

THE INFLUENCE OF FOUNDING TEAM COMPANY AFFILIATIONS ON FIRM BEHAVIOR

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This paper's argument is that founding team composition—in particular, members' prior company affiliations—shapes new firm behaviors. Firms with founding teams whose members have worked at the same company engage in exploitation because they have shared understandings and can act quickly. Conversely, founding teams whose members have worked at many different companies have unique ideas and contacts that encourage exploration. In addition, firms whose founding teams have both common and diverse prior company affiliations have advantages that allow them to grow. The results suggest team composition is an important antecedent of exploitative and explorative behavior and firm ambidexterity.

The terms “exploration” and “exploitation” have been used broadly to capture a wide array of firm actions and behaviors. The concepts are central to studies of adaptation, organizational learning, and technical innovation (Abernathy, 1978; Benner & Tushman, 2002, 2003; Katila & Ahuja, 2002; Levitt & March, 1988; March, 1991). Exploratory behaviors are those that increase variance and generate internal variety (McGrath, 2001; Tushman & Smith, 2002); exploration involves radical innovation, creating new markets and products, experimentation, broad search, frequent change, and discovery (Katila & Ahuja, 2002; Miner, Bassoff, & Moorman, 2001; Rosenkopf & Nerkar, 2001). Exploitative behaviors, in contrast, are variance-decreasing and efficiency-oriented (March, 1991); exploitation involves incremental innovation, implementation, refinement, routinization, local search, and efficiency (Beckman, Haunschild, & Phillips, 2004; Benner & Tushman, 2003; March, 1991). Although there are benefits to being able to do both (He & Wong, 2004), organizations that explore may have

processes, strategies, structures, and capabilities quite distinct from those of organizations engaging in exploitation (Benner & Tushman, 2002; Katila & Ahuja, 2002; McGrath, 2001; Rosenkopf & Almeida, 2003).

Existing research suggests an important antecedent to exploration and exploitation: managers who create the right structures or develop supportive contexts (Brown & Eisenhardt, 1997; Gibson & Birkenshaw, 2004; Smith & Tushman, 2005; Tushman & O'Reilly, 1996). How do managers decide which structures or processes to adopt? Rather than having a clear idea about what structures are appropriate in a given context, I argue executive choices are driven by their past experiences. Managers bring ideas with them when they move across firm boundaries, and an executive's career experiences shape the range of actions she or he will consider at a new firm (Baty, Evan, & Rothermel, 1971; Boeker, 1997; Kraatz & Moore, 2002; Sørensen, 1999). In this study, I examine groups of early executives that comprise firms' founding teams and argue that their prior experiences predispose firms to engage in explorative or exploitative behaviors. In a broader sense, this view suggests that team composition both informs and constrains later firm action.

A founding team's past company *affiliations* are an important and understudied component of team composition. Much of the existing research focuses on how the functional experience and key relationships among founding team members influence firm strategy and action (Beckman, Burton, & O'Reilly, 2006; Boeker, 1988; Roure & Maidique, 1986; Shane & Stuart, 2002). Yet affiliations are important because the past companies in which managers have worked offer employees models for

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what an organization should look like and how it should act. Following Burton and colleagues (2002), this study focuses not on the *what* of the experience, but on the *where*. To take a simple example, compare a three-person team where everyone has had prior experience at Apple Computer and a three-person team with one member from Apple, one from Intel, and one from Hewlett-Packard. Regardless of any overlap in functional or industry experience, the two teams bring with them different company affiliations from their prior jobs. The all-Apple team shares a language and set of tacit understandings even if the managers were not at Apple at the same time, whereas the team from the three different firms has a variety of experiences and diverse sources of information. These affiliations are a critical source of ideas, frames of reference, and contacts that shape the behaviors in which a new firm is likely to engage. And, in contrast to the stark example above, teams can both share common affiliations and bring multiple unique affiliations to their firms, as would be the case if, for example, the people from Intel and Hewlett-Packard in the above example also had prior experience at Apple.

In general, I argue that prior affiliations of management team members shape firm exploration and exploitation behaviors. Teams with some common prior company affiliations share a language and vision (Nahapiet & Ghoshal, 1998) that allow them to easily implement and routinize activities. Thus, firms whose management team members have shared affiliations should be more likely to pursue exploitative behaviors such as improving on existing processes and moving new products or processes quickly to market. In contrast, founding teams whose members come from a wide array of past companies bring diverse knowledge and contacts to their firms, and a variety of perspectives stimulates innovation and the discovery of new alternatives (Amabile, Conti, Coon, Lazenby, & Herron, 1996). Thus, firms whose teams have diverse affiliations should be more likely to pursue explorative behaviors such as investigating multiple ideas and becoming technical pioneers. Furthermore, teams should benefit from diverse and common prior company affiliations because these firms engage in behaviors that support both implementation and innovation. Thus, having a mix of both diverse and common team affiliations should be a precursor to organizational ambidexterity. Overall, this study develops the concept of team affiliations as an important antecedent to firm exploration and exploitation.

THEORY AND HYPOTHESES

To understand how prior founding team affiliations shape firm behaviors, it is first important to discuss how new firms are created. What brings founders and ideas together? At the extreme, a founding team comes together without a clear idea of what the potential firm will do. For example, Bill Hewlett and Dave Packard decided they wanted to start a company together, then decided what type of firm to create (Collins & Porras, 1994: 24). Their prior experiences and affiliations informed the early activities pursued and ideas generated. Indeed, the idea generation cannot be separated from the experiences of a firm's founders. In many cases, individuals' experiences shape which technological opportunities they recognize (Shane, 2000); thus, the characteristics, experiences, and affiliations of team members shape the ideas and opportunities that are eventually pursued. Together an idea and founders evolve into a firm (Clarysse & Moray, 2004). Imagine two engineers from the same company deciding they should exploit an innovation that their current employer is not exploiting. Or imagine two sales representatives from different firms comparing notes and deciding to take advantage of a market opportunity that neither firm has acknowledged. The team and initial idea for a firm emerge in a dynamic, reciprocal fashion in which the idea is embedded in the context and experience of the founders—the firm and market experiences of founders are thus embedded in the new firm created.¹

Indeed, prior work on new ventures has shown that founders and founding team shape a firm's initial strategies, structures, actions, and performance (e.g., Beckman et al., 2006; Boeker, 1988; Burton, Sorenson, & Beckman, 2002; Eisenhardt & Schoonhoven, 1990; Gompers, Lerner, & Scharfstein, 2005; Roure & Maidique, 1986). Routines and competencies are embedded in managerial experiences, and these routines are passed to new firms through employee mobility (McKelvey, 1982; Phillips, 2002, 2005). In keeping with this literature, the general argument of this paper is that shared understandings and unique knowledge are embedded in prior team affiliations that shape firm exploitation and exploration.

