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MOMENTUM AND SERENDIPITY: HOW ACQUIRED LEADERS CREATE VALUE IN THE INTEGRATION OF TECHNOLOGY FIRMS

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Merger and acquisition activity is a critical means by which technology firms obtain the resources needed to compete in global markets. Effective implementation is essential to making these acquisitions successful, yet prior research on the implementation process has yielded paradoxical findings. I argue that a closer examination of the role of the acquired managers helps to resolve the implementation dilemmas found in prior research, which has focused on the role of the acquiring firm. I use grounded theory-building techniques to examine the integration of eight technology acquisitions, and find that acquired managers play a key role in achieving two types of value: expected and serendipitous. In promoting the realization of these two types of value, acquired leaders maintain the advantages of both integration and autonomy. Moreover, these leaders enable their organizations to simultaneously experience two often-conflicting forms of change: exploration and exploitation.

Acquisitions have emerged as an important means for firms to gain technological capabilities in dynamic global markets (Coff, 1999; Ranft and Lord, 2000, 2002; Puranam, Singh, and Zollo, 2002). Yet capturing value from acquisitions can be difficult, and buyers often fail to realize the desired gains from their acquisition activity (e.g., Singh and Montgomery, 1987; Datta, Narayanan, and Pinches, 1992; Anand and Singh, 1997). One reason that acquisitions fall short of their goals is ineffective post-deal implementation (Jemison and Sitkin, 1986; Haspeslagh and Jemison, 1991; Larsson and Finkelstein, 1999). Prior research on acquisition implementation has focused in particular on the challenge of balancing integration and autonomy. Post-acquisition integration and resource reconfiguration may be necessary in order to exploit potential synergies between the acquired and acquiring firms (Capron and Mitchell, 1998; Capron, 1999; Larsson and Finkelstein, 1999), yet the loss of autonomy that typically accompanies integration can itself be detrimental to acquisition performance (Chatterjee *et al*., 1992; Very *et al*., 1997). Moreover, effective integration of the acquired firm demands a substantial commitment of managerial resources (Haspeslagh and Jemison, 1991), a requirement that may distract the acquirer from its own core business (Schoar, 2002).

The dilemma of integration vs. autonomy may be especially salient in acquisitions of technology firms. Technology acquisitions are often motivated by the desire to obtain and transfer tacit and socially complex knowledge-based resources (Grant, 1996; Ranft and Lord, 2000, 2002). Since these forms of knowledge are difficult to transfer, a high degree of post-deal integration may be required in order to realize an acquisition's

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potential value (Ranft and Lord, 2000, 2002; Puranam, Singh, and Zollo, 2002). Yet integration may ultimately lead to the destruction of the acquired firm's knowledge-based resources through employee turnover and the disruption of organizational routines (Puranam *et al*., 2002; Ranft and Lord, 2002). A second problem is that tacit and socially complex knowledge is difficult for external parties to observe. Acquirers may initially have poor information about where valuable knowledge resides in the acquired organization (Coff, 1999; Ranft and Lord, 2002), leading buyers to make ineffective decisions regarding the integration process.

Haspeslagh and Jemison (1991) have proposed one potential solution to the dilemma of integration vs. autonomy, based on an acquisition typology that incorporates the strategic and organizational attributes of a deal. *Symbiotic* acquisitions require both a high degree of integration and a high degree of autonomy in order to succeed. Acquisitions in which the strategic purpose is the exploitation of tacit and socially complex knowledge are likely to fall in this category. A key recommendation for managing symbiotic acquisitions is to delay the integration process, providing an opportunity for mutual learning and the establishment of trust between the two organizations before integration occurs. Such delays may be problematic in dynamic technology-based industries, however. Technology acquisitions are often undertaken in order to speed products to market by combining the acquired company's technology expertise with the acquirer's commercialization, manufacturing, and distribution skills (Puranam, Singh, and Zollo, 2002). Delayed interaction between the acquirer and acquiree may postpone the realization of these synergies and lead the combined firm to miss a short market window for its product.

In the face of these challenges, how do technology firms manage to create value from acquisitions? One part of the answer may be revealed by examining the role of a set of actors who are often overlooked in the acquisition literature: the leaders of the acquired firm. Prior research has generally viewed post-merger integration as a process that 'happens to' the acquired firm, rather than as an activity in which the acquired leaders are active and essential participants (e.g., Chatterjee *et al*., 1992; Pablo, 1994). The current study addresses this gap in the literature, using a grounded theory-building approach (Strauss and Corbin, 1990, Eisenhardt, 1989) to explore the question, 'How do the leaders of the acquired firm influence value creation during the implementation process?'

I examined this question using a grounded theory-building approach, creating detailed case studies of eight technology acquisitions. I found that acquisition performance can be conceptualized in two independent dimensions: *expected* and *serendipitous* value. *Expected* value refers to those benefits that motivated the buyer to undertake the acquisition, while *serendipitous* value refers to windfalls that were not anticipated by the buyer prior to the deal. Examples include new strategic ideas, improved product development techniques, and unexpectedly useful technologies.

The drivers of these two sources of value are distinct, yet acquired leaders play a critical role in each. Expected value is realized by preserving the momentum of the acquired firm. While the buyer's leaders tend to their own businesses or search for the next acquisition target, acquired managers preserve their companies' momentum by performing *mobilizing* and *mitigating* actions. Acquired leaders are uniquely qualified to perform these actions because of their deep understanding of their own businesses and established relationships with their own employees.

Serendipitous value is realized through a different mechanism. Specifically, serendipitous value is created when acquired personnel take on *cross-organizational responsibilities* that encompass both the acquired and acquiring firms. In these cross-organizational roles, acquired leaders have the visibility to discover unexpected synergies as well as the status to bring these synergies to fruition.

Together, these findings recast acquisition implementation as a process of fusing two coevolving organizations. To unleash the greatest value, this fusing must incorporate multiple, simultaneous forms of change. First, the buyer must continue its own development, responding to changes in its own competitive environment. Second, the acquired firm must complete its technology. Third, the buyer and the acquired firm must interact in relatively predictable ways to take advantage of planned synergies. Fourth, the two organizations must unlock the potential for entirely unexpected, serendipitous forms of synergy.

This view of acquisition implementation has implications for theories of organizational change. Prior theory has argued that both exploration and exploitation are necessary for organizational survival (March, 1991; Levinthal and March, 1993), yet the two forms of change are fundamentally incompatible (Levinthal and March, 1993; Teece, Pisano, and Shuen, 1997). I argue that acquisitions represent one means by which organizations can mitigate the potential trade-off between exploration and exploitation by maintaining multiple, simultaneous change points.

The paper proceeds as follows: First, I discuss theory-building through the multiple case method. I describe the research sample, the data collected, and the analytical techniques used. I then review the findings that emerged from the data and their implications for understanding the acquisition of technological competences. I conclude by discussing the broader implications of this study for understanding the coexistence of multiple forms of organizational change.

METHODS

The research approach I used in this study was grounded theory-building (Eisenhardt, 1989; Strauss and Corbin, 1990). I chose this strategy because of the lack of prior theory and research regarding the role of acquired managers in the post-acquisition integration process. The setting was the communications and information technology industries. Acquisition activity is a prevalent means of obtaining technology resources in these industries, with examples including Cisco Systems, Microsoft, and Nokia. I used a multiple-case design, allowing a 'replication' logic in which I treated the cases as a series of experiments, each case serving to confirm or disconfirm the inferences drawn from the others (Yin, 1989, 1993).

The study design involved eight acquisitions of privately held technology ventures (Table 1). In order to increase generalizability, the eight cases were divided into four industry sectors, each of which is global in terms of markets, competitors, and acquisition activity. Two sample cases were networking hardware companies, two were communications software companies, two were financial software companies, and two were content management companies. The number of employees in the acquired firms ranged from 20 to 110, and the stage of development of the acquired firms ranged from product development to revenue-generating. Prior research has suggested that geography can play a role in acquisition outcomes (Krug and Hegarty, 1997, 2001; Lubatkin *et al*., 1998). Therefore, the sample included four acquisitions in which the acquirer and acquiree were located in either different regions or different countries.

In order to improve the likelihood that informants accurately remembered the events that had transpired, I selected acquisitions that had taken place less than 6 months prior to the initial data collection. As a result, seven of the eight focal companies were actively involved with some part of acquisition implementation at the time of the study. This allowed the study to incorporate both retrospective and real-time data, creating greater depth of understanding of how events evolved over time (Leonard-Barton, 1990).

Informants included the individuals from both the acquired and acquiring firms who were most involved in the acquisition integration process. I identified informants through 'snowball sampling.' I contacted each company either through the CEO of the acquired firm or through the head of business development at the buying firm. This initial contact then identified the other individuals who had been most involved in the acquisition within the acquired and acquiring firms. To confirm that these were the key individuals to interview, I asked each additional informant to name other individuals who were central to the acquisition process. This process converged on a set of key managers and investors whom I contacted and interviewed. This set typically included the CEO and two or more vice presidents or board members from the acquired firm, as well as two to four vice presidents or senior managers from the acquiring firm.

