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Balancing and Rebalancing in the Creation and Evolution of Organizational Control

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This research examines data collected as part of a 10-year case study of the creation and evolution of organizational control during organizational founding. Past research has taken a cross-sectional approach to examining control use in mature, stable organizations. In contrast, this study examines organizational controls during the founding period and takes a longitudinal perspective on organizational control. By examining how organizational controls are created and evolve through specific phases of the founding period, the research also provides new data and insights about what drives shifts in the use of various types of control. Specifically, this research sheds light on the role of imbalance among formal and informal controls as the key driver of shifts in control configurations, and provides a step toward making organizational control theory more dynamic.

Key words: control; entrepreneurial organizations; longitudinal; founding

Control systems are fundamental to all organizations (Scott 1992, p. 9) because it is through them that managers seek to align employee capabilities, activities, and performance with the organization's goals and aspirations (Cyert and March 1963, Merchant 1985). However, as Kimberly (1979) and, more recently, Aldrich have observed scholars who have studied organizational control have concentrated almost exclusively on understanding the characteristics and effects of control in large, mature organizations, and paid little or no attention to "how they came to be that way" (Aldrich 1999, p. 1). Whereas past studies have looked at the stable use of controls in mature organizations, this paper draws on a decade-long case study of a new organization to advance our understanding of the ebb and flow of early organizational control. Our longitudinal study extends control theory by tracing the creation and dynamic evaluation of control mechanisms over a start-up company's first 10 years. We reveal distinct stages within the founding period of an organization during which specific types controls are added, deleted, and modified. Our observations allow us to derive potentially significant theoretical insights about drivers of the origin and evolution of organizational control.

Research on Organizational Control

Research on organizational control traces its roots to the very origins of modern organizational and management science research. The topic flourished in the late 1970s and 1980s following publications by Cyert and March (1963), Thompson (1967), Perrow (1970), Woodward (1970), and Williamson (1975). Perhaps the most well-known among organizational control scholarship was Ouchi's research (1977, 1979), which defined distinct organizational approaches to the use of control (market, hierarchy, clan).[1] Subsequent research on control also identified specific management control mechanisms used to manage such issues as socialization, principal-agent relations, and performance evaluation (e.g., Eisenhardt 1985, Merchant 1985, Bradach and Eccles 1989).

The Establishment of Control

Control efforts commence with the creation of the organization (Kimberly 1979, Aldrich 1999), yet control research has focused on the attributes of control in mature organization settings, where formal and informal control systems are already well established and intertwined with other organizational processes and systems (e.g., Ouchi 1977, 1980; Ouchi and Johnson 1978; Birnberg and Snodgrass 1988). Although classic (e.g., Cyert and March 1963, Perrow 1970, Thompson 1967) and more recent work (e.g., Sitkin et al. 1994; Kirsch 1996, 1997; Makhija and Ganesh 1997; Cardinal 2001; Long et al. 2002) highlight the critical link between the effective design of controls and the organization's task environment, research has remained centered on static typologies of control system elements, virtually ignoring the origins and the evolution of organizational control.[2]

This study proposes a more dynamic approach, by exploring how control systems form and change in an organization—and by theorizing what might drive those changes in control use. How large bureaucratic control systems or small clan-like systems come to be created and evolve during their founding periods is still poorly understood (Aldrich 1999) because organization theorists have examined neither the initial founding of control systems nor the causal engines of control evolution. As a consequence, this body of research lacks a theoretical basis for classifying patterns in control systems and the causal factors that drive change in control use over time. From the existing literature, we cannot easily distinguish when market-like internal controls will be invoked in founding organizations or what effect formal rules and procedures or more informal normative controls will have after initial controls have already been established. Nor can we explain when or why organizations will shift their emphasis from one configuration of controls to another. Our lack of understanding of control creation and evolution is significant, given that control systems are widely acknowledged to be both ubiquitous and critical to how organizations function (Cyert and March 1963, Scott 1992, Cardinal 2001).

Our research explains the dynamic unfolding of control systems from an organization's founding through its early evolution. Focusing on the founding of an organization allows us to expose each control mechanism used and trace its progression through the fledgling organization's periodic shifts in control systems and their attendant drivers. We provide a more general theoretical base for understanding control evolution through our analysis of control as a dynamic, multifaceted, and emergent phenomenon.

Drivers of Control Evolution

In this paper, we extend past work on control by examining factors that drive the evolution of organizational control during an organization's founding period. Organizations operate in complex and dynamic competitive environments whereby managers are likely to find it difficult to maintain an appropriate balance among control mechanisms, or even to know what such a balance would look like. Thus, we focus in particular here on balance between the use of formal and informal control mechanisms.

The Dynamics of Balance. Unfortunately, in the control literature, attention to balanced use of control has remained rather loose and suggestive to date (with perhaps the exception of Sutcliffe et al. 2000). Most attention has focused on organizational issues of imbalance. For example, Sitkin and Bies (1994) describe the adoption of more informal controls when an organization has too strongly emphasized the formal. Sitkin et al. (1994) address the over-emphasis on certain aspects of TQM systems. Bradach and Eccles (1989) describe combining specific control system elements to achieve a balance that matches situational requirements.

Despite these few direct and many indirect references to control and the importance of balance, no attention has been paid, either theoretically or empirically, to how control use shifts (except Barker 1993) or how controls initially arise. Because balance has not been examined dynamically, we know little about efforts to establish a balanced control system or to re-establish disrupted balance. Despite consensus about the importance of balance, all we have are anecdotal examples, such as Waterman's description of an organization he founded that was nearly destroyed when it adopted a purely clan-like control approach that had been based on Peters and Waterman's "*In Search of Excellence*" work (1982).

Balance must be addressed for progress on control to be made, yet organizational literature across diverse areas of inquiry provides scant guidance as to what "balance" is. March (1988, p. 5) acknowledges, "Finding a good balance... is a recurrent problem of theories of adaptation." Suggesting its fundamental importance to theories of organization, March notes (1988, p. 185) that balance is relevant to theories of choice (balancing search and execution), learning (exploration/exploitation) and selection (variation/selection), and change (change/stability). While March's list is not exhaustive (e.g., organizational design might balance differentiation and integration), it certainly indicates the range of fundamental organizational issues for which balance is a critical factor. And, in applying the issue to his own work, March explains that "The basic problem confronting an organization is to engage in sufficient exploitation to ensure its current viability and, at the same time, to devote enough energy to exploration to ensure its future viability" (Levinthal and March 1993). As he had admitted years earlier, "Defining an optimum mix... is difficult or impossible" (March 1988).

The clearest guidance comes from Sutcliffe et al. (2000) in their research on quality processes. They reject the simple notion that balance requires "equality" or "trade-offs" and instead define balance in terms of "the need to actively consider both types of process and to determine what an appropriate balance should be, contingent on situational conditions" (p. 321). That is, balance is dynamic and cannot only change over time, but can take different forms depending on the specifics of the situation.[3]

Drawing on Sutcliffe et al. (2000), we define *balance* as a state where an organization exhibits a harmonious use of multiple forms of control. The harmony of any configuration of control elements relies on specific situational requirements (March 1988, Sutcliffe et al. 2000), but depends on achieving isomorphism with internal and external requirements (Thompson 1967) and sustaining or smoothly adapting to changes in those requirements.

We focus on factors that drive changes in control mechanisms. After describing our data collection efforts and analytical approach, we report on one organization's history and how our analysis advances our understanding of control system founding and evolution and, specifically, how imbalance and rebalance drove the evolution of control. Finally, we examine the implications of this analysis for control formation and a broader understanding of control in organizations.

Methods

Case Context

Blue Whale Moving Company specializes in short-haul, professional and residential relocations, within a midsize, southwestern, metropolitan area. Blue Whale was founded in the fall of 1988 by Brad Armstrong (an attorney and entrepreneur who provided the capital and played a small advisory role in the beginning) and Blake Miller (a young mover who managed the organization full-time). Over a 10-year period (1988–1998), the organization developed through four phases. In the fall of 1988, Miller and several part-time movers established the company as an operating organization. What we call Phase 1 lasted approximately six months, from the company's founding until the spring of 1989. In Phase 2, from April 1989 until early 1992, the organization grew rapidly and the company's cofounders received local and national acclaim. In Phase 3, spring of 1992 until early fall of 1995, significant organizational and financial problems led the organization to hire professional management in Phase 4 (1995–1998). We formally ended our investigation in 1998, once Phase 4 control-related activities had stabilized and Blue Whale's founding period had ended.

Rationale for Site Selection

We selected Blue Whale to explore issues relating to the effective implementation of a strong cultural control system. The elaborate, informal control system they used at the time we began our data collection (Phase 2) differed significantly from the industry norm: Rather than hire individual day laborers ("movers") from spot markets, Blue Whale's cofounders—to pursue their vision for a new kind of company, to differentiate from competitors, and to avoid the problems (e.g., high employee turnover) that commonly plague companies in their industry—hired movers as permanent employees and designed the company's control systems to boost employee morale, improve mover performance, and promote exemplary customer service. At the time, we were interested in understanding how Blue Whale's strategy of eschewing formal control might work and whether it could inform organization theory.

A team of four researchers collected archival data, interviewed organizational members, and observed company operations to understand Blue Whale's control system and how it had evolved from the company's founding. As our analysis progressed, the company's performance first rose, then began to decline. When this decline led cofounders Armstrong and Miller to radically and unexpectedly shift the controls used, we also changed our research agenda because we recognized that we had a unique opportunity to observe a naturally occurring, radical change.

Three factors qualified the Blue Whale Moving Company as an ideal candidate for our longitudinal research agenda on control system evolution: control transparency, the intentional and explicit creation and use of controls, and issues of organizational emergence. First, as a small company performing a relatively routine set of tasks in a simple industry, Blue Whale's establishment and changes in control systems were transparent and easily observed. Next, because control formed a central component of Blue Whale's founding strategy, the company's cofounders, managers, and employees presented clearly articulated and documented conceptualizations of the range of controls they applied and their motivations for implementing various mechanisms. Third, because the company's leaders and members were quite open with the research team, we were able to collect data on the company's control use throughout its first 10 years, from the cofounders' initial selection of control mechanisms. Thus, we could accurately track the mechanisms throughout their control system's evolution.

