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Ambivalence and Resistance: A Study of Management in a Concertive Control System

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This research contributes to our understanding of control and resistance by demonstrating that managers may be constrained by the very concertive systems of control that they enact and that managers may subtly and indirectly support employee resistance to control. A study of an aerospace company finds concertive control acts as a barrier to management directed organizational change. In this case, managers subverted their own change efforts by communicating ambivalence about changes they introduced; this gave employees support in resisting the proposed changes. Despite clear material necessity and discursive ideologies supporting change, managers were bound by their identification with and devotion to the traditional value premises of the company.

Keywords: Concertive Control; Identification; Identity; Resistance

This study challenges assumptions of the control and resistance literature by suggesting that strong, value-based control systems may constrain managers as well as employees, and that what seems like employee agency or resistance may actually be supported, indirectly, by managers. While empirical studies have begun to demonstrate the complex and contradictory nature of employee resistance to value-based systems of control, more empirical research is needed to discover the ways that managers' attempts to implement normative forms of control may be bound by their

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own fragmented identities. The concertive control literature (Barker, 1993, 1999; Tompkins & Cheney, 1985) and labor process literature (Edwards, 1979), more broadly, relies on a dichotomy between managers and workers that may not appropriately capture the complicated, contradictory, and collaborative nature of normative forms of control. The blurring of traditional boundary roles between managers and workers is especially apparent in high-tech organizations, like the one researched in this study. While clearly there are consequential power imbalances between managers and employees, this in-depth, qualitative study complicates that relationship. This is significant because efforts to understand employee resistance need to account for the ways that managers support, as well as hinder employee resistance to change. In addition, this suggests that resistance is not only the tactical response of employees, but also of managers who may resist changes brought about by material necessity and discourses of enterprise (Cohen & Musson, 2000; du Gay, Salaman, & Rees, 1996). By focusing on managerial communication related to two competing sets of organizational values, this study informs our understanding of consent and resistance in normative forms of control.

The research described here is based on an in-depth, qualitative study of JAR Technologies,[1] an aerospace company in the Rocky Mountain region. Because of government budget cuts and increased commercial competition, JAR was forced to make substantive changes in its business practices and its value premises for decision making. These changes at JAR, tracked over the course of 11 months, provided a key moment to study the processes of control and resistance as they accompanied organizational change efforts (Fairhurst, Green, & Courtright, 1995). Specifically, we make three contributions to the research on control and resistance, and concertive control in particular, through a study of management's communicated ambivalence. First, we complicate the manager/worker dichotomy by arguing that normative, concertive-based systems of control (Barker, 1993, 1999; Sewell, 1998; Tompkins & Cheney, 1985) may constrain managers, as well as workers, in powerful ways. Second, this study suggests that employee resistance to change may be subtly supported by management through words and gestures communicating ambivalence. Third, we demonstrate how the fragmented identities of managers associated with "managerial capitalism" (Deetz & Mumby, 1990) are influenced by internal and external discourses that shape the (re)development of concertive systems of control. Next, we build a conceptual framework for understanding the role of managers in control and resistance, beginning with a look at value-based, concertive systems of control.

Conceptual Framework

Rise of Concertive Control

Control issues permeate organizational life, but, at the same time, control is increasingly hidden and unobtrusive in contemporary work-life. In fact, the most powerful forms of control may be those that are "fully unobtrusive" that "control the cognitive premises underlying action" (Perrow, 1979, p. 151). Increasingly then, the practice of organizational control in the information age is conceptualized as value-based (Meglino & Ravlin, 1998), team-based (Ezzamel & Willmott, 1998), normative (Barley & Kunda, 1992), linked closely with organizational cultures (Kunda, 1992) and identity (Knights & Willmott, 1985), and most importantly for our purposes here, "concertive" (Barker, 1993, 1999; Barker & Tompkins, 1994; Bullis, 1991, 1993; Bullis & Tompkins, 1989; Tompkins & Cheney, 1985).