Data collection

I used three data sources: (1) interviews with company leaders and investors; (2) follow-up e-mails and phone calls; (3) archival data, including company websites, business publications, and other materials provided by the informants. The primary source was over 60 semi-structured interviews with individual respondents, conducted over a period of 10 months. The interviews were typically 60–90 minutes in length. I described the topic and purpose of the research to each informant prior to the interview. Also prior to the interview, I reviewed information about the acquisition from published sources and from previous interviews.

Table 1. Description of case data

Company	Sector	Acquiree stage of development, location	Strategic purpose of deal	Expected source of synergy/resource contributions	Interviews
MoveTech	Networking hardware	Product development Distant	Create and distribute new product	*Seller*: Technology expertise, customer relationship *Buyer*: Manufacturing, marketing, sales, distribution skills	*Total*: 5 *Seller*: 3 *Buyer*: 2
RoadComm	Networking hardware	Product development Distant	Create and distribute new product	*Seller*: Technology expertise *Buyer*: Complementary technology expertise, manufacturing, marketing, distribution skills	*Total*: 6 *Seller*: 3 *Buyer*: 3
Communique	Communications software	Product development Local	Combine products into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Manufacturing, marketing, distribution skills, customer relationships	*Total*: 8 *Seller*: 6 *Buyer*: 2
FanMail	Communications software	Revenue Distant	Combine products into suite with greater functionality	*Seller*: Technology expertise, customer relationships *Buyer*: Complementary technological expertise, marketing sales, and distribution skills	*Total*: 7 *Seller*: 3 *Buyer*: 4
BigDeal	Financial software	Product development Local	Combine services into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Manufacturing, marketing, sales, and distribution skills	*Total*: 9 *Seller*: 5 *Buyer*: 4
TouchDown	Financial software	Beta testing Local	Combine products into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Complementary technology expertise, marketing, sales, and distribution skills	*Total*: 7 *Seller*: 4 *Buyer*: 3
Spectacle	Content management software	Revenue Local	Combine services into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Complementary technology expertise	*Total*: 9 *Seller*: 5 *Buyer*: 4
Golden	Content management software	Revenue Distant	Combine services into suite with greater functionality	*Seller*: Technology expertise, customer relationships *Buyer*: Complementary technology expertise, customer relationships	*Total*: 7 *Seller*: 3 *Buyer*: 4

Prior to the main data collection effort, I conducted eight pilot interviews to provide preliminary insights into the acquisition process and to test potential interview questions. The pilot informants were individuals who had significant experience with acquisitions of technology-based firms, including venture capitalists, entrepreneurs, and leaders of acquiring firms. I used the findings from these interviews to develop separate interview guides for each of three groups: acquired firm managers, acquired firm investors, and buying firm managers. The interview guides consisted of a series of open-ended questions that allowed the informant to relate his or her acquisition experience. I used a 'courtroom' procedure, in which questions concentrated on facts and events rather than on respondents' interpretations (Eisenhardt, 1989).

The interview guide for acquired managers began by asking for background information on the firm and the informant, and then asked a series of questions about the chronological history of the company *vis-à-vis* acquisition. The interview concluded with a questionnaire asking the informant a series of closed-ended questions about the firm's history and about the informant's acquisition experiences, including his or her perceptions of the acquisition's success. Interview guides for buyers and investors followed a similar chronological structure, but were adapted to the roles that these individuals typically play in the acquisition process. In addition to the acquirer, acquiree, and investor interviews, I conducted a few interviews with individuals who had extensive experience with acquisitions (e.g., the head of technology M&A at a prominent investment bank). These interviews followed a more open-ended format with questions that were often idiosyncratic and related to the domains of expertise of the informants.

In preparing for each interview, I reviewed my notes from prior interviews pertaining to the same case. However, in order to protect the anonymity of the informants and to encourage candor, information from prior interviews was not shared with subsequent informants. I tape-recorded and transcribed all interviews. In addition, I asked follow-up questions via phone or e-mail in situations in which clarification was required. If the acquisition integration was ongoing at the time of the initial interview, I conducted additional interviews to track the development of the integration process. I interviewed informants as many as three times.

Data analysis

As is typical in inductive research, I analyzed the data by first building individual case studies, and then comparing cases to construct a conceptual framework (Eisenhardt, 1989). Upon completing all of the interviews for a particular case study, I synthesized the interview transcripts and archival data into individual case histories. There was typically high agreement among respondents around such critical issues as the strategic purpose of the acquisition, the degree of integration, and the level of success of the acquisition. The histories were between 40 and 70 double-spaced pages in length and included narrative, selected quotes from the informants, and tables and timelines summarizing key facts about the company and the deal. The case-writing process took approximately 6 months to complete.

I used the case histories for two types of analysis: within-case and cross-case (Miles and Huberman, 1984). Within-case analysis focused on describing the events experienced by the acquired and acquiring firms and developing generalizable constructs about the integration process. The analysis and data collection proceeded in an iterative process in which I refined interview questions to pursue emerging themes within each case. While I noted similarities and differences among cases, I left further analysis until I had completed all case write-ups in order to maintain the independence of the replication logic. As a check on the emerging case stories, a second researcher read through the original interviews and formed an independent view of each case. This perspective was then incorporated into each case in order to provide a richer and more triangulated summary for each firm.

Cross-case analysis began after all of the cases were completed. Using methods suggested by Miles and Huberman (1984) and Eisenhardt (1989), I looked for the presence of constructs across multiple cases and examined whether similar themes emerged in multiple settings. I developed tentative propositions by grouping the focal firms according to variables of potential interest. An additional technique used was to compare pairs of cases to identify their similarities and differences. I refined emerging relationships through replication logic, revisiting the data to see if each separate case demonstrated the same pattern. I used charts and tables to facilitate comparisons between cases. The analysis process was iterative. The initial phase lasted for 6 months. I then revisited the findings from this phase after a break of several months. In the second phase, I re-examined the original interviews to ensure that the developing framework remained consistent with the data. What emerged from this process was a set of insights linking acquisition performance to specific actions by acquired leaders, as well as to the nature of the responsibilities given to acquired personnel in the combined organization.

ACQUISITION PERFORMANCE

Prior research has often used acquisition outcomes to infer managerial motivations for undertaking acquisition deals. Researchers have argued, for example, that evidence of widespread post-acquisition resource reconfiguration suggests that managers conduct acquisitions in order to reshape organizational capabilities (Capron, Dussauge, and Mitchell, 1998; Capron, 1999), and that a lack of actual post-merger cost benefits implies acquisitions are not motivated by operational efficiencies (Dranove and Shanley, 1995).

While there is undoubtedly a relationship between managers' original motives and post-acquisition results, acquisition outcomes are to some degree inherently unpredictable (Haspeslagh and Jemison, 1991), particularly in the setting of technology industries (Coff, 1999). It follows that managerial motives may not completely correspond to the sources of value that emerge after deal close, and vice versa. A gap in the acquisition literature, therefore, is an understanding of how managers' goals for an acquisition interact with emergent situational factors to ultimately shape the sources of post-deal value creation.

The current study addresses this gap, finding that post-deal outcomes can be more accurately conceptualized in terms of two distinct dimensions: realization of *expected* value, and realization of *serendipitous* value. *Expected* value refers to those benefits that motivated the buyer to undertake the acquisition. *Serendipitous* value, in contrast, refers to value that was not anticipated by the buyer prior to the deal. While expected value was relatively similar across all cases, serendipitous value took many forms, including the revitalization of the acquirer's marketing organization, the discovery of new product development processes, and the identification of additional acquisition targets.

As in prior studies of technology acquisitions (Ranft and Lord, 2000, 2002; Puranam *et al.*, 2002), the buyers in this study conducted acquisitions primarily in order to obtain technological resources that could be combined with their own technological, manufacturing, marketing, and sales resources to create value. The goal of these acquisitions was to increase revenues by speeding entirely new products to market or by adding compelling new features to the buyer's existing products or services. In four cases (MoveTech, Spectacle, Golden, and FanMail), a secondary expectation was that the acquired companies would bring existing customer relationships that could be used to sell the buyer's products. In keeping with the knowledge-recombination rationale for these acquisitions, the buyers in this study intended to retain virtually all acquired employees. Prior research indicates that employee retention is important for knowledge preservation and transfer (Ranft and Lord, 2000) and therefore for the timely development of a product pipeline (Puranam *et al.*, 2002) and the longer-term realization of value in a technology acquisition.

To reflect the acquisition motives expressed by buyers, I measured the realization of expected value in three dimensions (Table 2): (1) revenues derived from acquired technologies; (2) retention of key acquired employees; and (3) managers' perceptions of acquisition performance. I evaluated acquired product revenues on the basis of whether planned targets were reached on schedule. I evaluated retention on the basis of whether key employees left the organization during the acquisition implementation process. Key employees were defined by informants, and typically included engineers and senior managers of functions such as marketing and information systems. Finally, I used managers' overall assessments of acquisition success to provide a comprehensive measure of whether acquisition outcomes met their expectations. These assessments ranged from positive descriptions such as 'most successful' and 'very good' to negative descriptions such as 'a total disaster.'