Common Company Affiliations and Exploitation

Distinct from the commonalities that come from a shared discipline or a prior relationship are com-

¹ Thanks to an anonymous reviewer for making this point.

monalities among the members of a new firm's founding team who have worked at the same company, commonalities based on a shared understanding of how organizational work should be managed and coordinated. Founding team members with common prior company affiliations have a shared language, culture, and narratives. A shared language suggests a common perspective and trustworthiness (Tsai & Ghoshal, 1998). A shared organizational culture provides a common frame of reference, a shared vision and set of goals, and a conceptual filter that helps generate expectations about work (Nahapiet & Ghoshal, 1998). A shared narrative suggests that people from the same company will have many of the same stories and examples of appropriate and inappropriate behaviors. In fact, common work experiences affect the development of shared beliefs and culture as well as firm performance (Baron, Burton, & Hannan, 1996; Chattopadhyay, Glick, Miller, & George, 1999). Eisenhardt and Schoonhoven (1990) found that founding teams with joint prior work experience had higher levels of growth than teams with less overlapping experience. They discussed the cohesion stemming from managers' having worked together in the past, but I add that this cohesion may result from shared affiliations as well as from direct experience with one another.

When founding teams' members share some common prior company affiliations, they share routines that aid their firms in "the exploitation of old certainties" (March, 1991: 71). Commonality will help teams be efficient and improve incrementally on existing processes or practices. Routinization and implementation are faster and easier when team members have shared understandings because team members will quickly agree on what needs to be done and how to do it. Of course, people from different companies will have some shared understandings (e.g., if they are from companies with similar strategies), but the level of mutual understanding and shared tacit knowledge will be greater when teams have shared affiliations.

When two founders come from the same prior company, they are more likely to talk to each other about the firm-specific knowledge that they share. This idea is consistent with the common knowledge effect: people talk about what they have in common (Stasser, Taylor, & Hanna, 1989). Firm-specific shared knowledge among founders encourages local search because team members find discussion straightforward, disagreements minimal, and the appropriate actions relatively clear. Taken together, these points suggest common prior company affiliations among the members of a firm's founding team will encourage exploitation.

Exploitative behaviors are those that build upon existing products and technologies and are efforts to seek competitive advantage through technical enhancements or cost advantages. Exploitation requires the efficiency and consistent implementation that common understandings facilitate. If all of a firm's founders come from a similar starting point (e.g., the same company), their narrower range of experience and knowledge suggests the firm is relatively limited in its routines and competencies and thus less likely to discover an innovation that is not readily apparent (Levinthal, 1997).

Firms pursuing exploitation will bring a product to market more quickly because they have the required routinization and standardization to move swiftly. In addition, the trust that arises from shared understandings will increase the speed of strategic decision making (Talauciar, Grundei, & Werder, 2005; Tsai & Ghoshal, 1998). Common understandings facilitate the execution and implementation of ideas (Williams & O'Reilly, 1998); indeed, Schoonhoven, Eisenhardt, and Lyman (1990) argued that joint work experience increases trust, common goals, and mutual understandings, thereby decreasing the time inefficiencies of learning new roles and expectations. This decrease, they argued, should translate into a shorter time to first product shipment. Similarly, Reagans, Zuckerman, and McEvily (2004) found that shared work experience resulted in shorter project duration. The argument of the current article is that a firm's founders' having worked at the same company, even if not together, will also result in faster time to market because of the language and understandings that they share from their prior company affiliation.

Counterexamples exist of spin-offs pursuing exploration strategies (such as some spin-offs from Fairchild Semiconductor), but these examples, as the analysis I will subsequently present demonstrates, are not typical. Generally, a group of founders breaks off from an employer to fill a particular competency niche. The innovativeness achieved by the founding team with common prior experiences may be quite high if the founding team spins off from parents that themselves have innovator strategies (Christensen, 1993), but spin-offs generally exploit existing technologies rather than introduce innovations (Klepper, 2001). A founding team from the same parent is more often involved in extending and utilizing knowledge that the parent company has little interest in pursuing than in pursuing a technology at the knowledge frontier. It is also important to point out that not all teams whose members have common prior company affiliations are spin-offs, because team members may

not come directly from that company, and they may not have been there at the same time.

Hypothesis 1. Founding teams with common prior company affiliations are likely to engage in exploitative behaviors.

Diverse Company Affiliations and Exploration

Although common company affiliations may give a team shared understandings, firms also need access to external social capital to improve the amount of available information. External social capital refers to the actual and potential resources, outside information, and new ideas obtained through external ties (Adler & Kwon, 2002). External social capital can have a wide range of sources, such as alliances, joint ventures, and professional associations, but the prior company affiliations of founding teams are likely to be an important source of such social capital at firm founding (Burton et al., 2002). Consider again the earlier example of an all-Apple team and a team from three different companies. The team from three different firms has access to significantly more external social capital. Although common prior affiliations build internal communication, diverse prior affiliations provide new insights and knowledge that allow firms to pursue explorative, innovative behavior. External social capital increases the heterogeneity of available information, encourages deeper deliberations and discussions about the reasons for variety, and can result in debate and the surfacing of new alternatives (Beckman & Haunschild, 2002).

Innovation often comes from bringing together knowledge from disparate places (Damanpour, 1991; Hargadon, 2003; Rodan & Galunic, 2004; Schumpeter, 1934). Katila (2002) found innovation came from old extraindustry knowledge. The creativity literature suggests that access to diverse information, ideas, and alternatives stimulates creativity and ground-breaking advancement (Amabile et al., 1996; Perry-Smith & Shalley, 2003). Thus, access to information, contacts, and perspectives from a diverse set of company affiliations should encourage and facilitate exploration and innovation. These firms will have the internal variety and external reach to develop new technologies and markets. As Kanter argued, "Contact with those who see the world differently is a logical prerequisite to seeing it differently ourselves" (1988: 175). This ability to gather information, adapt, and innovate is consistent with the pursuit of technical innovation. Explorative behaviors include efforts to win a technology race in a new niche or to gain competitive advantage by being the first to develop

new, hitherto unproven, technologies. Innovators develop routines and competencies that are different from those of other organizations (Aldrich & Martinez, 2001), and teams with diverse networks are more likely to engage in innovative activities (Ruef, 2002). When founders come from a range of prior companies, the common knowledge they share includes broader market issues. Sharing broadly based market knowledge will encourage innovation and the development of new technologies more than a discussion of narrow firm-specific knowledge because team members with a variety of former company affiliations have different understandings about technical procedures, customer requirements, productive organizational cultures, and appropriate routines and processes. In fact, unique knowledge is more likely to be shared and integrated in teams in which people are not familiar with one another (Phillips, 2003). Thus, founding teams that draw on diverse prior company affiliations are more likely to pursue explorative behaviors because they have the knowledge and capacity to innovate.

