A Genealogical Approach to Organizational Life Chances: The Parent-Progeny Transfer among Silicon Valley Law Firms, 1946–1996

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Data on Silicon Valley law firms over a 50-year period were used to study the genealogy of organizational populations and its consequences for organizational life chances when a member of an existing firm leaves to found a new firm. Hypotheses and subsequent analysis suggest that the transfer of resources and routines between a parent organization and its progeny decreases life chances for the parent firm and increases life chances for the progeny. The results are contingent on the founder's previous position in the parent firm and time since the parenting event. In addition, I find that progeny have lower life chances when the parent is a failing firm, when there are multiple parents, and when the founder is a former senior partner of a large law firm.●

Organizational sociologists have long considered the effects of the transfer of resources and routines from old to new organizations. The 1980s featured a relatively brief but active line of research that attempted to establish a framework for understanding new organizations as the progeny of parent organizations. Brittain and Freeman (1980) examined factors that lead organizational members to leave and start new organizations. Other scholars, such as McKelvey (1982), Carroll (1984a), Astley (1985), Freeman (1986), Hannan and Freeman (1986), and Romanelli (1989), have continued research in this vein. Each of these studies posited that some amount of a parent organization's "blueprint" would carry over to the new organization through the career experiences of the offspring's founders. Yet, despite this past work, at least two areas remain underdeveloped. First, there has been little formalization linking a genealogical framework with many of the key outcome variables of organizational sociology, such as an organization's structure, ability to adapt, likelihood of success (e.g., survival, profitability), innovativeness, or the attainment of organizational members. Consequently, scholars have overlooked another possible answer to one of the key questions raised in the past twenty-five years of organizational sociology, "Why do so many organizations look alike?" (Meyer and Rowan, 1977; Hannan and Freeman, 1977). Second, while past efforts have emphasized the source of progeny, there have been few attempts to assess empirically the consequences of transferring resources and routines from parent organizations to their progeny. As a result, there are studies of the types of firms that parent new firms (Brittain and Freeman, 1980) and of the effect of founders' previous affiliations and experiences on new firms' success (e.g., Brüderl, Preisendorfer, and Ziegler, 1992; Burton, Sørensen, and Beckman, 2002) but no bridge between the two.

This paper addresses each of these unexplored areas by developing and testing a framework to understand organizational life chances, one of the key outcomes in organizational sociology. Often associated with population ecology, organizational failure (or, more accurately, survival) lies at the core of many other perspectives, such as the contingency (Lawrence and Lorsch, 1967) and neoinstitutional perspectives (Meyer and Rowan, 1977). Unlike past research on the source of new organizations, this paper constructs a framework for understanding the fate of both parent and progeny organizations by looking at the personnel that leave the par-

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ent to found a new firm. I used data on Silicon Valley law firms from 1946 to 1996 to examine how organizational genealogy affects the likelihood of organizational failure. This context enabled me to trace the previous organizational affiliations of a law firm's founders, in order to examine the effects of resource expropriation from firms as they are transferred, through the founder, to the new firms they found.

THE PARENT-PROGENY TRANSFER

Organizations often emerge from other organizations (Stinchcombe, 1965a), and a number of studies have focused on the relationship between organizations and their members who leave to found new organizations (Brittain and Freeman, 1986; Freeman, 1986; Hannan and Freeman, 1986; Hannan and Freeman, 1989; see also Romanelli, 1991). This genealogy is significant: organizational founders, as Freeman (1986) emphasized, are constrained by their organizational experiences, and, consequently, the new organizational forms are constrained by the characteristics of the founders' previous organization, population, and employment (Astley, 1985; Hannan and Freeman, 1989; Romanelli, 1989). Thus, progeny are more likely to replicate organizations of a previous generation than are other newly founded organizations. But conceptual and empirical work to test and advance these insights into the parenting event and its consequences is still underdeveloped (see Barnett, 1997, for a partial treatment). The work that has been done falls into three veins of research: organizational speciation, the interorganizational transfer of routines and resources, and the role of social capital in the success of progeny.

The focus on organizational speciation, briefly outlined above, all but came to a halt by end of the 1980s, as a second line of inquiry grew, emphasizing the interorganizational transfer of routines and resources as a result of the mobility of personnel (e.g., Pfeffer and Leblebici, 1973). This work focused on the role of interorganizational transfer in the strategy and success of the new organization. Executive mobility researchers examined how mobility across organizations affects social structure and the diffusion of information and skills (Aldrich and Pfeffer, 1976; Boeker, 1997; Kraatz and Moore, 2002), as well as the competition between firms (Sørensen, 1999a). The findings of these studies suggest that a genealogical framework can be useful in examining the transfer of strategy and structure from parents to progeny.

The third stream of research emphasizes the role of career histories in explaining variance in the success of new organizations (Gunz and Jalland, 1996; Shane and Khurana, 1999; Higgins and Gulati, 2000; Burton, Sørensen, and Beckman, 2002). The founders' previous affiliations may play a crucial role. Burton, Sørensen, and Beckman (2002) and Higgins and Gulati (2000) argued that a new organization's constituents use a founder's past organizational affiliations to decide how much of their financial and social capital to invest. This suggests that, in genealogical terms, social capital is one of the critical resources transferred from parents to their progeny.

Each of the research streams outlined above, when considered in the context of a population of firms with some probability of parenting new organizations, provides a foundation to theorize about the relationships among parent organizations, progeny organizations, organizational life chances, and population diversity. Whenever personnel leave one organization to found a new organization in the same population, there is a transfer of resources and routines. Not only does this imply that the offspring has some advantages over peers that lack parent organizations, but it suggests that the founding event poses a hazard to the parent: an offspring's founders leave with many of the firm-specific skills, insights, and resources (e.g., customers, social capital, ties to external constituents) that help sustain the parent. The parenting event disrupts social structure, sensemaking, and socialization. Externally, a parenting event may alter the social position of the parent firm by changing or severing ties to constituents and otherwise disrupting its position in the market's social structure. The volume of resources and routines transferred to the new entity is likely to be a function of the founder's position in the parent organization. The more critical the potential founder's position is, the more likely that the parent organization's resources and routines will be affected as that founder exits to entrepreneurship.

Organizations have a set of routines that are manifest in their production function, marketing strategy, internal labor market, social organization, and idiosyncratic knowledge of their market position (cf. Thompson, 1967; Hannan and Freeman, 1989). Day-to-day actions are captured by routines and codified by social and operational rules (Cyert and March, 1963; Zucker, 1977; Nelson and Winter, 1982; Zhou, 1993). Routines are those things that signify what an organization knows and what it can do (see Amburgey, Kelly, and Barnett, 1993). Distinct from Durkheim's (1938) conception of "social facts" or Weber's (1968) concept of bureaucracy, in which routines and rules are objectified, I follow Hannan and Freeman's (1984) and Amburgey, Kelly, and Barnett's (1993) concept, which emphasizes the aspect of routines that concerns extensive interactions with the environment (see also Nelson and Winter, 1982). Changes in organizational routines increase the risk of failure, at least in the short term, if the routines are close to the organization's core (Singh, House, and Tucker, 1986). Not only do changes in routines create a need to relearn day-to-day action, it also requires reallocating internal resources and reconfiguring external ties, such as relations with customers or clients. In this way, an organization's routines are often coupled with its resources.

On average, higher-ranked individuals are more tightly coupled with an organization's life chances than are lower-ranked individuals, so that the volume of the transfer of routines and resources is likely to be a function of the potential founder's role in the parent organization. The position held by the founder in the parent correlates to that person's ties to external resources and also reflects how important he or she is in maintaining the production function, marketing strategy, internal labor market, social capital, and idiosyncratic knowledge of the parent organization. Thus, the higher the

previous rank, the greater the parent-progeny transfer, the more hazardous the parenting event is to the parent, and the more beneficial the parenting event is to the offspring.[1]

The parent-progeny transfer involves a reallocation of human capital, ties to constituents, and social capital in the parent firm of the departing founder. Typically, an individual leaving to found a new firm is motivated to reduce any financial or social start-up costs by expropriating resources and routines from the parent firm. The departure of a high-ranking employee, significant in itself for the parent firm, carries additional ramifications. A departure to found a new firm creates more uncertainty and anxiety about the fate of the parent firm than does a departure due to retirement or interorganizational mobility. Also, as Rajan and Zingales (2001) suggested, high-ranked employees are more likely to take lower-ranked workers with them when they leave.

Similar to Amburgey, Kelly, and Barnett's (1993) finding that disruptions in routines increase firm failure rates, particularly in the short term, the parent-progeny transfer disrupts the reproduction of social organization in the parent. Furthermore, the transfer means a loss of firm-specific expertise and resources that is costly for the parent firm to replace. The resources not only include human capital but the social capital that is now being deployed to the benefit of a new organization. Thus, my first hypothesis simultaneously addresses the parenting event and the volume of the parent-progeny transfer:

H1a: The greater the parent-progeny transfer (the higher the previous rank of founders), the greater the likelihood of parent failure.

This hypothesis distinguishes my framework from earlier studies on executive departures (e.g., Grusky, 1960; Carroll, 1984b; Haveman, 1993) by examining the effect of a parenting event on the parent organization while controlling for all other departures at the same rank within the parent organization. The departure of personnel to start new organizations should increase the likelihood of failure for the parent organization more powerfully than does the departure of those who do not found progeny.

Organizations occupy particular niches or roles, aligning them with resources and relations with constituents (Hannan and Freeman, 1977; White, 1981; McPherson, 1983; Podolny, 1993; Zuckerman, 1999). The parenting event is likely to create a niche overlap between the parent and offspring that arises from similarity in scope (Baum and Singh, 1994). Parents and progeny may directly compete, and the transfer of resources may in some cases be characterized by expropriation. If so, progeny that replicate a parent's product and service offerings present a greater threat than progeny that are not direct competitors. Even if progeny founders do not intend to be in direct competition, however, their departure may disrupt the parent's routines and lower its viability, to a degree corresponding to the similarity between the parent and the offspring.

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The assumption that the founder's importance is represented by rank may limit the number of organizations to which the present conceptualization applies. In some organizations, an employee's rank may be independent of the degree of his or her importance to the parent organization's fate. In these settings, capturing the volume of the transfer would require a modification but would not alter the conclusions of the genealogical framework.

H1b: The parent failure rate due to a parenting event increases with the similarity of the parent's and offspring's scope (their niche overlap).

H1b allows a distinction to be made between the effect of the volume of transfer and the effect of niche overlap. If the effect of the volume of transfer is simply due to niche overlap, taking niche overlap into account will attenuate the volume-of-transfer effect.

The effect of parenting may change over time. If the parenting event is a disruption to the resources and routines of the parent organization in the same way that Hannan and Freeman (1984) and Amburgey, Kelly, and Barnett (1993) noted, the negative impact of the parent-progeny transfer on the parent is likely to be greatest at the moment of that event (see Singh, House, and Tucker, 1986; Haveman, 1992, for conditions under which change may be beneficial to an organization). The effect of the disruption should diminish with time, as the parent organization rebuilds internal processes, reorders responsibilities, adjusts the production function, finds new talent, retrains existing members, reassures old customers, and finds new customers. The parent must make internal adjustments, and time is required to reestablish its position and role in the social structure of the market.

