also more likely to have a work tie if they are co-located in the same
office. Model 3 adds the gender and homophily variables. Neither has an effect on hierarchical work relationships. While somewhat surprising, it is important to note this may be due to the types of relationships under study: in hierarchical relationships preferences for social similarity based on race or gender may matter less than in informal relationships.

[INSERT TABLE 7 HERE]

In Model 4 we include variables the control for the availability of same school partners for associates within the firm and for another potential basis of allocation – i.e. prestige. The number of partners in the firm that attended an associate’s law school does not affect work relationships, nor does the prestige similarity variable. Model 5 adds the mean DV variable for all dyads with $i$ or $j$ to account for the prevalence of associations that are occurring across lawyers. Again, this variable strongly affects the realization of a work tie. However, the positive and statistically significant effect of having attended the same educational institution on work ties remains. For the same reasons stated in the industry-level analysis, Model 6 clusters the standard errors of $i$ and $j$. Again, the standard errors increase making the statistical tests more conservative, but the effect of a same school affiliation remains statistically significant at the 1 percent confidence level.

As in the industry analysis, we check the robustness of our results for work ties in a number of ways. In Model 7 in Table 8 we include more nuanced demographic variables in our models. Perhaps the influence of gender homophily depends on whether the partners and associates are male or female. To examine this further four variables were constructed: male partner-male associate, male partner-female associate, female partner-male associate, female partner-female associate, and include three of these variables in Model 7 in Table 9 (the female
partner-female associate variable is omitted). After including these variables, the effect of the prior affiliation variable remains positive and statistically significant.

[INSERT TABLE 8 HERE]

Given the practice area analysis we show above, the availability of individuals that share the same education affiliation within a practice area could be affecting partner-associate work relationships. Similarly, the office location of partners and associates may affect the realization of work relationships. To address these possibilities, we first restrict our sample to only those individuals that work in the same practice area in Model 8 and the same firm-office in Model 9. The positive effect for shared education affiliations on work ties remain.

We also explore the possibility that the lack of an effect for the prestige differential variable might be due to law school prestige being less meaningful in this setting than the prestige of an individual’s undergraduate institution. In Model 10 the effect of shared education affiliation is assessed when including this alternative prestige differential variable. The number of observations is reduced because the undergraduate institution was not available for all partners in the sample. This alternative prestige variable is not statistically significant, but the effect of sharing an education affiliation on placement into hierarchical work relationships remains positive and statistically significant.

In a final set of robustness checks we include practice area fixed effects and law school fixed effects for associates in Models 11 and 12. As in the prior models, the effect of shared education affiliation is positive and statistically significant. We use the Petersen (1985) formulation and include the covariates at their most common values in Model 12 to assess marginal effects. The likelihood of being placed together in a partner-associate dyad is 7.3
percent higher if the two lawyers graduated from the same law school than if they did not.

Discussion

The purpose of this inquiry has been to investigate if and how education affiliations affect organizational allocation processes. We predicted and showed that higher education affiliations influence two allocation processes common to most organizations: allocations to work groups and to work relationships. Using industry-level data on law firm practice areas, we found that two individuals are significantly more likely to work in the same practice area within a firm or firm-office if they share an education affiliation than if they do not. This result is robust to a number of model specifications that account for alternative bases of employee allocation. Overall, our results suggest that individuals are more likely to work with alumni of their degree-granting institution than with graduates of other schools. This industry-level study was complemented with an investigation of hierarchical relationships at a large international firm. We found that sharing an educational affiliation positively influences the likelihood of two lawyers having a hierarchical work relationship (i.e., associate-partner). Both analyses indicate that where individuals obtain higher education strongly influences with whom they work.