Founding teams with a broad range of prior company affiliations have, in addition to a wealth of collective internal knowledge, a wide range of potential contacts and diverse relationships on which to draw. Access to diverse contacts may increase the centrality of a firm, which further privileges it, giving it a variety of information. In fact, an "exploration trap" refers to the pattern of behavior in which firms continue to seek new and different ideas without fully exploiting earlier ideas (March, 1991). Entrepreneurial firms are often trapped in this type of exploration (Aldrich, 1999). This view suggests that firms with diverse affiliations will not be tied to a particular idea and will pursue different ideas. Diversity of affiliations will not only encourage new and innovative behaviors, but also, in keeping with the nature of innovation, frequent change. Thus:

Hypothesis 2. Founding teams with diverse prior company affiliations are likely to engage in explorative behaviors.

Managing Exploration and Exploitation

Thus far I have suggested that the prior company affiliations of a founding team shape exploitative and explorative firm behavior but have not addressed the outcomes of these behaviors. Research on organizational ambidexterity suggests that firms capable of both exploring and exploiting do better than firms rooted in either one (Gibson & Birkinshaw, 2004; Katila & Ahuja, 2002; Tushman &

O'Reilly, 1996). For example, He and Wong (2004) found firms that had both exploitative and explorative innovation strategies had higher growth rates than other firms.

Existing research focuses on the structural and cognitive requirements for a firm to both explore and exploit (Smith & Tushman, 2005; Tushman & O'Reilly, 1996). For example, Tushman and O'Reilly (1996) described organizations with ambidextrous organizational forms. Loosely coupled units maintain different selection and search criteria, which allow both exploration units and exploitation units to operate. It is the group or individual at the top that must "manage across" these subunits (Smith & Tushman, 2005). Within a larger ambidextrous organization, this parallel operation of both exploring and exploiting units can lead to exploration *and* exploitation at the organization level. Entrepreneurial firms, however, are more likely to exist as a single business units.

The question that surfaces, then, is whether the same team can engage in both explorative and exploitative behaviors. Brown and Eisenhardt (1997) observed entrepreneurial firms that used sequential attention or rhythmic pacing to shift from exploration to exploitation. Such shifting between exploration and exploitation is distinct from contextual ambidexterity (Gibson & Birkinshaw, 2004), in which organizations manage to simultaneously reinforce adaptation and alignment tendencies (akin to exploration and exploitation) within the same organizational subunit. Contextual ambidexterity and rhythmic pacing both suggest that the same organizational units, and thus the same organizational personnel, can engage in both explorative and exploitative behaviors either sequentially or simultaneously, given the right organizational context. Despite this possibility, in the studies cited above the numbers of ambidextrous business units and firms were small, which suggests that engaging in both exploration and exploitation may be particularly difficult. I argue the pattern of affiliations in a founding team may be important for understanding which firms are able to do both and, thus, this pattern may be important for understanding firm performance.

If founding team affiliations predict exploitation and exploration, firms should see performance benefits when their founding teams have both common and diverse prior company affiliations. Diversity of prior affiliations alone will not improve performance because diversity encourages innovation but not implementation. Common prior affiliations alone will not improve performance because shared affiliations promote efficiency but not new discoveries. Teams with both common and diverse

prior company affiliations will have the shared understandings to efficiently transmit knowledge and the unique perspectives to support innovation and change.

This performance benefit should be maintained over time for several reasons. First, a firm's founding team creates the initial structures and processes that shape its future actions (e.g., Baron et al., 1996). The founding team will leave a lasting imprint, and a team with both common and diverse founder affiliations will leave an imprint that provides the basis for both exploration and exploitation. In addition, although other managers may eventually replace or supplement founding teams, evolutionary arguments of path dependence and inertia suggest that subsequent teams are shaped by founding teams (Aldrich, 1999; Beckman & Burton, 2005; Phillips, 2002, 2005). Through an attraction-selection-attrition cycle (Schneider, 1987), founders select managers like themselves, and managers who do not fit the existing organization leave. Thus, patterns of founding team affiliations will be perpetuated over time. As a result, firms whose founding teams have both types of affiliations will be more likely to recruit managers with both types of affiliations. Taken together, these points suggest that founding teams with both common and diverse affiliations will both explore and exploit over time. He and Wong (2004) pointed to performance benefits for those firms that explore and exploit; thus,

Hypothesis 3. Firms whose founding teams have both common and diverse prior company affiliations will have higher levels of performance.

DATA AND METHODS

Sample

Data for this study were drawn from a longitudinal study of more than 170 young high-technology firms in California's Silicon Valley (for sampling details, see Burton et al. [2002]). The sample focused on a subset of high-technology industries: computer hardware and/or software, telecommunications (including networking equipment), medical and biological technologies, manufacturing, research, and semiconductors. Focusing on firms within a single region and a narrow range of similar industries holds constant key labor market and environmental conditions. Sampled firms had at least ten employees and were no more than ten years old at the time of first contact in 1994–95 (Certo, Covin, Daily, and Dalton [2001] used a similar age cutoff). About half of the firms had been founded before 1989, and founding year ranged from 1982 to 1995.

Interview, survey, and archival data were collected to gather information on the founding and evolution of these companies. Trained MBA and doctoral students conducted semistructured interviews with a member of the founding team of each firm to gather information about firm formation and early practices. The interviews, which provided data on the background and experience of the founding teams, were supplemented with archival data on the firms and teams. Data were collected for all firms from founding until they were acquired, died, or disappeared, or until July 2001. At the point of the last observation, the median firm was 13 years old (the range was 4–21 years). Of the 173 firms in the initial sample, I dropped 14 firms from the analysis because of missing data on key variables and an additional 18 because they were founded by solo entrepreneurs. These exclusions left a final sample of 141 firms. I eliminated solo entrepreneurs because, although a solo entrepreneur can have narrow or diverse prior company affiliations, the notion of shared understandings can only exist (or not exist) in a team. Although a team of two may operate differently than a larger team, two founders were considered a team because they exhibit team characteristics: ongoing interaction, interdependence, shared responsibility, and identification as a social entity (Cohen & Bailey, 1997).² To account for differences in team dynamics resulting from team size, I included number of founders as a control in all analyses.