Finding Edwards' (1979) three types of control incomplete, Tompkins and Cheney (1985) added a new type, "concertive" control that served to explain the exercise of control in contemporary organizations with flattened hierarchies and the use of teams. Concertive control is a shift in control from the rational/bureaucratic system to normative, value-laden premises where control is exercised through identification with organizational core values and is enforced by peers. This is an inherently communicative process as all control involves direction, monitoring, and dispensing of rewards and punishments—the double interact of control (Tompkins & Cheney, 1985). In a concertive system, during the socialization and training processes, employees are inculcated with decision premises of fact and value. Subsequently, they employ the organizational premises in reaching conclusions—the process of organizational decision making (Simon, 1976). More rigorous socialization efforts lead to greater value congruity (Chatman, 1991). But, unlike the previous form of control where the locus of control lies with the bureaucratic rule system, in concertive control that locus shifts to the value consensus enforced by employees themselves (Barker, 1993, 1999). In other words, employees, based upon the values of the organization, become responsible for directing the work, monitoring themselves, and dispensing rewards and punishments among each other. Most recently, Sewell (1998) demonstrated how concertive control works with technical surveillance to create a system of heightened managerial control.

Complex Interplay Between Control and Resistance

Edwards's (1979) structural framework of control and resistance posits that new forms of control—from simple to technical to bureaucratic—"represent adaptations to the forms of control that preceded them, each intended to counter the disadvantages of the previous form" (Barker, 1993, p. 409). As managers react to weaknesses in a system of control exposed through employee resistance, they develop new systems of control that are less obtrusive and, theoretically, more difficult to resist (Tompkins & Cheney, 1985). Concertive control, thus, represents a subtle, yet powerful adaptation to the inefficiencies of bureaucratic control but, consistent with Edwards's thesis of control and resistance, this form of control will itself be resisted.

Detailed case studies have informed understanding of resistance as a complex and contradictory process. For example, Collinson (1992, 1994) examined shop-floor resistance to managerial practices and found that forms of resistance often reinforce the present system of control. Collinson concludes that control and resistance are linked so inextricably well, that one may constitute the other. Collinson writes, "Resistance frequently contains elements of consent and consent often incorporates aspects of resistance" (1994, p. 29). Other studies have supported this assertion by showing how women discursively shaped their identities in resistance (Holmer-Nadesan, 1996), how structural and communication factors prevent resistance from being effective (Davidson, 1994), how ideology shapes resistance efforts (Egri, 1994), and how whistleblowing can serve as an effective means to force organizational change (Rothschild & Miethe, 1994).

Despite a theoretical framework that suggests a dialectic of control and resistance, most of the empirical work done in the concertive control tradition has shown how interests of the dominant group are strengthened and maintained in concertive systems of control, what Mumby (1997) termed the dominance model. Barker's (1993, 1999) work in particular deserves mention for contributing to our understanding of how teams operating within a concertive system of control actually tighten the "iron cage" of control that Weber (1958) associates with bureaucracy. While this work shows the potential for domination in a concertive system of control, our understanding of concertive control could be strengthened by considering how resistance may be operating simultaneously with control. Mumby (1997) suggests that in "analyzing hegemonic struggle it is important to demonstrate the ways in which discourses and actions can be *simultaneously* resistant and consensual, uniting and dividing, radical and conservative" (p.368). This is important because without examining control and resistance as a constant interplay, our theories are likely to overlook the subtle ways in which control and resistance become manifest in practice.

To this point, empirical studies of concertive control have focused on the creation of such systems by managers through fostering identification with organizational values (Bullis, 1991, 1993; Cheney, 1983), and through participation and empowerment programs (Barker, 1993; Bullis & Tompkins, 1989; Papa, Auwal, & Singhal, 1995, 1997). To a lesser extent, these studies have documented weaknesses of concertive control systems, as well as resistance by employees (Bullis, 1991, 1993; Bullis & Tompkins, 1989; Ferraris, Carveth, & Parrish-Sprowl, 1993). Others, while not using the same terminology, have focused on the resistance to similar systems of control by employees (Collinson, 1994). This study begins to address the resistance gap in the concertive control literature by showing how managerial attempts at control can simultaneously support employee resistance.