An example of a company that delivered its expected value is TouchDown. TouchDown was acquired in order to obtain a technology that could

Table 2. Acquisition outcomes: expected value

Company	Performance relative to expected value	Revenues met/exceeded plan	Loss of key employees	Overall performance
Communique	High	Yes 'We've sold twice as much of Communique's product as we thought we would.'—acquirer VP sales 'We committed to the board in May that we would have 10 customers by the end of the year, and do $2 million in revenue, and we've almost doubled that on both counts. So it's been a very successful acquisition.'—acquired VP business development	None	High 'It is the most successful I've experienced out of six to seven different deals.'—acquirer VP sales
TouchDown	High	Yes 'We had a 10-customer goal for March, we closed our 31st customer yesterday, so tripled our target . . . I built a sales model assuming one application, $60K, and our average sales price is about $110K, so we're way ahead on revenue. That company looked a hell of a lot better than a lot of the companies that go public.'—acquired CEO	None	High 'It was a very good acquisition.'—acquirer VP business development
Spectacle	High	Yes 'Spectacle is making huge contributions to the gross margins of [the buyer] . . . Every quarter we've exceeded our targets.'—acquired CEO	None	High 'The acquisition has made our assets so much more valuable.'—acquirer VP business development
Golden	High	Yes 'They were hitting numbers that were better than what [the buyer] was expecting.'—acquired firm angel investor	None	High 'We're doing great. For them, we're obviously generating a lot of value.'—acquired CEO 'There's a phenomenal amount of respect for what [the acquired company] is doing.'—acquirer VP business development
MoveTech	Low	No 'The development team at MoveTech missed some milestones for the customer, and the customer went away.'—acquirer head of technical integration	VP marketing Two founders/senior engineers	Low 'In terms of the impact on the business today from the product shipping and customer impact point of view I would say it is probably a 5 or a 6 out of 10 right now.'—acquirer VP business development

(*continued overleaf*)

Table 2. (*Continued*)

Company	Performance relative to expected value	Revenues met/exceeded plan	Loss of key employees	Overall performance
		'They're shipping, and [doing] trials, but not quite shipping fully, which is kind of amazing. A little of that has to do with the acquisition. Things slow down a lot when that happens.'—acquired firm venture investor 'The acquisition slowed us down for a month or even a couple of months.'—acquired CFO [April] 'The product is later than we expected . . . We expected the product to be out there in the field by now [September 18].'—acquirer VP business development		
RoadComm	Low	Yes 'Once we acquired them, we might have lost about 6 weeks to 2 months trying to match up our development teams . . . debugging took a long time, longer than we expected'—acquirer senior VP 'I don't think you're going to like the commercial bottom line from that acquisition.'—acquired firm angel investor	None	Low 'Many things could have been done much better.'—acquirer director of business unit
FanMail	Low	No 'We are not going to see the [revenue] synergies that we would like to see.'—acquirer director of business development	VP Engineering and three engineers	Low 'The worst example of anything we've ever integrated.'—acquirer CTO 'I just don't think that was our marquee acquisition.'—acquirer director of strategic development 'We struggled quite a bit.'—acquired VP sales
BigDeal	Low	No 'We were slow to market, so we're facing some competitors that we would not like to have faced.'—acquirer manager of strategy	President CEO CIO Director of engineering Director of business development	Low 'The acquisition of BigDeal obviously was a disaster.'—acquirer manager of strategy 'The acquisition went quite poorly. I think there is nobody who would say otherwise at the senior management level.'—acquirer vice president

be rapidly commercialized using the buyer's marketing and distribution resources. The CEO of the buying firm explained, 'It was the combination of our sales force and their product that made for the synergy.' He added that the acquisition had several goals: 'to leverage our core business by adding a value-added service, to add revenue, and to bring us the absolute experts in the technology.' In this case, the buyer was not disappointed. TouchDown performed very well in each of the three dimensions of expected value. TouchDown's CEO explained that the company far exceeded post-deal revenue targets:

> We had a 10-customer goal for March, we closed our 31st customer yesterday, so tripled our target . . . I built a sales model assuming one application, $60K, and our average sales price is about $110K, so we're way ahead on revenue. That company looked a hell of a lot better than a lot of the companies that go public.

TouchDown was also able to retain all of its key managers and engineers through the completion of the acquisition implementation. The CEO commented, 'the engineering team came over intact—they're still doing their thing.' Overall performance assessments confirmed that the acquisition fulfilled the buyer's expectations. The buyer's vice president of business development commented, 'It was a very good acquisition.'

In contrast, four other companies failed to achieve their expected value. MoveTech provides an illustration of this. Like TouchDown, MoveTech was acquired to bring a new technology to market and to obtain skilled employees who could develop future product generations. Rapid commercialization was felt to be essential to creating value from the acquisition. An executive in the buying firm explained, 'If the product doesn't come out in the planned timeframe it could be too late. Other companies may have technologies that are better.'

Unfortunately, MoveTech did not commercialize its product rapidly. Problems became apparent only a few months after the deal closed, when the product missed its planned completion date. At that time, an acquired executive commented, 'The acquisition slowed us down for a month or even a couple of months.' This assessment turned out to be overly optimistic; 3 months later, the product still had not been completed. One of MoveTech's board members remarked, 'They're shipping and doing trials, but not quite shipping fully, which is kind of amazing.' Two months later still, with the product not yet ready for distribution, the acquirer's head of business development lamented, 'The product is later than we expected. We expected it to be out there in the field by now.'

A secondary motive for the MoveTech acquisition was to exploit the company's incipient relationship with a major telecommunications carrier. The buyer was hoping to parlay this relationship into a significant source of revenue across multiple product lines. As the product development process foundered, this expected source of revenue evaporated. An acquiring executive commented, 'The development team at MoveTech missed some milestones for the customer, and the customer went away.'

In addition to failing to meet customer and revenue targets, MoveTech lost several key employees after the acquisition, including the company's vice president of marketing and two founders who played important engineering roles within the company. Consistent with the delayed launch, key customer loss and retention issues, the acquisition's overall performance assessments were poor. The acquiring firm's head of business development summarized, 'In terms of the impact on the business today from the product shipping and customer impact point of view, I would say it is probably a 5 or 6 out of 10.'

REALIZING EXPECTED VALUE

Why did some acquisitions exceed buyers' expectations, while others fell short? While prior research has focused on the role that the acquiring firm plays in realizing the potential value from an acquisition (Chatterjee *et al.*, 1992; Very *et al.*, 1997; Haleblian and Finkelstein, 1999; Hayward, 2001; Zollo and Reuer, 2001; Zollo and Singh, 2001; Finkelstein and Haleblian, 2002), this study found that the acquired firm's management played a critical role in realizing both expected and serendipitous value. These managers contributed to the generation of expected value through a combination of *mobilizing* and *mitigating* actions. These two types of actions kept employees focused, maintaining organizational momentum during the acquisition implementation process.

Mobilizing actions

In many technology acquisitions, time is of the essence. Technology acquisitions are often motivated by the desire to speed products to market. Achieving this goal requires that the acquired company accomplish two tasks during post-deal implementation: completing its own technology, and rapidly linking with the acquiring firm's manufacturing, marketing, and distribution organizations. A number of factors may interfere with this process, threatening the realization of the acquisition's expected value. Acquisition implementation can cause increased uncertainty and heightened stress for acquired employees (Schweiger and DeNisi, 1991), leading them to 'mentally disengage' (Haspeslagh and Jemison, 1991: 179). Haspeslagh and Jemison recommend that the acquirer set short-term goals as one means to focus acquired personnel, but note that this can be difficult since 'acquiring executives may not have many of the answers about precisely where the organization will have to go' (Haspeslagh and Jemison, 1991: 180). In the case of technology firms, two factors may make it particularly difficult for buyers to provide meaningful direction to the acquired firm: First, significant information asymmetries may exist between buyer and seller (Coff, 1999), making the buyer ill-equipped to set specific goals and targets for the acquired firm. Second, dynamic external conditions may make it challenging for the acquiring executives to devote adequate attention to the acquired firm, or to anticipate the actions that must be taken for the acquisition to succeed.

Despite these issues, half of the acquisitions met or even exceeded their expected value. The key to success in these cases was that rather than relying on the acquiring firm leaders, who were typically unable to provide useful direction, the acquired leaders took matters into their own hands. These effective acquired leaders performed *mobilizing actions* that focused and guided their teams and maintained organizational momentum. These actions took two forms. First, the more effective acquired leaders engaged in *internal pacing* to channel employees' energy toward tangible tasks. Internal pacing is defined in this study as setting specific goals and timelines for the acquired organization. Second, these leaders *accelerated coordination* between the acquired and acquiring firms. Accelerating coordination is defined as instances in which the acquired leaders impelled the buyer to interact more rapidly with their own organization.

Table 3 summarizes acquired leaders' mobilizing actions and indicates that acquired leaders who engaged in these activities were far more effective in realizing the value expected from their companies. TouchDown provides an illustration of this relationship. As discussed earlier, TouchDown was highly successful in achieving its expected value. The acquisition's success is all the more impressive given that the acquiring firm failed to provide effective leadership during the implementation process. The acquiring CEO acknowledged, 'We made some mistakes.' The buyer launched the acquisition with a party, but then proceeded to offer little direction to the acquired firm. The acquired vice president of sales expressed concern that uncertainty was causing the acquirer to postpone important decisions: 'I fear that people around me say, "but we don't know yet." I come from a school that says, "but we do know this, let's go teach the organization this."' In addition, the buying firm's leaders were simply too busy with their own business to spare time for the acquiree. Their market was rapidly changing, and adding to the managers' burden, they acquired a second firm shortly after buying TouchDown. One of TouchDown's leaders explained, 'Everyone over there was so heads-down that we were a huge thing that they just didn't have time for.' But if the buyer's neglect was partly accidental, it was also partly purposeful. The acquiring firm seemed to have decided that a 'hands-off' approach was best. A vice president of TouchDown commented, 'I would come in and say, 'Who did I need to talk to about this?' [They'd say], 'You do it the way you want. Just go ahead and do it.' So they were very, 'We don't want to offend you, we don't want to hurt you.' So that made it very difficult in some ways.'