This study makes important contributions to our understanding of institutions and stratification. For decades, scholars have studied educational institutions and work organizations as “dual engines” of inequality. But, beyond studies of hiring and promotion (e.g., Useem and Karabel, 1986; Rivera, 2011; Ishida, et al. 1997), surprisingly little research links allocation processes across both engines. Although studies suggest how stratification across educational institutions influences attainment, the intervening processes that occur within organizations are
not clearly understood. By demonstrating how education affiliations influence staffing and supervision, this study identifies two clear mechanisms that govern organizational contributions to horizontal stratification. Resources located in work groups and work relationships are subject to a social closure process based on education affiliations. As a result, the sieves that allocate individuals to different educational opportunities are reified within organizational boundaries.

Importantly, our findings reserve a critical role for employing organizations in the horizontal stratification of higher education institutions. Much research implicates higher education institutions in the reproduction of inequality. For example, variations in institutional selectivity based on standardized test scores allocate students in postsecondary institutions depending on whether or not families can afford costly test preparation and tutoring (Cookson and Persell, 1985; Espenshade and Radford, 2009). Also, the practice of admitting legacy applicants similarly favors those with kin relationships and reduces upward mobility for less-connected individuals (Espenshade, Chung, and Walling, 2004). In turn, organizations amplify these contributions to stratification by using education affiliation to place employees into work structures.

By strengthening the logical connections between horizontal stratification of higher education institutions and intra-organizational processes, our study also offers important insights to intra-organizational bases of inequality. It is widely-acknowledged that intra-organizational relationships strongly influence one’s career prospects (e.g., Burt, 1992; 2009; Podolny and Baron, 1997). In particular, prior research on lawyers demonstrates that partner-associate relationships strongly influence career outcomes (Briscoe and Kellogg, 2011). While Briscoe and Kellogg found that allocation to hierarchical relationships was seemingly random they did not specifically investigate educational affiliations. Here, we find systematic evidence of
allocation based on education affiliations at the industry, firm, and firm-office levels of analysis. Allocation practices probably vary widely across firms. Future research that investigates both variation in allocation practices and the implications for employee careers is likely to contribute even more valuable insights to those studying stratification.

This study also offers an important contribution to the literature on social structure. A voluminous literature on social networks documents how workplace relationships influence career outcomes (see Burt, Kilduff and Tasselli, 2013 for an extensive review) but the literature on how such social structures come about is much smaller and less clear (e.g. see Stuart and Sorenson, 2007). Our study produces clear evidence that the availability of formal workplace relationships are constrained by institutional factors that are present prior to employees entering organizations. Because formal work relationships are a source of informal social structure (Tichy and Fombrun, 1979; Ibarra, 1993; Borgatti and Cross, 2003), intra-organizational networks, it seems, are products of external hierarchies of social opportunities that are reproduced by the intra-organizational allocation of employees to work.

Despite these insights, our study has clear limitations. We aimed to elucidate if and how organizations contribute to horizontal stratification by endogenously allocating individuals into work groups and work relationships based on education affiliation. Our focus on the antecedents of group assignment and work relationships within organizations enables us to establish an organizational basis for the horizontal stratification of higher education institutions. But, our cross-sectional data no not enable us to examine the long-term career implications of these allocation practices (c.f. Ishida et. al, 1997). Future work might explore the extent to which workplace relationships influence employee careers when such allocations are taken into account.
Further, although our empirical analysis supports the notion that affiliation-based allocation to work groups and hierarchical work relationships occurs, future research should be conducted to more fully elucidate the allocation process. For example, organizations may prioritize multiple factors in their allocation decisions and those priorities might vary across organizations within the same industry. It is also possible that differential hiring or retention of employees based on education affiliation produces closure within organizations or work groups, much as race contributes to workplace segregation through selective turnover (e.g., Sørensen, 2004). Our data prevents such investigations, but future researchers might probe such possibilities with panel data.