Managers, Control, and Resistance

In order to better understand control and resistance practices, it is necessary to better understand the role of modern management in control practices. According to labor process theory, "The structured antagonism between capital and labor is recognized to exert pressures upon managers to strengthen or refine the means of control, and upon workers to bolster or develop forms of resistance" (Ezzamel, Willmott, & Worthington, 2001, p. 1058). While early labor process theory (Braverman, 1974; Edwards, 1979), from which the theory of concertive control draws, posits a clear distinction between labor and capital, more recent work within that tradition has complicated the relationship by suggesting that modern managers face "increasingly precarious, insecure and uncertain subjectivities" in a post-bureaucratic world (Collinson, 2003, p. 530). This is useful as we consider the modern manager in concertive systems of control because management has emerged as the dominant group in many large organizations—with interests and identities that differ from both owners and workers. "While the worker seeks freedom—from necessity and for self-fulfillment—and the owner seeks profit, the manager seeks control" (Deetz & Mumby, 1990, p. 28).

Modern management is characterized by the "extreme fragmentation" of managerial identity that occurs as many different forces compete for their professional and personal allegiances (Deetz & Mumby, 1990, p. 28). The fragmentation of the managerial identity produces ambivalence, ambiguity and insecurity on the part of managers as they negotiate the complex economic, social and political realms of managerial life (Collinson, 2003; Jackall, 1988; Willmott, 1990). Therefore, how to control workers or other organizational systems involves a complex process that is closely related to the identities of managers—identities that are shaped by the internal values of the organization as well as by external discourses such as the discourse of enterprise (Cohen & Musson, 2000). In order to understand the practice of managerial control, we must understand how managerial identity shapes decision making, and thus, control practices in organizations. Such a conceptualization suggests that the administration of control is likely to reflect the fragmentation of the modern managerial identity.

To this point, conceptualizations of the implementation of normative forms of control, including concertive control, have not sufficiently accounted for the nuances of managerial capitalism. Ironically, while empirical lessons reveal employee responses to control as partial, contradictory, and situated, we still do not understand managerial practices of control and responses to resistance in a similar way. As the research on resistance has appropriately complicated our understanding of resistance from the perspective of employees, we suggest reconsidering the role of managers both in relationship to concertive-control systems and to employee resistance. Such a reassessment of managers is important for the development of control theory, as it promises a richer picture of the dynamics of control attempts and resistance to them.

To explore the influence of concertive control on managers, we asked two research questions. First, "How do managers communicatively make sense of and respond to changes in the concertive value premises of an organization?" As change often leads to resistance, moments of change provided an opportunity to see how managers responded to changes in the company value system that threatened their organizational identities. Second, "How, if at all, do managers influence the resistance to change efforts by employees?" This second question explored not only ways that employers exerted control and overcame resistance, but also ways in which managers subtly supported employee resistance.

Method

This study, part of a larger research project drawn from the first author's dissertation research, examines control and resistance communication through participant observation, interviews, and document analysis. As our purpose is to look carefully at practice to inform our understanding about control and resistance, such textual methods are useful for "lending variation, incongruity, process, nuance and texture to more conventional accounts" (Ashcraft & Kedrowicz, 2002). The following describes an in-depth, qualitative study of one aerospace company, JAR Technologies.

A Brief Introduction to JAR Technologies

JAR Technologies designs and manufactures satellites and other technical instruments for government and commercial aerospace customers. Approximately 2,500 employees work primarily in JAR's Rocky Mountain Headquarters. JAR is organized as a matrix organization in that it has both functional units like engineering or production, and program units, which are teams of people who have many different functional specialties and who come together to build a particular satellite.

Most of JAR's employees are engineers and other professionals. These types of high-tech workers are distinct in that their high levels of education and professional affiliations provide them with resources and job mobility opportunities much greater than, say, blue-collar or factory workers. Professionals and engineers in particular, are highly likely to seek out and to participate in normative-based control systems (Deetz, 1998; Kunda, 1992). At JAR, engineering is the most influential group in the company and most of the top managers have worked their way up through the engineering ranks.