While a combination of intentional and unintentional factors led TouchDown's buyer to nearly ignore their acquiree, TouchDown's own leaders actively guided the post-deal progress of their company through mobilizing actions. TouchDown's CEO provided internal pacing, promising his employees a week-long vacation over the winter holidays if they achieved their targets. A vice president stated: 'Our CEO had millennium goals—he said, "we can't defocus." He asked each of the managers to put in goals for our teams—it got people

Table 3. Acquired leaders' mobilizing actions

Company	Internal pacing	Accelerated coordination	Performance relative to expected value
Communique	Yes Acquired top management team made commitments to board of directors to meet specific customer and revenue targets.	Yes Acquired CEO insisted that buyer's salespeople were trained about acquired product: 'I think it was the first customer advisory council we were having in October. We put the agenda together, and we had an hour for our product and an hour and a half for [the buyer's]. And one of the guys in the services organization said, "Why are you giving so much time to your product?" And it was like, what do you mean? And he was like, "Well, the core of the company is [buyer's product], and you only give an hour and a half to that." And I said, "Because the core of the company next year is not going to be [buyer's product]." '—acquired CEO	High
TouchDown	Yes '[The CEO] had millennium goals—he said, 'we can't defocus.' He asked each of the managers to put in goals for our teams ... it got people charged up and working and focused.'—acquired VP services	Yes Acquired vice presidents pushed buyer's managers to work on implementation: 'I was calling my peers in the services group, saying "Let's get together, let's work this out, I know I'm going to be in this slot, let's figure out what makes sense. I want to work with you to figure out the details. I want to make sure our systems are together and everything." '—acquired VP services	High
Spectacle	No	Yes 'I've taken the entire Spectacle organization and mapped it to the buyer's organization.'—acquired CEO 'We are closing February 10. The reporting relationships change February 11. I have a very strict philosophy on acquisitions. You implement as quickly as possible.'—acquired CEO	High

(continued overleaf)

Table 3. (*Continued*)

Company	Internal pacing	Accelerated coordination	Performance relative to expected value
Golden	Yes 'For revenue, we already had all those targets done, because we had the financials as part of the fundraising process ... Our business already had such a solid plan.'—acquired VP business development 'We still have priorities, we have goals, we know exactly how many members we're going to get, we know how we're going to get them.'—acquired CEO	Yes Acquired company founders proactively visited acquirer to coordinate activities: 'Just about every week, one of us has gone out [to the acquirer] ... the onus is on our end and their end to make sure that communication is there. And to date we've done very well.'—acquired CEO	High
MoveTech	No	No Acquired CEO focused attention primarily on internal rather than external issues. 'He's an engineer's engineer ... I think he's spending a lot of time working on getting the MoveTech product through the development stages it is at.'—acquirer head of business development	Low
RoadComm	No 'What the exact goals and milestones were—there was [only] some vague notion of what kinds of things they would be.'—acquired CTO	No Acquired CEO focused primarily on internal issues, and interacted with only one individual from the buying firm. 'We stayed in our own group and we essentially followed the same plan that we had.'—acquired CEO	Low
FanMail	No 'We don't have four or five key objectives up on the walls in every office.'—acquired VP Marketing 'People there are not being guided and they don't know what to do.'—acquirer VP business development	No Acquired CEO acted as barrier between buyer and acquired employees: 'We had a single point of entry into the company—the CEO—and everyone else was hidden behind this big umbrella.'—acquirer CTO	Low
BigDeal	No 'The organization wasn't getting from us clear direction about, "this is exactly where we need to go." '—acquired VP business development	No Acquired CEO and VP business development blocked communication between their own employees and the acquirer. After the deal closed, 'They banned everyone else from talking to anyone at [the buyer].'—acquired CTO	Low

charged up and working and focused.' In addition, the acquired leaders accelerated coordination between the acquired and acquiring firms, pushing the buyer's employees to interact with the acquired organization. One acquired leader explained:

> I was calling my peers in [the buyer's] services group, saying 'let's get together, let's work this out, I know I'm going to be in this slot, let's figure out what makes sense. I want to work with you to figure out the details. I want to make sure our systems are together and everything.'. ... We felt like we were driving it, which is just kind of weird to be the acquired company and to be begging people for time to work through the things.

As a result of managing internal pace and accelerating coordination with the buyer, TouchDown's leaders not only achieved, but surpassed the value expected from the acquisition.

A second company that illustrates the benefits of the acquired leaders' mobilizing actions is Golden. Like TouchDown's buyer, Golden's acquirer engaged relatively little with the company after the deal closed. The acquiring CEO explained that this was intentional. He had experienced a negative outcome from an acquisition at a prior company, and had concluded that the less input from the acquirer, the better:

> It's not like we're saying, 'you should change how you're doing something.' We tried to do that differently this time ... The other thing is, we're not rushing into an integration effort ... I'm trying to delay it to give room for those people to get kind of comfortable with the whole idea on a gradual basis.

While the acquirer stayed away, Golden's leaders managed the timing of both internal development and coordination with the buyer. Golden's CEO controlled internal pacing by setting goals for customer acquisition during the post-deal implementation period: 'We still have priorities, we have goals, we know exactly how many members we're going to get, we know how we're going to get them.' Her co-founder concurred: 'We already had all those targets done ... Our business already had such a solid plan.' As a result, one of the acquiring firm's board members praised Golden's CEO for 'keeping her employees on track.' In addition to managing internal pacing, Golden's entire management team worked to rapidly coordinate their company's activities with the buyer's. They accelerated coordination between the two organizations by traveling to the buyer's headquarters on a frequent basis. Golden's CEO explained: 'The last thing you want to do is overlap. So what we've done is, just about every other week, one of us has flown out [to the acquirer].'

Ultimately, the efforts of Golden's leaders resulted in a very successful acquisition that exceeded the value expected by the buyer. The original goal of the acquisition was to merge Golden's content management capabilities with the buyer's online sales technology, creating a powerful combination that would attract new customers as well as encourage repeat business. By all accounts, the acquisition was successful in accomplishing both. One of the company's angel investors commented, 'They were hitting numbers that were better than what [the buyer] was expecting.' In fact, Golden grew to dominate its market, accumulating 175,000 registered users when its two main competitors combined had less than 10,000. Golden also retained all of its key employees. The CEO explained, 'everyone has stayed, knock on wood!' Overall assessments of the acquisition were positive from both sides. The acquirer's head of business development described having a 'phenomenal amount of respect' for the achievements of the acquired company, and the acquired CEO agreed, 'we're doing great.'

A comparison of TouchDown and Golden indicates that the acquired leaders' mobilizing actions may be valuable regardless of the actual level of integration that exists between buyer and seller. TouchDown was highly integrated with its buyer. Shortly after the deal closed, the engineering group began reporting to a vice president in the acquiring firm, and functions such as customer support, services, and product management were completely merged with the buyer's organization. Yet, internal pacing from the acquired CEO continued to be an important means of managing the productivity of acquired employees. In contrast, Golden stayed both physically and organizationally quite separate from its buyer. Golden remained in the Midwest while the acquirer was located in Silicon Valley, and all of Golden's employees continued to report to their original managers. One of Golden's senior leaders explained, 'we're basically running Golden as an independent subsidiary.' Yet accelerated coordination was still important: in order for the expected value of the acquisition to be realized, the acquired company's activities needed to be linked to the buyer's to ensure technical compatibility and to launch joint marketing initiatives.

While TouchDown and Golden had leaders who performed mobilizing actions during acquisition implementation, four other companies in the study did not fare as well. Their leaders neither provided internal pacing nor accelerated coordination with the buyer, and as a result these acquisitions fell far short of their expected value. An example is FanMail. Like the buyers of MoveTech and Golden, FanMail's acquirer fell victim to external pressures and internal uncertainty, and failed to provide task guidance to the acquired firm. FanMail's acquirer had embarked on an ambitious acquisition program in order to seize positions in its emerging market. An executive explained, 'It's a tough call because there is so much premium placed on first-mover advantage in this space . . . [but] you can't possibly absorb and motivate so many people.' The buyer's leaders were too overwhelmed by their six other acquisitions to make decisions regarding FanMail. The buyer's head of integration admitted, 'I just remember at Christmas getting off the phone and telling my husband, "Boy, do I feel like crud, [the acquired CEO] is really wanting answers that I can't give him." '

When MoveTech and Golden faced the same absence of acquirer leadership, their own senior managers filled the void. FanMail's leaders did not do so, failing to provide pacing for employees during acquisition implementation. The acquirer's vice president of business development observed, 'people there are not being guided and they don't know what to do.' Acquired leaders agreed with this assessment. The acquired vice president of marketing noted, 'We don't have four or five key objectives up on the walls in every office,' and the acquired CEO agreed: 'I think it would have been beneficial to come up with three or four things to focus on.' Unfortunately, he never took the step of defining these focal points, and as a result employees lost sight of important, time-sensitive tasks.