Data Collection

Data on the evolution of Blue Whale's control system consisted of structured interviews, semi-structured interviews, informal interviews, observations of the organization's operations, and archival material.[4] We concluded the formal data collection in 1998; the control system had been stabilized for two years.[5]

To develop a picture of Blue Whale's evolution and use of control, we interviewed each subgroup of organizational members—cofounders, managers, support staff, and front-line workers (i.e., movers)—for each phase.[6] From our observations and interviews, we gained a general understanding of the industry and company operations, and documented the company's history. We later tracked changes in control usage. We believe that we obtained honest, unrehearsed accounts of events from all participants; we verified accounts through archival checks or independent accounts.

Data collection included three waves. First, a retrospective approach (following Miller et al. 1997) developed our understanding of the founding of the organization's controls between late 1988 and our entrance in early 1991 (Blue Whale's first two years).[7] We gathered retrospective reports during on-site structured interviews.

While we acknowledge that individuals "tend to impose order retrospectively on phenomena which in real-time are rife with ambiguity and conflict" (Kimberly and Bouchikhi 1995, p. 12), we believe that several aspects of our data collection effort at this stage enhanced the accuracy of the reports. First, Blue Whale's cofounders allowed us to investigate any aspects of Blue Whale's control system that we deemed relevant and aspects where conflicting accounts surfaced. Informants discussed issues freely and did not try to withhold information. Second, we sought information in the form of facts and asked informants not to provide opinions (Glick et al. 1990, Miller et al. 1997). We used free reports, whereby informants could decline to answer a question. Free reports have shown high levels of accuracy (Miller et al. 1997). Third, we supplemented interviews with archival data, such as organizational financial records, office memoranda,[8] and artifacts (e.g., posted charts, customer letters),[9] and observed organizational members in their jobs.[10] Fourth, whenever possible, we attempted to verify individual reports by asking similar questions to multiple participants.

Our second and third waves of data collection (1991 through 1998) proceeded on a real-time basis.[11] In the second wave, from 1991 through 1995, we primarily relied on on-site structured interviews, intensive observational visits, archival records, artifacts, and ongoing informal interviews (telephone updates) to follow the organization's unfolding history and control evolution process.[12] In our final wave of data collection, from 1996 to 1998, we conducted follow-up, semi-structured interviews by telephone and continued to collect archival data.[13] These interviews were more narrowly focused than in the first two waves because we were now tracking specific changes in control system use that would indicate stability or continued evolution in control.

Data Analysis

We employed a traditional grounded theory approach by continuously comparing data with emerging theoretical constructs (Glaser and Strauss 1967, Miles and Huberman 1984). We classified distinct control mechanisms and distinct time periods in the company's history (Kimberly and Bouchikhi 1995). Our data analysis proceeds through six steps. In Step 1, we constructed a chronology of the company's key historical events (Langley 1999, Pentland 1999). Then, in Step 2, as we reviewed the data, we discovered four clear control phases, involving three discernible transitions in the use of control. We noted that the control systems in use during the first three phases matched Ouchi's (1980) typologies (i.e., market, clan, bureaucracy). We drew on the Roth et al. (1994) concept of "integrative control" (an extension of Ouchi's control typology in which the use of both normative and bureaucratic control is high) to characterize controls used during the fourth phase of the study.

In Step 3, we inductively identified the control mechanisms (i.e., individual units of control such as singular processes, policies, norms, etc.) the organization employed during each phase. We then systematically searched our data for evidence of each mechanism during each phase to insure that we did not erroneously infer the absence of a mechanism because of incomplete data collection.

In Step 4, we coded each control mechanism as formal or informal. We defined formal control mechanisms as officially sanctioned (usually codified) institutional mechanisms, such as written rules, standard operating systems, and procedural directives—visible, objective forms of control. Informal control mechanisms comprised unwritten, unofficial values, norms, shared values, and beliefs that guide employee actions and behaviors—less objective, uncodified forms of control.

In Step 5, we classified each control mechanism by its role in "what" is controlled—the target of control. Control targets refer to attributes of the production process that control mechanisms are intended to influence and can be divided into inputs, behavior, or outputs (Cardinal 2001). Input control is the use of control mechanisms to manage resources acquired by the firm; it focuses on human, material, and financial resources flowing into the firm. Behavior control uses control mechanisms to manage task activities that transform inputs into outputs. Additionally, behavior control determines how work gets done. Output control is the use of control mechanisms to manage product and service outcomes and regulate results or outcomes.

Finally, Step 6 of the analysis classified movement and changes in the control mechanisms. Our data permitted us to track Blue Whale's initiation, usage, and termination of various control mechanisms across all four phases, as well as when these mechanisms were changed. Building on the approaches of Glick et al. (1990) and Romanelli and Tushman (1994), we classified each mechanism as to (1) when a new control mechanism was initiated, (2) whether it was retained across a time period from the prior phase, (3) whether its use lessened in intensity or ceased, (4) whether it was augmented and reinforced, and (5) whether it was a previously used control mechanism that had been discarded and reinvoked.

Two coders identified all control mechanisms and noted all changes in each mechanism throughout the four phases. The Perreault and Leigh (1989) index was used to estimate inter-rater reliability. The estimate was sound for all three control attributes coded: control formality (0.98), control target (0.90), and control changes (0.96).

Results

Our case study research provides a context for examining whether the creation and evolution of organizational control passes through a series of phases, such that the transition to each phase is initiated to address imbalance in control mechanism use. We analyze Blue Whale's founding period in terms of the four phases the company passed through during its initial 10 years. Table 1 presents the triggering events and their respective effects on control use for each of the phases.

Phase 1

Because Blue Whale's cofounders had articulated a clear vision of the kind of company they wanted to create, they moved through Phase 1 quickly. Although they adopted the largely balanced controls used throughout the industry, they paid little attention to balancing informal and formal controls because they viewed this phase as temporary. Thus, our brief discussion of "balance" in this phase addresses the most dominant imbalance and transition issues over this six-month phase (see Table 1).

The moving industry's almost universal set of control practices were balanced largely because neither formal nor informal controls saw much use.

> With the contract employees, those guys they don't care if they end up doing a bad job or huge damage. They say, "Well, I guess I blew it with this company and I will find somebody else to work for." And then the company is left looking bad in the customer's eyes.

It was this benign neglect of both customer and employee needs that motivated Armstrong and Miller to create Blue Whale and institute their dream of using organizational control systems to create a culturally rich and rewarding company environment.

Founding Blue Whale. Although the cofounders wished to create a family-like atmosphere in which their values guided the company's culture and practices, they recognized that their industry had virtually no variance in practices and that they would not be able to attract employees if they acted too radically. Also, because the moving industry's practices were based on purely competitive economic motives, they anticipated that potential employees would not initially see the value in the cofounders' new ideas. Thus, the cofounders mirrored the industry during the initial phase, even though they intended to move quickly beyond those standards and norms.

To begin, Armstrong and Miller adopted the existing industry practice of using spot market labor. Their company's strategy was to get better clients and provide higher cost services by being more attentive to client needs than their competitors. By charging customers a higher price, they could pay movers a lower percentage and still pay them a higher take-home salary than other companies. This helped Blue Whale attract new employees.

Adoption of Initial Operating Style. Blue Whale's cofounders felt strongly that the primary source of bad experiences with moving companies (for both employees and customers) was that these companies were motivated solely by money and one-time (very short-term) transactions. In effect, they reasoned, even a slight tilt toward creating a relationship internally (with employees) or externally (with customers) could provide a competitive advantage for their company by meeting tacit, previously unrecognized market needs. They recognized that a strong, viable company culture rested on both strong normative values and formal structures that could sustain internal and external relationships. To begin building such relationships, Blue Whale hired movers as permanent employees rather than as contract laborers, contrary to the industry norm.

The first phase of Blue Whale's existence employed minimal formal and informal controls and strong emphasis on the simple output controls used throughout the industry. Pay for a specific move was a formal output control; a more informal output control was Miller's verbal feedback on how well a job was done. As with many start-ups in their early stages, Miller was involved in virtually every aspect of Blue Whale's operations.

> I knew I was going to have to be the one who did all of the work, answered the phones, and actually did the moves.... Paperwork-wise and control-wise and rule-wise, there wasn't any in the first six months, because it was just me.

Miller exercised control through his personal presence. Miller's close personal supervision, role modeling, and informal feedback demonstrated the company's desire to behave differently than its competitors. He screened employees on hygiene, attire, attitude, and strength. Miller seemed to be everywhere in the earliest days, but as Phase 1 began to shift to Phase 2, his role shifted from doing the work to modeling the values and practices that would increasingly infuse how the company did its business and built its identity, both internally and externally.

Phase 2

In the second phase, to implement their initial vision for Blue Whale as a family-like organization driven by a sense of shared values for quality and service, Armstrong and Miller overlaid increasingly informal, normative controls onto the few market-based controls used in the first phase. For most of Phase 2, this approach was a great success.

Creating a Culturally Driven Company. Blue Whale's members increasingly experienced many small, informal elements of control by working in close harmony. While individually insignificant, these control mechanisms, implemented step-by-step, collectively reinforced

Table 1 Triggering Events Effects on Use* of Input, Behavior, and Output Control

Phase	Triggering event	Effects of trigger on control use: Input	Behavior	Output
Phase 1	Founding of Blue Whale • Need to cope with start-up phase • Need to initially attract staff & customers • Early state of company always viewed as temporary			• commission-based compensation • take-home pay higher than industry norm
	Adoption of initial operating style • Differentiate firm without violating industry norms • Need to create sustainable relationship with employees & customers	• hired movers as permanent employees not contractors	• personal leader supervision & feedback • leadership role modeling of desired behaviors & attitudes	• provided feedback on a move well done
Phase 2	Creating a culturally driven company • Implement strategic vision • Support family-like culture	• screened hires to ensure high standards & culture fit (hygiene, attire enthusiasm, attitude, etc.) • socialization of new hires by peers concerning Blue Whale values & practices	• verbal feedback from Miller • role modeling/mentoring behaviors • team social time (beer after return from a job) • Miller directly involved in every aspect of supervision • peer pressure to conform to norms • open-door policy of conflict management	• informal review & feedback on moves • stressed importance of fast/high-quality moves • leaders talk up importance of customer satisfaction
	Company growth • Revenues increased • More crews hired • With growth, Miller cannot be with all movers all the time • Armstrong joins company full-time	• Miller cannot personally screen & socialize everyone • vision statement developed & used in hiring	• Miller lives life with movers—from early morning to evening • sharing of war stories by veteran movers used to guide action • vision statement guides behavior	
	Miller burns out and takes sabbatical	• loss of critical role model leads to less effective informal socialization & selection	• loss of critical role model leads to less effective informal oversight & guidance • peer influence & guidance continues even in Miller's absence	• loss of critical experience & personal loyalty leads to less effective informal outcome assessments & feedback • questions arise about the effectiveness of Miller's "buddy-buddy" style of management
Phase 3	Formalizing company operations • Exclusive focus on cultural controls seen as creating serious problems • Decoupling control & Miller	• adopted formal application & selection processes for hiring	• added middle-management layer • adhered strictly to hierarchy • trained managers & administrative staff on business skills/procedures • physical separation of management & movers to limit access	• emphasis on output control becomes less universally present

Table 1 (cont'd.)