H2: The likelihood of parent failure due to a parenting event decreases with time.

Although the parent-progeny transfer is hazardous to the parent organization, progeny may have several advantages that make them less likely to fail than de novo organizations. First, progeny do not have to learn every new role, decision criterion, method of dispute resolution, exception to rules, or other specialized skills associated with the "liability of newness" (Stinchcombe, 1965b). A template for compensation systems and for the division of labor already exists. Members of progeny organizations have more developed relations of trust than members of de novo organizations. Also, progeny employees are more likely to be cognizant of or embedded in the network of social relations within the population, as well as the set of relations between the population and its constituents (Higgins and Gulati, 2000; Burton, Sørensen, and Beckman, 2002). As a consequence, progeny have more ties to customers and clients, as well as more information about opportunities. The more a founding team is represented by members with a previous organizational affiliation within the focal population, the more easily the offspring should be able to leverage its resources and routines. Moreover, this effect should be the strongest for the transfer of routines, since a few founders with a relevant affiliation may find it difficult to influence a large number of inexperienced founders.

H3a: The greater the proportion of founding members coming from parent organizations, the lower the likelihood of failure, as compared with de novo organizations.

Hannan (1998) and Carroll and Hannan (2000) suggested that the advantages highlighted in hypothesis 3a are most helpful during the early years of the organization's life cycle. This

endowment provides new firms with advantages in the start-up phase that will dissipate over time.

H3b: An offspring's likelihood of failure is lowest in the early years of its existence.

The volume of the parent-progeny transfer should explain differences in life chances among progeny. The higher the rank of the founder's previous position, the more resources and routines the offspring should possess. Therefore, among progeny,

H4: The greater the parent-progeny transfer (the higher the previous rank of founders), the lower the likelihood of progeny failure.

When considering the characteristics of the parent firm, another implication of a genealogical approach is that poor resources and routines, as well as helpful ones, are transferred from parents to progeny. An unsuccessful parent may pass on firm-specific routines that are inappropriate for its market position (ecological niche). Being an offspring of a failing parent may also mean that there are few resources to pass on (e.g., social capital, clients). In a zero-sum competitive scenario, the parent and progeny directly compete over resources in the same market position, making the success of the offspring inversely related to the success of the parent. Because of the parent-progeny transfer, however, the parent's fitness or viability is likely to be "imprinted" on the offspring. Progeny that arise from failing parent organizations are, in turn, more likely to fail.

H5: Progeny firms whose founders recently departed from failed parent organizations are more likely to fail.

Research by Higgins and Gulati (2000) and Burton, Sørensen, and Beckman (2002) has suggested that the prominence of a parent firm increases the likelihood of an offspring's success in launching and maintaining its business, but neither considered the transfer of routines. Although having an established parent may be advantageous in some respects, established parents are not necessarily the best source of routines. Larger and older firms often have a mix of beneficial resources and suboptimal routines (Barnett, 1997). The routines of large and older organizations often make them competitively weaker than smaller organizations, but they use their status, institutional influence, and slack resources to compensate (Barnett, 1997; cf. Michels, 1962). Haveman (1993) found that many of the advantages of large organizations attempting to move into new markets result from their market power more than their internal structure. A similar argument holds for older organizations, which are also more likely to be structurally inert (Hannan and Freeman, 1984). Established organizations tend to have routines that support a more complex and bureaucratic (i.e., specialized) structure (Blau, 1970; Blau and Schoenherr, 1971) and may be less helpful to a smaller and younger start-up that would benefit from routines that are less complex and more malleable.

One way to resolve this apparent contradiction between the advantages and disadvantages of having an established parent is to disaggregate the effect of having an established par-

ent by the rank of the potential founder. Established firms should be most advantageous to those potential founders who are able to maximize the transfer of resources but minimize the transfer of outdated, irrelevant, or competitively weak routines. Also, founders about which the market knows relatively little would benefit most from the status associated with an established firm. With respect to organizational rank, this leads to what may initially appear to be a counterintuitive prediction: the advantage drawn from having an established parent is attenuated by the rank of the potential founder. Higher-ranked employees are more likely to be more invested in the parent firm's routines and are often responsible for creating, enacting, and enforcing them (Hall and Schneider, 1972). They are more likely to be imprinted with useless or harmful routines that would follow the potential founder to the offspring organization. At the same time, there is greater market uncertainty surrounding lower-ranked employees, making an association with an established firm a more meaningful signal to their potential constituents.

H6a: The larger the parent firm, the lower the offspring's likelihood of failure.

H6b: Parent-firm size is less advantageous the greater the parent-progeny transfer is (the higher the previous rank of founders).

H7a: The older the parent firm, the lower the offspring's likelihood of failure.

H7b: Parent-firm age is less advantageous the greater the parent-progeny transfer is (the higher the previous rank of founders).

Taking a genealogical perspective on organizations also raises the compelling question of the effect on progeny of multiple parents. These organizations should experience different failure rates than progeny with a single parent, although the direction of this effect is not immediately obvious. If we assume that resources are much more influential than routines in the transfer from parents to progeny, then having multiple parents is beneficial, as it increases the resources available to the progeny. Having multiple parents may expand the social networks of the founders, yielding a greater accumulation of resources. If routines are key to the transfer from parents to progeny, however, having multiple parents can be costly. To the extent that each parent's routines are firm-specific, there is an increased likelihood that the offspring's founders must negotiate and coordinate the different models of organization. The extensive literature on organizational demography suggests that having multiple parents is likely to be a source of conflict as founders attempt to resolve these differences (O'Reilly, Caldwell, and Barnett, 1989; Wiersema and Bird, 1993; Williams and O'Reilly, 1998; Chatman and Flynn, 2001).[2]

H8: Progeny with multiple parents have a higher likelihood of failure than progeny with a single parent.

I tested the hypotheses with data on Silicon Valley law firms from 1945 to 1996. This population is especially well-suited to a genealogical analysis of organizational life chances. First,

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I thank an anonymous reviewer for insightfully proposing the logic for this hypothesis.

the organizational context is one in which members hold the key assets (human and social capital), ensuring that a transfer of resources and routines includes components valuable to the operation of the organizational form. Second, the data sources allow a researcher to trace the lineage of population members across the entire observation period.

METHODS

Context: Law Firms

I collected data from the annual *Martindale-Hubbell Law Directory* from 1945 through 1996 for law firms and attorneys in Silicon Valley, California. As Suchman (1993, 2000) and Escher and Morze (1998) noted, Silicon Valley is a relatively self-contained market for legal services in Northern California, with scant legal activity before World War II. Silicon Valley comprises the following ten cities: Redwood City, Menlo Park, Palo Alto, Los Altos, Mountain View, Sunnyvale, Santa Clara, Cupertino, Campbell, and San Jose. In 1946, the area had only six law partnerships. By 1996, Silicon Valley hosted 209 law partnerships employing 2,375 active attorneys. For each law firm, I coded its founding date (its first appearance in the directory) to alleviate any left-censoring. The directories list attorney and law firm characteristics and, when followed across time, provide information on the life chances of law firms and whether the founder was previously affiliated with another Silicon Valley law firm (see also Phillips, 2001; Phillips and Zuckerman, 2001). I collected data on 513 law partnerships across the fifty years, which comprises every firm listed with more than one active attorney—solo practitioners were excluded because they cannot be parent firms and lack distinctive hierarchical positions. Of these firms, 137, or 27 percent, were founded by attorneys who had a previous affiliation with a Silicon Valley firm.

Name partners, regular partners, and associates. In general, law firms have two positions: associates and partners. Associates enter the firm directly from law school or after a one-year judicial clerkship. They generally work under the firm's partners, who leverage the work of associates by hiring them at a given salary and billing them out to the firm's clients at multiples of that salary. Associates are considered for promotion to partnership after a period in which they work under the supervision of the partners, receive training, and exercise increasing responsibility (Smigel, 1969; Nelson, 1988; Galanter and Palay, 1991). Those not promoted must leave the firm (the "Cravath" or "up-or-out" promotion system). Partners own the firm and share in its profits. The transition from associate to partner is generally accompanied by increased income, as well as a new functional role within the firm. Partnership encompasses several new tasks and responsibilities, emphasizing skills in firm management that transcend the traditional tasks involved with practicing law as an associate (Nelson, 1988).

Within the partnership ranks, a further distinction is made between regular partners and name partners, those after whom a firm is named, who typically hold the most prestigious and powerful position. For example, in a hypothetical five-partner firm named Jones and Smith, Jones and Smith

are the name partners, while the other three partners are regular partners. Name partners are either the firm's founders or partners who have contributed to the firm's revenues and public image so significantly that the name partners change the organizational identity to include the new name. Thus, unlike a regular partner, a name partner is a key component of a firm's identity. Name partners sit on the executive committee of the firm and directly influence strategic directions (cf. Smigel, 1969). In addition, name partners typically interact with the firm's most important clients, establishing bonds of trust. Thus, the departure of a name partner would cause internal disruption, loss of clients, and a reason for external constituents to reconsider the firm's identity.

A firm's regular partners, while lower in rank than name partners, are traditionally co-owners of the firm and are vital to the firm's functioning. In many law firms, regular partners actually manage the day-to-day activities of the firm, as well as maintain ties with the firm's clientele. A typical partner advises both clients and colleagues, supervises associates, meets with outside lawyers, attends firm meetings, writes journal or review articles, and teaches law school courses (Smigel, 1969; Osborne, 1998; Haserot, 1999). Partners must also develop financial skills and discipline, as their compensation (in contrast to that of a salaried associate) is directly linked to their net income.

The lowest position in a traditional law firm is that of associate. While the contribution of an associate is invaluable, it is also more mundane and less firm-specific than the tasks of the partner or name partner. Among the associate's tasks are research, writing briefs, conferring with partners, fellow associates, and sometimes clients, drafting letters, revising corporate charters and bylaws, preparing trial memos, and taking depositions (Smigel, 1969).

I have outlined a hierarchical framework with only three ranks (associate, partner, and name partner), but many law firms use minor gradations within the levels of associate (junior associate and senior associate) and partner (junior partner and senior partner). Although tenure within the associate and partner ranks increases the amount of resources and routines an attorney would take if starting a new firm, the variation between the three ranks is much more significant than variation within each rank. Most associates, regardless of tenure, are unaware of the responsibilities, activities, and intrafirm dynamics that correspond to the rank of partner (Boardman, 1996). In fact, there is empirical evidence that performance as an associate is a poor indicator of performance as a partner (O'Flaherty and Siow, 1995).

Finally, in recent years large law firms have increased the number of job titles and positions, creating career destinations within law firms that deviate from the traditional up-or-out promotion system (see Reichman and Sibley, 1999). Among these positions are permanent associate, part-time attorney, staff attorney, and counsel. Here, these positions are considered associates, as the amount of resources and routines at their command is most consistent with the asso-

ciate rank. Following similar logic, recent variation in types of partners—income partner, non-equity partner, and equity partner—are considered partners.