In addition to not providing pacing, FanMail's leaders failed to accelerate coordination with the buyer. FanMail's CEO insisted that all of his employees continue to report to him, creating a barrier between them and their counterparts in the acquiring firm. The buyer's CTO complained that this arrangement interfered with communication between the two companies: 'We had a single point of entry into the company and everyone else was hidden behind this big umbrella.' Rather than trying to bridge the gap their CEO had created, FanMail's other senior managers also retreated behind the walls of their own organization. The CEO's second-in-command acknowledged, 'I removed myself from [the process] . . . In terms of policy setting and executive decisions, I'm much less involved in this setting.' This withdrawal further slowed coordination between the acquired and acquiring firms.

FanMail was ultimately a great disappointment, failing to achieve its expected value. The acquirer's head of business development explained that the acquisition was falling behind its revenue expectations: 'We're not going to see the [revenue] synergies that we would like to see.' The head of engineering and three key engineers left the company during the acquisition process, leading the acquired vice president of sales to admit, 'we struggled quite a bit.' The acquirer's CTO labeled the deal 'the worst example of anything we've ever integrated.'

An alternate hypothesis for the reason that companies like FanMail performed worse than Golden and MoveTech is that the latter companies' technology was simply better. That is, rather than having leaders who were effective in maintaining productivity, the more successful companies may have had technologies that were more promising. However, the data suggest this hypothesis is incorrect. For example, Communique shared the same success as Golden and MoveTech, yet the company's product was far from perfect, even at the time of launch. The president of the acquiring firm commented: 'If there's one downside, the product wasn't that great. By Q4, they were still trying to debug it.' Conversely, even companies like BigDeal and FanMail had technology that could have been valuable. The acquiring firms simply did not purchase companies that did not have a potentially useful product. Thus while the quality of the acquired firms' technology undoubtedly plays a role in acquisition success, the post-deal actions of the acquired leaders also appear to be important.

Why were acquired leaders' actions so important to achieving the expected value from an acquisition? One answer lies in the demands of the multiple forms of change that must take place during acquisition implementation. The acquisition implementation process can be viewed as an innovation battle with many fronts. These fronts, or change points, must be individually managed but also collectively coordinated. Company leaders must orchestrate independent changes within the buying firm and within the acquired firm, and simultaneously fuse the two organizations together to exploit synergies. Moreover, all of these changes need to take place rapidly. Synchronizing these multiple change points proved to be too overwhelming a task for most of the acquirers in this study. However, the effective acquired leaders shared the burden, taking responsibility for those areas of change that they were most qualified to manage. They kept their own organizations on pace to complete their technology, and accelerated interaction between the acquiring and acquired firms to ensure a rapid fusing of the two organizations.

In formal terms, this finding suggests the following relationship:

> *Proposition 1: Acquisitions will be more likely to achieve their expected value if acquired leaders perform mobilizing actions (i.e., managing internal pacing and accelerating coordination across the two companies) during the implementation phase.*

Mitigating actions

One hazard of acquisition implementation is that it often triggers negative emotions for acquired employees. Acquired employees must confront changes in a wide range of matters, from reporting structures and titles to office space. They may experience feelings of 'significant discomfort' (Buono, Bowditch, and Lewis, 1985), which in turn can lead to increased absenteeism and diminished job satisfaction and commitment (Sales and Mirvis, 1984; Buono and Bowditch, 1989; Schweiger and DeNisi, 1991; Nahavandi and Malekzadeh, 1993). Negative emotions triggered by the acquisition process may not only interfere with employees' productivity, but also cause them to leave their jobs (Hambrick and Cannella, 1993). Heightened post-acquisition turnover is particularly concerning in technology acquisitions, since acquired employees are the repository of tacit, socially complex knowledge that is essential for making the acquisition a success (Coff, 1999; Ranft and Lord, 2000, 2002; Puranam *et al.*, 2002).

The more effective acquired managers were able to protect their employees from many of the negative outcomes associated with the implementation process. While change was inevitable, the better acquired leaders helped to lessen the discomfort of their employees by engaging in *mitigating actions*, defined as activities that resolved complaints or addressed concerns of acquired personnel. These actions helped to minimize turnover and disruptions to productivity, maintaining organizational momentum and ultimately leading to the realization of the acquisition's expected value.

Two measures for mitigating actions emerged from the data in this study. The first was *expediting of concerns*, defined as actions taken to rapidly address and resolve employees' acquisition-related problems. The second was *real-time communications*, defined as timely, proactive information-sharing with acquired employees. Table 4 summarizes the mitigating actions taken by acquired leaders, and indicates that companies whose leaders engaged in these activities were more likely to achieve their expected value.

An example of this relationship is Communique. Communique's CEO and president energetically both expedited employee concerns and engaged in real-time communications. Their expediting of concerns primarily involved issues emerging from employees' newly assigned managers and titles. In one instance, one of Communique's strongest employees was facing a demotion as a result of the acquisition. She had held the title of director of marketing at Communique, but although she was a valued employee the buyer's president felt this title should be reserved for more experienced managers: 'She was great but we just couldn't make her the director of marketing here. It was a challenge for [the acquired CEO] too, to try to fit her in.' To avoid an outright demotion, the acquired CEO creatively designed two different types of 'director' positions: 'He ended up creating different levels of directors. Now we have the director of marketing and Shelly has some sort of director title also, and she's happy with that.'

In a second instance, a Communique employee was at risk of being terminated because of a personality clash with his new boss in the acquiring firm. Communique's CEO again intervened, advocating for the employee and insisting that the manager remedy the situation:

> I remember having a conversation with one of the buyer's VPs, just going, 'look, it's your job to make this work, and it's not going to be, you know, "we just don't get along, we have an issue here, and let's just let the guy go."'

Table 4. Acquired leaders' mitigating actions

Company	Expediting of employee concerns	Real-time communications	Expected value realization
Communique	Yes Acquired CEO created new title structure to avoid the appearance of demotions: 'Instead of taking her title away, [the acquired CEO] ended up creating different levels of directors.'—acquirer president Acquired CEO intervened with acquired employee's new manager to prevent employee from being terminated from company. 'I remember having a conversation with one of the buyer's VPs, just going, "Look, it's your job to make this work, and it's not going to be, you know, we just don't get along, we have an issue here, and let's just let the guy go." '—acquired CEO	Yes '[We spent time] listening to people, taking them out to lunch, showing up and meeting new people who joined and only ever worked in the old location who I'd never met, stuff like that.'—acquired VP business development	High
TouchDown	Yes Acquired CEO readjusted vesting to address inequities: '[The CEO] proposed for each of the people, there were probably eight people, what we thought was fair in terms of additional grants, periods, acceleration.'—acquired firm venture investor	Yes 'The CEO kept us very aware [of the deal negotiations]. It's his style.'—acquired VP services '[The CEO] was really good about explaining why we had made this decision [to be acquired], why it was a good decision.'—acquired VP services	High
Spectacle	Yes Acquired CEO pushed to place his managers in positions in the combined firm that reflected their experience and skills. 'I had great managers. I wanted to promote them . . . I kept putting them in front [of the Executive Committee]'—acquired CEO	Yes 'I am having almost weekly lunches to tell people about what is going on and the progress of things, the issues. This is to make people feel involved in the process.'—acquired CEO	High
Golden	Yes Acquired leaders prevented relocation of company from Midwest to California: '[The CEO's] only concern is retention of their best employees, and having them come out to California—it's expensive to live out here.'—acquirer VP business development	Yes Acquired managers arranged for acquiring firm CEO to visit company to answer employees' questions: '[The founder] called me today and said they're having a problem at Golden with the degree of uncertainty that's going on. So our CEO is going out there, trying to settle the waters.'—acquirer board member	High
MoveTech	No Failed to ensure that CFO received an appropriate position. Buyer's 'job grading' system led to a demotion, and CFO planned to leave the company.	No	Low
RoadComm	No Failed to address complaints about excessive meetings, loss of quiet workspace, and inadequate information technology systems.	No 'I never talked to [the CEO] too much about [the acquisition].'—acquired CTO	Low
FanMail	No Failed to address employees' complaints, and created additional concerns by isolating acquired employees from the buyer.	No 'People are not communicating there.'—acquirer CTO 'I don't give regular presentations.'—acquired COO	Low
BigDeal	No	No 'In general, our senior management tried not to be so open which actually frustrated a lot of people.'—acquired product manager 'We started to feel [the CEO] was not very forthcoming. She didn't discuss what she planned to do.'—acquired CTO	Low

The vice president conceded and found more effective ways to work with the acquired employee, keeping him at the company. Ultimately this proved to be a fortuitous choice. The acquired president explained, 'Now that guy, we talk to him and he says it would've been the biggest mistake of his career [to fire the acquired employee] because that guy, the person who's now reporting to him, is making him wildly successful.'

In addition to advocating for quick resolution of employees' concerns, Communique's leaders engaged in real-time communications. Communique's president described this behavior as 'making everyone feel comfortable, spending a lot of time with people, listening to people, taking them out to lunch, showing up and meeting new people who joined and only ever worked in our old location who I'd never met, stuff like that.' An important feature of these communications seemed to be that they were actively planned. Rather than simply being 'available' to employees, Communique's leaders planned specific events such as lunches as opportunities to communicate.