JAR's success in the past stemmed largely from its ability to solve difficult technical problems and produce top-quality hardware, but the environment that bred that past success has changed significantly. During the 1990's, NASA and U.S. government defense budgets shrank significantly at the same time that a large commercial space market was growing rapidly. Commercial customers usually are not looking for the best solution, but rather one that is "good enough," produced quickly and at cost that will turn a profit. In addition, government customers like NASA, started to demand commercial-like terms and conditions. NASA even adopted a new mantra, "Faster, Better, Cheaper,"[2] aimed at creating a more market-like culture. NASA Administrator Dan Goldin discussed the implications of this mantra when he said, "A project that is 20 for 20 isn't successful. That's proof we're playing it too safe" (Borenstein, 1999). Stated in other terms, JAR, like NASA in its unmanned space program, was attempting to change from being a "high-reliability organization" that valued primarily technical excellence to one that focused more on profit, efficiency and best value (Weick & Sutcliffe, 2001). In the late 1990s, JAR managers began an aggressive campaign to change the company value system to focus on cost/schedule rather than technical excellence. (For a detailed discussion of these three values or "topoi" see Tompkins, 1993.)[3]

Data Collection

Over 11 months, data were gathered using participant observation, in-depth interviews, and document analysis. The first author logged approximately 200 participant-observation hours, interviewed 48 employees and managers, and collected over 2,000 pages of organizational documents. In exchange for access, the organization received periodic unpaid briefings during the data collection period as well as a two-hour presentation of findings at the conclusion of the project.

For participant observation (Lindlof & Taylor, 2002), the researcher sought both in-depth understanding of certain groups as well as a broader, matrix perspective on the entire organization. To begin, three project teams or "programs" were followed closely for 10 months. These cross-functional project teams were each directed by a program manager and consisted of engineers, technicians, planners, schedulers, business analysts, accountants, and quality inspectors. Within these programs, the researcher observed weekly team meetings, customer reviews, informal celebrations such as birthday parties, team-leader meetings, problem-solving sessions with engineers, hardware testing, and hardware assembly. In addition, the researcher shadowed employees as they went through their daily routines, ate lunch with employees in the office areas, and jogged with employees during the lunch hour. As a method for observing the more informal aspects of organizational life, the researcher secured office space within one of the project team's offices where he regularly worked during several months of the study. While the three project teams were the focus of the research, the first author also sat in on executive committee meetings, meetings of other high-level managers, and attended larger organizational events, such as the video broadcast of the launch of a new satellite or the quarterly "Communications Briefing" from the CEO. In all cases, preliminary "head" or "scratch" notes taken during observations were typed up as field notes that serve as a detailed record of the observations (Lindlof & Taylor, 2002).

After five months of participant observation, interviews were conducted. Interviews provide "accounts" of employee behavior that generate meaning as employees attempt to make sense of their interactions (Tompkins & Cheney, 1983). Forty-eight interviews were conducted ranging from 20 to 90 minutes with an average length between 30 and 40 minutes. All interviews except one, in which the participant declined, were recorded and transcribed. For the interviews, a network sampling method was used (Granovetter, 1976). Individuals associated with the three program teams were first interviewed and, subsequently, they provided names of others throughout the organization to interview. Outside of the program teams, interviewees were selected to try to get as broad a range as possible of hierarchical and functional differences in the organization. In all, 17 engineers, 14 managers and executives, 6 technicians, and 11 other support personnel (business analysts, schedulers, planners, quality inspectors) were interviewed over the course of six months. Representative of the small number of women at JAR and in the aerospace industry in general, only 9 of 48 interviewees were women. The interviews were semistructured and designed to encourage employees to reflect on their own as well as others' decision-making practices as well as to consider recent changes at JAR related to the industry challenges. One question, for instance, asked employees to reflect on "How does cost and schedule fit with the JAR value of technical excellence?"

In addition to participant observation and interviews, document analysis was also used to gather information about control and resistance practices at JAR. Documents collected included historical yearbooks, weekly newsletters, training manuals, selected e-mail messages, employee handbooks, glossaries of official acronyms and terminology, meeting agendas, program schedules, technical reports, business forecast reports, videotaped speeches, promotional videos, product marketing materials, and program progress reports prepared for customer review meetings.