De novo, de alio, and merger firms. At least three other origins are possible for new Silicon Valley law firms (aside from the parent-progeny relationship): de novo and de alio firms and mergers. In my study, de novo firms, those in which the founders have no previous organizational experience within the focal population (Hannan et al., 1998; Carroll and Hannan, 2000), are the reference group to which I compared the fate of progeny law firms. I consider a firm de novo if its founders have no (measurable) Silicon Valley law firm experience, although they may have had experience outside Silicon Valley. De alio law firms are branch offices of law firms headquartered in other cities, such as San Francisco. Here, founders may have had resources and routines at their disposal, but their resources and routines did not pertain to the Silicon Valley legal market. These "immigrant" firms should have a higher likelihood of failure, as they lack the resources and routines (such as social capital) that are idiosyncratic to Silicon Valley (Escher and Morze, 1998). Finally, a law firm may also be founded by merger. According to Phillips (2001), who used the same data, only nine of the 513 firms were founded as mergers. This relatively low fraction of cases (1.75 percent) is likely due to the constantly expanding market for legal services in Silicon Valley. Accordingly, I did not specify my model with mergers as an alternative event.

Dependent Variable: Law Firm Failure

The first year that a firm appears in the *Martindale-Hubbell Law Directory* was considered the year of founding. The year that a firm is no longer listed, or only has one attorney (i.e., is no longer a partnership) was considered the year of failure. Firms had to remain as "failed" for three years to be coded as failed firms, to ensure that inadvertent deletions from the directory were not incorrectly coded as failures. Occasionally, firms in the directory change their name, address, or phone number, but I did not consider any of these changes as constituting firm failure unless all three simultaneously occurred. A dichotomous variable for firm failure was coded one for the respective year. At the time of failure, the firm was removed from the risk set.

Independent Variables

Silicon Valley progeny. A law firm was coded as an offspring (a dummy variable) if one member of a firm's founding team was (1) a name partner, (2) a partner, or (3) an associate at another Silicon Valley law firm within the three years prior to founding. Through this coding scheme, 137 of the 513 Silicon Valley law firms were identified as progeny. This is a conservative definition, as it limits progeny to those firms that have recent Silicon Valley lineage. Since an unknown number of de novo firms undoubtedly were founded by attorneys with experience outside of Silicon Valley (an assumption too labor-intensive to verify), my measure implicitly considered those resources and routines specific to Silicon Valley law firms. In addition to the single dummy variable, I coded indi-

vidual dummy variables for each hierarchical position, as well as a continuous variable that gives the proportion of the founding team with Silicon Valley parents. To test the difference between progeny with single and multiple parents, I created an additional dummy variable for whether the offspring had more than one parent. Of the 137 progeny, 19 had more than one Silicon Valley parent.

Parenting event. Four dummy variables were created to code whether a firm becomes a parent firm and to note the rank of the attorney that departed to start a new firm. The first dummy variable was coded one at the year in which any of the firm's members left to start a new firm, and zero otherwise. The next three variables captured the volume of the parent-progeny transfer by rank: (1) the year in which a name partner left to start a new firm; (2) the year in which a regular partner left to start a new firm; and (3) the year in which an associate left to start a new firm. I also coded the proportion of name partners, regular partners, and associates that left to found an offspring firm in a particular year. These variables captured the magnitude of the parenting event at each rank.

To test whether progeny founders who leave to practice law in the same practice areas as their parent firms increase the likelihood that the parent will fail, I constructed four dummy variables. Each was coded as a type of parenting event. The first dummy variable equaled one if the progeny practiced in up to 25 percent of the parent firm's practice areas. The second captured practicing in more than 25 percent but less than 50 percent of the parent's practice areas; the third, between 50 and 75 percent; and the fourth, between 75 and 100 percent. The greater the similarity in scope, and the greater the niche overlap, the more likely that the parent experienced a loss of resources and disruption of routines. To capture the temporal effect of the parenting event, I recorded the number of years since the occurrence of the most recent parenting event. A *parent failure* variable was constructed to test whether the failure of the parent firm affects the failure of the progeny. For the models in which the risk set was only progeny, I coded a dummy variable as one if the parent firm failed within three years preceding the founding of the offspring, and zero otherwise. For progeny with more than one parent, I coded the dummy variable as one if at least one of the parents failed. In measuring *firm age*, I considered the year in which the law firm was first listed in the directory to be the law firm's first year.

Control Variables

Population density was calculated as the log of the total number of law firms in Silicon Valley for a given year. The models presented here were also estimated using the linear and quadratic transformation of density, as well as the founding density (Carroll and Hannan, 1989). Although none of the transformations of density altered the variables of interest, the use of logged density maximized model fit. *Firm size* was operationalized in two ways: (1) the total number of full-time partners and (2) the total number of full-time associates. Given that the distribution of firm sizes was log-normal

(skewed to reflect a few relatively large firms), the log of each size variable was coded.

Studies of law firms conventionally consider the ratio of associates to partners. Profits primarily come from the firm's ability to leverage the skills of the partners with the efforts of the associates. As a measure of firm leverage, the ratio of associates to partners serves as a proxy for firm performance (Galanter and Palay, 1991). It also represents the law firm's structure and degree of specialization, which varies by the type of law practiced (Kordana, 1995; Sherer, 1995). A well-specified model that includes the ratio of associates to partners as an interaction effect requires the inclusion of the inverse of the number of partners instead of the number of partners (Bradshaw and Radbill, 1987), but there is no theoretical justification for including the inverse of the number of partners in a model of law firm failure. Rather, using partnership and associate size as separate components, instead of the ratio of associates to partners, provides a theoretically consistent model with easily interpretable results, especially because in these data, the ratio was highly correlated with the number of associates ($r = .74$) but not correlated with the number of partners ($r = -.06$). It is better to examine the effect of the number of associates, while controlling for the number of partners, than to insert the associate-to-partner ratio separately or as an interaction effect.

In addition to measuring logged size, I coded a dummy variable for firms of two attorneys *(very small firm)*. Three rationales guided this coding. First, very small firms may face fundamentally different environments, have different goals (e.g., a preference not to grow), and accordingly possess resources and routines that are different from other law firms. Second, I wanted to ensure that failures due to parenting events were not the result of partners leaving small partnerships. Third, very small organizations are likely to occupy extremely fragile positions (Hannan, 1998; Phillips and Sørensen, 2003), making a successful response to environmental changes difficult (Levinthal, 1991; Dobrev and Carroll, 2001).

A clear alternative hypothesis to my prediction that parenting events increase failure rates is that departure by rank causes failure. Thus, it was important to control for departures. For each year, I coded the number of attorneys of each rank that left the firm at year's end, then divided each number by the total number at the respective rank in the beginning of that year *(attrition by rank)*. Each variable was constructed to vary between 0 (no departures at that rank) and 1 (complete departure at that rank). Since the effect of departures was likely to be a function of the size of the firm—large firms may suffer less from the same proportional departure—I tested each of the models with attrition by size interactions.

Firm scope was operationalized as a continuous variable from 0 to 1. It captured the number of law practice areas that a law firm reported in the *Martindale-Hubbell Law Directory* in a particular year, divided by the total number of practice areas that were reported across all firms in that year. This measurement allowed a relative measurement of firm scope. I also

included a quadratic term for firm scope to test for curvilinear effects. Two dummy variables were used to code whether a firm was de alio (a *branch office*). The first variable equaled one if the firm was a branch office of a San Francisco-based firm. The second variable equaled one if the firm was a branch office from any other city besides San Francisco (e.g., New York, Los Angeles).

Competition and interaction among lawyers relies heavily on whether their firm serves individual clients as well as corporate clients (Heinz and Laumann, 1982). Firms serving individuals have a different social system from those that focus solely on corporate customers. Thus, a variable was coded one if any if a firm's areas of practice were identified by Heinz and Laumann (1982) as *personal plight law*.

To control for the professional experience of the firm's founding team, I calculated the mean age for the set of founders for each law firm. If the volume of the transfer was only due to professional experience, then the indicators for the volume of the parent-progeny transfer would be severely attenuated by this control variable. To capture experience heterogeneity, I also included the standard deviation of the founding team's age. Past research suggests that age heterogeneity increases group conflict and turnover, outcomes that could be detrimental to a new law firm. I also controlled for period effects with four dummy variables coded to capture activity before 1970, between 1970 and 1986, between 1987 and 1991, and between 1992 and 1996. Before 1970, there was little change in the social and economic landscape of Silicon Valley. Beginning around 1970, however, the area experienced a period of rapid growth, lasting until the stock market drop and subsequent recession (1987–1991). Finally, the years 1992 to 1996 represent the beginning of the post-recession era. To capture any additional changes in the environment that may have affected the resources available to law firms, I coded the yearly San Jose Metropolitan Statistical Area (MSA) unemployment rate from the U.S. Census.

Case law on rules surrounding law partnership dissolution is occasionally examined in the courts. Among the more contentious issues is determining how to divide assets after a law firm's dissolution and how to define and sanction attorneys who "client steal" (Hillman, 1990). Using a Lexis-Nexis search, I coded the number of dissolution-related cases in each year, to get an indicator of changes in the legal environment that might affect the likelihood that lawyers leave one firm to found another.

Method of Estimation

I estimated the organizational failure of Silicon Valley law firms with piecewise constant exponential models. In these models, I split the time axis into time periods according to firm age. Although the models assumed that transition rates were constant with each of the time periods, base rates varied freely across them. The assumption is that period-specific baseline rates can vary across time periods, but the covariates have the same (proportional) effects (Blossfeld and Rohwer, 1995; Sørensen, 1999b).

The resulting models gave an age-dependent constant (a "y-intercept") for each time piece of the model. There are different strategies for choosing the appropriate time periods. Some theoretical predictions may require that the time periods take on particular values. For this paper's models, I drew on Phillips (2001), who assumed no a priori knowledge of age dependence. The null model was an exponential model without time periods, in which it was assumed that rates were time invariant. The y-intercepts included in the model were statistically significant with respect to a chi-squared model improvement test.