Further, our study does not implicate the direct mechanism through which higher education institutions affect their constituents – i.e. through selection into institutions or through educational treatments received at those institutions. Due to the belief that higher ability individuals are more likely to be admitted to elite institutions, much scholarly attention has been paid to parsing selection and treatment effects of higher education attendance. Available evidence suggests that higher education institutions do more than merely allocate individuals into opportunities; rather, they also have substantive treatment effects (see Hout, 2012 and Stevens Armstrong, and Arum, 2008 for reviews). Future research within organizations could inform an understanding of the intervening process through which higher education institutions affect attendees.

Finally, future research might also explore the interrelatedness of higher education institutions and opportunities for association within the workplace across demographic groups. Educational attainment varies substantially across demographic groups and across-group inequality is most pronounced in high-paying occupations that require substantial educational
investments, such as business and law (Grodsky and Pager, 2001; Elliott and Smith, 2004). For example, within these occupations there is greater representation of women and racial minorities in entry-level positions than in higher-compensation positions (Tomaskovic-Devey, 1993; Petersen and Morgan, 1995; Kalev, Dobbin, and Kelly, 2006; Cohen and Huffman, 2007; McGinn and Milkman, 2012). The differential allocation of groups across positions contributes to inequality through wage dispersion (Chiu and Leicht, 1999; Leicht and Lyman, 2006; DiTomaso et. al, 2007) and prospects for upward mobility (Baron, 1984; Kalev, 2009). Because educational stratification occurs across racial and ethnic groups (Jencks et. al, 1972; Kao and Thompson, 2003), our study indicates organizations create a form of social capital that is restricted to employees whose prior education affiliations are represented in the organization, likely reducing social opportunities for underrepresented groups.

Conclusion

There has been a persistent and long-standing interest amongst social scientists in the impact of education on economic and social rewards. Much of this work focuses on differences in labor market outcomes (e.g. earnings) but neglects the intervening organizational processes that shape attainment. By suggesting that with whom individuals work is impacted by higher education affiliations, this study provides a clear demonstration of how organizations contribute to the horizontal stratification of higher education institutions through impacting the social resources employees have in embedded in work groups and work relationships. By doing so, this study extends prior research that primarily examines the influence of educational pursuits and career outcomes absent from the work context in which careers unfold.

Our findings highlight the enduring influence of higher education institutions’ admissions
decisions on the socioeconomic attainment of individuals. Educational opportunity is directly linked to socioeconomic opportunity not only because education affiliations signal ability but, additionally, because organizations allocate work based on specific education affiliations. Despite this, numerous factors besides applicant ability influence entry into higher education institutions, like social origins and family background (e.g., Karabel, 2005). Organizations allocate graduates based on impressions of the effects of higher education (e.g., who is best prepared to perform specific work tasks), in turn, heightening higher education institutions’ stratifying effects.
REFERENCES


Economist, Is College Worth It?, Published online April 5, 2014 http://www.economist.com/node/21600131/print.


Table 1. Sample characteristics for the single firm study.

**Associates (n=111)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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</thead>
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<td>43%/57%</td>
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<td>7%</td>
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<tr>
<td>Hispanic</td>
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<td>Asian</td>
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</tr>
<tr>
<td>Age (Average)</td>
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<tr>
<td>Years at Firm (Average)</td>
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</table>

**Partners (n=275)**

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<td>Black</td>
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<td>Law Area</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------</td>
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<td>Contracts</td>
<td>Immigration</td>
</tr>
</tbody>
</table>
Table 3: Summary statistics and correlations of variables in within-firm, same-practice analyses.