The mitigating actions taken by Communique's CEO paid off by preserving the momentum of the acquired firm. Communique delivered its expected value, launching its product on time and exceeding its targets for both customer acquisition and revenue. The buyer's vice president of sales explained, 'We committed to the board in May that we would have 10 customers by the end of the year, and do $2 million in revenue, and we've almost doubled that on both counts. So it's been a very successful acquisition.' Moreover, Communique retained all of its key employees. The buyer's vice president of sales praised the acquisition as, 'the most successful I've experienced in six or seven different deals.'

A second illustration of the effects of acquired leaders' mitigating actions is Spectacle. Like Communique's leaders, Spectacle's CEO expedited his employees' concerns during the implementation process. Spectacle had hired experienced executives in anticipation of rapid growth. A leader commented, 'We have senior people with great depth who have managed 100, 150 people before.' Spectacle's CEO worked to ensure that these experienced employees were placed in appropriate positions in the combined firm. At times this required forceful discussions with the acquirer. The CEO explained: 'I had great managers. I wanted to promote them ... I had this guy, and I wanted to make him a VP, and they wouldn't let me. Now he's finally the Senior VP of product marketing. But I had to force him into that ... I kept putting him in front.'

Spectacle's leaders also engaged in real-time communications with their employees. They conducted 'almost weekly lunches to tell people about what is going on and the progress of things, the issues.' In addition to participating in these meetings, Spectacle's CEO took the unusual step of distributing to his employees a book about dealing with change. He used the book to encourage dialogue about coping with the acquisition process. While this CEO could not protect his employees from change, his timely communications helped them to adjust to and even embrace their new circumstances.

The combination of mitigating actions seemed to help Spectacle's employees to maintain momentum during the turbulent post-acquisition period. The company exceeded its expected value, surpassing revenue targets. The CEO explained, 'Spectacle is making huge contributions to the gross margins of [our buyer] ... every quarter we've exceeded our targets.' Spectacle also succeeded in retaining all of its key employees during the implementation period. The buyer's vice president of business development commented, 'The acquisition has made our assets so much more valuable.'

In contrast to the leaders of Communique and Spectacle, the leaders of four other acquired companies did not engage in mitigating actions. These four companies failed to achieve their expected value. RoadComm provides an illustration of this relationship. First, RoadComm's leaders failed to expedite employees' concerns. When RoadComm was acquired, its employees were dismayed by changes in their working environment. The company was moved from a quiet office space to a noisy floor of cubicles. Moreover, the new location had poorly functioning information technology—a serious obstacle to productivity in a technology company. One engineer explained, 'Information management has been weak—you know, getting your computer configured and hooked up to the Net, getting telecommuting to work.' Unfortunately, the CEO did not intervene to improve the situation. Acquired leaders also failed to conduct real-time communications with their employees. While RoadComm's CEO was theoretically 'available' to meet with employees, he did not actively do so. Even his closest lieutenant, the CTO, said, 'I never talked to the CEO much about the acquisition.' Employees' worries were left to grow over time rather than being addressed immediately.

Not surprisingly, RoadComm fell behind in achieving its expected value. The head of the business unit that acquired RoadComm explained that product launch fell behind schedule: 'Once we acquired them, we might have lost about six weeks to two months.' One of RoadComm's own investors concurred that the product would miss its market opportunity: 'I don't think you're going to like the commercial bottom line from that acquisition.' An acquiring executive concluded, 'many things could have been done much better.'

Why are mitigating actions so important in achieving an acquisition's expected value? As discussed earlier, negative emotional consequences from acquisition implementation can result in outcomes such as decreased commitment and increased turnover (e.g., Nahavandi and Malekzadeh, 1993). These outcomes are analogous to friction that can slow the acquired organization's momentum. One solution that has been proposed is for the buyer to grant more autonomy to the acquired organization (Chatterjee *et al*., 1992; Hambrick and Cannella, 1993; Very *et al*., 1997; Ranft and Lord, 2000). Yet preserving the autonomy of the acquired organization may interfere with the realization of potential synergies from an acquisition (Larsson and Finkelstein, 1999). Indeed, the more effective acquired managers viewed the fusing of the two organizations as critical to achieving the expected value of the acquisition, and actually accelerated interaction with their buyers rather than preserving the autonomy of their own organizations.

Given that interaction with the buyer was necessary and desirable, the acquired leaders were faced with the challenge of minimizing the uncertainty and discomfort that this interaction engendered. Consistent with other recent findings (Huy, 2002), this study found that acquired leaders played an important role in helping employees to cope with a time of radical organizational change. Managing employees' emotions was an essential complement to providing internal pacing and accelerating interaction with the buyer. If acquired leaders' mobilizing actions are analogous to giving their organizations a push, then mitigating actions are analogous to removing any friction that could impede the progress of their organizations down the required path.

In formal terms, this finding suggests the following:

Proposition 2: Acquisitions will be more likely to achieve their expected value if acquired leaders perform mitigating actions (i.e., expediting of employee concerns and real-time communications) during the implementation phase.

CREATING SERENDIPITOUS VALUE

While achieving the expected value from an acquisition was important, the buyers in this study were often surprised to find unexpected, yet significant, sources of value in their acquired companies. These surprise gains are termed *serendipitous* value. The two types of value creation appeared to be independent: One sample company delivered its expected value but failed to add any serendipitous contributions, two failed to deliver their expected value but did yield serendipitous gains, three succeeded in both dimensions and two failed in both dimensions.

Like expected value, serendipitous value was linked to the actions of acquired leaders. However, the mechanisms of these linkages were quite different. While achievement of expected value was fostered by actions that preserved organizational momentum in planned directions, serendipitous value emerged from opportunities to discover new paths to creating value. These opportunities materialized when acquired personnel were given *cross-organizational responsibilities* in the combined firm, defined as tasks in which an acquired manager had responsibility for activities, functions, or strategies that encompassed not only the acquired firm, but also components of the acquiring firm.

Cross-organizational responsibilities were typically manifested in one of two ways. In some instances, the CEO or other leaders from the acquired firm were given new senior management responsibilities in which they supervised employees from both the acquired and acquiring firms. An example is Communique's CEO, who became the vice president of marketing for the combined firm, responsible for a team composed of employees from both organizations. In other cases, cross-organizational responsibilities involved tasks that were shared between technical teams from the acquiring and acquired companies. An example is RoadComm. After deal close, RoadComm's engineering team worked in tandem with a group of the buying firm's engineers to complete RoadComm's product. At the end of each day the RoadComm team, located in Silicon Valley, would hand off their work to the buyer's team, located in Europe. RoadComm's technical managers thus had cross-organizational responsibility for achieving the completion of the product.

Table 5 summarizes the cross-organizational responsibilities that were created during the implementation process for each acquisition, and indicates whether serendipitous value was realized from the acquisition. Serendipitous value was more likely to be discovered when acquired managers were given cross-organizational responsibilities. An example of this is TouchDown. TouchDown sold financial transaction software via telesales to small companies. Its buyer sold a related software product, but its target market was *Fortune* 500 companies. When TouchDown was integrated, many of the company's senior managers were given cross-organizational positions in the combined firm. TouchDown's CEO became the head of marketing for the entire organization and sat on the executive committee, where he was able to participate in high-level strategy decisions. A number of other senior managers were also given cross-organizational roles. An acquired executive explained:

> The person who was the director of marketing communications at TouchDown became the director of marcom at [the buyer]—not just for TouchDown products but for all products. The person who had been the VP of marketing is actually the VP of product management now. And the director of product management for TouchDown is now the director of product management for TouchDown and [the buyer]—so he's taken over both of those.

As a result of these cross-organizational responsibilities, TouchDown's leaders created serendipitous value in the combined firm. One serendipitous discovery came from the acquired vice president of sales, who became the head of channel sales for both companies. The buyer planned to add TouchDown's functionality to its own product in order to provide a more complete product suite to its large-company customer base. However, after the acquisition, TouchDown's head of sales discovered that a mirror-image opportunity existed: he could leverage TouchDown's phone sales force to sell a downsized version of the buyer's product to small businesses. The buyer's CEO explained, 'They really opened our eyes to telesales ... In a way, we were too focused on the *Fortune* 1000 and the direct sales channel and so were missing other business and other innovative ideas.'

In addition to this innovation, TouchDown contributed to a new strategic direction for the combined firm. TouchDown's CEO suggested that the buyer drop some of its own plans for future product development, and instead acquire a new product by buying a second start-up, FinanceCo. One of TouchDown's executives said, 'Our CEO looked at the marketplace and said, "Bam! FinanceCo is it!"' The CEO of the acquiring firm agreed: 'The TouchDown guys kept telling us that if you want to get into this market, you have to look at FinanceCo ... So we went after them.' The acquiring CEO was not familiar with FinanceCo or its product, so the acquisition would not have happened without the influence of TouchDown's CEO. A vice president from TouchDown commented, 'In my opinion, if you'd asked [the buyer's CEO] what FinanceCo's technology was and what this market was, he would have said, "not sure." Because [the buyer] was in a different market ... They bought FinanceCo because of our CEO.'