RESULTS

Parenting Events, Progeny, and Law Firm Failure

Table 1 presents the means, standard deviations, minimums, and maximums for the variables for all 4107 Silicon Valley law firm years. Table 2 compares the mean and standard deviation of the founding team's age, as well as founding size, across type of progeny. The table demonstrates that progeny do not have more general experience, to the extent that age reflects general experience, or larger founding team sizes. In fact, it appears that progeny begin at a disadvantage with

Table 1

Descriptive Statistics for All Silicon Valley Law Firms, 1946–1996 (N = 4106)

Variable	Mean	S.D.	Min.	Max.
Firm failure	0.08	0.27	0.00	1.00
Density	138.93	56.69	6.00	209.00
Log(partners)	1.29	0.75	0.00	4.47
Log(associates)	0.90	0.96	0.00	5.33
Very small firm	0.19	0.49	0.00	1.00
Firm age	9.80	9.59	1.00	51.00
Relative scope	0.15	0.10	0.01	0.63
SF branch	0.11	0.31	0.00	1.00
Non-SF branch	0.13	0.34	0.00	1.00
Personal plight law	0.85	0.35	0.00	1.00
Name partner attrition	0.03	0.11	0.00	1.00
Regular partner attrition	0.04	0.14	0.00	1.00
Associate attrition	0.11	0.24	0.00	1.00
Mean of founders' ages	42.49	6.16	31.00	71.00
S.d. of founders' ages	6.02	5.34	0.00	27.58
Any parenting event	0.16	0.37	0.00	1.00
Prop. of name progeny	0.001	0.018	0.00	0.67
Prop. of non-name progeny	0.001	0.022	0.00	1.00
Prop. of assoc. progeny	0.002	0.036	0.00	1.00
Parent-progeny overlap .00–.25	0.14	0.34	0.00	1.00
Parent-progeny overlap .25–.50	0.01	0.09	0.00	1.00
Parent-progeny overlap .50–.75	0.01	0.07	0.00	1.00
Parent-progeny overlap .75–1.0	0.12	0.11	0.00	1.00
Firm is progeny	0.24	0.43	0.00	1.00
Prop. of founders w/SV parents	0.24	0.36	0.00	1.00
Firm has one parent	0.21	0.41	0.00	1.00
Firm has more than one parent	0.02	0.15	0.00	1.00
San Jose unemployment rate	7.31	1.55	3.40	9.90
Court cases on dissolutions	1.45	0.93	0.00	4.00
Period: 1971 to 1985	0.43	0.50	0.00	1.00
Period: 1986 to 1991	0.20	0.40	0.00	1.00
Period: 1992 to 1996	0.23	0.42	0.00	1.00

respect to each of these indicators, except that progeny with many parents tend to be larger. Thus, any advantage progeny have is likely to be a result of the particular experience embodied in the transfer of resources and routines. The bottom half of table 2 reveals that name-partner progeny are not more experienced than regular partners (each of the differences in mean founding team age by rank is statistically significant). This finding reinforces the importance of distinguishing by rank and not considering rank as a proxy for general professional experience.

Table 3 presents the piecewise hazard rate estimation of law firm failure. Model 1 includes the firm and population controls. Logged density is significant, reflecting the role of com-

Table 2

Demographic Descriptives of All Law Firms by Progeny Type*

	Mean founding team age	S.d. of founding team age	Founding team size
De novo	43.12	6.47	2.89
Branch (de alio)	41.73	5.61	3.51
One parent	41.11	4.69	2.86
Many parents	39.45	4.92	4.63
Name-partner progeny	40.87	5.25	2.85
Regular-partner progeny	42.54	5.48	3.46
Associate progeny	39.05	5.44	3.77

* Each of the differences in the mean team founding age is significant at the $p < .05$ level.

Table 3

Maximum Likelihood Estimates of Silicon Valley Law Firm Failure, 1946–1996*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age: 0–6 years	−5.76	−6.07	−5.95	−5.96	−5.83	−6.19	−6.18	−6.03
	(1.23)	(1.23)	(1.24)	(1.24)	(1.23)	(1.24)	(1.23)	(1.25)
Age: 6–10 years	−5.94	−6.26	−6.13	−6.21	−6.16	−6.40	−6.67	−6.27
	(1.24)	(1.24)	(1.24)	(1.25)	(1.23)	(1.24)	(1.25)	(1.26)
Age: 10–21 years	−6.42	−6.77	−6.70	−6.79	−6.73	−6.93	−6.99	−6.91
	(1.24)	(1.24)	(1.25)	(1.25)	(1.24)	(1.25)	(1.26)	(1.26)
Age: 21+ years	−6.20	−6.58	−6.45	−6.65	−6.64	−6.77	−6.77	−6.78
	(1.25)	(1.26)	(1.27)	(1.27)	(1.26)	(1.27)	(1.27)	(1.29)
Log(density)	0.77**	0.82**	0.80**	0.85**	0.71**	0.86**	0.86**	0.81**
	(0.27)	(0.27)	(0.27)	(0.27)	(0.27)	(0.27)	(0.27)	(0.28)
Log(partners)	−0.49**	−0.20	−0.21	−0.24*	−0.25*	−0.21	−0.22	−0.28**
	(0.13)	(0.13)	(0.14)	(0.14)	(0.13)	(0.13)	(0.13)	(0.14)
Log(associates)	−0.41**	−0.13	−0.14	−0.19*	−0.19*	−0.12	−0.11	−0.19*
	(0.10)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Very small firm	0.33**	0.36**	0.33**	0.31**	0.30*	0.35**	0.36**	0.26
	(0.15)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
Relative scope	6.80**	6.79**	6.89**	7.21**	6.90**	6.72**	7.00**	7.40**
	(2.50)	(2.50)	(2.54)	(2.51)	(2.51)	(2.50)	(2.52)	(2.56)
(Relative scope)^2	−17.97**	−18.03**	−19.69**	−19.91**	−19.13**	−17.94**	−18.40**	−21.07**
	(7.36)	(7.31)	(7.55)	(7.51)	(7.48)	(7.36)	(7.38)	(7.64)
SF branch	0.39**	0.45**	0.48**	0.47**	0.42**	0.41**	0.40**	0.43**
	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)	(0.21)
Non-SF branch	0.38**	0.33*	0.29	0.27	0.33*	0.29	0.29	0.22
	(0.18)	(0.18)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
Personal plight	−0.10	−0.09	−0.08	−0.13	−0.10	−0.09	−0.10	−0.12
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
Mean founder age	0.02*	0.01	0.01	0.02**	0.02**	0.01	0.01	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
S.d. of founder age	−0.01	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Name partner attrition	0.70	2.96**	3.79**	3.17**	3.06**	3.02**	3.03**	3.88**
	(0.44)	(1.00)	(1.18)	(1.03)	(1.02)	(1.00)	(1.00)	(1.18)

Table 3 *(Continued)*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Name-partner attr. x log(part.)		−1.64•	−2.76••	−1.83••	−1.76••	−1.69••	−1.70•	−2.78•
		(0.87)	(1.13)	(0.90)	(0.89)	(0.87)	(0.87)	(1.12)
Name-partner attr. x log(assoc.)		−1.97•	−3.23••	−2.08•	−2.03•	−1.94•	−1.93•	−3.10••
		(1.11)	(1.38)	(1.13)	(1.12)	(1.11)	(1.12)	(1.38)
Regular-partner attrition	−2.33••	−4.51••	−4.15•	−4.60••	−4.32•	−4.54••	−4.63••	−4.38••
	(0.92)	(2.28)	(2.20)	(1.29)	(2.23)	(2.25)	(2.27)	(2.23)
Regular-partner attrition x log(part.)		−0.80	−1.01	−0.77	−0.69	−0.72	−0.72	−0.84
		(1.06)	(1.07)	(1.06)	(1.07)	(1.05)	(1.05)	(1.05)
Regular-partner attrition x log(assoc.)		3.98••	3.90••	4.16••	3.89••	3.92••	3.96••	4.05••
		(1.31)	(1.28)	(1.33)	(1.29)	(1.30)	(1.31)	(1.33)
Associate attrition	−0.40	3.28••	3.87••	3.35••	3.30••	3.29••	3.26••	3.80••
	(0.27)	(0.89)	(0.99)	(0.89)	(0.89)	(0.89)	(0.89)	(0.98)
Associate attr. x log(part.)		−2.30••	−2.41••	−2.36••	−2.25••	−2.34••	−2.36••	−2.50••
		(0.75)	(0.78)	(0.75)	(0.75)	(0.74)	(0.75)	(0.78)
Associate attr. x log(assoc.)		−3.61••	−4.42••	−3.60••	−3.63••	−3.61••	−3.57••	−4.20••
		(1.22)	(1.36)	(1.22)	(1.22)	(1.21)	(1.21)	(1.34)
Name-partner parenting rate			6.25••					3.63••
			(1.30)					(1.36)
Partner parenting rate			3.75•					3.03
			(2.25)					(2.48)
Associate parenting rate			−17.07••					−17.09••
			(5.81)					(7.03)
Associate parenting rate x log(assoc.)			13.61••					12.11••
			(3.52)					(4.19)
Par.-progeny similarity .00–.25				0.42•				0.43•
				(0.23)				(0.23)
Par.-progeny similarity > .25–.50				1.65••				1.39••
				(0.37)				(0.39)
Par.-progeny similarity > .50–.75				2.00••				1.99••
				(0.39)				(0.40)
Par.-progeny similarity > .75–1.0				1.91••				1.65••
				(0.25)				(0.27)
Any parenting event					1.41••			
					(0.20)			
Parenting event clock					−0.10••			
					(0.04)			
Prop. of founding team w/parents						−0.33••		−0.34••
						(0.16)		(0.16)
Age: 0–6 by progeny							−0.48••	
							(0.18)	
Age: 6–10 by progeny							0.50	
							(0.39)	
Age: 10–21 by progeny							−0.22	
							(0.55)	
Age: 22+ by progeny							−0.73	
							(1.08)	
SJ MSA unemployment rate	−0.03	−0.04	−0.04	−0.05	−0.05	−0.04	−0.04	−0.04
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Dissolution court cases	−0.09	−0.07	−0.08	−0.09	−0.09	−0.07	−0.07	−0.09
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Period: 1971–1986	−0.32	−0.38	−0.45	−0.41	−0.41	−0.40	−0.43	−0.49
	(0.46)	(0.46)	(0.46)	(0.46)	(0.46)	(0.46)	(0.46)	(0.47)
Period: 1987–1991	−0.40	−0.45	−0.49	−0.43	−0.43	−0.47	−0.48	−0.50
	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.50)	(0.51)
Period: 1992–1996	−0.50	−0.54	−0.62	−0.51	−0.51	−0.54	−0.55	−0.57
	(0.56)	(0.56)	(0.56)	(0.57)	(0.57)	(0.56)	(0.56)	(0.57)
Firms	513	513	513	513	513	513	513	513
Events (firm failure)	333	333	333	333	333	333	333	333
Firm-years	4107	4107	4107	4107	4107	4107	4107	4107
Log-likelihood	−617.34	−584.21	−568.69	−552.32	−561.98	−581.85	−579.30	−543.35
D.f.	22	28	32	34	30	29	32	37

• $p < .10$; •• $p < .05$.
* Standard errors are in parentheses.

petition in increasing the likelihood of law firm failure. Large firms, by either measure, had a lower likelihood of failure. Consistent with Dobrev and Carroll (2001), the variable for very small law firms is positive and significant, suggesting that very small firms face different environmental conditions and are more fragile than a continuous measure of size would indicate. The quadratic specification for scope is statistically significant for both terms across the eight models. Similar to findings expected by a resource partitioning model (Carroll, 1985), firms with mid-range scope faced the greatest competitive pressure. The model modestly suggests that firms experience a liability of newness. Although the magnitude of the effects is not large, the younger the firm, the higher the likelihood of failure. Consistent with Escher and Morze (1998), firms with home offices in cities other than Silicon Valley (de alio firms) were more likely to fail. Finally, firms with older founders were more likely to fail.