Phase	Triggering event	Effects of trigger on control use: Input	Behavior	Output
Phase 3	Cost containment • Shift of attention from revenue to costs • Address spiraling costs		• standardized budgeting procedures • hired permanent bookkeeper • used written rather than personal communication for the first time	• sent official letter announcing elimination of year-end bonus
	Company becomes overly legalistic		• leadership communicated only by memo & letter • formalized job descriptions • created highly legalistic interpersonal agreements • developed procedures manual • rigidly enforced rule violation with fines	
	Reaching a critical inflection point • Downward spiral of mutual distrust & hostility • Movers stage a walkout • Discovery that office staff was stealing		• responded with more formalized controls as problems arose	• made damage policies more explicit & punitive • standardized pay structure • fired most of office staff
Phase 4	Financial jeopardy of company • Cofounders fire each other	• hired professional managers	• reinstated headquarter control over all activities	
	Professional management takes over to stop the bleeding	• hired professional operations managers	• instituted customer relations training • made operations manual more friendly	
	Need to rebalance controls • Institutionalize Miller's knowledge • Attention to financial picture • Movers reminisce about Blue Whale's glory days		• re-established standards • provided guidelines • provided monitoring throughout the day with immediate feedback • had monthly & quarterly meetings • paid attention to care of trucks & related maintenance • reinstated "open-door policy" • expanded recitation of vision statement to include interaction with customers & use of vision to guide decision making in the field	• standardized pay formula • redesigned customer satisfaction surveys • fired for any theft • altered end-of-year bonus to reflect damage claims • checked trucks daily • issued fines for lateness • computerized accounting system with focus on costs • instituted budget approval process • had celebratory beer parties for work well done

* Because the focus of our analysis is on changes in the use of control, controls are listed in this table when they were first adopted or when they were changed. Controls that persisted from one phase to the next are not listed repeatedly.

Blue Whale as a distinct and distinguished service company. The control system touched a variety of cultural issues, from Miller's role to personnel selection, task monitoring, mentoring, and revenue control (see Table 1).

Miller came to personify Blue Whale culture. He not only talked about the envisioned culture, but modeled the high standard of service, collegiality, tough supportiveness, and team atmosphere he so fervently believed in. For example, Miller describes how they set expectations for the movers.

> We'd hang out after the day. We'd sit on the end of the dock in the warehouse... somebody would go buy a case of beer and 15 of us would sit there and drink... for a couple of hours and talk about our war stories. "Man, that piano was a bitch." "Going up those three flights of stairs...." "Here's what I think was going on...." We would be coaching each other through the steps and the stages.

Because employees respected Miller and what he was trying to do, they followed his lead.

> People honored what he believed in because that was what worked.

Miller's idiosyncratic set of controls helped him personally motivate the movers. He made it clear that he would always support them and that he understood what they needed. One of his gifts as a leader was that he conveyed his caring and support in a concrete, persuasive way that reinforced the core company culture.

> You have got to instill the confidence in that other person that they are not going to be thrown to the wolves. I was going to teach them... it was mind over matter. This is difficult work, its summertime, its 100 [degrees] out here—but [if] you get your head right we can be done by 4 o'clock and you will be at the pool and you will make your $150.

Miller's legacy was well established during Phase 2 as he infused the company with his vision, style, and standards for doing the work, and for relating to others inside and outside the company (see Table 1).

A critical form of informal control during this period focused on ensuring that Blue Whale hired movers who could do the work, fit into the new culture, and live up to Blue Whale norms and expectations. Informal selection and behavior controls involved both Miller and existing crew members.

> On the first couple of moves they would come as the third man. The third man was the guy that wasn't required to do a lot of big time major lifting... but he was able to see kind of the flow and how a move works, how do you get through a day. And then, once we felt comfortable with him, he would go on as one of a two-man crew either with me or somebody else. That's when he was expected to pull his weight, literally... and we wouldn't let him go until we knew he could do it. And if he couldn't do it, we knew that pretty quick too because we worked them pretty hard. And if they couldn't hang in, then we would just say, "We are going to do something else with you or you need to move on."

Miller felt informal influence was the best way to motivate, monitor, and oversee mover activities. He created a set of "rules," but there was nothing formal about them.

> Miller's only rules were that you showed up on time, were on your job on time all day long, and [that you called in if you had] any kinds of problems. [If you showed up late, Miller] had someone else come in.... So he had somebody take your job away from you.... Everybody knew the rules and that is how it was. There was no arguing or fighting over it. It was just that if you showed up late and he had somebody there that could do the job, he sent that crew out first.

Company Growth. Eventually, Miller could no longer be with all of the moving crews at the same time, but he quickly recognized how much people wanted to be "with him" as well as be "like him." He used this awareness as a key control tool (for socialization, motivation, and monitoring), and began to consciously exploit it.

> Their carrot was that they got to hang out with me all day. I tried to make it not only unique for the customer... but I [also] tried to make it unique for the guy working with me that day.

To translate his personal influence into a commitment to the company and trust in the Blue Whale team, Miller used his sheer presence as a positive, motivating example to movers.

> It didn't make no difference what time of day it was, he [Miller] stayed there and [would] greet you in the evening just like he would in the morning. And he made sure everything was okay and that you was ready for the next day.

> I wanted these guys to go into a burning building for me. I wanted that kind of unity, that kind of brotherhood, teamwork. And... they had to know... that I would go through a burning building for them... [I would show them that] by getting out there whenever they called and they were in trouble. I would close up shop, get in my truck, and go meet them on the job.

In addition, in Phase 2, Miller increasingly used his personal involvement to observe how moves were being handled and to focus the team on outcomes, and thus informally strengthened the focus on output standards, in an unobtrusive, norm-based way.

> They had a lot of fun and a lot of input, but they knew that if they screwed up or if they didn't get the truck clean or... count their equipment, or if anything was missing, they knew Miller would know. And when he knew, there was accountability.

As the company continued to grow and Miller could not be everywhere that control was needed, Miller began to use the senior movers to impart the organization's culture to the less senior movers.

> We were building a camaraderie and a sense of trust.... It was absolutely invaluable because when some of the newer guys came back to the office, they would hang out and wait until the older guys, the veterans, came back because they wanted to hear these stories. I'm telling you, man, there was a huge amount of testosterone.... I mean there was ego, puffed chests, bad language, and all of this machoism.... "I'm the man! And let me tell you why I'm the man, because I did this today!" And in the process, they would tell what it took to get the job done... there was no better classroom except for maybe hands-on... than to have these young guys listen to these stories and listen to the process that these guys went through so they would learn.

Miller tried to create an atmosphere where employees self-monitored, peer-monitored, and where the controls became internalized.

> Joe got the first big goose neck trailer and he said: "You assign me that trailer and I will make sure that it doesn't have a scratch on it." He took that kind of personal pride in equipment that didn't belong to him and for a year and a half that thing did not have one mark on it.

Despite Miller's relatively tight normative system of informal controls to track day-to-day mover performance (see Table 1), he did not have sufficient financial controls for the overall business.

> He had a very tight control.... But he did that just by issuing cash in the morning and he would ask for receipts back and he would know. "Gosh, we are spending too much. What are you guys doing?" ... It wasn't scientific or anything... they didn't have at the end of the month the accountant come in and tally up everything... and there would be other expenses. The yellow page ads really got out of control. They wouldn't make the best decisions about the trucks they purchased. If they had had better accounting controls and if they had somebody that played the role of chief financial officer or a controller even, they would have been a lot better off.

Because Armstrong and Miller lacked formal monitoring systems, they stressed culture control and increasingly focused on how they did things (behavior control), rather than on profitability (output control).

> [We knew the] number of phone calls that we were getting and how many of those phone calls we were turning into dollars.... Our phone calls are increasing.... I am booking more moves.... Therefore, we are buying more trailers and hiring more movers.... We were motivated by "let's get more dollars in the door" and we stopped looking at the bottom line.... [We didn't realize] we were bringing in more dollars, but we were losing more money.

Looking back on this phase of the company's development, Miller felt satisfied with the success that grew out of the vision he and Armstrong had initially created and how well they did, for a time, using a nearly pure form of the value-based control approach they had both dreamed of. Toward the end of 1991, an enthusiastic Armstrong joined full time.[14] Miller's systems appeared to be working smoothly and Armstrong wanted to be sure the organization would continue to grow.

> This is a phenomenon. This thing is rolling, it's breathing, it's living, it's making money, it's generating income and jobs. People are happy.

Armstrong took the culture seriously and worked hard to insure that the norms and practices that had developed were emphasized. For example, he created the Blue Whale vision statement to reflect and symbolize the core culture of the company, and soon incorporated the values and vision into the company's hiring process.

> I would bring somebody in, I would recite the vision statement and I would ask them how they felt about it. If they said "Well that's kind of dumb, isn't it?," they probably wouldn't get a job. But if they said something like "Wow, that's really great; I would like to work in a company that is that committed to their customers," then maybe we would have something.

Over the next year, Blue Whale continued to grow. Armstrong sought more recognition for Blue Whale's accomplishments, and over a two-year period they won three local and two national awards.

Miller Burns Out and Takes Sabbatical. The downside of Miller's personalization of control was that, as the company grew, he could not be in all places at all times, and the lack of institutionalization of processes put significant strain on Miller and the company. Miller was constantly fighting fires, and his years of 16-hour days, and lack of time and sleep created a difficult personal situation for him. Finally, Miller left Blue Whale to take a year-long personal leave.

Miller's departure created a significant vacuum. All of the details of running the business were in Miller's head as he worked obsessively to ensure that every detail was attended to. However, he had never formalized his systems and procedures.