Another company, MoveTech, illustrates the second manifestation of the creation of serendipitous value. MoveTech was purchased in order for the buyer to obtain a specific piece of technology that MoveTech was developing for an emerging market niche. The acquirer was a large firm that considered itself to have very strong product development processes. As one of the buyer's executives described, '[We have] a whole cadre of hundreds of people that are program managers, new product or manufacturing engineers that advise the business unit development groups. They go through this stuff every day of the week, every day of the month.' When MoveTech was acquired, its engineers were asked to meet with members of the buyer's 'cadre' to plan for MoveTech's manufacturing ramp. In the course of this cross-organizational collaboration, it became apparent that MoveTech had developed product development processes that were in certain aspects superior to the buyer's. MoveTech's CEO explained:

Table 5. Serendipitous value

Company	Strategic purpose of deal	Expected source of synergy/resource contributions	Cross-organizational roles	Serendipitous value
Communique	Combine products into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Manufacturing, marketing and distribution skills, customer relationships	CEO became VP marketing VP services became director of client service	Revitalized marketing organization 'We kept saying internally that if we took [acquired CEO's] resume today, he couldn't get a job here as the VP of marketing . . . but we desperately needed a VP of marketing . . . By putting in an ex-CEO, things were resolved because he took his CEO skills and his entrepreneurial skills and applied them to marketing. He hired the right people and so on.'—acquirer president
TouchDown	Combine products into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Complementary technology expertise, marketing, sales and distribution skills	CEO became VP marketing VP marketing became VP product management VP sales became VP global channels VP services joined M&A/integration	Recommended that buyer acquire a second company instead of developing a competing product internally 'The reason why our buyer bought FinanceCo is because of our CEO . . . He grabbed [the buyer's CEO] by the arm and we made the deal.'—acquired VP sales 'The TD guys kept telling us that if you want to get this market, you have to look at FinanceCo . . . So we went after them.'—acquirer CEO Developed strategy of selling buyer's product to small companies through telesales 'They really opened our eyes to telesales . . . they woke us up to dotcoms, too . . . In a way, we were too focused on the *Fortune* 1000 and the direct sales channel and so were missing other business and other innovative ideas. This was the unexpected good surprise of the acquisition.'—acquirer CEO
Golden	Combine services into suite with greater functionality	*Seller*: Technology expertise and customer relationships *Buyer*: Complementary technology expertise and customer relationships	CEO became VP in the combined company, participated in executive committee	Provided contacts for business development deals and financing 'They opened the door for us at [venture capital firm].'—acquirer board member 'We're going down tomorrow to visit one of Golden's contacts to see if we can perpetuate the relationship, and on Friday we're meeting with another one to try to deepen their relationship to us.'—acquirer VP business development

(*continued overleaf*)

Table 5. (*Continued*)

Company	Strategic purpose of deal	Expected source of synergy/resource contributions	Cross-organizational roles	Serendipitous value
MoveTech	Create and distribute new product	*Seller*: Technology expertise, customer relationship *Buyer*: Manufacturing, marketing, sales, distribution skills	Engineering team sent to work with acquiree CEO joined strategy team for the optical networking group	Introduced more robust product development processes 'Most of their acquisitions have weak processes and their mentality is that they have to come in and impose order. But it was just the opposite for us . . . In a lot of ways our development process was more robust than [buyer's]. We're from telecom after all, where reliability matters a lot . . . so some of our development process ideas floated into the buyer. I think that they were surprised that we had such a demanding process . . .'—acquired CEO 'With MoveTech, absolutely, we learned about building carrier class products.'—acquirer VP business development
RoadComm	Create and distribute new product	*Seller*: Technology expertise *Buyer*: Complementary technology expertise, manufacturing, marketing, sales, distribution skills	CEO and partner from buying firm coordinated joint product development with a team from the buying firm	Introduced quicker product development processes 'We tried to integrate them with a team in Europe. We thought we could take advantage of the time difference and work around the clock. But the team in Europe was too slow. They got out of synch. The team in Europe was too process-oriented. We have learned a lot from the RoadComm team about product development.'—acquirer head of business unit 'We're doing things 3–10 times faster than a lot of people in these existing support groups are used to.'—acquired CTO 'We had to come in and share what we're doing, because it's very different from what they're used to, so there's an education process.'—acquired CTO
Spectacle	Combine services into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Complementary technology expertise	None	None
FanMail	Combine products into suite with greater functionality	*Seller*: Technology expertise, customer relationships *Buyer*: Complementary technological expertise, marketing, sales, and distribution skills	None	None
BigDeal	Combine services into suite with greater functionality	*Seller*: Technology expertise *Buyer*: Manufacturing, marketing, sales, and distribution skills	None	None

> Most of [the buyer's] acquisitions have weak processes and their mentality is that they have to come in and impose order. But it was just the opposite for us ... In a lot of ways our development process was more robust than [the buyer's]. We're from telecom after all, where reliability matters a lot ... so some of our development process ideas floated into the buyer. I think that they were surprised that we had such a demanding process ...

Because MoveTech's engineers were collaborating as peers with the engineering team from the acquiring firm, they were able to share their product development techniques as colleagues. The buyer's engineers were receptive to MoveTech's ideas. The head of business development from the acquiring firm acknowledged, 'With MoveTech, absolutely, we learned about building carrier class products.'

How do cross-organizational responsibilities for acquired personnel lead to serendipitous value? Prior research has identified resource reconfiguration as a source of innovation in both product design and managerial practices (e.g., Hargadon and Sutton, 1997; Rosenkopf and Nerkar, 2001; Katila and Ahuja, 2002; Rodan and Galunic, 2002; Martin and Eisenhardt, 2003). Resource reconfiguration has also been linked to capability improvement in acquisition settings (Capron and Mitchell, 1998; Capron, 1999). Yet a gap in this research is an understanding of how resource reconfiguration originates. Particularly in a technology setting, it may be unclear which of the acquiree's and acquirer's resources should be recombined to create value. Given this initial uncertainty, how do leaders ultimately recognize and implement opportunities for resource reconfiguration?

Cross-organizational responsibilities for acquired leaders may be one mechanism for resolving this dilemma. First, these responsibilities provide acquired leaders with exposure to the activities taking place within the acquiring firm. The leaders can then use their unique experiences and information to spot opportunities for unanticipated value creation. Second, acquired leaders with cross-organizational responsibilities will have a broad and unusual combination of formal roles and informal relationships, allowing them to effectively leverage technological competencies across different organizational domains (cf. Hansen and Lovas, 2004). Finally, the acquired personnel interact with the buyers from a position of equal or higher status.[1] This enables their ideas to be heard and executed. For example, TouchDown's vice president of sales had the authority to implement his idea for selling the buyer's product via telesales because he was the leader of the combined firm's channel sales organization.

While companies like TouchDown and MoveTech contributed serendipitous value to their buyers, other companies did not yield these unexpected gains. A potential hypothesis would be that acquired companies with more resources, such as a more developed organization or more experienced management, would be more likely to yield unexpected windfalls. Yet the data suggest the presence or absence of cross-organizational responsibilities also plays an important role. An example of this is Spectacle. Data suggest that Spectacle could have provided at least two sources of serendipitous value to its buyer. First, the company had an unusually experienced management team for a company its size, and could have offered insights into how to manage a large organization. The buyer's CEO explained that although the deal was motivated by obtaining Spectacle's technology in a certain vertical market, he had discovered that Spectacle's CEO could also be an important asset: 'He's really valuable and hopefully we'll be able to keep him.' Second, Spectacle had a piece of content management technology that could have been applied to the buyer's other vertical industry markets. The buyer's director of business development explained shortly after deal close, 'They had done some really neat technology things that we could use for all our different marketplaces.'

Unfortunately, when Spectacle was acquired, its CEO was not granted any role in the buyer's senior management. Moreover, Spectacle's engineering team was isolated and denied the opportunity to interact with engineers in the acquiring firm. The CEO described the companies as being, 'totally orthogonal.' As a result of this lack of cross-organizational responsibilities, Spectacle's potential to generate serendipitous value was never

[1] Placing acquired personnel in positions of higher status may have other organizational effects, including enhancing the trust and confidence of acquired employees and increasing two-way communications (Ranft and Lord, 2002), as well as improving retention (Hambrick and Cannella, 1993; Ranft and Lord, 2000). These effects may contribute to the realization of expected value. However, not all high-status positions may involve cross-organizational responsibilities and lead to serendipitous value.

realized. Spectacle's CEO repeatedly attempted to offer advice to the buyer's CEO, but was never able to capture the buyer's attention in order to implement his ideas. He lamented, 'I wrote [the buyer's CEO] every month telling him what problems I saw ahead for the business ... there was never a single return call.' Ultimately the acquiring company attempted to grow too quickly, missed its profit projections and suffered dramatic market declines that perhaps could have been foreseen by heeding the advice of Spectacle's experienced CEO.

In formal terms, this finding suggests the following relationship:

Proposition 3a: Acquisitions will be more likely to yield serendipitous managerial/strategic value if acquired managers are given cross-organizational responsibilities.

Proposition 3b: Acquisitions will be more likely to yield serendipitous technological value if acquired engineers share responsibilities with acquiring firm engineers.