Model 2 introduces interactions between attrition by rank and firm size.[3] The results suggest that attrition at the partner level operates differently than attrition at the name-partner and associate level. For name-partner and associate attrition, small to average-sized firms were more likely to fail. In large firms, however, attrition slightly improved a firm's life chances. To illustrate, figure 1a displays the relationships among name-partner attrition rates, partnership size (the number of partners), and law firm failure. For law firms with a partnership size equal to the population's mean size (the bold line), increasing attrition increased hazard rates. This effect was even greater for firms with a smaller partnership size (the thin line). For larger firms (the dotted line), attrition slightly decreased failure chances.

By comparison, figure 1b shows the relationships among regular-partner attrition, associate size (the number of associates), and law firm failure. While regular-partner attrition reduced the failure chances of firms with average and below-average associate size, large firms suffered severely from regular-partner attrition. This suggests that in large, highly leveraged law firms (many associates per partner), partners are difficult to replace. In smaller firms, name partners are more critical to the firm than regular partners. It is possible that in small firms, regular partners not selected as name partners are not contributing to the firm's success and leave.

In each model of table 3, associate attrition was only problematic for small firms. Large firms benefited from associate attrition. This is an artifact of the up-or-out promotion system, in which one sign of a profitable law firm is its ability to attract associates who are willing to compete in a tournament for the unlikely promotion to partner. Those not promoted leave the firm. This is a common feature of large law firms (Phillips, 2001) and suggests that in some cases, high associate attrition reflects a law firm's desirability and strength.

Models 3–8 tested the first three hypotheses. Using the variables for parenting rate by rank, model 3 shows support for hypothesis 1a, the greater the parent-progeny transfer, the greater the likelihood of parent failure, although the effect for

3
Each of these results was replicated with raw counts of departures instead of proportional counts.

Figure 1a. The relationship between name-partner attrition rates, partnership size, and law firm failure in Silicon Valley law firms, 1946–1996.

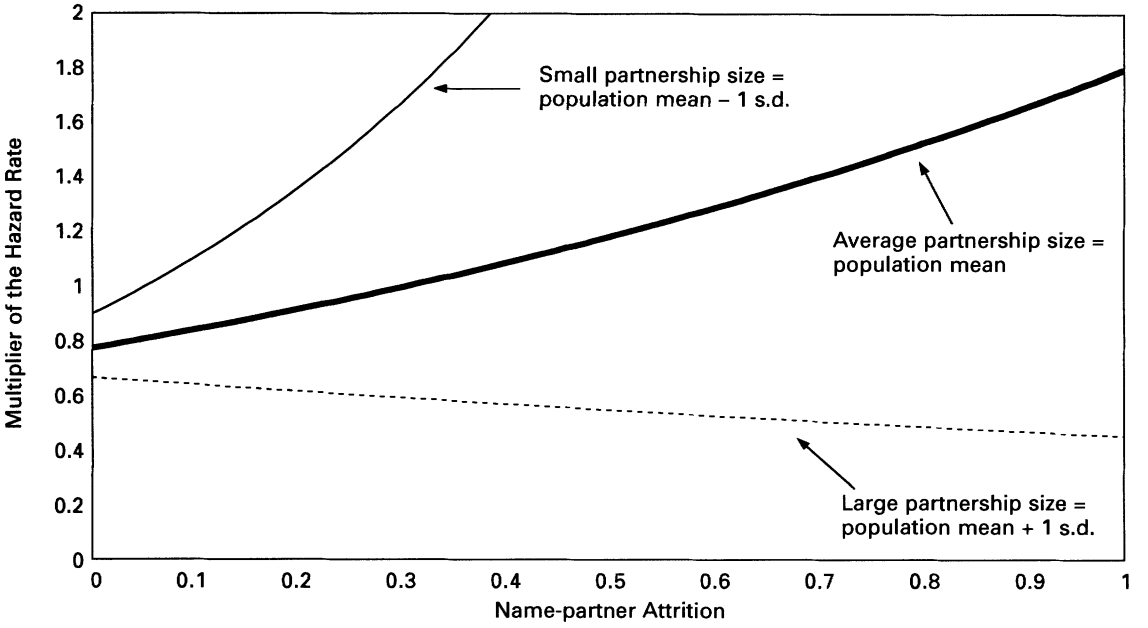
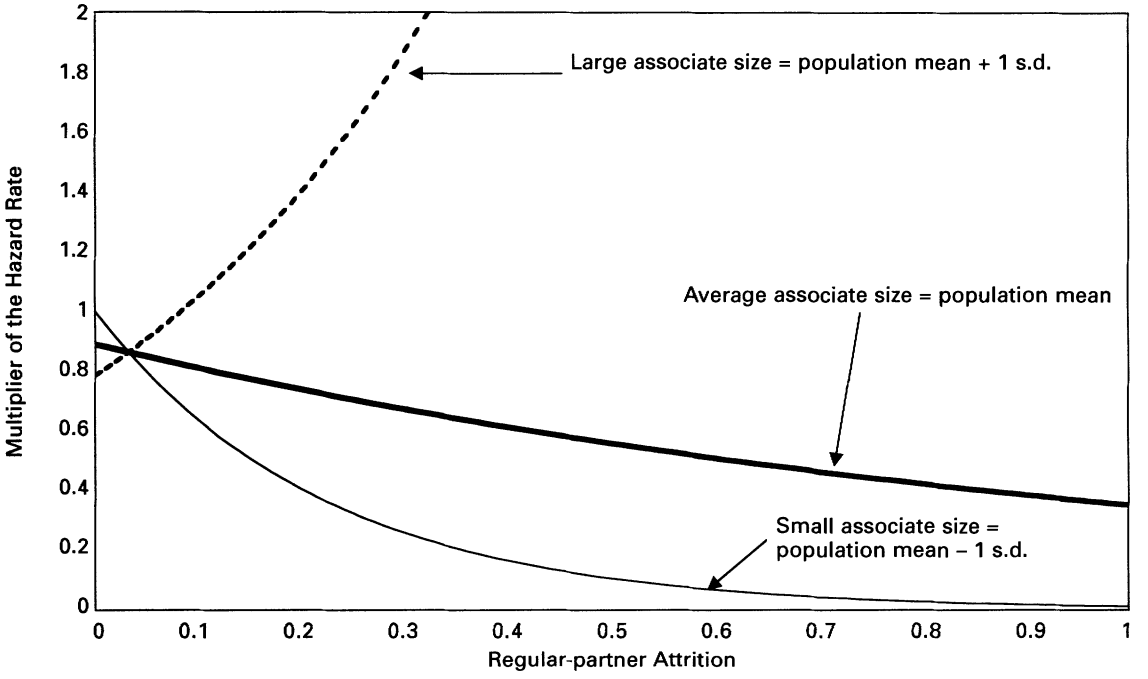


Figure 1b. The relationship between regular-partner attrition, associate size, and law firm failure in Silicon Valley law firms, 1946–1996.



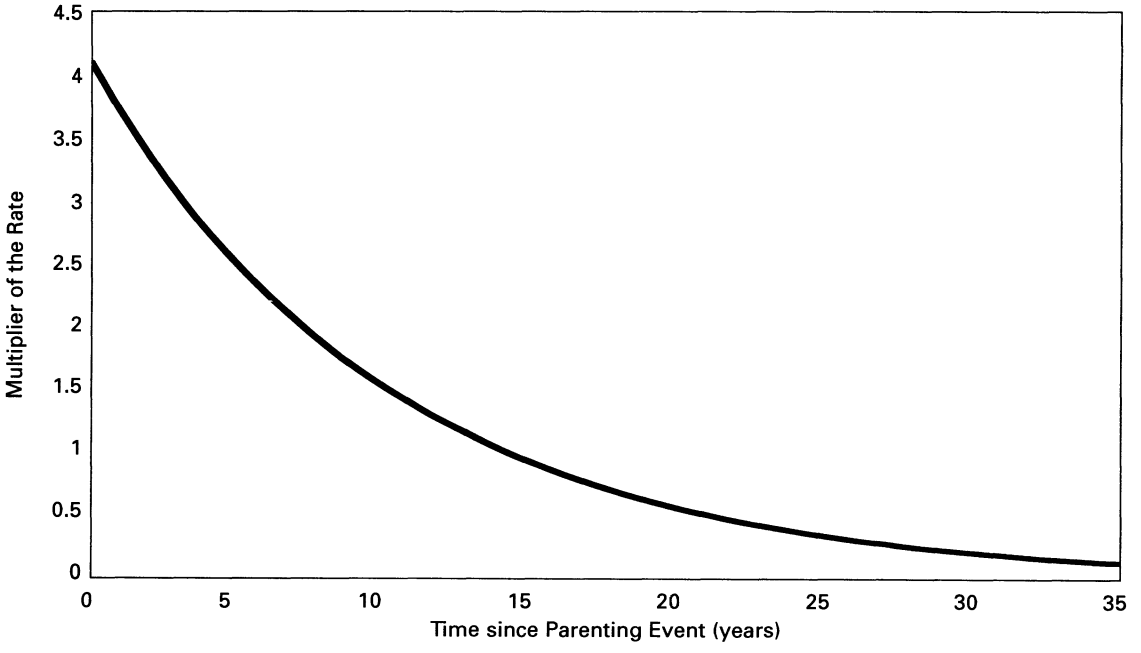
associate progeny parenting was a function of firm size. When name partners leave to found new firms, the parent firm is susceptible to failure ($t = 4.81$). The effect for regular-partner founding was marginally significant ($t = 1.67$). The trend for associate progeny founding was similar to the name-partner progeny finding, but the effect reversed for the smallest firms. When an associate of a small firm left to found a new firm, the parent firm experienced lower failure

rates. This finding suggests that associate-founded progeny and their small parents may have mutually beneficial relationships. I tested for whether the name-partner or regular-partner progeny rate was contingent on firm size but found no statistically significant effects.

Hypothesis H1b, that the failure rate due to parenting increases with the similarity of the parent and progeny's scope, is supported in model 4, using the four indicators of overlap of parent-progeny practice area. The estimates suggest that the greater the similarity, or niche overlap, between parent and progeny, the greater the likelihood of the parent's failure. There is no statistically significant difference between the 50–75 percent and greater than 75–100 percent indicators. The statistically meaningful differences were from 0 to 25 percent, greater than 25 up to 50 percent, and greater than 50 percent overlap.