> There was nothing missing in Miller's management style. He just didn't have it formalized... and didn't have a training system in place to turn over to other people. Miller had it all ingrained in his head.... He knew what it took to motivate the movers.... He didn't have that documented so whoever took over after him [could follow] suit. Nor did he have any kind of management control. When he left, he didn't go back and say "OK, here's the procedures you should be following."

As Phase 2 drew to a close, company morale was in great shape, but cost containment and profitability issues were just beginning to surface, and there was the question of how to fill the void created by Miller's sabbatical.

Phase 3

By the end of Phase 2, Armstrong concluded that the company's exclusive reliance on informal, cultural controls had created serious problems. So as Phase 3 commenced, he focused on creating more balance in the types of controls Blue Whale utilized, and began to formalize company operations in a variety of ways. From finances and goals to job descriptions and training, Armstrong pushed to systematically shift every aspect of the company's operations toward formal control (see Table 1). However, rather than gradually adding formal controls to the existing cultural controls, Armstrong almost completely abandoned informal controls (see Table 1). Increasingly legalistic controls coupled with the waning use and ultimate abandonment of cultural controls turned the small company into a bureaucracy. They relied too heavily on formal controls while simultaneously de-emphasizing their use of outcome controls. As control systems became increasingly imbalanced, a variety of problems pushed Blue Whale into crisis.

Formalizing Company Operations. As Armstrong became more familiar with the detailed workings of the company, he became increasingly concerned that the organization's buddy-buddy atmosphere could be both unprofessional and legally perilous. Armstrong believed that Blue Whale's culture needed to be more easily and widely understood, so that Miller and Armstrong would not be required to constantly interpret the norms or resolve problems. Armstrong wanted to involve others besides the cofounders in sustaining the highly successful culture. To make the informal system more sustainable as the organization grew, Armstrong knew he would have to make the culture less tightly joined to Miller. Armstrong saw this as an opportunity to remove the cofounders from the direct chain of command and, simultaneously, to remove Miller from day-to-day fraternizing with the movers. Armstrong hoped to be able to retain the benefits of the informal system while avoiding the degree to which it depended on Miller personally and was subject to his whims and idiosyncrasies. Even though Armstrong realized that it would be tough to follow in Miller's footsteps, he appointed Scott Painter as Operations Manager and asked him to make this more hierarchical system work. Armstrong insisted that the movers go through Painter on a day-to-day basis.

> [Painter] was a bulldog.... We would bring Painter... over to the corporate office and we would say "Okay, now these are the things that we want you to start passing down. No more drinking. We want to get the trailers cleaned up. We want to get sales motivated." And then he would go back [and tell them].

The movers did not take to the newly appointed leader easily, nor did they take to the changes in the culture that Miller had created and been so strongly identified with personally. Movers quickly circumvented Painter's authority by going to Miller directly. And Miller unthinkingly responded with his hands-on style, but he began to recognize the problem this created.

> If Painter was managing and I was there, people would still come to me for the answers and they would go around Painter. I was submarining his authority.

To accelerate and broaden the formalization process, the company retained a management consulting firm. The cofounders, managers, and staff attended weekly training sessions throughout the fall of 1993. These sessions stimulated the drive to create a much more formalized "business-like" company. A variety of managerial tools and practices were introduced, as was information about basic building blocks: how a business functions, how to read financial statements, how to define and document job responsibilities, the need for operating procedures and manuals, and how to plan for growth. The training emphasized the benefits of formal control and the tools and techniques that could be easily implemented and immediately improve the professionalism and effectiveness of managerial behavior at Blue Whale. The move toward formalization surged.

Armstrong also believed physical proximity hampered the professionalism of the firm's management, and that as long as the cofounders remained in the same location as the movers, the movers would attempt to circumvent Painter's authority by going to Miller directly.

> With this in mind, Armstrong pushed for a new facility and the company signed the contract for a lease in a new building. This not only created interpersonal distance between the cofounders and the movers, but it also forced the movers to follow the chain of command and go to Painter if they had problems rather than relying on Miller.
> I think part of it was if we got an office off-site then I [Miller] couldn't subvert Painter's authority.

Cost Containment. The training sessions gave Armstrong and Miller, for the first time, the tools and perspective they needed to take a more dispassionate look at the company's cost structure. The more formally organized (albeit rudimentary) accounting systems they had instituted during the last quarter of 1993 allowed Blue Whale's cofounders to finally begin to understand the degree to which costs (as opposed to their primary focus on sales and revenues) were a key problem. Armstrong and Miller recognized that they did not understand the underlying cost structure associated with running the business. In Phase 3, they began to see that their focus on revenues had been myopic.

> How much did we do in move sales and what are we doing this year? "Well, we need to beef up move sales. We are behind." They had a lot of focus on sales and on customer service, which was great because the customer service part is what kept us at an 80% referral from customers that have used us before... and they would have an idea of what they were spending in a week, but they

> really didn't have it detailed out. So at the end of the month when they had an accountant come in and compile all the information, they would have a loss.

Blue Whale replaced their once-a-month contract bookkeeper with a permanent bookkeeper to better track finances. Armstrong and Miller's attention shifted to cost containment and to implementing formal systems for accounting control.

Their first major and visible action was to eliminate the year-end bonus in a letter to employees dated December 22, 1993. While intended to make explicit the linkages between company performance and individual rewards and to make the company atmosphere less informal and less family-like, the letter symbolized much more than mere formalization to the employees. Employees were angry about losing their bonus. However even more fundamentally, they were hurt by how they were treated. This was the first time significant information was conveyed in writing rather than personally. Management had not explained their actions or motives in a way that showed sensitivity to the impact of the lost bonus on the employees. As a result, employees felt disconnected from management and perceived increased formal control as being punitive toward them and self-serving for management.

Company Becomes Overly Legalistic. The cofounders tried to be more disciplined and consistent in their newfound formality, supporting hierarchical control by sticking to a hands-off managerial style and sending orders down through the hierarchy. To increase clarity, commitment, coordination, and accountability, they developed a detailed procedures manual and created other documents to codify the tasks and duties of organization members and cofounders. One focus of the documents was to formalize task responsibilities. They created interpersonal agreements, in which the cofounders, managers, and staff jointly articulated (often for the first time) what their specific tasks, duties, and goals actually were.

> So we sat together (not just Miller and me, but really the entire management team, including Painter), and said: "What are we going to try and accomplish this year. Who is going to be responsible for seeing it done?" So everybody had interpersonal agreements. Miller and I had one with each other as partners. We all had interpersonal agreements, and they were all designed to be able to hold people accountable for outcomes.

Not only did these agreements delineate job duties, but employees were also required to sign them to demonstrate their commitment to agreed on goals and tasks.

Unfortunately, both employees and managers found the operating and procedures manual to be both too specific and too complex. The level of detail and poor organization made it very "user unfriendly." Even the interpersonal agreements produced problems. Although they were not called "contracts" (in a desire to avoid being legalistic), employees reacted badly to these very lengthy and legal-sounding documents, and simply ignored many of the specifications. Armstrong and Miller grew increasingly frustrated that their formal attempts to encourage compliance did not seem effective.

While Painter chafed at the rigidity of the interpersonal agreements, he wanted those below him to adhere to his rules rather than his behavior. Painter expressed resentment that movers did not follow his instructions and felt they did not take him seriously. Yet the movers defended their response to what they saw as Painter's inconsistent application of the rules and his use of fines as his sole way of dealing with "rule violations."

> They became resentful because he then started putting in place fines... to take care of what you could call "the leaks." Whenever there was a leak or something wasn't working, he would fine it. We had some ridiculous fines. Like if you were 10 minutes late, it was a dollar a minute.

Movers became increasingly resentful, uncooperative, and hostile. Painter responded by relying more and more on fining individual movers "for violations." Their relationship deteriorated rapidly as a cycle of escalation continued.

Reaching a Critical Inflection Point. Company actions (such as making informal practices more explicit and standardized, more clearly linking company performance and individual rewards, or sharing accountability more fairly with employees) were intended to positively affect company behaviors and outcomes by formalizing what had been haphazard and ineffective. Yet these actions symbolized much more than mere formalization to the employees and, thus, represented a critical inflection point in the company's early history. Taken together, these events—the bonus elimination letter, the removal of direct contact with Miller, Painter's rampant use of fines for policy violations—stimulated a downward spiral of mutual distrust and hostility between managers and employees at Blue Whale.

Painter was not alone in encountering problems with employee actions and morale. Armstrong and Miller, responded to a variety of problems with stricter and more formalized rules and policies, and found themselves engaged in a spiral that mirrored Painter's—and their control efforts compounded Painter's in further escalating the employees' negative reactions. For example, damages were rising. In response to this problem, and to rectify past arbitrariness in handling damages, damage policies were made explicit and standardized. This change was quite noteworthy for the movers.

> What used to happen when you got damage [is that] we would be notified about it, but [we] never had to sign a release form saying you could take it out of my check. And then they came up with a policy that you had to sign... stating that you can take this out of my check.

One problem that Armstrong and Miller addressed was the standardization of the pay scales—both internally and in terms of industry standards. They still wanted to continue to get the best movers by paying above industry norms. However, informal decisions in Phase 2 had resulted in a bizarre set of idiosyncratic deals and a pay scale that was untenable for the fledgling company. Armstrong and Miller decided to make a change in the movers' pay system. This further exacerbated the resentment that had erupted from their previous actions:

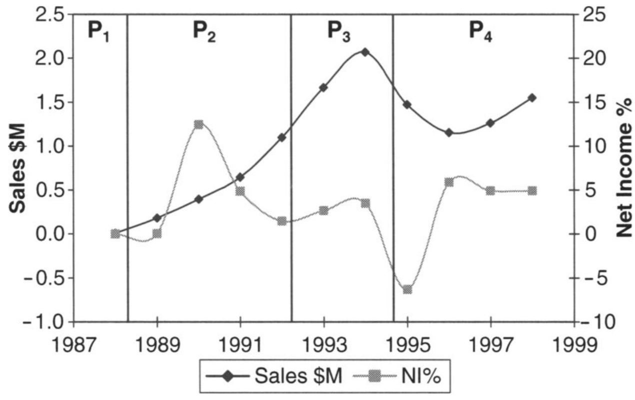
> When the pay structure changed, that's when we had mutiny and, man, it was ugly. Oh it was horrible! Morale was bad. These guys were in a rebellious state. They would show up for work whenever they got ready. Guys like Jim Cash...gosh, I will never forget that one. He would incite these little riots and these little rebellions. He would get all these other guys together and say, "Look, this is how they are screwing you. Don't you see this?" And we had big trouble.