| (1) Lawyers work in same practice area (0/1) | Mean  | St. Dev. | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| (2) Lawyers graduated from same law school (0/1) | 0.05  | 0.21 | 0.01 | - |
| (3) Both lawyers work in same office (0/1) | 0.28  | 0.45 | 0.01 | 0.12 | - |
| (4) Both lawyers are partners (0/1) | 0.20  | 0.40 | 0.04 | 0.00 | -0.01 | - |
| (5) Both lawyers are associates (0/1) | 0.15  | 0.36 | -0.01 | -0.01 | 0.02 | -0.22 | - |
| (6) Mean law school-practice affiliation (ij) | 0.02  | 0.01 | -0.01 | 0.05 | 0.04 | 0.04 | -0.01 | - |
| (7) # of other firm lawyers from i or j’s law school | 54.7  | 46.6 | 0.01 | 0.26 | 0.05 | 0.00 | 0.03 | 0.40 | - |
| (8) Mean DV for all dyads with i or j | 0.46  | 0.21 | 0.65 | 0.01 | 0.00 | 0.03 | -0.01 | -0.03 | 0.00 |

n= 18,727,886 dyads
Table 4. Dyadic analyses of assignment to same practice area.

<table>
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<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
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<td>Graduated from same law school (0/1)</td>
<td>0.125 **</td>
<td>0.114 **</td>
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<td>0.099 **</td>
<td>0.091 **</td>
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<td>(0.002)</td>
<td>(0.002)</td>
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<td>0.050 **</td>
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<td>(         )</td>
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<td>Both are partners (0/1)</td>
<td>0.180 **</td>
<td>0.182 **</td>
<td>0.120 **</td>
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<td>Both are associates (0/1)</td>
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<td>-0.014 **</td>
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<td># of other firm lawyers from i or j's school/100</td>
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<td>Mean law school-practice affiliation (ij)</td>
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<tr>
<td>Pseudo R²</td>
<td>0.000</td>
<td>0.000</td>
<td>0.001</td>
<td>0.001</td>
<td>0.381</td>
<td>0.400</td>
<td>0.400</td>
<td>0.410</td>
</tr>
<tr>
<td>Log pseudolikelihood</td>
<td>-12,914,976</td>
<td>-12,913,981</td>
<td>-12,901,432</td>
<td>-12,899,844</td>
<td>-7,992,262</td>
<td>-7,742,674</td>
<td>-7,741,754</td>
<td>-7,616,368</td>
</tr>
<tr>
<td>Wald Chi-square (d.f.)</td>
<td>3,223 (1)</td>
<td>5,211 (2)</td>
<td>30,313 (4)</td>
<td>33,524 (6)</td>
<td>3,707,826 (7)</td>
<td>3,523,343 (212)</td>
<td>3,524,088 (241)</td>
<td>3,613,464 (277)</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.
** p < 0.01; * p < 0.05; † p < 0.10; two-tailed tests.
Table 5. Robustness checks: Dyadic analyses of assignment to same practice area.