Analysis

Analysis of the data was an ongoing practice during the fieldwork process. During data collection, the authors read through the data and discussed emerging themes, and wrote preliminary "asides" and "commentaries" (Lindlof & Taylor, 2002). The second author served as a check on the first in that he was theoretically informed and was more distant from the organization than the first author. During the first few months, tensions between values of technical excellence, cost, and schedule emerged from the data set. Discussion of these tensions led the authors to focus more closely on cost/schedule/technical excellence by designing interview questions that explicitly addressed these value tensions. Identification of initial themes during the data collection stage was also useful because it allowed the authors to conduct member checks with organizational participants to see if the meanings of the researchers and the meanings of the participants coincided. In addition, the first author presented the overall findings of the research to a group of approximately 25 JAR employees and managers, including the CEO. This two-hour briefing and discussion of the results with participants confirmed that the themes constructed by the researchers were consistent with the sense making of the participants. The second author's presence during this briefing to observe how the subjects responded to the results further strengthens the validity of this work (Tompkins, 1994). This process of data collection, reflection, and member checking characterized the data gathering process.

For the data analysis for this study, we used a revised version of Glaser and Strauss's constant comparison method (1967; see also Charmaz, 2000; Strauss & Corbin, 1998). Our analysis, typical of qualitative research, was a comparative, iterative process whereby we moved continuously back and forth between the data and interpretive categories leading to numerous revisions of the categories. In particular, we were concerned with the ways that organization members made sense of and constructed interpretations of their work experiences at JAR in relation to key value premises (Charmaz, 2000). We began by examining how organization members talked about cost, schedule, and technical excellence at JAR. We looked for recurring themes across respondents and compared responses according to hierarchical and functional differences. We discussed emerging themes and wrote analytic memos that further refined the developing thematic categories. In addition, we compared themes across different forms of data—field notes, interview transcripts, and documents—in order to evaluate the consistency of our interpretations. As we examined the data, each new instance was compared with previous categories to determine if it fit or if the interpretive categories needed further revision (Lindlof & Taylor, 2002). Through this comparative process, we explored the data set and developed an understanding of the way participants themselves understood key value premises.

Results

Management's Competing Discourses of Identity

To understand the contradictions surrounding management's attempts to change the company value system, we examined how the managers made sense of the ongoing changes that they themselves were implementing. The communication of managers reflects two strong, but competing discourses of identity: *the discourse of enterprise* and the *discourse of JAR's successful past*. First, managers, both executives and program managers, espoused the "discourse of enterprise" to justify the changes that needed to be made at JAR (Cohen & Musson, 2000; du Gay & Salaman, 1992). The discourse of enterprise broadly references a number of widely held beliefs in Western economies such as the "customer is always right" (du Gay & Salaman, 1992) or "continuous change" is necessary for success in a "turbulent environment" (Zorn, Christensen, & Cheney, 1999). Such discourses attempt to impose market-like conditions on the internal functioning of organizations.

JAR managers constructed the need to change the concertive control system by appealing to the discourse of enterprise. For example one manager stated:

> And that is what we call the best value criteria. And part of what that means is what is value in the customer's eye? What is he really looking for? And the example is value in knowing what time it is means two different things to two different people. To one person, a $10 Timex watch where you buy at K-Mart gives him the time, it's plastic and that's fine. All he wants to know is the time. To somebody else, he wants the Rolex. It gives the same quality of time, but he likes the other features, the luxuriousness that goes along with it.

This manager advocated changing the organization based upon customer demands. "Best-value" for this JAR manager meant listening closely to the customer and providing the appropriate product. In most cases at JAR, this meant not producing the Rolex when the customer wanted a Timex. Others provided justifications for changing the values at JAR by similarly appropriating language from the discourse of enterprise. One manager stated, "We need to be careful to give rather than the Cadillac, give the Chevrolet if that's the case." Others focused more on the customer-driven nature of the market economy. One manager said, "I like to think of myself as a very customer-oriented person." Another manager talked about his co-workers as "internal customers" saying, "As my customer, definitely. If they come to me with a problem, I feel I need to make every effort I can to help them out. We need those people. I appreciate them and, and we need them. And I want to make every effort that I can to help them out."

The reliance of managers on the discourse of enterprise is also evident through the large number of popular "guru" type books, videotapes, and training sessions advocated by management. The enterprise ideas of popular business authors such as Covey, Senger, and Kotter were discussed by managers during meetings and in conversations with the researchers. For example, the idea of "BHAGs"—Big Hairy Audacious Goals (Collins & Porras, 1994) was used to justify the strategic vision for JAR's change by the CEO at one company-wide meeting. JAR also offered training sessions that dealt with many of these sorts of "customer focused" issues. For example, during the observation period JAR paid a consultant to teach a seminar on "Design to Cost" and the company offered regular "Covey" training sessions for all employees. At a meeting of the executive committee, a video on the *Balanced Scorecard* (Kaplan & Norton, 1996) was shown and the CEO asked all of the vice presidents to think about how the ideas might be implemented at JAR. In all, JAR management's espousal of "best value" and customer focus to justify change suggests these managers evaluated themselves and their relationships to others according to the value premises conveyed through that discourse of enterprise. This part of their organizational identity, though, had to be balanced with other competing identity constructs.