The cofounders tried to explain the new pay system by writing memos to the movers, and even tried writing letters to the movers' families. It did not work. Formalization had already passed the point of constructive clarification and usefulness. Increased formalization, which they were now pursuing as a response to every problem, simply added fuel to the fires of resentment and distrust.

Yet the cofounders continued to tighten controls and became hyper-vigilant in all aspects of their management style. Miller was by this time consistently saying "no"—in stark contrast to his previous interpersonal, flexible, and even self-sacrificing style. Instead of seeing his new style as the disciplined and mature management that he intended, the movers began to suspect that the cofounders and other managers wanted to further restrict them and were willing to "cheat" the movers out of money. They ignored or disbelieved cofounders' efforts to explain that the movers were still earning more than they would at competing companies. Rather than re-engaging with their staff, the cofounders resorted increasingly to written memos, policies, and fines as their primary form of communication and rule enforcement.

Even as the formal controls increased, movers increasingly ignored the rules, neglected to care for their equipment, and even stole from the company. Like the double helix of escalating distrust and control observed by Fox (1974) and Sitkin and Stickel (1996), Blue Whale had spun out of control. The rift between movers and management deteriorated until the fall of 1994, when the movers staged a walkout. The movers returned after only a day, but the cofounders got the message. Their disdain for everything informal had begun to destroy everything they had built. They realized fundamental changes were needed beyond what they had previously considered.

Figure 1 Blue Whale Performance*



* Net income data were adjusted in 1996 and 1998 to correct for one-time nonoperating expenses or savings that made the data for those years noncomparable to the other years shown. The data shown here, with these adjustments, are a more uniform representation of the profit and loss associated with core operations of the firm between 1988 and 1998.

Ironically, despite the company's overly legalistic behavioral controls, there were no financial controls in place to detect theft. After the movers returned from the walkout, Armstrong and Miller discovered that the office staff was stealing from them. They immediately released most of the office staff, but the company was now in serious trouble. By July 1995, Blue Whale had a full array of formal controls, a new facility, a dissatisfied workforce, and a looming bankruptcy.

Phase 4

As shown in Figure 1, the company was in financial jeopardy toward the end of Phase 3 because operating expenses were outrunning income, even though sales were growing nicely. Radical changes needed to be made in Phase 4 to rectify the problems and stabilize the organization. In this phase of Blue Whale's control evolution and development (see Table 1), draconian cuts resulted in a smaller, more focused organization, but also led to profitability and laid the foundation for stability that persisted through Phase 4 and beyond.[15]

Financial Jeopardy of Company. Armstrong and Miller finally admitted that Blue Whale was at significant risk unless some drastic actions were taken. Armstrong and Miller decided to "fire each other" and hire professional managers (Paul Patton and Joan Clay) to run the company. By taking themselves off payroll, they generated enough working capital for the company to stay in operation.

Professional Management Takes Over to Stop the Bleeding. At the beginning of Phase 4, the newly hired CEO (Patton) and CFO (Clay) faced a bleak situation. According to Clay:

> [Several] areas were out of control when I came in: (1) truck and equipment maintenance; (2) damage claims;

(3) accounts receivable; (4) mover morale. Over $185,000 in payables had not been paid. Vendors were shutting us down. Damage claims? The ones we knew about were six months behind, with a couple of lawsuits pending.

Patton and Clay reinstituted "headquarter" control of quality and service activities. They halted all growth until these processes were once again consistent with Blue Whale's high-quality reputation. After the walkout and firing of employees at the end of Phase 3, the company ran a very lean operation. During this turnaround period, Patton and Clay kept tight personal control over all processes. They retained a small set of high-quality moving crews and refused to grow, referring customers to their competitors when their crews were completely booked. They required standardized customer relations training for all employees and, later, discarded the "user unfriendly" legalistic procedures manual in favor of a new, more easily understood manual that enabled employees to be more effective in their jobs.

Need to Rebalance Controls. At first, Clay learned through trial-and-error which processes were effective and which were ineffective. The ones that were most successful ultimately turned out to be that those Miller had employed. Clay saw that the movers thrived on the controls used in Phase 2, when Miller had applied tight, fair, and consistent controls through his day-to-day actions.

[Blue Whale had] to go back to informal behavior controls again.... So I put one mover in charge of the counts in the morning, and before the trucks went out, he had to count every truck. If anything was missing, we looked back to the day before to see who was driving, and they were accountable for it. They had to pay for the missing equipment.

Clay discovered that the movers responded to Miller's style of high-involvement, personal control:

I have never worked anywhere where I have to baby-sit so much. But this company was raised that way and those older movers are still there. They really are like big kids.

Early in 1996, a third executive, Ted Shepherd, was hired as Chief Operating Officer to recapture Miller's informal behavioral control processes for the day-to-day management of the movers. Re-establishing control through personal attention required setting standards and providing guidance at the beginning of an activity, and also monitoring the process throughout the day.

The most important time is to have someone there first thing in the morning (when the movers go out) that they know has authority that they can gripe to, that can also motivate them in the morning, and can keep a hand on them. That person is there at 7:00 when the movers get there and that person says "Here's your day. Here are some of the complications that are going to happen along the way based on talking to the customers yesterday. Let's count your equipment. OK, all your equipment is here. You guys have a great day. Go fuel up. Call me after your first job. If you have got any problems today, let me know it. I don't want to hear it from the customer first."

The executives wanted employees to take initiative and to solve their own problems, and designed a control system that also included a safety net. Once the standards and guidelines were set, movers could get immediate feedback when they "screwed up."

I pulled aside one of the movers that had problems yesterday and say, "Hey you know you had a bad day yesterday. I am a little upset that you didn't call in and discuss it with me and, because of that, we had an angry customer. But let's have a better day today. I expect you to call me after each job today. Let me know how it went, and at the end of the day I want to talk with you and see if today was better. Let's count your equipment. All right, let's get you out of here."

As shown in Table 1, output controls were reinstituted to help rebalance formal controls used in Phase 3. Movers' pay formula was standardized. Customer satisfaction surveys were redesigned to increase the response rate. Immediate post-move customer calls were particularly effective because they permitted Blue Whale to not only track customer satisfaction and the customer's experience, but also to verify adjustments made to size of the job, the final invoice amount, and initial damages. This created continuous feedback and greatly reduced opportunities for theft by the movers. Theft that did occur was not tolerated. Employees were immediately fired—whether the theft involved $10 or $200.

New forms of output control were added. A year-end bonus tied to worker performance and helped keep damages in check. Damage fines were made less punitive, and a clear set of incentives that recognized some damages were not within the movers' control (movers paid for damages up to $500; management paid for damages of $500–$1,000; insurance paid damages over $1,000). Other forms of output control included having a mover check the trucks each day. The COO fined movers if they were late. Movers paid for missing equipment. To create redundancy in the system, new informal controls complemented formal output controls. In monthly and quarterly meetings, management and movers shared customer feedback and discussed damages. These meetings pushed quality and customer satisfaction to the forefront of the movers' minds, thus increasing the quality of ongoing moves.

Patton and Clay took a multipronged approach to turning around the financial situation at Blue Whale. Clay created a general ledger and Patton computerized the accounting system so that detailed financial reports could be generated monthly and expenses and profits tracked weekly. They fundamentally changed the emphasis of the company by focusing on expenses and profits rather than revenues and growth. Budgets were approved, financials were examined each month, and any deviations during the month or the prior year were discussed. At the start of Phase 4, they cut all expenses and did not permit expense growth until the company reached profitability.

Management discussed their expectations with the movers concerning the need to maintain the trucks, check the oil, and project fuel expenses. They tried to create a clear chain of command that had explicit understanding of and incentives for achieving profitability.

> Whoever is putting the crews out in the morning needs to have direct tie-ins to the profitability of the company and understand the budget and what the strategic goal is.

Also, company financial and billing controls were made very concrete.

> The second thing is the movers need to be given standards up front. [For example, any] changes that are made to the invoices, [you need to] call in the office and get those changes updated so you can give your customer their new move price.

Despite lingering morale problems and displeasure with management's emphasis on formal control mechanisms, movers often reminisced about Blue Whale's past, particularly the period when Miller managed the company. Patton and Clay realized that employees still felt the impact of the informal control mechanisms that Miller had used. Miller's culture-driven message about values, norms about how you do your work, what standards you apply, and how you treat customers were still felt, enacted, and collectively reinforced by the movers.

> Now there was culture in place that [Clay] not only couldn't change, but didn't want to change.

Patton and Clay understood that the culture created early in the company's history had evolved from the "good old rah-rah" days and had become both the cause and the effect of Blue Whale's having the best movers and offering the best service in town. With this recognition in mind, they reinstituted a number of cultural practices that had been dropped during Phase 3, including the "open-door policy" and an occasional celebratory beer party. They expanded recitation of the vision statement to include interaction with customers and use of Blue Whale's vision to guide decision making in the field.

> I am a believer in vision statements if they are used, and so one of the things we're doing to internalize that vision statement for all of our movers and staff is to have them memorize it and...recite it to customers at the time that they move them. So we have our movers and staff memorize it, use it as a tool for decision making out in the field, use it as a tool for direction to help qualify our direction of where we are going in the company, and also to really reflect our uniqueness.

Now instead of relying primarily on informal control (as in Phase 2) or on formal control (as was stressed in Phase 3), in Phase 4 management utilized a broad array of both formal and informal controls in a more balanced and integrative approach.

> What you are hearing is the pendulum swing. We are not using really the carrot or the stick, and we are still using our vision statement.

> You have got to understand, these are two-man crews that go out on jobs. There's no drill sergeant standing over them.... They have got to hump furniture in 100° weather up three flights of stairs day and day out and do it with a smile on their face and dazzle customers and get 9s and 10s. And they don't do that, I promise you, out of fear [that] they are going to get spanked or that they are going to lose their jobs. Likewise, they don't do that out of incentive that they are going to get an extra $100 bonus. They do that because they are proud of our reputation. They are proud of the fact that when they show up customers are happy to see them and they have an expectation about the quality of service that we are going to provide.

> There is a lot of humor. There's a lot of laughter. There's a lot of good will in there. But in terms of the comparison as the way it was, there is a lot more discipline and there is a lot more holding people accountable. Now, the ones that don't follow the rules have been sanctioned for it. So the ones that follow the rules and adhere to our vision and our passion and our excellence are loving it, because everybody is held to that same standard.