<table>
<thead>
<tr>
<th></th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
<th>(12)</th>
<th>(13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduated from same law school (0/1)</td>
<td>0.139 **</td>
<td>0.139 **</td>
<td>0.139 **</td>
<td>0.058 **</td>
<td>0.063 **</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.006)</td>
<td>(0.008)</td>
<td>(0.008)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Work in same office (0/1)</td>
<td>0.070 **</td>
<td>0.070 **</td>
<td>0.070 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.006)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both are partners (0/1)</td>
<td>0.159 **</td>
<td>0.159 **</td>
<td>0.159 **</td>
<td>0.151 **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.006)</td>
<td>(0.007)</td>
<td></td>
</tr>
<tr>
<td>Both are associates (0/1)</td>
<td>-0.056 **</td>
<td>-0.056 **</td>
<td>-0.056 **</td>
<td>-0.059 **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.005)</td>
<td>(0.006)</td>
<td>(0.008)</td>
<td></td>
</tr>
<tr>
<td># of other firm lawyers from i or j's school/100</td>
<td>0.012 *</td>
<td>0.012 *</td>
<td>0.012</td>
<td>0.062 **</td>
<td>-0.006</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.006)</td>
<td>(0.008)</td>
<td>(0.012)</td>
<td>(0.018)</td>
</tr>
<tr>
<td>Mean law school-practice affiliation (ij)</td>
<td>-10.9 **</td>
<td>-10.9 **</td>
<td>-10.9 **</td>
<td>-4.07 **</td>
<td>-1.63</td>
</tr>
<tr>
<td></td>
<td>(0.691)</td>
<td>(0.680)</td>
<td>(0.942)</td>
<td>(0.960)</td>
<td>(1.55)</td>
</tr>
<tr>
<td>Mean DV for all dyads with i or j</td>
<td>11.6 **</td>
<td>11.6 **</td>
<td>11.6 **</td>
<td>10.8 **</td>
<td>10.0 **</td>
</tr>
<tr>
<td></td>
<td>(0.039)</td>
<td>(0.040)</td>
<td>(0.056)</td>
<td>(0.058)</td>
<td>(0.075)</td>
</tr>
<tr>
<td>Constant</td>
<td>-4.22 **</td>
<td>-4.22 **</td>
<td>-4.22 **</td>
<td>-4.62 **</td>
<td>-4.59 **</td>
</tr>
<tr>
<td></td>
<td>(0.024)</td>
<td>(0.026)</td>
<td>(0.035)</td>
<td>(0.039)</td>
<td>(0.061)</td>
</tr>
<tr>
<td>Firm fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Top 29 law school fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Practice area fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sample</td>
<td>Same Firm</td>
<td>Same Firm</td>
<td>Same Firm</td>
<td>Same Office</td>
<td>Same Office</td>
</tr>
<tr>
<td>Lawyers in dyads</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>Partner-Assoc.</td>
</tr>
<tr>
<td>Clustering</td>
<td>Lawyer i</td>
<td>Lawyer j</td>
<td>i and j</td>
<td>i and j</td>
<td>i and j</td>
</tr>
<tr>
<td>N (dyads)</td>
<td>18,708,829</td>
<td>18,708,829</td>
<td>18,708,829</td>
<td>5,212,442</td>
<td>1,457,234</td>
</tr>
<tr>
<td>Pseudo R²</td>
<td>0.410</td>
<td>0.410</td>
<td>0.410</td>
<td>0.391</td>
<td>0.394</td>
</tr>
<tr>
<td>Log pseudolikelihood</td>
<td>-7,616,368</td>
<td>-7,616,368</td>
<td>-7,616,000</td>
<td>-2,194,000</td>
<td>-610,700</td>
</tr>
<tr>
<td>Wald Chi-square (d.f.)</td>
<td>173,283 (277)</td>
<td>173,283 (277)</td>
<td>3,600,000 (277)</td>
<td>1,000,000 (276)</td>
<td>300,000 (245)</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.

** p < 0.01; * p < 0.05; † p < 0.10; two-tailed tests.
Table 6: Summary statistics and correlations of variables in single-firm, work tie analysis.

| (1) | Work tie (0/1) | Mean | St. Dev. | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|-----|----------------|------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| (2) | Graduated from same law school (0/1) | 0.04 | 0.18 | 0.033 * | - |
| (3) | Same practice (0/1) | 0.25 | 0.43 | 0.074 * | 0.001 | - |
| (4) | Work in same office (0/1) | 0.26 | 0.44 | 0.171 * | 0.09 * | -0.02 * | - |
| (5) | Same gender (0/1) | 0.46 | 0.50 | 0.01 | 0.008 | 0.01 | 0.012 * | - |
| (6) | Same race (0/1) | 0.80 | 0.40 | 0.013 * | 0.031 * | 0.006 | 0.022 * | 0.054 * | - |
| (7) | Educational prestige differential | 42.0 | 43.6 | -0.02 * | -0.18 * | -0.04 * | -0.12 * | 0.024 * | -0.14 * | - |
| (8) | # of partners from associate's law school | 11.0 | 9.1 | 0.017 * | 0.117 * | -0.02 * | 0.077 * | -0.01 | 0.037 * | -0.16 * | - |
| (9) | Mean DV for all dyads with i or j | 0.02 | 0.01 | 0.067 * | 0.043 * | 0.049 * | 0.102 * | 0.027 * | 0.123 * | -0.09 * | 0.09 * |