I constructed the key study variables from the career histories of individual team members. Career backgrounds were hand-collected for every founder and executive who held the role of vice president or higher from a variety of sources, including interviews, internal company documents, Securities and Exchange Commission (SEC) documents, Lexis/Nexis news searches, Dow Jones Interactive, Edgar Archives, the *San Jose Mercury News*, and extensive Web searches. For founders with no background experience, it was difficult to ascertain whether there were no data because the founders had no prior jobs, or because the experiences were simply not reported in available sources. For 50 percent of the firms, the founders' prior places of employment were confirmed with the human resources departments of the sampled firms. It was confirmed that at least 38 founders started companies directly after school, so their prior employment experience was nonexistent. The resulting

data set contains 329 founders who had worked for a total of 1,300 prior employers (454 distinct prior employers).

To investigate the sequence of events leading to firm formation, I coded and analyzed interviews with founders in which stories of firm formation were recounted. The data are consistent with the idea that the founding team and initial idea evolve together in the early days of a firm's life. This scenario differs from that typical in established firms, where the needs and espoused strategy of the firms often drive managerial selection (Fligstein, 1987). The sequence of firm formation was coded from the interviews by two people blind to study conditions ($K = .69$, $ICC = .78$). For example, a firm could be coded as a spin-off, as a restart, as begun by a group of entrepreneurs, or as begun by a solo entrepreneur with a specific idea who sought out founding team members. In the 100 interviews providing enough data to code the sequence, 64 percent of the firms reported that their founding teams evolved before or with the idea for the firms. In the remaining firms, one founder often had a specific idea before bringing on other founders. As other founders were brought in, the ideas were fine-tuned and strategies developed. Again, ideas develop in the social contexts in which they operate. Rather than argue that firm strategy drives team selection, I emphasize the dynamic process of firm formation whereby these decisions coevolve.

A *t*-test indicated that sequence of events varied neither by the type of prior company affiliation nor by an exploration firm strategy. Interestingly, firms with exploitation strategies were more likely to have founding teams that were formed prior to the ideas of the firms. This finding points to the presence of a subset of firms in which a group of entrepreneurs came together first, and then decided what idea to exploit or pursue. I included the sequence variable as a control in supplementary analyses. The results, which are described below, remained significant, despite the significantly reduced number of observations (with the exception of firm growth, which became marginally significant [$p < .10$]). Taken together, these initial analyses supported my view of team formation and idea generation as dynamic and reciprocal.

Dependent Variables

Exploration and exploitation behavior. To predict whether founding team members' prior company affiliations were associated with explorative or exploitative behaviors (Hypotheses 1 and 2), I examined several outcomes. Maximum-likelihood logistic regression was used as a means to predict

² Similar results were obtained when I included the 18 firms with solo entrepreneurs and when I excluded the 52 two-person teams.

whether a firm pursued an exploration strategy and changed initial ideas (change is consistent with exploration). I also used maximum-likelihood logistic regression to predict the pursuit of an exploitation strategy and employed event history analysis to examine time to first product (rapid product shipment is consistent with exploitation).

To test Hypotheses 1 and 2, the strategic behaviors and intentions that comprised firm strategy were examined. Most of the organizational strategy typologies empirical scholars employ allow for a distinction between innovators and incrementalists (e.g., Miles & Snow, 1978; Porter, 1980). A theme in all of the typologies is the importance of differentiating firms that are exploiting existing markets from those that are exploring or creating new markets. In the interviews, founders reconstructed early firm actions. Each founder was asked to describe the core competence of his or her firm at founding. Open-ended responses (supplemented by early press reports, product announcements, business plans, and prospectuses) comprised the raw data that were used to categorize each firm as falling into one of four strategic archetypes: innovator, enhancer, marketer, or low-cost producer (see Hannan, Burton, & Baron, 1996). Innovators seek to gain first-mover advantages by winning technology races. Firms that explore may also pursue other strategies, but here the focus is on exploration through technical innovation. A firm was coded as having an exploration strategy (exploration = 1, otherwise = 0) if it had a technical innovator strategy (48 percent of the sample firms). Enhancer firms seek to produce products similar to those of other companies but develop general modifications or enhancements to gain competitive advantage. Low-cost producers seek cost advantages through efficient production techniques, relationships with low-cost suppliers, or economies of scale. Because the enhancer and cost strategies both revolve around extending existing products or services, an exploitation strategy was coded as present (exploitation = 1, otherwise = 0) if a firm had an enhancer or low-cost strategy (25 percent of the sample firms). Marketers seek competitive advantage through superior sales, marketing, or customer service, and this approach does not clearly constitute either exploration or exploitation. The remaining 27 percent of the sample firms had marketing or hybrid strategies.

There is reason to be confident that the strategy measures capture differences in firm behavior with a high degree of accuracy. Respondents were not asked to classify the strategies themselves; rather, two people independently coded strategies in an iterative fashion based on the interview and archi-

val research. A list of phrases and words were created to assist in coding. For instance, interviewees' use of words like "forefront," "pioneer," "first mover," and "innovation" when discussing their firms' activities was a basis for coding their firms as having exploration strategies. Words and phrases such as "clone," "low cost," "better design," and "feature-rich" signaled an exploitation strategy. Disagreements were reconciled through both coders discussing them with a third person. Hellmann and Puri (2000) performed a number of post hoc analyses of these same firms, linking patenting activity to the four firm strategies outlined above. They found that innovators accumulated larger patent portfolios, generating further confidence that the measure captured actual firm behaviors. These strategies describe the initial activities and behaviors of firms as recounted by their founders and early press releases. In later interviews, coders determined whether the initial firm strategies changed (e.g., from innovator to incremental). Although stability and change in strategy were not the focus of this study, these initial strategies were relatively stable in the early years of the sampled firms' lives (Hannan et al., 1996).