In addition to the discourse of enterprise, the second discourse that shaped the identities of managers was that of JAR's successful past. Despite logical reasons for change based upon the discourse of enterprise and material reasons for change based upon lost contracts, JAR managers had difficulty modifying the values that contributed to past organizational success. Most of the managers at JAR had come up through the engineering ranks and still strongly identified with the company's long-time commitment to technical excellence. One functional manager spoke for many when he said:

> About 20 some odd years ago I got bored where I was working and I decided that I wanted to try some place where we never did the same thing twice and that's JAR. Everything we do is different. Everything we do is a technical challenge. Virtually everything we do is one of a kind: design it, build it, and ship it. It makes it interesting because it is always stuff that hasn't been tried before.

The organizational identity of this manager is based, at least partially, on his identification with the company's past success. Trying "stuff that hasn't been tried before" motivated this manager. In contrast with the discourse of enterprise, with its compromise position of "best value," this manager revealed his strong affinity for technical excellence and his devotion to the past. This sentiment is supported by another long-term manager who stated,

> We never wanted a long-run program. We always wanted a program that had a new, unique problem—that it lasted about two to three years to fix it, to figure it out, build it, test it and ship it and then show me the next one and that's all they wanted to do for the most part is those kinds of typical really high-tech, state of the art, never been done before kinds of problems as opposed to let's come up with a design for a military weapons system that we're going to build two hundred thousand of them. You know, nobody around here really wanted to do that because that was boring, it's routine.

Other evidence also points to this identity of JAR managers as linked to JAR's success in the past with solving difficult problems and providing technical excellence. One manager stated, "The overall culture has been 'Do Your Best Technical Work'." When asked what worked well at JAR, most managers agreed, "The thing that works superbly is the fact that we put together a team and we undertake a challenge that sometimes nobody in their right mind would try, and we succeed. . . . We put hardware up in space that performs flawlessly." As managers recalled success stories, it was easy to see their pride in the technical achievements of the past. One senior manager confessed, "I think we've got a bit of technical arrogance that says we know how to do it better than anybody else, even when we don't." Another manager revealed, with some pride, that others in the industry saw JAR as "technically arrogant."

The alternative discourses of identity that shaped the identities of JAR managers were contradictory. The discourse of enterprise suggested changing precisely what the discourse of JAR's successful past celebrated. In other words, as the discourse of enterprise pushed for market responsiveness to customer demands for better cost control, the discourse of JAR's successful past suggested that doing it "right" mattered most. These discourses then represent tensions that managers have to negotiate as they conduct their daily business. At JAR, part of that daily business during the time of observation involved promoting change and reorganizing according to the company-wide change program. These identity tensions influenced the way managers communicated about the changes.

Forms of Ambivalence Communicated by Management

The identity struggle among managers led to ambivalence regarding the changes at JAR. Ambivalence refers to positive or negative valences of equal strength that result in two equally desirable goals or end states (Lewin, 1951; Thompson, Zanna, & Griffin, 1995). Often organizational change efforts are marked by ambivalence as members genuinely struggle with desirable, yet contradictory alternatives. In some cases, what appears to be employee resistance to change may actually be ambivalence as employees negotiate the initiatives in terms of their individual and collective identities (Piderit, 2000). As JAR managers attempted to implement a significant change to the concertive system, *they subtly undermined their own change efforts*. Many managers still identified strongly with the old value system at the same time they were convincing themselves and others of the need to change that value system. As they struggled to reconcile these two discursive identities, they communicated in ways that reflected this ambivalence. This section emphasizes two forms of communicated ambivalence that highlight the subtle and not so subtle contradictions in management communication.