One determinant of whether acquired personnel were given cross-organizational responsibilities was whether the acquiring firm had gaps in its management team at the time of the acquisition. For example, Communique's CEO became the head of marketing for the combined firm only because the buyer had not been able to fill the slot. The president of the acquiring firm admitted that putting the acquired CEO in the head marketing position was an act of desperation when no other candidates could be found: 'We kept saying internally that if we took [acquired CEO's] resume today, he couldn't get a job here as the VP of marketing ... but we desperately needed a VP of marketing.' Nonetheless, this choice turned out to be fortuitous; the acquired CEO successfully revitalized the marketing organization and solved a 'problem child' for the combined firm.

Open senior management positions were common when a buyer had conducted only a few acquisitions, so the leaders of the first company to be acquired were likely to be given cross-organizational roles. However, senior management positions tended to be filled by the time the acquirer was buying its third or fourth company. An example of this is FanMail. FanMail's buyer was in the midst of an extensive M&A campaign, and had already acquired a large number of senior managers. The acquired CEOs began to be superfluous. They accomplished so little that employees began to refer to them as the 'Dead Presidents Club.' The leaders of Communique and TouchDown observed the same pattern when their buyers made additional acquisitions. While the leaders of Communique and TouchDown were given significant cross-organizational responsibilities, the leaders of firms that their buyers subsequently acquired either remained isolated within their own organizations or were terminated. Communique's CEO commented, 'Now we have ten people on the exec staff, we do another merger, you're not going to add more to the exec staff.'

These examples suggest that cross-organizational roles, and hence serendipitous value, may be more likely to emerge from the first few acquisitions that a buyer conducts than from subsequent deals. This may help to explain prior empirical findings regarding the benefits of acquisition experience. Researchers have found that the buyer's degree of prior acquisition experience has a U-shaped relationship to acquisition performance, with a company's second acquisition typically underperforming its first (Haleblian and Finkelstein, 1999; Zollo and Singh, 2004; Finkelstein and Haleblian, 2002). This relationship has been explained as a result of inappropriate application of prior experience. When companies have completed only a few acquisitions, managers may infer lessons that are not relevant to the next integration. However, this study suggests a second explanation. When companies undertake early acquisitions, they are more likely to have openings in their management teams. Buyers are likely to fill some of these open positions with acquired managers, creating cross-organizational responsibilities that help these managers to identify and exploit serendipitous sources of value. In subsequent acquisitions, fewer positions may be open, reducing the likelihood that acquired managers will be given cross-organizational roles and making it less probable that serendipitous value will be discovered during the implementation process. This lack of open positions would contribute to declines in performance after small numbers of prior acquisitions. Presumably this effect would plateau at some point (when no open positions were available) and the positive effects of learning would dominate, explaining the eventual increase in performance with larger amounts of experience.

In formal terms, this finding suggests the following:

Proposition 3c: Acquired managers will be more likely to receive cross-organizational responsibilities if the buyer has conducted few prior acquisitions and has vacancies in its top management team.

DISCUSSION

Acquisitions are a critical means by which firms can obtain the technological capabilities needed to compete in global markets. Yet acquirers often fall victim to post-acquisition implementation challenges and experience disappointing outcomes (Jemison and Sitkin, 1986; Haspeslagh and Jemison, 1991; Larsson and Finkelstein, 1999). Moreover, implementation difficulties may be heightened in technology acquisitions. In these settings, due to a combination of intrinsic uncertainty and information asymmetries between buyer and seller (Coff, 1999; Ranft and Lord, 2000, 2002; Puranam *et al*., 2002), acquirers may lack the knowledge required to implement acquisitions successfully.

Therefore, this study explores the role of *acquired* leaders in unlocking the value from technology acquisitions despite their inherent challenges. I find that acquired leaders can play a critical role in realizing two forms of value, expected and serendipitous. The more effective acquired leaders promote the realization of expected value through mobilizing and mitigating actions. Mobilizing actions include providing internal pacing and accelerating interaction with the buyer, while mitigating actions include expediting resolution of employees' concerns and engaging in real-time communications. Effective acquired leaders also promote the realization of serendipitous value by identifying opportunities for unexpected resource reconfiguration. Cross-organizational responsibilities provided these acquired leaders with the exposure and status needed to discover and realize these opportunities. Moreover, acquired leaders were more likely to be given cross-organizational responsibilities if the buying firm had gaps in its own top management team, a situation that may be more common in the buyer's first few acquisitions.

By engaging in mobilizing and mitigating actions, acquired leaders resolve a difficult issue in acquisition implementation, the potential trade-off between integration and autonomy. Integration is critical for realizing synergies (Larsson and Finkelstein, 1999), transferring knowledge (Ranft and Lord, 2002), reconfiguring resources (Capron and Mitchell, 1998) and producing subsequent products (Puranam *et al*., 2002). Yet greater integration can trigger negative emotions (Chatterjee *et al*., 1992), increase turnover (Hambrick and Cannella, 1993; Very *et al*., 1997), destroy acquired knowledge (Ranft and Lord, 2002), and delay completion of the acquired firm's first product (Puranam *et al*., 2002). The risks of integration may be even higher in global acquisitions, which may involve substantial cultural differences between the two firms (Krug and Hegarty, 1997; Very *et al*., 1997; Krug and Hegarty, 2001).

This study suggests that acquired leaders can play an important role in minimizing the risks of whatever level of integration is chosen. The more effective acquired leaders helped to limit negative emotions and turnover by engaging in mitigating actions that addressed employees' problems and concerns. They encouraged the completion of the acquired firm's first product by maintaining internal pacing. Finally, they promoted the realization of synergies by accelerating coordination between the acquired and acquiring firms. Taken together, these findings suggest that effective acquired leaders can help organizations to achieve the benefits of both integration and autonomy.

The potential conflict between integration and autonomy can be viewed as a special case of the fundamental trade-off between two forms of organizational innovation: exploration and exploitation (March, 1991). Greater autonomy promotes the completion of the acquired firm's existing technology (exploitation), while greater integration promotes the recombination of the acquired and acquiring firms' resources (exploration). Prior research has argued that while both exploration and exploitation are essential for organizational survival (e.g., Eisenhardt and Martin, 2000), the two activities are in perpetual conflict (March, 1991; Levinthal and March, 1993). Organizational structures and practices that promote one form of change are likely to stifle the other (e.g., Benner and Tushman, 2002; Danneels 2002). Moreover, exploration and exploitation are each self-reinforcing over time (Levinthal and March, 1993).

The current study suggests that acquisitions are one way in which organizations can mitigate against this conflict. The acquired firms that achieved their expected value engaged in both exploitative and exploratory innovation, completing their products as well as interacting with their buyers to reconfigure resources and realize planned synergies. Moreover, the most successful acquisitions also involved a more pronounced form of exploration, yielding serendipitous value. While the realization of planned synergies required the acquiring and acquired firms to reconfigure their resources in relatively predictable ways, the realization of serendipitous value involved recombinations that were entirely unanticipated.

The coexistence of multiple forms of change during the acquisition integration process may provide some broader insights into how exploration and exploitation can coexist. Prior theory has primarily suggested structural solutions to the problem, suggesting that organizations can maintain exploration and exploitation by having distinct subunits dedicated to each, such as a dedicated R&D group that maintains its own culture (Tushman and O'Reilly, 1996). Yet this solution would not have produced the range of innovation seen in the current study. A structural solution requires organizational leaders to know *a priori* what areas are ripe for change. Serendipitous value by definition came by surprise, from an unexpected direction. A structural solution that predefined areas for innovation would not have fostered these discoveries.

The current study suggests that acquisitions provide an alternative, potentially more flexible means for organizations to achieve exploration and exploitation simultaneously. However, certain organizational practices were necessary for this to succeed. First, management of employees' emotions was critical. Exposure to multiple forms of change, such as integrating with the buyer at the same time as completing their own technology, can create significant strain for employees. The role of leaders was not to isolate employees from change, but to help them cope with the change that they experienced. Second, leaders needed to provide focal points to provide appropriate pacing for each form of change. For example, they provided concrete goals for product development to prevent employees from being sidetracked by other change processes that were occurring simultaneously, such as events happening within the buying firm or integration activities. Third, cross-organizational exposure was essential. For acquired leaders, this included both accelerating interaction between buyer and seller, and taking on cross-organizational responsibilities. Moreover, it was important for both parties to have high status in cross-organizational interactions.

This study complements prior findings indicating that acquisitions create both resource-deepening and resource-extending changes over the long term (Karim and Mitchell, 2000), and that repeated acquisition activity triggers, rather than stifles, more routinized forms of organizational expansion (Vermeulen and Barkema, 2001). These prior studies suggest that acquisitions can enable both exploration and exploitation over a multi-year time horizon. The current study suggests that an acquisition may also trigger exploration and exploitation simultaneously, over the short term. It explicates the mechanisms by which exploration and exploitation can coexist, and provides a fine-grained description of the role of acquired leaders in promoting change on multiple fronts.

CONCLUSION

This study explored the role of acquired leaders in creating value in the implementation of technology acquisitions. I found that these leaders are instrumental in creating two types of value, expected and serendipitous. Acquired leaders create value in part by mitigating the potential conflicts between autonomy and integration. The most effective acquired leaders are able to foster multiple points of change within their organizations, including the completion of the acquired technology, the realization of planned synergies, and the discovery of unexpected sources of synergy. The coexistence of multiple forms of change suggests that acquisitions can provide a means for organizations to simultaneously sustain both exploitation and exploration, two forms of change that are both necessary for organizational survival in dynamic markets.

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