In addition to the above coding, I used two additional measures of exploitation and exploration. Firms with exploitation strategies are likely to ship products more quickly. The dates of product shipment came from a founder survey. Not all founders completed the survey, but interviews and other company data were used to supplement when possible. Firms with exploration strategies are likely to change ideas or direction more often than other firms. In fact, changing products or marketing channels is an important part of exploration. In order to measure whether a firm's founding idea changed, two independent coders examined the interview transcripts. The interviews did not contain enough information to adequately code this dependent variable for a sizeable number of firms. Thus, there are only 68 observations for model 3 in Table 4 (Hypothesis 2). The coders examined ten transcripts to develop and agree on a coding scheme and then independently coded the other transcripts. Differences were resolved through discussion, and the initial agreement was substantial ($K = .76$, $ICC = .83$). The coding scheme for the founding idea included "stable," "elaborated," "one major restart," "multiple ideas pursued," and "multiple ideas considered." The variable was coded 1 if an initial idea changed and 0 if the idea was stable or elaborated.

Firm performance. Hypothesis 3 predicts firm performance. In new ventures, firm growth is an important marker of success (Eisenhardt & Schoon-

hoven, 1990). Particularly in this time period and region, firms desired growth. Thus, new ventures founded with both types of affiliations (shared past employers and diverse past employers) should have grown more quickly because the resources, routines, and behaviors of these founding teams supported both exploitative and explorative behaviors. *Firm growth* was measured as growth in employees. A proportional firm growth measure was created:

$$Growth_{i,t} = \log(employees_{i,t+1}/employees_{i,t}), \quad (1)$$

where *employees* was the number of employees for firm *i* and *t* represented year. Number of employees was collected at the end of each year from survey and archival sources.

Independent Variables

Using the career histories described above, I identified the most recent three firms for which each founder had worked. Three past company affiliations were used, although results were similar when one prior company affiliation for each team member and all available data were used for each team member. *Diverse prior company affiliation* was a count of the number of discrete prior firms reported by all the members of a given founding team. *Common prior company affiliation* was a count of the number of firms at which more than one member of the founding team worked. For example, if one founder had worked at Apple, another founder at Global Village and Apple, and a third at Fairchild Semiconductor, Apple, and Applied Materials, the founding team was coded as having one common (Apple) and four diverse (Apple, Global Village, Fairchild, Applied Materials) prior company affiliations. Results were the same if diverse affiliations only included those firms where there was no overlap (three in the above example), but I included all discrete firms because ideas come from the full range of prior companies in which founders have worked. There was a .15 correlation between common prior company affiliation and diverse prior company affiliation at founding. These measures were calculated at founding and thus were not time-varying because “imprinting” arguments suggest that founders’ impact lasts, even when they leave and new managers join their firm. This impact occurs through subsequent recruiting of similar others and established routines and practices that remain past the time of

a founder’s employment at a firm (Beckman & Burton, 2005; Phillips, 2005).

Control Variables

Industry. Some industries may be more likely to adopt a particular strategy or develop a product quickly. For example, biotechnology firms are more likely to have exploration strategies and ship products late in their life cycles. Preliminary analyses revealed that medical (including medical devices and biotechnology), networking and telecommunications, and manufacturing were significantly different from other industries (results are available from the author). Those industry dummy variables that were significantly different from the other industries were included in each set of analyses.

Venture capital. An important external factor to consider when predicting firm growth and speed to product shipment is whether a firm has obtained venture capital (VC) backing. *VC financing* data were collected via a combination of public and proprietary databases, SEC-required filings and annual reports, internal company documents, and a survey instrument sent to the most senior finance executive at each firm (see Hellmann & Puri, 2000). The number of cumulative VC rounds obtained by a firm in each year is included in Tables 3 and 4.

Firm controls. I used the measures of exploration and exploitation strategies, which are described above, as control variables when examining firm growth and time to product shipment. Product shipment speed and growth may depend on firm size, so number of employees is included in Tables 3 and 4. Firm growth may also be a function of firm age, so firm age (in months) is included in Table 4.

Team controls. Larger founding teams have the potential for both more diverse and more common past company affiliations. *Founding team size* was coded as part of the interview process and corroborated with the career history data. Founding team size ranged from 2 to 12 members ($\bar{x} = 3.3$) and was included in all analyses. I included the *proportion of founders* currently employed by a firm for Tables 3 and 4 to account for changes in founding teams over time. Hypothesis 3 examines firms over time, so it was important to control for changes in top management teams after founding. I included *top management team size* and cumulative *executive entrances and exits* in Table 4, aggregated from the career history data. In so doing, I could be certain I was capturing lasting effects of founding teams over time, regardless of how these teams had changed over time.

TABLE 1
Descriptive Statistics and Correlations^a

Variable	Mean	s.d.	Mini- mum	Maxi- mum	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Prior diverse company affiliations	3.33	1.99	0	11																	
2. Prior common company affiliations	1.02	1.36	0	7	.15																
3. Exploration strategy	0.48	0.50	0	1	.07	-.07															
4. Exploitation strategy	0.25	0.43	0	1	-.11	.07	-.52														
5. Medical industry	0.16	0.36	0	1	-.10	-.18	.35	-.25													
6. Telecom industry	0.21	0.41	0	1	.17	-.08	-.16	.08	-.24												
7. Manufacturing industry	0.06	0.23	0	1	-.19	-.10	-.21	.14	-.10	-.12											
8. Founding team size	3.33	1.61	2	12	.02	.46	.11	-.08	.07	-.05	-.08										
9. Firm size	2.47	14.80	0	380	.05	.05	.03	-.02	-.04	.11	-.03	-.03									
10. Idea change	0.13	0.34	0	1	.22	.34	-.10	.17	-.10	.26	-.07	.33	.06								
11. Venture capital financing	2.62	2.62	0	11	.00	-.05	.19	-.06	.12	.02	-.22	.01	.04	-.09							
12. Executive exits	3.28	5.47	0	43	.03	.16	.05	.02	-.01	.06	-.13	.09	.43	.00	.30						
13. Executive entrances	6.74	6.25	0	44	.05	.20	.09	.02	-.02	.08	-.17	.08	.44	-.02	.34	.88					
14. Top management team size	4.29	3.38	0	29	.10	.17	.05	-.01	-.01	.10	-.16	.07	.19	-.02	.25	.29	.68				
15. Firm age	7.00	4.28	1	21	-.03	.04	-.09	.01	-.01	.07	-.05	-.01	.21	.13	.35	.60	.51	.20			
16. Firm growth	0.24	0.45	-4.03	3	.06	.02	.02	-.04	-.01	.03	-.01	-.03	-.04	-.05	-.09	-.20	-.12	-.01	-.27		
17. Proportion of founders in firm	0.69	0.38	0	1	-.04	-.00	-.04	.03	-.11	.02	.12	-.05	-.18	-.14	-.32	-.59	-.47	-.07	-.56	.17	

^a Correlations greater than .17 are significant at $p < .05$.