Model 5, includes two variables, the dummy variable for any type of parenting event and the covariate for the time since a parenting event (a clock). The coefficient for the clock is negative and significant ($t = -2.47$), supporting H2, that the likelihood of failure due to a parenting event decreases over time after the parenting event. I also tested for whether, after an initial disruption, the effect of the parenting clock is nonlinear, by using higher-order specifications of the clock but found that the linear specification accurately captured the effect. Figure 2 illustrates the short- and long-term effect of a parenting event with a graph of the multiplier of the failure rate due to the parenting event as time passes. The multiplier of the hazard rate is the independent multiplicative effect of a variable on what a rate would have been otherwise. Figure 2 demonstrates the initial effect of the parenting event. After the sharp rise (over a fourfold increase), the multiplier of the

Figure 2. Multiplier of the failure rate due to time since parenting event.



rate falls with the passage of time, suggesting that the parent firm slowly adjusts to the parenting event.

Model 6 includes indicators for the proportion of the firm's founding team with Silicon Valley parents to test whether a higher proportion lowers the likelihood of failure (H3a). H3a was supported (t = –2.14). The higher the proportion of the founding team members from a parent firm, the lower the likelihood of failure. In model 7, I separated the effect of firm age for law firm progeny to test H3b (that an offspring's likelihood of failure is lowest in the early years of its existence), using a routine that allowed me to specify variables whose effects vary between time pieces.[4] As predicted in hypothesis 3b, progeny had a lower likelihood of failure over the first six years (t = –2.66) than did de novo firms. Model 8 is the full model, listing each variable of interest. The parenting event and clock are not included, since the scope similarity measure is the parenting event disaggregated by similarity of scope. The effects are largely similar to the earlier models, with no changes in the support for the hypotheses.

Volume of the Parent-Progeny Transfer and Progeny Failure

I tested hypotheses 4 through 8 using law firm progeny as the risk set to understand how the volume of the parent-progeny transfer and the characteristics of the parent affect the likelihood of firm failure. Table 4 presents descriptive statistics for the progeny law firms. Compared with the overall

Table 4

Descriptive Statistics for Silicon Valley Law Firm Progeny, 1946–1996 (N = 935)

Variable	Mean	S.D.	Min.	Max.
Firm failure	0.08	0.27	0.00	1.00
Density	159.99	42.06	21.00	209.00
Log(partners)	1.15	0.61	0.00	3.14
Log(associates)	0.79	0.80	0.00	3.29
Small firm	0.18	0.39	0.00	1.00
Firm age	6.91	6.19	1.00	33.00
Relative scope	0.12	0.07	0.01	0.50
SF branch	0.06	0.24	0.00	1.00
Non-SF branch	0.12	0.33	0.00	1.00
Personal plight law	0.78	0.41	0.00	1.00
Name-partner attrition	0.03	0.11	0.00	1.00
Regular-partner attrition	0.05	0.17	0.00	1.00
Associate attrition	0.11	0.24	0.00	1.00
Mean of founders' ages	40.58	6.10	31.67	62.00
S.d. of founders' ages	4.79	4.10	0.00	20.51
Parent failed	0.27	0.44	0.00	1.00
Progeny is name partner	0.67	0.47	0.00	1.00
Progeny is regular partner	0.30	0.46	0.00	1.00
Progeny has multiple parents	0.10	0.30	0.00	1.00
Parent firm log(parent size)	2.09	1.01	0.69	5.78
Parent firm log(age)	2.29	0.87	0.00	4.21
San Jose unemployment rate	7.51	1.45	4.40	9.90
Court cases on dissolutions	1.42	0.93	0.00	4.00
Period: 1971 to 1985	0.40	0.49	0.00	1.00
Period: 1986 to 1991	0.24	0.43	0.00	1.00
Period: 1992 to 1996	0.32	0.47	0.00	1.00

4
Essentially, interactions with firm age estimate a separate coefficient for the variable of interest (whether the firm is a progeny) within each age range.

data set, progeny are smaller, younger, narrower in scope, and less likely to practice corporate law.

The structural similarity between progeny and their parents was assessed in terms of similarity in practice areas (scope) and leverage ratios (the number of associates divided by the number of partners). As argued, the higher the rank of the founder(s), the greater the transfer of resources and routines from the parent to the progeny. This should be reflected in the structural similarity across generations as a function of the founder's previous rank. Results from t-tests show that name-partner progeny had greater similarity to parent firms in their leverage ratios ($t = 6.24$) and provided services in a greater percentage of their parent's practice areas ($t = 9.24$). Surprisingly, regular-partner progeny and associate progeny were statistically similar. It is possible that the former are replicating the parent's core practice areas, while associate progeny focus on specialties on the periphery. This would mask the actual difference between regular-partner progeny and associate progeny. Unfortunately, the data did not allow for this level of discrimination.

The five models of table 5 tested hypotheses 4–8. Model 1 presents the control variables. The effect for logged density

Table 5

Maximum Likelihood Estimate of Silicon Valley Law Firm Progeny Failure, 1946–1996*

Variable	(1)	(2)	(3)	(4)	(5)
Age: 0–6 years	–10.15	–8.95	–8.98	–7.89	–6.97
	(3.60)	(3.86)	(3.90)	(3.90)	(3.94)
Age: 6–10 years	–9.81	–8.45	–8.49	–7.40	–6.44
	(3.59)	(3.87)	(3.91)	(3.91)	(3.96)
Age: 10–21 years	–10.57	–9.02	–9.06	–8.02	–7.03
	(3.62)	(3.92)	(3.96)	(3.96)	(4.00)
Age: 21+ years	–9.82	–8.02	–8.04	–6.94	–5.93
	(3.65)	(3.97)	(4.00)	(3.98)	(4.03)
Log(density)	1.38	1.11	1.22	1.29	1.16
	(0.78)	(0.83)	(0.85)	(0.84)	(0.85)
Log(partners)	0.47	0.55	0.58•	0.55	0.43
	(0.33)	(0.34)	(0.34)	(0.34)	(0.35)
Log(associates)	–0.29	–0.28	–0.27	–0.25	–0.22
	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)
Small firm	0.90••	0.90••	0.89••	1.03••	1.00••
	(0.35)	(0.35)	(0.35)	(0.35)	(0.35)
Relative scope	3.40	3.21	3.01	3.42	2.57
	(2.42)	(2.45)	(2.48)	(2.47)	(2.55)
SF branch	0.42	0.17	0.22	0.30	0.46
	(0.60)	(0.65)	(0.65)	(0.64)	(0.65)
Non-SF branch	0.66	0.55	0.37	0.59	0.61
	(0.42)	(0.42)	(0.44)	(0.44)	(0.44)
Personal plight	0.02	–0.04	0.00	0.01	–0.00
	(0.34)	(0.34)	(0.35)	(0.36)	(0.36)
Mean founder age	0.04•	0.05••	0.06••	0.07••	0.07••
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S.d. founder age	0.02	0.04	0.04	0.04	0.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)
Prop. of founders that are progeny	–0.40	–0.31	–0.18	–0.14	–0.30
	(0.45)	(0.46)	(0.47)	(0.47)	(0.49)
Name-partner attrition	6.40••	6.02•	5.66•	5.30•	5.24•
	(3.27)	(3.22)	(3.18)	(3.16)	(3.16)
Name-partner attr. x log(part.)	–6.24•	–6.06	–5.88	–5.49	–5.45
	(3.64)	(3.63)	(3.59)	(3.55)	(3.56)

Table 5 *(Continued)*

Variable	(1)	(2)	(3)	(4)	(5)
Name-partner attr. x log(assoc.)	1.32	1.70	1.78	1.77	1.78
	(1.67)	(1.69)	(1.70)	(1.74)	(1.76)
Regular-partner attrition	–6.14	–5.74	–3.96	–4.10	–3.30
	(11.55)	(11.93)	(10.39)	(10.77)	(10.32)
Reg.-partner attrition x log(part.)	–3.47	–3.96	–4.83	–4.81	–5.69
	(5.57)	(5.75)	(5.41)	(5.50)	(5.31)
Reg.-partner attrition x log(assoc.)	6.60	6.89	6.75	6.60	7.02
	(4.37)	(4.45)	(4.25)	(4.07)	(4.31)
Associate attrition	2.09	2.03	2.10	1.95	2.09
	(1.45)	(1.53)	(1.55)	(1.61)	(1.60)
Associate attr. x log(part.)	–3.85**	–4.04**	–3.95**	–4.06**	–3.77**
	(1.56)	(1.69)	(1.71)	(1.77)	(1.73)
Associate attr. x log(assoc.)	–0.22	–0.08	–0.23	0.02	–0.34
	(1.86)	(1.99)	(2.02)	(2.08)	(2.06)
Progeny: name partner		–0.82**	–1.12**	–3.41**	–3.49**
		(0.38)	(0.43)	(1.01)	(1.00)
Progeny: regular partner		–0.62*	–0.64*	–0.65*	–0.77**
		(0.34)	(0.34)	(0.35)	(0.36)
Parent failed		0.85**	0.66*	0.67**	0.72**
		(0.31)	(0.34)	(0.33)	(0.33)
Parent firm log(size)			–0.20	–0.59**	–0.62**
			(0.19)	(0.27)	(0.26)
Parent firm log(size) x name partner				0.83**	0.77**
				(0.38)	(0.36)
Parent firm log(age)			–0.18	–0.38	–0.41
			(0.19)	(0.29)	(0.29)
Parent firm log(age) x name partner				0.23	0.23
				(0.35)	(0.35)
Multiple parents					0.89*
					(0.52)
SJ unemployment rate	0.01	0.02	0.02	–0.00	–0.02
	(0.11)	(0.12)	(0.12)	(0.12)	(0.12)
Dissolution court cases	–0.12	–0.13	–0.13	–0.14	–0.14
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Period: 1971–1986	–1.52	–1.66	–1.85	–1.93	–1.85
	(1.14)	(1.20)	(1.22)	(1.21)	(1.22)
Period: 1987–1991	–1.54	–1.66	–1.83	–1.88	–1.80
	(1.23)	(1.28)	(1.30)	(1.29)	(1.30)
Period: 1992–1996	–2.07	–2.23	–2.42	–2.37	–2.31
	(1.39)	(1.45)	(1.48)	(1.47)	(1.49)
Firms	137	137	137	137	137
Events (firm failure)	74	74	74	74	74
Firm-years	935	935	935	935	935
Log-likelihood	–123.40	–118.54	–117.28	–113.81	–112.46
D.f.	28	31	33	35	36

* $p < .10$; ** $p < .05$.
* Standard errors are in parentheses.