The process of reinvoking prior controls, adding new controls, adapting some former controls, and dropping the overly legalistic controls led to a rebalancing in the use of control at Blue Whale.

Achieving Stable Performance Based on Balanced Control

The effects of balanced control on performance were clear. As the use of a set of integrative, balanced controls stabilized, so did Blue Whale's performance (see Figure 1). The company not only stabilized and prospered, but 1996 turned out to be Blue Whale's most profitable year (see Figure 1). New, higher margin growth was also added by offering a packing service for their customers.

> Now we have Armstrong, who is the visionary and he's got the great dream. And you have got Patton who has been doing our accounting. Patton is very conservative and sort of a pessimist when it comes to numbers. He really puts a lot of money away for a future disaster is kind of how he puts it. And so you have got both of them now and then you have got me and Shepherd somewhere in the middle and I think you have a very good management team—four people that are discussing, "Is this really a viable option? Will it build up sales? Is it going to get our name in the community? How much is it going to cost? Is this the right timing? Do we have the resources?"

The balance that Blue Whale achieved in its use of control in Phase 4 (see Table 1) was lasting. Management finally achieved its original goal of adding benefits (paid vacations, sick leave, holidays, insurance, and 401k plans) for employees. In 2000, the new Blue Whale executives bought out Miller's share of the company and became owners with Armstrong. Also, by 2000 the company was the 11th largest moving company in the state (this includes both local moving firms and large, long-haul, interstate van lines) and the largest local moving company in the state with over 50% of the local residential moving market. Additional services (house cleaning, window washing, painting, and yard clean up) were added in 2001.

Discussion

Twenty-five years after he published his seminal life-cycle article, Greiner acknowledged that "researchers are just beginning to study the specific developmental problems of structure, control, rewards, and management style" (Greiner 1998, p. 67). Taking Greiner's admonition seriously and applying it to organizational control, in this paper we have tried to offer a grounded theory of organizational control that not only reflects and builds on past research, but also begins to lay a foundation for a more dynamic theory of organizational control. By making control theory dynamic, we believe we have made important extensions to control theory.

The Role of Imbalance as a Driver in the Evolution of Control

Our study of the Blue Whale Moving Company over its initial 10 years provided an unusual opportunity to examine the creation and early evolution of organizational control. We chose to utilize a qualitative, longitudinal, and field-based research design to examine the dialectical evolution (Van de Ven and Poole 1995) of this organization's control system over time (e.g., Kimberly and Bouchikhi 1995). Thus, our findings inform and extend previous control research that has been conducted primarily in a cross-sectional fashion on mature and stable control systems.

The Blue Whale case sheds new light on the obstacles organizations must hurdle as they create and adjust control systems during their founding years. We discovered that control balance is important for organizational functioning, yet also fragile during the founding years. In a young organization, we observed how control imbalance can trigger radical shifts in organizational control. Thus, our analysis of Blue Whale's control systems highlights the challenges that managers face in creating and sustaining balance, and captures the role of balance in cycles of control creation and reformation.

Overzealous Rebalancing Efforts Can Simply Create New Imbalances. Organizational crises and performance problems were precipitated by periods of control system imbalance. Crisis, performance problems, and imbalance all incited Blue Whale managers to zealously rebalance the organization's control system. However these rebalancing efforts, when not carefully monitored, created a momentum that routinely swung the organization past a potentially balanced midpoint. This pendulum effect was observed in Phases 2 and 3 where the addition of informal control (in Phase 2) and formal control (in Phase 3) could have led to greater balance, but instead led to problems as controls became too heavily weighted in one direction or the other. For example, when Blue Whale adopted formal control mechanisms specifically to obtain a level of relative balance at the beginning of Phase 3, earlier failures with informal controls stimulated managers to overemphasize formal controls. As managers overzealously attempted to rebalance Blue Whale's control system via a nearly pure emphasis on formalization, Blue Whale management became overly legalistic and punitive (Fox 1974, Sitkin and Stickel 1996). Specifically, Armstrong, Miller, and Painter's lack of management experience with formal control mechanisms led Blue Whale to almost entirely replace informal with formal control—with severely negative consequences.

Balance Cycles as Punctuated Change. Blue Whale illustrates the difficulty of creating and sustaining a state of balance (March 1988, Sutcliffe et al. 2000). Some of Blue Whale's managerial control decisions created significant organizational problems. Imbalanced control systems toward the end of Phases 2 and 3 led to organizational problems that eventually compromised organizational performance. Despite an overall economic expansion during the 10 years of the study and favorable opportunities to acquire new customers, Blue Whale's periods of relative control system balance were punctuated by periods of control system imbalance, where managers were either unable or unwilling to sustain an appropriate variety of control mechanisms. In particular, managers' overemphasis on informal controls (in the second phase) and overemphasis on formal controls (in the third phase) led the organization toward several periods of control system imbalance. And it appears that these periods of imbalance were not merely "punctuations" in a generally equilibrated set of control processes.

Consistent with Greiner's (1998) conceptualization of evolutionary and revolutionary periods or Romanelli and Tushman's (1994) punctuated equilibrium model, we observed that organizational evolution toward imbalance may take some time. Because managers are unlikely to attempt rebalance until forced to by a crisis, the need for quick action is then typically perceived as urgent and reform is pushed with fervor. In such "revolutionary" periods, managers may establish a new cultural balance to enable the organization to respond effectively to current environmental demands while simultaneously establishing "the basis for the next period of evolutionary growth" (Greiner 1998, p. 58). Like the effective guided missile whose trajectory is rarely correct, but is almost constantly in a state of being corrected (Sitkin 1992), so too may effective controls be in a state of constant rebalancing. Such a dynamic image of controls departs from historically cross-sectional research on large, mature organizations. Future work will need to explore if this dynamism is merely an attribute of the founding period, as controls are first established, or if it is actually a more enduring feature of organizational control that requires longitudinal studies to be discerned.

Familiarity and Competency Traps. Akin to managerial myopia and familiarity bias observed in other domains (e.g., Levinthal and March 1993), Armstrong and Miller relied primarily on forms of control that were familiar and had been successfully used in the past. Armstrong's over-reliance on formal controls, and rejection of informal controls, led him to ignore a more balanced control approach that might have ameliorated the rift developing between movers and management.

During these periods, competency traps (Levitt and March 1988) created significant problems for Armstrong, Miller, and the organization. For example, Miller's strict adherence to informal controls at the end of Phase 2 led him to neglect more formal control options (e.g., documenting organizational processes or creating cost controls) that might have ushered the organization more smoothly through a period of rapid expansion. Miller had informal control down to an art, and seemed unable to embrace any other type of control.

Ironically, Armstrong, who had disdained legalization and in particular wanted to avoid the "trappings" of the legal profession, ended up adopting highly formal, "legalistic" controls (Sitkin and Bies 1994) as the solution to Blue Whale's problems toward the end of Phase 2. Unaware of how easily he embraced legalistic solutions, he insisted that Blue Whale's "interpersonal agreements" (that looked just like a contract to everyone else) were not contracts. His assessment of the company's operations during the latter stages of Phase 2 and his general distaste for what he saw as irresponsible and inefficient fraternization between movers and management, led him to replace the organization's informal control system with a series of formal control initiatives. The formal control system that Painter then implemented under Armstrong's direction ignored the informal control mechanisms that contributed to Blue Whale's previously strong and effective culture.

Spiraling Toward Legalistic Control. Blue Whale's continued growth early in Phase 3 overwhelmed Painter and Turner,[16] limited the amount of time and attention they devoted to implementing the newly formalized control system, and drove the control system into a state of imbalance. To compensate, Armstrong and Painter increasingly relied on more stringent formal control mechanisms, such as fines and detailed procedures, and became much less personally involved with the moving operations. This is the classic spiral of "legalization" (Sitkin and Bies 1994). The resulting imbalanced formal control system increased animosity between movers and management and eventually incited the movers to walk out.

Moves to Rebalance. Managers employed five methods to rebalance Blue Whale's control system. Each constituted a major change in both the focus and form of organizational controls that managers applied. Conceptually these five types of control change can be characterized as subtracting, adding, modifying, substituting, or reactivating. First, illustrating the subtraction of controls, managers sometimes totally dropped existing controls (e.g., Patton and Clay in Phase 4)—for example, when they were seen as punitive or ineffective. Second, in some cases managers overlaid newly created controls on the existing system, such as when Miller (in Phase 2) added numerous informal controls to the minimalist market-like controls used when Blue Whale was first formed. Third, illustrating the modification of existing controls, managers were able to adapt (rather than eliminate) existing controls, as in Phase 4 when Patton and Clay retained but softened some of the harsh control practices of Phase 3. Fourth, illustrating the substitution of controls, managers sometimes dropped existing controls while adopting methods of control that were entirely new (to them), as Armstrong and Miller did in Phase 3 when they expunged many of the informal controls used in Phase 2 and substituted highly formalized versions of the same controls. Fifth and finally, managers also reactivated controls when they drew on previously (but not currently) employed, latent control mechanisms (e.g., Patton and Clay reinstating beer parties in Phase 4).

Although the ideas of adding, subtracting, modifying, and substituting controls are conceptually straightforward, the lack of dynamic research on organizational control has left these processes relatively unexplored and poorly understood. At this point however, we wish to emphasize the fifth type of control change: reactivation because it is, to our knowledge, a completely new classification, and thus our findings concerning the reactivation of latent controls merit additional examination.

Control Latency as Pentimento

Issues of latency in the Blue Whale story play an important role in control system evolution that has not been reflected to date in the organizational control literature. Blue Whale might never have developed a balanced (i.e., integrative) control system in Phase 4, if the organization had not formulated informal and formal control systems during Phases 2 and 3, respectively. The changes in control systems we observed in Blue Whale are analogous to peeling away layers of a painting, so that each layer that is peeled away reveals clues that the painter created one masterpiece on top of another, on a single canvas.[17]

> Old paint as it ages, sometimes becomes transparent. When that happens it is possible in some pictures, to see the original lines: a tree will show through a women's dress, a child makes way for a dog, a large boat is no longer on an open sea. That is called pentimento because the painter "repented," changed his mind. Perhaps it would be well to say that the old conception, replaced by a later choice, is a way of seeing and then seeing again (Hellman 1973).