TABLE 2
Results of Logistic Regression Analysis Predicting Firm Strategy and Idea Change^a

Variable	Exploration Strategy					Exploitation Strategy					Idea Change	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 8	Model 9	
Medical industry	7.80** (5.13)	8.66** (5.78)	7.43** (5.04)							0.67 (0.84)	0.41 (0.61)	0.54 (0.80)
Telecom industry	0.56 (0.26)	0.51 (0.24)	0.44 [†] (0.21)	1.67 (0.78)	1.77 (0.85)	1.95 (0.95)	3.49 (3.14)	2.73 (2.58)	2.62 (2.54)			
Manufacturing industry				3.62 [†] (2.72)	4.34 [†] (3.31)	3.61 [†] (2.82)						
Founding team size	1.08 (0.13)	1.08 (0.13)	1.22 (0.17)	0.95 (0.13)	0.84 (0.13)	0.83 (0.13)	1.60* (0.34)	1.65* (0.35)	1.45 (0.37)			
Diverse prior company affiliation		1.17 [†] (0.11)	1.22* (0.13)			0.87 (0.10)		1.38* (0.26)	1.41* (0.29)			
Common prior company affiliation			0.75 [†] (0.12)		1.35* (0.22)	1.41* (0.25)			1.39 (0.45)			
Exploration strategy							0.64 (0.57)	0.54 (0.51)	0.66 (0.65)			
Observations	141	141	141	141	141	141	68	68	68			68
Log-likelihood	-88.31	-87.00	-85.39	-77.10	-75.43	-74.75	-21.74	-20.29	-19.76			
Pseudo-R ²	0.10	0.11	0.13	0.02	0.05	0.05	0.18	0.24	0.26			

^a Odds-ratios are reported, with standard errors in parentheses. One-tailed tests for hypothesized variables.

[†] $p < .10$

* $p < .05$

** $p < .01$

RESULTS

Table 1 presents the descriptive statistics and correlations among the study variables. Although cumulative entrances and exits are highly correlated with firm age, firm size, and top management team size (correlations range from .4 to .8), the effects for team affiliations do not change with these variables in the model.

Table 2 reports the effects of founding team prior company affiliation on firm-level strategy. The Pearson chi-square goodness-of-fit test suggested a reasonable model fit for all models (not reported). Model 1 presents the control variables. The medical industry was 7.8 times more likely to have an exploration (i.e., innovator) strategy. As predicted, model 2 demonstrates that founding teams with diverse prior company affiliations were more likely to have an exploration strategy. Model 3 replicates the finding in model 2 and also indicates that the firms of founding teams with prior common company affiliations were less likely to have an exploration strategy (a relationship that was not hypothesized but is consistent with the theory). Odds-ratios are reported, so model 3 suggests teams with one more diverse prior company affiliation are 1.22 times more likely to have an exploration strategy. The variance explained in model 3 is 13 percent (pseudo- $R^2 = .13$), and the overall "hit rate" of the model is 67 percent. This rate suggests that although industry is the largest predictor of an exploration strategy, there is also strong support for Hypothesis 1.

Model 4, with the control variables, shows that manufacturing firms were significantly more likely

to have an exploitation (i.e., incremental) strategy.³ Model 5 demonstrates that firms with teams with prior common company affiliations were more likely to have an exploitation strategy. In model 6, I added diverse prior company affiliations to be sure that the relationships were consistent with the theory (consistency required nonsignificance in this model). Model 6 confirms model 5 and thus, Hypothesis 2 is supported. The overall hit rate of the model is 75 percent, and the firms of teams with one additional common prior company affiliation were 1.41 times more likely to adopt an exploitation strategy. Although the explained variance is only 5 percent, results do show that common prior company affiliations predict exploitation rather than exploration strategies. This finding is consistent with prior work on spin-offs (Klepper, 2001), although not all teams in my sample with common prior company affiliations were spin-offs. In sum, founding teams whose members have worked for some of the same prior companies are more likely to pursue an exploitation strategy and less likely to pursue an exploration strategy, whereas founding team members from different prior companies are more likely to support an exploration strategy.

Models 7–9 concern the effects of team affiliations on the stability of the initial idea for a firm. Model 7 includes the control variables. Large founding teams were 60 percent more likely to change a basic firm concept. Findings reported under model 8 support Hypothesis 2, showing that

³ The medical industry drops out because no firms in that industry pursued an incremental strategy.

TABLE 3
Results of Event History Analysis Predicting Speed of Product to Market^a

Variable	Model 1	Model 2	Model 3
Exploitation strategy	1.11 (0.19)	1.12 (0.19)	1.11 (0.18)
Medical industry	0.39** (0.10)	0.41** (0.10)	0.41** (0.10)
Telecommunications industry	1.15 (0.15)	1.19 (0.15)	1.20 (0.16)
Venture capital financing	1.10 ⁺ (0.06)	1.09 ⁺ (0.06)	1.09 ⁺ (0.06)
Firm size	1.23** (0.08)	1.25** (0.08)	1.25** (0.08)
Founding team size	0.93 ⁺ (0.04)	0.89* (0.04)	0.89* (0.04)
Proportion of founders in firm	1.52 (0.71)	1.43 (0.72)	1.44 (0.72)
Common prior company affiliations		1.09 ⁺ (0.06)	1.10 ⁺ (0.06)
Diverse prior company affiliations			0.99 (0.04)
Observations	417	417	417
Log-likelihood	-547.66	-546.94	-546.90

^a Hazard ratios are reported, with robust standard errors in parentheses; $n = 138$; 129 failures. One-tailed tests for hypothesized variables.