n= 30,525 dyads, *p < 0.05
Table 7. Rare events logit models of associate-partner work ties.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawyers graduated from same law school (0/1)</td>
<td>0.886 **</td>
<td>0.485 **</td>
<td>0.468 **</td>
<td>0.513 **</td>
<td>0.513 **</td>
<td>0.504 **</td>
</tr>
<tr>
<td></td>
<td>(0.157)</td>
<td>(0.160)</td>
<td>(0.159)</td>
<td>(0.166)</td>
<td>(0.165)</td>
<td>(0.182)</td>
</tr>
<tr>
<td>Associate and Partner Work in Same Practice Area (0/1)</td>
<td>1.16 **</td>
<td>1.16 **</td>
<td>1.17 **</td>
<td>1.12 **</td>
<td>1.12 **</td>
<td>1.12 **</td>
</tr>
<tr>
<td></td>
<td>(0.086)</td>
<td>(0.086)</td>
<td>(0.086)</td>
<td>(0.086)</td>
<td>(0.086)</td>
<td>(0.171)</td>
</tr>
<tr>
<td>Associate and Partner Work in Same Office (0/1)</td>
<td>2.485 **</td>
<td>2.483 **</td>
<td>2.496 **</td>
<td>2.431 **</td>
<td>2.435 **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.104)</td>
<td>(0.104)</td>
<td>(0.106)</td>
<td>(0.107)</td>
<td>(0.187)</td>
<td></td>
</tr>
<tr>
<td>Associate Partner are Same Gender (0/1)</td>
<td>0.117</td>
<td>0.115 †</td>
<td>0.066</td>
<td>0.066</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.085)</td>
<td>(0.085)</td>
<td>(0.086)</td>
<td>(0.093)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same race (0/1)</td>
<td>0.188</td>
<td>0.212</td>
<td>0.110</td>
<td>0.114</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.116)</td>
<td>(0.118)</td>
<td>(0.119)</td>
<td>(0.156)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational prestige differential</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.001</td>
<td>(0.001)</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of partners from associate's law school</td>
<td>0.005</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td>0.005</td>
<td>(0.005)</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.005)</td>
<td>(0.005)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean DV for all dyads with i or j</td>
<td>44.7 **</td>
<td>44.7 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5.33)</td>
<td>7.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-3.99 **</td>
<td>-5.67 **</td>
<td>-5.88 **</td>
<td>-6.03 **</td>
<td>-6.75 **</td>
<td>-6.76 **</td>
</tr>
<tr>
<td></td>
<td>(0.044)</td>
<td>(0.104)</td>
<td>(0.154)</td>
<td>(0.190)</td>
<td>(0.198)</td>
<td>(0.288)</td>
</tr>
<tr>
<td>Sample</td>
<td>All lawyers</td>
<td>All lawyers</td>
<td>All lawyers</td>
<td>All lawyers</td>
<td>All lawyers</td>
<td>All lawyers</td>
</tr>
<tr>
<td>Clustering</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>i and j</td>
</tr>
<tr>
<td>N (dyads)</td>
<td>30,525</td>
<td>30,525</td>
<td>30,525</td>
<td>30,525</td>
<td>30,525</td>
<td>30,525</td>
</tr>
<tr>
<td>Log pseudolikelihood</td>
<td>-2,872</td>
<td>-2,422</td>
<td>-2,419</td>
<td>-2,418</td>
<td>-2,389</td>
<td>-2,389</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.

** ρ < 0.01; * ρ < 0.05; † ρ < 0.10; two-tailed tests.
Table 8. Robustness checks: Dyadic analysis of associate-partner work ties.