One cannot study latency cross-sectionally, which may be why it has not been identified previously in the control literature. By studying only one time period or only one transition, the cross-sectional researcher might assume that latent controls had not been used or had been abandoned completely. If we had just studied the transition between Phases 2 and 3, we would have only observed that the controls present in Phase 2 disappeared in Phase 3. However, by studying Blue Whale's evolution across four phases of its founding period, we were able to observe that the controls that *appeared* to go away in Phase 3, reappeared in Phase 4 as the practices that overlaid them became transparent to and were peeled away by a new, savvy management team. Our analysis suggests that, indeed, these controls did not disappear in Phase 3, but instead were latent in that they were still tacitly present and available to be rediscovered in Phase 4.

Although never utilized in the control literature, latency is not a new concept for organizational scholars; it has even occasionally been linked to control issues.[18] Perrow (1986) and March and Olsen (1989) discuss the power of decision and attention premises that appear to have been removed, but whose effects persist. Zucker (1977) explicitly discusses latency when discussing tacit assumptions of appropriate institutionalized practice. Research in organizational culture also offers insights into how managers may generate states of normative balance by highlighting how managers must "honor its (the organization's) past" to move forward to its "new future" (Wilkins 1989, p. 52). According to Kimberly (1979, p. 455), "Change in existing organizations has to come in the context of an established culture and institutionalized set of norms, values, and procedures." Much as we observed in Blue Whale, managers may effectively resolve control problems by re-adopting previously successful forms of organizational control. These previously used forms of control can permit the organization to positively build on the organization's past, while still implementing change for the future (Wilkins 1989, Trice and Beyer 1993).

As an entrepreneurial organization, Blue Whale provides an excellent context for illustrating the limitations of cross-sectional research—or even longitudinal research of short duration—for identifying latency. It has been argued that founders of organizations confront "the elusiveness of [creating] a cultural legacy" (Martin et al. 1985) and are unlikely to imprint their organization's culture in their own image or with their own vision as a result. Yet our research suggests that empirical patience may discover the persistence of tacit features implemented by founders (or others) early in an organization's history. March and Olsen (1989) propose that key institutional features in the political arena may lie dormant for 15 years or more before resurfacing and being adopted. Similarly, founder impact may require more time to assess than it has been granted in most organizational research to date.

Blue Whale's period of integrative balance (Phase 4) took place after two periods of imbalance (Phases 2 and 3), in which elements of its clan control system first dominated completely and then had almost totally disappeared and its market control system partially disappeared. By Phase 4, Blue Whale's earlier experiences with varied controls had provided the organization with a rich (albeit latent) control history. When Patton and Clay arrived at Blue Whale, formal rules constituted the organization's primary mechanisms of control. The knowledge and capabilities associated with informal control mechanisms appeared (at least superficially) to be gone. Patton and Clay's managerial skills and experience helped them understand the importance of identifying Blue Whale's latent informal control system and recognize how it still affected movers' motivation and actions despite its apparent disappearance. This awareness ultimately led them to reinstitute latent controls in Phase 4, combining elements of Blue Whale's former informal control system with softened versions of its formal control mechanisms to create a more workable and balanced control system.

Patton and Clay appear to have succeeded in reviving the latent elements from prior periods for several reasons. First, early founder decisions continued to influence the organization even after the cofounders were no longer actively involved. This is consistent with Stinchcombe's (1965) notion of the continuing impact of early events in an organization's development (see also Kimberly and Bouchikhi 1995, Walsh 1995). Second, while the use of early organizational mechanisms associated with market and clan control had atrophied, selected aspects of these systems (i.e., formal output controls and informal peer influence behavioral norms) had remained latent in the company's practices and culture and, thus, they may have been more easily evoked than would have been otherwise anticipated. Last, the early days were still considered "the good old times" at Blue Whale and, even though the practices had ceased, reminiscing kept the latent flame alive. Like pentimento in a painting, the covered-over old controls shone through, but only because we were observant across time and willing to see.

Future Directions

While we have suggested that some form of the balance-imbalance-rebalance pattern exists in all organizations, it is likely to be more pronounced in emerging organizations or organizations undergoing substantial and rapid growth. Managers in new organizations must often make rapid decisions under pressure (Aldrich 1999) and, thus, may be more susceptible to the familiarity and competency traps that we have argued can accelerate the tendency for control system imbalance. Even under conditions of less uncertainty, however, we contend that competency traps (Levinthal and March 1993) and managers' pervasive interests in economizing their efforts (Eisenhardt 1985) can draw control systems toward the focused short-term efficiency of control specialization (i.e., relative imbalance) (Sutcliffe et al. 2000) and create organizational crises that require managers to initiate rebalancing activities.

In theory, managers may undertake either incremental or drastic actions to rebalance their organization's control system when balance among control elements has been lost. Because control system imbalances often precipitate serious organizational problems that stimulate managerial response, future studies should examine whether managers tend to address control system imbalances by initiating significant, systemic changes to their organizational control systems, rather than incremental adaptations. In addition, because managers remain vulnerable to the pressures that initially caused the imbalance, rebalancing activities may go too far and lead an organization to remain imbalanced, just in a different state. Thus, a period of imbalance may last for a short period, or indefinitely. The prevalence of each state and its contingent facilitating conditions need further study.

While we identified a highly suggestive example of control latency, future research should examine how widespread this phenomenon is and how issues of latency affect control system evolution. This work could evaluate, for example, how control systems evolve through successive iterations, how these iterations lead organizations to achieve states of control system balance and imbalance, and why managers may succeed or fail to reinstate potentially valuable but latent elements of these control systems.

Future work should also examine whether the balance-imbalance-rebalance sequence we observed represents a general pattern of control system evolution common to organizations that utilize multiple forms of controls. Path dependencies in the potentially wide variety of mechanisms that managers use to achieve control system balance are also not well understood. For example, can managers integrate formal and informal mechanisms without first managing independent, successive iterations of comprehensive formal or informal control systems? Another future research opportunity would be to examine the applicability of our control framework to more highly differentiated, mature organizations.[19]

In Blue Whale's case, it appears that integrative control depended on invoking aspects of the prior control phases. Although inapplicable in this case, an empirical question is whether organizations can take the integrative approach from the beginning of their history. Theoretically, Blue Whale could have taken this approach at an earlier point in their history. Because their explicit strategy was to exclude formal control, we likely would not have seen integrative control during Phase 2. However, we might have seen an integrative approach in Phase 3 had they chosen to overlay formal controls on existing informal controls, rather than suppress existing informal controls. We suspect that multiple paths lead to the integrative form, but those remain for future research to examine.

Conclusion

Our work highlights the degree to which past cross-sectional treatment of control has limited our theoretical advances in control theory. Systematic, in-depth analysis of the founding and evolution of control shows us the complexity, fragility, and resilient persistence of control in new organizations. It also permits us to understand the role that imbalance plays in triggering shifts in control and how a return to balance enhances organizational effectiveness.

A cross-sectional analysis of Blue Whale would have missed or misdiagnosed significant aspects of its control system use that our dynamic research design revealed. We do not suggest that all future research needs to utilize long-term, case study designs, but instead that future work be grounded on longitudinal theories of control evolution so that cross-sectional research contexts can be more carefully selected to test questions that are appropriate to the developmental time period under study. In recent years organization science has begun to more adequately reflect the fundamentally dynamic nature of organizations, whereas control theory has not. This paper contributes one more step toward a more dynamic theory of organizational control.

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Endnote

[1]In Ouchi's well-known typology, internal market control systems primarily focus on evaluating transaction outcomes (i.e., prices), rather than how well subordinates adhere to organizational rules or norms. In contrast, hierarchical control systems differ from internal market control systems that emphasize the specification, monitoring, and enforcement of rules and primarily apply formal control mechanisms, such as rules and regulations, specialized jobs, and hierarchies. Clan control systems place relatively greater emphasis on informal control mechanisms. Within these clan control systems managers use traditions and beliefs to motivate members to supplant their individual goals with commitments to organization values.

[2]A notable exception is Barker (1993), who studied the shift in self-managed teams from bureaucratic to concertive control. The most obvious general exception to this characterization is life-cycle research (e.g., Greiner 1998), which (though longitudinal) only refers to control in passing and as a result neither draws on nor has influenced mainstream control research.

[3]Researchers have viewed balance in different ways, as being a feature of particularly effective configurations of elements (e.g., Ichniowski and Shaw 1999) or as complementarities between elements (Bendersky 2003), in addition to conceptualizing balance as involving equality between dimensions. Yet Sutcliffe et al.'s (2000) theorizing about how different causal relationships among elements (i.e., antithetical, orthogonal, or synergistic) is the most relevant to our focus here and thus forms the basis for our conception.

[4]Formal interviews lasted between one and three hours and were taped and transcribed. Regular, ongoing semi-structured telephone interviews and conversations also helped the research team to stay abreast of Blue Whale's status. Two dozen semi-structured interviews and ongoing informal conversations were conducted over the real-time portion of the study (from 1991 to 1998). Detailed field notes were taken for these discussions.

[5]Although the study ended in 1998, selected data collection continued after that date. Follow-up efforts to update Blue Whale's status occurred in 1999, 2000, 2001, and 2002 with Blue Whale's CEO. Through these informal or semi-structured interviews, we were able to verify that the control system remained stable.

[6]Data were collected during each of the four phases from each of these four groups. In the first phase and the early second phase (when we entered the organization), all members of each group provided data. In the later phases, as findings stabilized, data was needed primarily for confirmation. In no single phase did participation fall below levels that were quite substantial and robust: a minimum of 100% for the cofounders, a minimum of 80% for the managers, a minimum of 40% for office staff, and a minimum of 27% for the movers.

[7]We entered the company in early 1991, when the company had only 11 employees. Rapid growth began later in 1991, when Blue Whale added 20 employees, including 4 in the Houston office.

[8]For example, we collected and/or reviewed the standard operating procedures manual, samples of the customer ratings, customer thank you letters, the mission statement, press releases, business articles, financial records, a franchise manual, interpersonal agreements, company memos sent to employees, the lease agreement for the new building, the phone sales representatives' check list form to create a bid/quote, the billing invoice sheet, the call back sheet to call customers after the move, job descriptions and positions posted, the yellow pages ads, company brochures, and thank you letters from the community for community service.

[9]We observed the trucks and equipment, the awards, the logos on the truck, the numerous blue whales displayed throughout the office, the office space, the customer ratings and evaluation forms posted on an entire wall, the weekly movers' work schedule on the writing board, the movers' docking station, and all of the offices and physical space.

[10]Full- and half-days were spent watching the moving process, observing on-site job quotes by sales personnel, phone quotes by sales personnel, customer call backs, front office activities by the receptionist dealing with customers and stakeholders, sales calls by Armstrong, and Armstrong speaking in the community about Blue Whale's service.