⁺ $p < .10$

* $p < .05$

** $p < .01$

TABLE 4
Results of Panel Regression Analysis Predicting Firm Growth^a

	Model 1		Model 2		Model 3	
Medical industry	0.00	(0.04)	0.02	(0.03)	0.02	(0.03)
Manufacturing industry	-0.04	(0.03)	-0.02	(0.03)	-0.02	(0.03)
Telecom industry	0.05 [†]	(0.03)	0.06*	(0.03)	0.05*	(0.03)
Exploration strategy	-0.01	(0.03)	-0.01	(0.03)	-0.01	(0.03)
Executive exits	-0.03*	(0.01)	-0.03*	(0.01)	-0.03*	(0.01)
Executive entrances	0.02	(0.01)	0.02	(0.01)	0.02	(0.01)
Top management team size	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)
Venture capital financing	-0.00	(0.01)	-0.00	(0.01)	-0.00	(0.01)
Founding team size	-0.01	(0.01)	-0.01	(0.01)	-0.01	(0.01)
Proportion of founders	-0.00	(0.06)	-0.00	(0.06)	-0.00	(0.06)
Firm age	-0.03**	(0.00)	-0.03**	(0.00)	-0.03**	(0.00)
Firm size	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Common and diverse prior company affiliations both high			0.05*	(0.02)	0.08*	(0.03)
Common prior company affiliations high, diverse prior company affiliations low					0.05	(0.03)
Common prior company affiliations low, diverse prior company affiliations high					0.03	(0.04)
Constant	0.40**	(0.07)	0.40**	(0.07)	0.36**	(0.07)
Observations	1,368		1,368		1,368	
Wald X ²	165.72		169.60		166.87	
R ²	0.10		0.10		0.10	

^aRobust standard errors are in parentheses. Models are random-effects analyses clustered by firm; $n = 141$. One-tailed tests for hypothesized variables.

[†] $p < .10$

* $p < .05$

** $p < .01$

when a firm's founding team has an additional diverse prior company affiliation, the initial idea is 38 percent more likely to change, and the overall hit rate of the model is 88 percent. Although no control variables for industry were significant, I included industry to maintain consistency with earlier models.⁴ Thus, founding teams with diverse prior affiliations were found to be more likely to explore and change ideas.

Table 3 reports the effect of founding team common prior company affiliation on time to first product shipment, another indicator of an exploitation strategy. Model 1 reports the control variables, indicating that the most important predictor of time to market is industry. Hazard ratios are reported; firms in the biotechnology/medical industry have a 61 percent lower hazard rate for product to market (biotech firms take much longer than other types of firms to bring a product to market). Firms with exploitation strategies and larger firms brought products to market more quickly, and large founding teams were slower to bring products to market. In support of Hypothesis 1, model 2 shows that

founding teams with members with prior common company affiliations bring products to market more quickly. The effects of common affiliation are not as large as those of the other variables in the model, but an additional common prior company affiliation increased the hazard rate by 9 percent. Model 3 demonstrates that it is common prior affiliations, not diverse prior affiliations, that increases speed to market.

Table 4 presents the results of a panel random-effects generalized least squares regression analysis with robust standard errors clustered by firm, which I conducted to examine whether founding team affiliations have a long-term impact on firms (Hypothesis 3). Model 1 presents the control variables alone. Telecommunications firms were more likely to grow, and teams with high levels of top manager exit were less likely to grow. In addition, older firms were less likely to grow. The next model examined whether founding teams with diverse and common prior company affiliations were more likely to grow. There are no effects for the continuous variables and no interaction effects between the continuous diverse and common prior company affiliation variables. I examined the distribution of the continuous variables and found that common prior company affiliations were often

⁴ The manufacturing industry drops out of the model because the idea never changed for any firm in the manufacturing industry.

zero. I then created variables using a median split for both affiliation variables. The median founding team in the sample had no common affiliations and had prior experience in three companies. Specifically, common prior company affiliation was coded 1 if any of the founders had worked at the same prior company. Diverse prior company affiliation was coded 1 if the founding team had worked at three or more unique prior companies. I then created four additional dummy variables: founding teams with diverse and common prior affiliations both high; those with high common and low diverse prior affiliations; those with high diverse and low common prior affiliations; and those with low diverse and low common prior affiliations. Twenty-two percent of the firms were coded into the category for high diverse and common prior company affiliations, and 32 percent were coded into the category for low diverse and low common prior company affiliations. By creating dummy variables, I was able to clarify that only firms with founding teams that had *both* diverse and common prior company affiliations received performance benefits.

Model 2 includes only the high diverse/common category, omitting all other founding team categories. Founding teams with high common and high diverse prior company affiliations were more likely to grow. This result offers support for Hypothesis 3. I calculated the growth rate from coefficients in model 2 and found that firms whose teams had high common and high diverse prior company affiliations had a 19 percent higher growth rate than other firms. Model 3 confirms that these effects hold when low diverse/common prior company affiliations is the omitted category. Despite the small change in explained variance (R^2), the hypothesized variables significantly increase model fit. These results offer some evidence that firms whose founders have both common and diverse prior affiliations (those teams that engage in explorative and exploitative behaviors at founding) are more likely to grow. It is important to note that these founding team variables are significant despite the presence of variables controlling for changes in teams over time. A founding team leaves a lasting impact that shapes firm growth. In supplementary analyses, I also controlled for functional diversity and later team affiliations. No additional variable changed the support for the hypothesized effects.

I also examined whether founding teams needed aligned experience and strategy (for instance, did founding teams with common prior affiliations do better when their firms also had an exploitation strategy?). Supplementary analyses provided no ev-

idence that firms benefited from founding teams with prior company affiliations and a consistent strategy (e.g., an exploration strategy with diverse affiliations). This pattern of findings suggests that, although prior company affiliations shape the *likelihood* of a firm's engaging in one pattern of activities or another, an affiliation profile does not necessarily shape the *success* of those particular activities over time. Yet it is firms with both types of founding team affiliations that do best. The results in Table 4 suggest that initial team affiliation is linked to overall firm growth. Perhaps prior founding team affiliations that are both diverse and common allow a firm to hire the personnel most necessary for its success (Beckman & Burton, 2005) or for engaging in exploration and exploitation behaviors that are not examined here.

DISCUSSION

Overall, the results suggest that founding team prior company affiliations predict whether a firm pursues exploratory and exploitative behavior, and they also suggest that firms whose founding teams have both types of affiliations are more likely to grow over time. In general, these results support a strong relationship between founding team affiliations and consistent patterns of firm behavior. The mechanisms suggested for these linkages are the shared understandings that emerge from common prior company affiliations and the creativity associated with diverse prior company affiliations. Shared understanding suggests easier implementation and speed, whereas unique knowledge is associated with innovation and change.

Contributions

This study challenges and extends recent work on exploration and exploitation. I examined the antecedents of exploration, exploitation, and organizational ambidexterity and obtained results suggesting an alternative to a managerial "ability" to manage exploration and exploitation (Smith & Tushman, 2005). These results suggest that both exploring and exploiting may require management teams to draw on members' common and unique affiliations both, but to date research has seemed to advocate managerial insight and planning rather than choosing team members with the best set of experiences. This article indicates that teams are more constrained by history than current work suggests and that differences in firm exploration and exploitation are built in at team formation. Thus, ambidextrous firms may be those whose teams

have significant common and diverse experience at founding.