<table>
<thead>
<tr>
<th></th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
<th>(12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawyers graduated from same law school (0/1)</td>
<td>0.509 **</td>
<td>0.792 **</td>
<td>0.596 **</td>
<td>0.525 **</td>
<td>0.425 *</td>
<td>0.443 *</td>
</tr>
<tr>
<td></td>
<td>(0.182)</td>
<td>(0.279)</td>
<td>(0.215)</td>
<td>(0.181)</td>
<td>(0.189)</td>
<td>(0.204)</td>
</tr>
<tr>
<td>Associate and Partner Work in Same Practice Area (0/1)</td>
<td>1.12 **</td>
<td>1.20 **</td>
<td>1.10 **</td>
<td>1.17 **</td>
<td>1.23 **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.173)</td>
<td>(0.192)</td>
<td>(0.178)</td>
<td>(0.176)</td>
<td>(0.178)</td>
<td></td>
</tr>
<tr>
<td>Associate and Partner Work in Same Office (0/1)</td>
<td>2.438 **</td>
<td>2.577 **</td>
<td>2.392</td>
<td>2.505 **</td>
<td>2.616 **</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.187)</td>
<td>(0.310)</td>
<td>(0.190)</td>
<td>(0.186)</td>
<td>(0.198)</td>
<td></td>
</tr>
<tr>
<td>Associate Partner are Same Gender (0/1)</td>
<td>0.003</td>
<td>0.133</td>
<td>0.074</td>
<td>0.105</td>
<td>0.085</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.143)</td>
<td>(0.110)</td>
<td>(0.096)</td>
<td>(0.090)</td>
<td>(0.092)</td>
<td></td>
</tr>
</tbody>
</table>

Male Partner - Male Associate
-0.011
(0.10)

Female Partner - Female Associate
0.020
(0.15)

Female Partner - Male Associate
-0.394 **
(0.147)

Same race (0/1)
0.132 | 0.304 | 0.222 | 0.170 | 0.155 | 0.105
(0.15) | (0.314) | (0.191) | (0.146) | (0.149) | (0.138)

Educational prestige differential (law school)
0.002 | 0.002 | 0.004 * | 0.001 | 0.001 | 0.001
(0.00) | (0.002) | (0.002) | (0.001) | (0.001) | (0.002)

Educational prestige differential (undergrad institution)
-0.001
(0.002)

# of partners from associate's law school
0.000 | -0.006 | 0.004 | 0.001 | -0.002 | 0.000
(0.00) | (0.011) | (0.006) | (0.005) | (0.005) | (0.005)

Mean DV for all dyads with i or j
46.3 ** | 53.0 ** | 35.0 ** | 43.5 ** | 46.4 ** | 48.8 **
(7.52) | (11.9) | (8.67) | (7.61) | (7.82) | (8.92)

Constant
-6.74 ** | -6.02 ** | -4.42 ** | -6.70 ** | -6.50 ** | -6.43 **
(0.28) | (0.502) | (0.301) | (0.289) | (0.291) | (0.479)

Practice area fixed effects
No
No
No
No
Yes
Yes

Law school fixed effects
No
No
No
No
Yes
Yes

Sample
All
Same practice
Same office
All
All
All

Clustering
i and j
i and j
i and j
i and j
i and j
i and j

N (dyads)
30,525
7,570
7,792
25,850
30,525
30,525

Log pseudolikelihood
-2,387
-961
-1,651
-2,102
-2,346
-2,323

Robust standard errors in parentheses.
** ρ < 0.01; * ρ < 0.05; † ρ < 0.10; two-tailed tests.
Figure 1. Mean Employee Law School Rank and Profits (000s) per Equity Partner (PPEP) by Firm’s Vault 100 Prestige Score in 2008.
Figure 2. Proportion of Co-Worker Dyads Assigned to the Same Practice Area.

* Differences in same firm and same firm-office mean proportions are significantly different (p<0.01, two-tailed).

Figure 3. Proportion of Positive Work Ties across Partner-Associate Dyads.

* All within-group differences in mean proportions are significantly different (p<0.05, two-tailed).