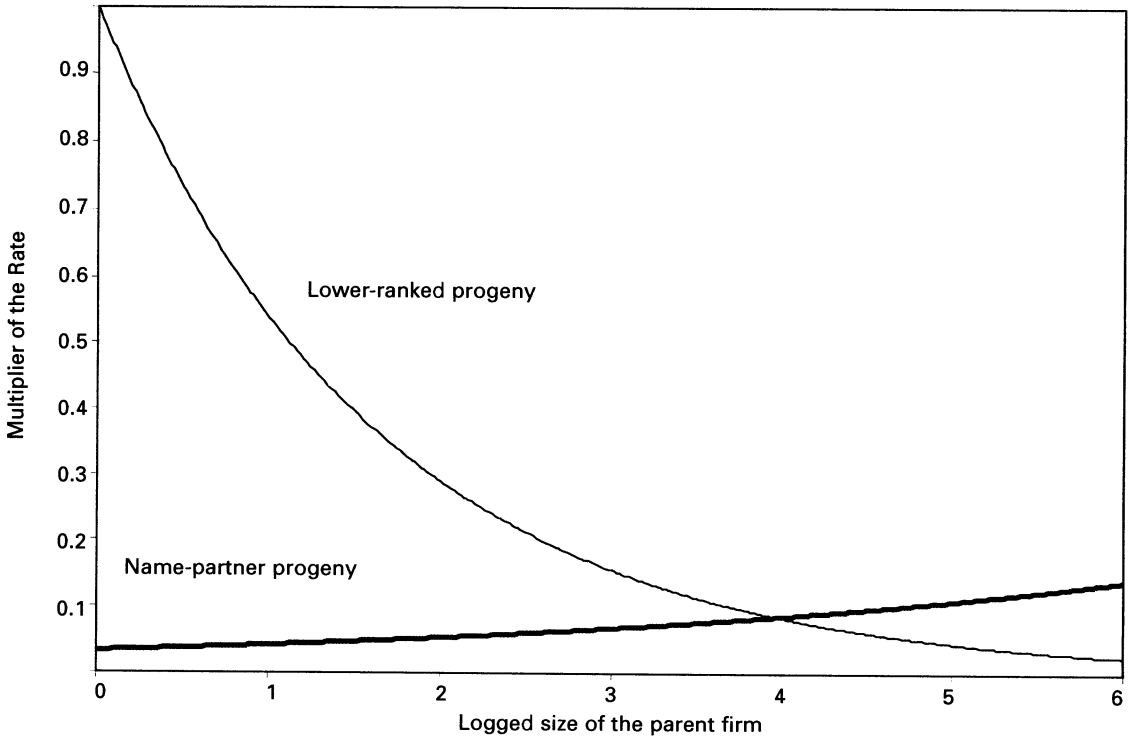
is not statistically significant, suggesting that progeny are less sensitive to increases in diffuse competition than other types of law firms. Of the three size indicators, only the indicator of small size is consistently significant. Having high founding team age and name partner attrition were detrimental to progeny, while associate attrition in large firms reduced the likelihood of failure.

Model 2 estimates the effects of parent failure and strength of the parent-progeny transfer on the likelihood of failure of progeny law firms. Dummy variables for whether the offspring was one founded by a former name partner or regular partner supports the claim in hypothesis 4 that the greater the parent-progeny transfer, the lower the likelihood of fail-

ure. With associate progeny as the reference group, name-partner progeny had the lowest likelihood of failure (t = –2.16). Progeny founded by former regular partners had a lower likelihood of failure, but the coefficient was only marginally significant (t = –1.82). Hypothesis 5, that progeny whose founders recently departed failed parent organizations are more likely to fail, is also supported in model 2. Progeny who were founded as the parent organization failed were more likely to fail (t = 2.74). This result supports the notion that the conditions that plague the parent firm (poor routines, low social or financial capital) are transferred to the progeny, but other explanations are also possible. For example, the parenting event may have been sufficiently disruptive that both parent and offspring failed. If this is true, an interaction with firm age would show that the failure of progeny of failed parents is highest when the progeny is young, but additional analyses disconfirmed this alternative.

Hypotheses 6 and 7 were tested in models 3 and 4. In model 3, I entered the main effects for parent firm size and age. While both are negative, indicating that large and old parents provide some advantages, neither is statistically significant. In model 4, I interacted parent size and age with whether the offspring was a name-partner progeny. The trend is similar in both cases but statistically significant only for firm size. Large parent firms lowered a progeny's likelihood of failure, but coming from a large firm penalized name-partner progeny. Figure 3 graphically displays the relationship between the size of the parent firm and the type of progeny. The findings support hypotheses 6a and 6b, with stronger support for H6b. Senior members from large parent firms who left to

Figure 3. Multiplier of the failure rate due to parent firm and former rank of progeny founder.



start new firms had a lower chance of surviving in their new venture. Hypotheses 7a and 7b are not supported, however, suggesting that a parent firm's age does not have a statistically significant effect on the life chances of its offspring.

Model 5 presents all of the variables, with an indicator for whether the offspring had multiple parents. With single-parent progeny as a reference category, model 5 tested whether firms with more than one parent were more likely to fail (hypothesis 8). The variable was positive and marginally significant, indicating that hypothesis 8 was modestly supported. This is likely due to the relatively small number of progeny with multiple parents (19 out of 137), reducing the statistical power of the estimation.

An Alternative Explanation: Progeny as Products of Failing Firms

It is possible that parenting events are direct results of a firm's poor performance. If so, then the logic behind the parent-progeny transfer is in question. The increased failure rates associated with a parenting event (table 3) may not be due to the parenting event, as I hypothesized (hypothesis 1). Instead, the parenting event may be a consequence, rather than a cause, of parent failure. This "sinking ship" alternative has appeal but has at least one major drawback. Failing firms are less likely to have the resources and routines necessary to transfer to potential founders, and, as results of model 2 of table 5 demonstrate, those founders who do leave troubled parents have a higher failure rate. It is also likely that attorneys in failing firms lack the advantages that facilitate founding their own firm and that other mobility options (such as working for another law firm) are more attractive to them.

To confirm that firm failure does not lead to parenting, I estimated the likelihood of parenting a new firm. As covariates, I included firm age, size, scope, status as a branch office, and attrition. Table 6 presents a set of models that estimate the likelihood of parenting a new firm. As in previous analyses, I tested for attrition-size interactions. Here, the associate attrition and size interaction is the only significant interaction. The model shows that as firms increased in associate size (the number of associates), they were more likely to produce progeny, but this effect diminished with increasing attrition at the associate level. This suggests that an associate who enters a large law firm is likely not the type of person who desires to be a law firm founder. The other attrition variables are positive but not significant.

Models 3 and 4 provide a test of the possibility that law firm progeny originate in failing parent firms. I first generated a baseline model of law firm failure using population density, firm age, firm size, scope, growth rate, branch office, focus on corporate clientele, and period effects.[5] Using the coefficients from the model, I calculated the predicted rate of failure for each of the 513 firms in the parenting event dataset, then included the predicted rate of failure as a covariate in the model that predicts the likelihood of parenting. If progeny were the result of members leaving a failing firm, the covariate should have been positive and significant.

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This baseline model is model 1 of table 3. To ensure that the model fit the data well, I approximated the Bayes factor by calculating the Bayesian Information Criteria (BIC) to compare model 1 of table 3 with a simple exponential model as the prior (Kass and Raftery, 1995; Raftery, 1995). My estimation of the BIC difference was 175.34, indicating "very strong" evidence that my model fits the data better than the prior (Raftery, 1995). The fact that a similar measure successfully predicted firm failure and associate promotion rates in Phillips (2001) gives further credence to the quality of the measure.

Table 6

Maximum Likelihood Estimates of Silicon Valley Law Firm Parenting, 1946–1996*

Variable	(1)	(2)	(3)	(4)
Age: 0–2 years	–7.54	–7.44	–7.15	–6.99
	(2.28)	(2.27)	(2.28)	(2.29)
Age: 2–9 years	–6.57	–6.52	–6.17	–6.00
	(2.26)	(2.24)	(2.61)	(2.28)
Age: 9–15 years	–6.19	–5.13	–5.70	–5.39
	(2.26)	(2.25)	(2.27)	(2.30)
Age: 15+ years	–6.58	–5.52	–6.12	–5.82
	(2.28)	(2.26)	(2.28)	(2.30)
Log(density)	1.13••	1.09••	0.94•	0.74
	(0.49)	(0.49)	(0.50)	(0.52)
Log(partners)	0.05	0.06	0.19	0.30
	(0.21)	(0.18)	(0.20)	(0.22)
Log(associates)	0.39••	0.41••	0.49••	0.58••
	(0.16)	(0.16)	(0.16)	(0.18)
Relative scope	0.35	0.39	0.13	0.13
	(1.53)	(1.52)	(1.57)	(1.61)
SF branch	0.57•	0.57•	0.49	0.41
	(0.33)	(0.33)	(0.33)	(0.34)
Non-SF branch	0.27	0.28	0.18	0.12
	(0.31)	(0.31)	(0.32)	(0.33)
Personal plight	–0.03	–0.03	–0.03	–0.03
	(0.32)	(0.32)	(0.32)	(0.32)
Name partner attrition	2.11	0.69	0.46	0.43
	(1.53)	(0.83)	(0.85)	(0.86)
Name partner attr.*log(part.)	–1.52	–	–	–
	(1.14)			
Name partner attr.*log(assoc.)	0.53	–	–	–
	(1.12)			
Regular partner attrition	0.49	0.32	0.59	0.98
	(1.74)	(0.67)	(0.69)	(0.71)
Reg. partner attr.*log(part.)	–0.66	–	–	–
	(1.10)			
Reg. partner attr.*log(assoc.)	0.84	–	–	–
	(0.82)			
Associate attrition	0.71	1.15	1.41	1.59•
	(1.06)	(0.88)	(0.87)	(0.88)
Associate attr.*log(part.)	0.88	–	–	–
	(0.78)			
Associate attr.*log(assoc.)	–2.03••	–1.41••	–1.55••	–1.60••
	(0.81)	(0.70)	(0.70)	(0.70)
Predicted failure rate			2.82	11.24
			(2.05)	(6.83)
(Predicted failure rate)^2				–22.03
				(18.81)
SJ unemployment rate	0.04	0.04	0.05	0.05
	(0.10)	(0.10)	(0.10)	(0.10)
Dissolution court cases	0.14	0.14	0.15	0.16
	(0.11)	(0.11)	(0.11)	(0.11)
Period: 1971–1986	–1.59••	–1.56••	–1.53••	–1.43•
	(0.78)	(0.79)	(0.77)	(0.76)
Period: 1987–1991	–2.00••	–1.99••	–1.95••	–1.83••
	(0.85)	(0.85)	(0.84)	(0.84)
Period: 1992–1996	–2.10••	–2.03••	–1.98••	–1.84•
	(0.96)	(0.96)	(0.95)	(0.94)
Firms	513	513	513	513
Events (firm failure)	97	97	97	97
Firm-years	3533	3533	3533	3559
Log-likelihood	–228.58	–230.72	–229.91	–228.92
D.f.	25	20	21	22

• $p < .10$; •• $p < .05$.
* Standard errors are in parentheses.

Model 3 does not support the prediction that a parenting event is a consequence of a high predicted rate of failure for an organization. While the coefficient is positive, it is not statistically significant. Model 4 yielded a similar conclusion after adding a quadratic term for the predicted rate. While not statistically significant, model 4 suggests that to the extent that failure causes parenting, the effect is curvilinear. Firms with a high likelihood of failure had a lower probability of parenting than did firms with a mid-range likelihood of failure. While having greater numbers of firm associates increased the likelihood of a parenting event, there was no evidence for the sinking-ship hypothesis. In line with my earlier argument, lawyers may leave a sinking ship to move to an existing firm or exit the system (Silicon Valley) entirely, but they are no more likely than lawyers from other firms to found new law firms.