For learning theories, these results confirm that initial starting positions shape the potential for change and growth (Levinthal, 1997). The link between firm growth and founding team affiliation is consistent with the path dependencies of learning. Furthermore, research indicating that founding teams are generally formed for reasons of convenience, not strategy (Ruef, Aldrich, & Carter, 2003) suggests a founding team's ability to support innovation and incremental learning may be an accident of founding.

These findings also contribute to network theory in important ways. The present arguments for the benefits of common and diverse company affiliations are similar to network arguments for cohesion and structural holes. In network theory, dense connections between team members may hinder exploration but aid exploitation (Coleman, 1988). In contrast, structural holes, where actors have access to disconnected others with nonredundant information, increase a firm's ability to explore and reach diverse information (Burt, 1992). However, past company affiliations do not align with network concepts in several important ways. First, networks may exist without an affiliation. Second, founding team members with an affiliation to a given organization may not have a prior relationship because they worked for the organization in different divisions or at different times. In fact, in these data the correlation between whether founding team members had known each other previously and whether they were from a common set of past companies was .17. The correlation was much higher when founders were coworkers (because by definition at least some of the founders simultaneously shared company experience), but including coworkers as a control did not change the pattern of reported results. This result demonstrates that, in addition to shared norms developing through close relationships, shared values and understandings develop through identification and experience with a common former organization. The way in which I examined affiliations is similar in concept to the study of affiliation or membership networks, where individuals are connected through events (Wasserman & Faust, 1994). But even in this work the focus is on direct ties formed through shared affiliations. Company affiliations offer an alternative means of developing cohesion or obtaining diverse knowledge without assuming prior dyadic relationships.

For managers, this research suggests that they might usefully spend more attention at founding creating a team with both common and unique prior company affiliations. This is not to say that,

without such initial team planning, history dictates firm outcomes. The multiple means by which shared understandings and diverse knowledge can be obtained should be acknowledged. However, rather than focusing solely on functional experience, race, or gender, this research suggests a more subtle experience that shapes perceptions and alters team dynamics: prior company affiliations. These affiliations are important for managers to consider, as are the more general benefits of accessing unique knowledge and having shared understandings.

Limitations and Future Research

To be certain, this analysis does not capture all exploration and exploitation behaviors. I focused on behaviors associated with exploitation and exploration strategies, but affiliations may lead to broader patterns of exploration and exploitation. For example, there is evidence that a key means by which firms engage in exploration is maintaining relationships with other firms (Brown & Eisenhardt, 1997; Rosenkopf & Almeida, 2003). Here, supplementary analyses showed that team-level affiliations were unrelated to the initial number and range of external advisors. However, it is beyond the scope of the data to predict whether prior company affiliations might be influential in predicting specific external relationships. A longitudinal study of external partnerships is a promising topic for future research.

Future research should examine these issues in other samples of firms. For two key reasons, the present sample is success-biased. First, the firms were observed during the 1980s and 1990s. The latter half of the 1990s was an extraordinary economic time in general, and in particular in Silicon Valley. Thus, some of the sampled firms might have survived longer than they would have in another period, buoyed by the optimistic financial markets. Second, the sampling frame (at least ten employees) meant that the firms under investigation had achieved some minimum scale. Despite this data limitation, the sample had some noteworthy advantages for the purposes of this study. It spanned a range of industries and included firms that did and did not receive venture capital, go public, and become successful. This variety in itself is quite unusual. Owing to data limitations, much of the research in a similar vein looks only at firms that receive VC or have gone public. Although many valuable things can be learned from that type of research, this sample offered a much broader range of firms.

It is important to acknowledge that firm strategy

may emerge with a founding team itself. I controlled for variables that might plausibly drive both founding team selection and firm strategy (i.e., industry and team size). Additionally, supplementary analyses suggested that firm strategy did not predict later top management team affiliation. This finding suggests the causality more often works in the direction hypothesized: founding teams shape firm strategy, and/or the strategy and team evolve together. By examining other behaviors that indicate explorative and exploitative behaviors that clearly happen after team formation (product shipment, changing the idea pursued by a firm), the analysis demonstrates a broad pattern consistent with the hypothesized causality. Yet future research on firm and team formation could further illuminate these causal processes.

The concept of common organizational affiliation net of direct contact among actors is an important contribution of this work. Future research should examine the influence of "connections" that are neither actual relationships nor between structurally equivalent actors. Network theory needs to expand the study of networks beyond strong ties (see Lawrence, 2006) and to consider affiliation networks as more than precursors to dyadic relationships. Take, for example, two individuals who went to the same college several decades apart. Although the two individuals did not meet at school, they share a language about people, places, and things, and perhaps a feeling about the cultural experience, shared experiences that give them a common bond. Thus, the shared understandings that develop through common past affiliations are similar but distinct from bonds that develop through direct relationships. These types of connections may be formed through common school or company affiliations or through intense professional training (e.g., advanced educational degrees). The relevance of these common past affiliations may vary depending on the other relationships and attributes salient in a team.

This study also informs research on spin-offs. Although not all founders with common prior company affiliations create spin-offs from the parent firms, all spin-offs have founders with common prior company affiliations. Although research has often suggested that spin-offs are the source of innovations (e.g., Christensen, 1993), more evidence is consistent with spin-offs as exploiters of existing technology (Klepper, 2001) than with spin-offs as innovators. The results of this study are consistent with Klepper's and raise the question of whether, in spin-offs, exploitation comes from the teams' shared understandings or from the technologies of the parent that are available to exploit. Here I found

that teams with common prior company affiliations were more likely to have exploitation strategies, and these teams were also likely to have been formed before their firms' central ideas were settled on. Future research could help better explain the mechanisms that lead spin-offs to exploit and examine details about parent firms. For example, does the innovativeness of a parent moderate the effects found here?

In conclusion, by examining the antecedents of explorative and exploitative behavior in organizations, this article develops links between the team and the firm levels of analysis. Team-level prior company affiliations, and experiences more generally, influence firm-level choices and behaviors. I find that common founding team affiliations are related to faster product shipment and use of an exploitation strategy, whereas diverse team affiliations predict an exploration strategy and change in founding ideas. Firms that have founding teams whose members have both diverse and common affiliations are more likely to grow over time, which suggests team composition is an important component of firm ambidexterity. By examining new ventures, I demonstrate this link without the confounding influence of prior firm actions and expectations. The study points to the importance of both people and the constraints people face in the creation and growth of organizations.

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