[11]Our approach to combining some retrospective data collection (two years) with real-time data collection (eight years) is similar to Garud and Van de Ven's (1992) in their study of internal corporate venturing. They entered the organization after five years of existence, then tracked events for years. Their data analysis included both the retrospective and nonretrospective data for a total of 12 years.

[12]During our first and second waves of data collection for interviews (structured and semi-structured) and observations, two or three researchers were on-site. For all telephone interviews one researcher conducted the interviews (semi-structured and informal).

[13]Because we were no longer observing the company or its operations, it was not necessary to be physically present.

[14]From the company's founding until this point, Armstrong had been a very part-time firm leader, working mostly with Miller on company strategy and not involving himself in the management of day-to-day operations.

[15]Through Phase 3, size could be proposed as the singular determinant of control utilization. However, by continuing to study Blue Whale into Phase 4, we were able to observe that the basis of control was more than merely a question of organizational size. Specifically, both formal and informal control rose as the organization shrank in size in Phase 4, suggesting alternative arguments are necessary.

[16]Michael Turner was promoted to Operations Manager when Painter was promoted to Vice President.

[17]We would like to thank an anonymous reviewer for bringing the concept of pentimento to our attention.

[18]Control latency can be conceptualized as an individual phenomenon or as an organizational phenomenon. As an individual phenomenon one might look to issues such as turnover and retention rates and individual-level knowledge and beliefs to measure latent practices or capabilities. For example, in the Blue Whale case a high percentage of the original employees and leadership remained throughout the period during which latent controls became tacit and then reemerged. At the organizational level, latency would depend on transactive memory

and be housed in organizational structures and routines. For example, in the Blue Whale case movers continued certain practices and continued to believe in certain standards even when these disappeared from the organizational routine.

[19]Firms like Blue Whale, as they continue to grow, may adopt M- or H-forms, and control processes may function and evolve differently under these conditions.

References

Aldrich, H. E. 1999. *Organizations Evolving.* Sage Publications, Thousand Oaks, CA.

Barker, J. R. 1993. Tightening the iron cage: Concertive control in self-managing teams. *Admin. Sci. Quart.* **38** 408–437.

Bendersky, C. 2003. Organizational dispute resolution systems: A complementarities model. *Acad. Management Rev.* **28** 643–658.

Birnberg, J. G., C. Snodgrass. 1988. Culture and control: A field study. *Accounting, Organ. Soc.* **13** 447–464.

Bradach, J. L., R. G. Eccles. 1989. Price, authority, and trust. *Annual Rev. Sociology* **15** 97–118.

Cardinal, L. B. 2001. Technological innovation in the pharmaceutical industry: Managing research and development using input, behavior, and output controls. *Organ. Sci.* **12** 19–36.

Cyert, R. M., J. G. March. 1963. *A Behavioral Theory of the Firm.* Prentice-Hall, Englewood Cliffs, NJ.

Eisenhardt, K. M. 1985. Control: Organizational and economic approaches. *Management Sci.* **31** 134–149.

Fox, A. 1974. *Beyond Contract: Work, Power and Trust Relations.* Faber and Faber, London, U.K.

Garud, R., A. H. Van de Ven. 1992. An empirical evaluation of the internal corporate venturing process. *Strategic Management J.* **13** 93–109.

Glaser, B. G., A. L. Strauss. 1967. *The Discovery of Grounded Theory: Strategies for Qualitative Research.* Aldine, New York.

Glick, W. H., G. P. Huber, C. C. Miller, H. D. Doty, K. M. Sutcliffe. 1990. Studying changes in organizational design and effectiveness: Retrospective event histories and periodic assessments. *Organ. Sci.* **1** 293–312.

Greiner, L. E. 1998. Evolution and revolution as organizations grow. *Harvard Bus. Rev.* **76** 55–67.

Hellman, L. 1973. *Pentimento: A Book of Portraits.* Little Brown and Company, Boston, MA.

Ichniowski, C., K. Shaw. 1999. The effects of human resource management systems on economic performance: An international comparison of U.S. and Japanese plants. *Management Sci.* **45** 704–722.

Kimberly, J. R. 1979. Issues in the creation of organizations: Initiation, innovation, and institutionalization. *Acad. Management J.* **22** 437–457.

Kimberly, J. R., H. Bouchikhi. 1995. The dynamics of organizational development and change: How the past shapes the present and constrains the future. *Organ. Sci.* **6** 9–18.

Kirsch, L. J. 1996. The management of complex tasks in organizations: Controlling the systems development process. *Organ. Sci.* **7** 1–21.

Kirsch, L. J. 1997. Portfolios of control modes and IS project management. *Inform. Systems Res.* **8** 215–239.

Langley, A. 1999. Strategies for theorizing from process data. *Acad. Management Rev.* **24** 691–710.

Levinthal, D. A., J. G. March. 1993. The myopia of learning. *Strategic Management J.* **14** 95–112.

Levitt, B., J. G. March. 1988. Organizational learning. *Annual Rev. Sociology* **14** 319–340.

Long, C. P., R. M. Burton, L. B. Cardinal. 2002. Three controls are better than one: A simulation model of complex control systems. *Computational Math. Organ. Theory* **8** 197–220.

Makhija, M. V., U. Ganesh. 1997. The relationship between control and partner learning-related joint ventures. *Organ. Sci.* **8** 508–527.

March, J. G. 1988. *The Pursuit of Organizational Intelligence.* Blackwell Business, Malden, MA.

March, J. G., J. P. Olsen. 1989. *Rediscovering Institutions.* Free Press, New York.

Martin, J., S. B. Sitkin, M. Boehm. 1985. Founders and the elusiveness of a cultural legacy. P. Frost, L. Moore, M. Louis, C. Lundberg, J. Martin, eds. *Organizational Culture.* Sage, Beverly Hills, CA, 99–124.

Merchant, K. A. 1985. *Control in Business Organizations.* Pitman Publishing, Marshfield, MA.

Miles, M. B., A. M. Huberman. 1984. *Qualitative Data Analysis.* Sage, Beverly Hills, CA.

Miller, C. C., L. B. Cardinal, W. H. Glick. 1997. Retrospective reports in organizational research: A reexamination of recent evidence. *Acad. Management J.* **40** 189–204.

Ouchi, W. G. 1977. The relationship between organizational structure and organizational control. *Admin. Sci. Quart.* **22** 95–113.

Ouchi, W. G. 1979. A conceptual framework for the design of organizational control mechanisms. *Management Sci.* **25** 833–848.

Ouchi, W. G. 1980. Markets, bureaucracies, and clans. *Admin. Sci. Quart.* **25** 129–141.

Ouchi, W. G., J. B. Johnson. 1978. Types of organizational control and their relationship to emotional well-being. *Admin. Sci. Quart.* **23** 293–317.

Pentland, B. T. 1999. Building process theory with narrative: From description to explanation. *Acad. Management Rev.* **24** 711–724.

Perreault, W. D., L. E. Leigh. 1989. Reliability of nominal data based on qualitative judgments. *J. Marketing Res.* **26** 135–148.

Perrow, C. 1970. *Organizational Analysis: A Sociological View.* Wadsworth, Belmont, CA.

Perrow, C. 1986. *Complex Organizations: A Critical Essay.* McGraw-Hill, New York.

Peters, J., R. H. Waterman, Jr. 1982. *In Search of Excellence: Lessons from America's Best-Run Companies.* Harper & Row, New York.

Romanelli, E., M. L. Tushman. 1994. Organizational transformation as punctuated equilibrium: An empirical test. *Acad. Management J.* **37** 1141–1166.

Roth, N. L., S. B. Sitkin, A. House. 1994. Stigma as a determinant of legalization. S. B. Sitkin, R. J. Bies, eds. *The Legalistic Organization.* Sage, Thousand Oaks, CA, 137–168.

Scott, R. W. 1992. *Organizations: Rational, Natural, and Open Systems.* Prentice-Hall, Englewood Cliffs, NJ.

Sitkin, S. B. 1992. Learning through failure: The strategy of small losses. B. M. Staw, L. L. Cummings, eds. *Research in Organizational Behavior*, Vol. 14. JAI Press, Greenwich, CT, 231–266.

Sitkin, S. B., R. J. Bies. 1994. The legalization of organizations: A multi-theoretical perspective. S. B. Sitkin, R. J. Bies, eds. *The Legalistic Organization.* Sage, Thousand Oaks, CA, 19–49.

Sitkin, S. B., D. Stickel. 1996. The road to hell: The dynamics of distrust in an era of quality. R. M. Kramer, T. R. Tyler, eds. *Trust in Organizations: Frontiers in Theory and Research.* Sage, Thousand Oaks, CA, 196–215.

Sitkin, S. B., K. M. Sutcliffe, R. G. Schroeder. 1994. Distinguishing control from learning in total quality management: A contingency perspective. *Acad. Management Rev.* **19** 537–565.

Stinchcombe, A. L. 1965. Social structure and organizations. J. G. March, ed. *Handbook of Organizations.* Rand McNally, Chicago, IL, 142–193.

Sutcliffe, K. M., S. B. Sitkin, L. D. Browning. 2000. Tailoring process management to situational requirements: Beyond the control and exploration dichotomy. R. Cole, W. R. Scott, eds. *The Quality Movement and Organizational Theory.* Sage, Thousand Oaks, CA, 315–330.

Thompson, J. D. 1967. *Organizations in Action.* McGraw-Hill, New York.

Trice, H. M., J. M. Beyer. 1993. *The Cultures of Work Organizations.* Prentice-Hall, Englewood Cliffs, NJ.

Van de Ven, A. H., S. Poole. 1995. Explaining development and change in organizations. *Acad. Management Rev.* **20** 510–540.

Walsh, J. P. 1995. Managerial and organization cognition: Notes from a trip down memory lane. *Organ. Sci.* **6** 280–322.

Wilkins, A. L. 1989. *Developing Corporate Character: How to Successfully Change an Organization Without Destroying It.* Jossey-Bass, San Francisco, CA.

Williamson, O. E. 1975. *Market and Hierarchies: Analysis and Antitrust Implications.* Free Press, New York.

Woodward, J. 1970. *Industrial Organization: Behavior and Control.* Oxford University Press, London, U.K.

Zucker, L. 1977. The role of institutionalization in cultural persistence. *Amer. Sociological Rev.* **42** 726–743.