DISCUSSION AND CONCLUSION

Overall, there was strong support for the central thesis that a parent-progeny transfer influences the variation in organizational life chances within a population. The transfer of resources and routines from parent to offspring attenuated the parent's chances of survival but enhanced the chances for the offspring. In each case, the effect of the transfer was time-dependent. In support of these findings, I found that similarities between the offspring and parent increase the likelihood that the parent will fail. Progeny with single parents had a lower likelihood of failure than those with multiple parents, suggesting that beginning with a variety of experiences and organizational models hinders the progeny.

Name-partner progeny, on average, experienced the lowest failure rates. This effect, however, was contingent on the characteristics of the parent firm. Having large parent firms increased the failure rates of name-partner progeny but benefited progeny founded by lower-ranked employees. This finding, coupled with the fact that the progeny of failed firms were themselves more likely to fail, leads to one of this paper's strongest implications: that the transfer of resources and routines may occur independent of their usefulness.

There may be other explanations for the finding that name-partner progeny from large parent firms experienced increased failure rates. One is that large firms may have forced out name partners who were not making sufficient contributions to the firm, although two pieces of evidence cast doubt on this interpretation. First, there is little benefit to displacing name partners. The high public visibility of large law firms makes a change in the name of the firm an unattractive option. More commonly, the firm retains its name but shifts the status of the low-performing name partner to "of Counsel" (Smigel, 1969). This reassignment of titles allows the firm to maintain its well-known identity (or brand), without facing the internal and external cost of displacing the name partners. In short, name partners of large firms are rarely (if ever) "fired." Second, model 3 of table 3 showed that the departures of name partners to found progeny increased a parent's likelihood of failure. Thus, not only is firing a name partner against the norm, but the departure of a

name partner to found a new firm poses a real danger to the parent firm.

Limitations

Despite its substantial findings, this study does have limitations. Future research could investigate the extent to which a genealogical framework in general, and the parent-progeny transfer in particular, explains the variation in performance, structure, and strategy among organizational forms other than Silicon Valley law firms. Not only is this context one of rapid economic growth, but the employment relationship (the up-or-out promotion system) is unique to professional service firms. Thus, while this setting offers many advantages (e.g., less need to control for individual functional heterogeneity, geographically bounded competition, qualitatively different hierarchical ranks), we must be cautious about overgeneralizing the findings.

Two additional limitations result from a lack of data. First, data on law firm clientele are sporadically and unreliably available. An ideal study of the parent-progeny transfer using law firms would follow the movement of clients from parents to the progeny. Second, while the Martindale-Hubbell legal directory notes each area of law in which a firm practices, it does not distinguish which areas represent a firm's core competence. The parent-progeny transfer should be more pronounced if progeny emerge from the technical core of the parents. More generally, future research should relax my assumption that the volume of the transfer is a function of rank. In other settings, rank may be negatively related to, or independent of, proximity to the organization's technical core. Horizontal differentiation may be more applicable to some organizations. Other organizational settings may require that the researcher consider technical expertise, an individual's functional role, or the internal and external social network position of the potential founder (e.g., Broschak, 1999). Using multidimensional indicators of the volume of transfer should result in broad support for the findings of this paper.

Law firms, in addition to having large differences in organizational structure, are generally smaller than the typical parent firm studied in research on entrepreneurship and career histories. There was no law firm in my study that had more than 500 attorneys. This limitation is noteworthy, but not unusual in studies of managerial succession: Carroll's (1984b) and Haveman's (1993) studies also consist of relatively small organizations (newspapers and early telephone companies, respectively) in which the departing manager may have been the firm's founder. My finding that the parenting event increased the likelihood of parent failure may hold only for small- to medium-size organizations.

Another challenge of this endeavor is distinguishing between the effects of the resources and routines that are transferred from parent firms to their progeny. In many cases, resources and routines are interdependent, especially when routines are client- or demand-specific (Kordana, 1995). While I argued that routines are transferred as well, it was less clear that the disruption of routines significantly increased a parent law firm's likelihood of failure. The transfer of routines did, how-

ever, appear to influence the fate of progeny. I expect that studies in other contexts will more easily replicate my findings on progeny than my findings for parent firms.

Attempts to apply the genealogical framework to other settings and populations should also take into account the degree to which firm-specific routines dictate an organization's structure and action at founding. There may be cases in which a new organization's routines are largely predetermined. For example, in some settings, technological or mechanization requirements may dictate a great proportion of an organization's routines, attenuating the impact of the routines from a founder's previous employer. In addition, the neoinstitutional perspective suggests that in some settings, isomorphic pressures to obtain legitimacy may more powerfully determine a new organization's routines than any routines a founder may introduce (DiMaggio and Powell, 1983). In clarifying scope conditions, future research should explore the existence of the parent-progeny transfer on organizational structure and life chances in highly institutionalized or regulated industries.

This study has emphasized the exit to entrepreneurship as the key mechanism for the transfer of resources and routines. I presented a relatively conservative model that emphasizes the role of resources and routines in start-up organizations. A more complex model might conceptualize and test interorganizational mobility after founding as well. I have not included interorganizational mobility here for three reasons. First, the routines and resources present at the founding of a firm have the greatest impact on its structure and survival (Stinchcombe, 1965b). In fact, the differences in attrition and parenting rates I found suggested that transfers of resources and routines to progeny are uniquely substantial events. Second, to the extent that incorporating interorganizational mobility after founding was relevant, it would not have altered any of the predictions made in this paper. Third, collecting data on interorganizational mobility in this case would not be feasible, as it must be done by hand. Capturing all interorganizational mobility requires following thousands of attorneys across hundreds of law firms for each of the fifty years. Given the lack of theoretical advantage to be obtained from such an effort, the endeavor is not likely to be fruitful.

Finally, the parent-progeny framework focuses on new firms that are founded within the same populations as their parent. While the framework presented here has implications for all forms of progeny, it is less powerful for understanding the founding of organizations that have significantly different forms from their parent firms (e.g., if a manager in a manufacturing firm leaves to found a consulting firm). This includes those settings in which personnel depart to establish different organizational forms that have mutually beneficial relationships with the parent firm (e.g., leave a prime contractor to found a supplier to that prime contractor).

Implications and Conclusion

This study used organizational ecology and demography, interorganizational mobility, and the career histories of firm founders as foundations on which to construct theory, and

the findings provide insights into and have potential implications for each of those research areas. With respect to organizational ecology and demography, this study suggests several insights. First, it redirects attention to the work of scholars who noted the merits of considering the population-specific origins of organizations (Freeman, 1986), as well as the importance of distinguishing between the different ways in which organizations are founded (Carroll et al., 1996). Not only does this study support the notion that differential failure rates occur according to whether or not an organization is an offspring, but it is the first to propose a framework that simultaneously incorporates the fate of parent organizations as well.

A compelling finding that adds to Barnett's (1997) treatment of "ancestor effects" is that progeny that arose in the wake of their parents' failure were more likely to fail. I argued that rather than benefiting from the failure of the parent law firms, progeny assume the same resources and routines that led to the failure of their parents. The theory and results also add to the ecological literature on age dependence, introducing another perspective along which organizational scholars may consider whether an organization suffers from the liability of newness. In addition to paying better attention to the confounding effect of organizational size (Barron, West, and Hannan, 1994), we must consider whether a new organization is incorporating its resources and routines from its present environment (Stinchcombe, 1965b) or the long-past environment of the progeny's parent (cf. Barnett, 1997; Kitts, 2002).

This paper also has implications for population diversity. If organizational blueprints and resources travel from parent firms to progeny across generations, populations should become less diverse as the rate of progeny foundings increases. This implication is consistent with the concept of inbreeding in population genetics (Ellstrand and Elam, 1993). Inbreeding increases homogeneity within populations, especially small populations. This suggests that the rate of loss in heterogeneity is inversely proportional to the population density in each generation. De alio firms (branch offices in this study) may be more likely to be sources of innovation and diversity, as they bring with them new resources and routines from outside the focal population.

This implication suggests many directions for future research, three of which I offer here. First, we should examine the population as the unit of analysis to learn how population density and the rate of progeny foundings affect the diversity of organizational forms. Not only should population diversity influence mobility (Hannan, 1998; Fujiwara-Greve and Greve, 2000), but mobility should influence population diversity as well. Second, one should be able to demonstrate the effect of environmental change on the rate of progeny failure. Periods of environmental change may increase the rate of failures for progeny if they have incorporated more out-of-date routines into their structure (see also Kitts, 2002). Third, future research should further validate whether progeny are of similar form, culture, and market position as their parent organizations. One possible direction has been signaled by

Sorenson and Audia (2000), who suggested that geographic clustering of industries is due in part to geographically proximate spinoffs of existing firms.

With respect to interorganizational mobility, it is important to consider that just as new ideas spread through the mobility of professionals (Boeker, 1997), so do poor routines and strategies. Like a corporate board's set of experiences, the set of experiences of the founding team will affect the quality of the progeny's resources and routines (Beckman and Haunschild, 2002). Sørensen's (1999a) research suggested that to the extent that progeny emerge from the same parent, they face the prospect of greater competition (i.e., "sibling rivalry") and lower performance. At the same time, my findings supported diversity and demography research (Williams and O'Reilly, 1998) that has suggested that progeny made up of founders from diverse subpopulations face challenges in avoiding dissolution.

This research is also relevant for the effect of career histories on the success of new firms. My findings suggest that while the prominence of past affiliations may affect the short-term success of the progeny, it may lead to long-term liabilities if the affiliations lead to the progeny using resources and routines that decrease in usefulness over time. Moreover, these findings could inform research on the innovativeness of new firms, which depends not only on a founder's former affiliation but also on his or her position in the previous organization.

The implications of my central thesis and findings suggest that populations producing a high proportion of progeny increase population homogeneity by reproducing social structure and organizational form across generations. Not only do progeny receive routines and resources from the previous generation, but they are also rewarded with improved life chances that make them candidates to produce the next generation of organizations. While scholars seeking to understand homogeneity have typically examined causal processes that operate among organizations within the same cohort, the findings of this paper suggest that scholars should study the conditions under which firms are born—not only to examine structural homogeneity but to yield new insights as well.

This genealogical approach can provide guidance to a wide range of organizational scholars. It implies that organizational ecologists should consider the genealogy of their population of interest when examining vital rates and suggests a focus for comparative or community ecology. It suggests that researchers of interorganizational mobility should pay attention to the diffusion of harmful practices alongside beneficial practices and seriously consider exit to entrepreneurship differently than exit to another organization. It should also spur entrepreneurship scholars to look beyond the founder's organizational affiliation to his or her previous position within the organization. The findings of this study suggest that a genealogical approach, using the parent-progeny transfer, could provide a new arena for research with the potential to successfully build on the foundations of organizational sociology.

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