Communication about change meets habits of practice

A first form of communicated ambivalence explains contradictions between rhetoric of change and habits of practice. Managers and employees noted contradictions between management's communication about change and the practice of daily work life. Most importantly, although JAR executives pushed cost/schedule as important value priorities, the company reward system still focused on technical excellence. As one manager put it bluntly, "The system is designed to reward technical excellence above all else. I have seen little if any shift away from that." One executive, who was a strong advocate of value change, also acknowledged the contradiction:

> Right now, their [employees's] main goal in life is to get the hardware or software or whatever it is out the door and make it work and make it work well and we've got a good reputation for doing that. But they kind of get the same reward no matter how that goes. I mean if they are a little late things still go well and if they are a little over things still go well and so we have no good way of relating their performance directly across the company to every individual.

Recognizing the contradiction between communication about change and perceptions of practice, one manager stated, "You just can't say, 'Hey this is important.' You have to back that up with training and the rewards." Notably, employees also recognized this contradiction between the rhetoric of change and perception of practice. One engineer, for example, noted that "management reserve" was always available to fix mistakes. Like many of his co-workers, he saw many signs that business-as-usual was continuing. Another noted the contradiction from a previous program assignment:

> And we are told that that climate is really changing, but it changes in fits, and on my previous project we were penalized because we went over budget and we blew the schedule. So what happened is that when we ultimately were totally successful on technical performance, our customer gave us back everything that was held, so what they taught us is that still technical performance is tops and this is within the last year. They didn't tell us that the schedule and budget really counted when it was successful and they got great publicity and it was huge for them that it was technically successful.

In this example, the interviewee recognized the contradiction between the communication about change and the realities of the reward system. She indicated that despite the rhetoric of change, she had learned to continue to value the premise of technical excellence above all else.

In addition, the contradictions between communication about change and practice were revealed through the introduction of a new quality system. At the same time that JAR introduced the best value ideal with corresponding emphasis on cost/schedule, the company also introduced a new quality system, ISO 9001.[4] Interestingly, the adoption of ISO standards resulted not from any quality problems at JAR, but rather from market pressures that were reinforced by the discourse of enterprise. Many customers, including the U.S. government and most European governments, were requiring ISO certification to do business. Rather than simply going through the motions to achieve the requisite certification, JAR management embraced ISO and adopted it as their "new business system." The contradictions in this latest quality program were summed up by one middle-level manager:

> JAR management has provided some very conflicting signals. They've put out these programs for total quality management, pride and excellence. It's got a different name, but there is always some program and it's going to go, "Oh you've got to do your best. It's not good enough to do good enough." Well good enough is where you have to stop if you want to make it and make it on cost and schedule. You can't afford to make it perfect.

Ironically then, at the same time JAR managers were attempting to get JAR employees to pay more attention to cost/schedule, they also advocated a new quality system. Despite attempts to reconcile these competing goals, the contradictory messages seemed both to hinder adoption of cost/schedule as primary decision premises and deter commitment to the ISO quality program. Employees saw JAR investing significant resources in a quality system at the same time they were being told that they had overdesigned in the past and should focus more on best value.

Finally, despite pushing for change, some managers expressed hope that the environment of the past would someday return. One vice-president commented during a meeting that NASA's problems with its Mars Lander might cause NASA to reconsider its "Faster, Better, Cheaper" mantra. The comment implied that if JAR just held out, then change might not be necessary. As managers publicly hoped for conditions that favored the past, their messages about cost and schedule priorities for the future were ambiguous to employees.

Bragging about past performance while promoting change

A second way in which managers communicated ambivalence was by bragging about past performance while promoting change. Efforts at changing the concertive value system were undermined through the (re)telling of stories that glorified JAR's idealized past. For example, one program manager, Bill, who often pushed his employees to find ways to cut costs on their product during team meetings, also often boasted about the legacy of that team in producing instruments that lasted many more years than the customer asked for. During one meeting, Bill went right from discussing ways to cut production costs to a declaration about how they had outperformed on technical excellence.

> Bill comments, "The last 5% of the project takes 90% of the time (to complete)." "That scares me" he adds. Linda replies, "That's Murphy's Law." Bill responds saying, "Murphy's law also doesn't say that instruments that should last two years will last 11, 8 or 5 years. We are pushing it with Murphy...."

Bill's own ambivalence is communicated as he highlighted the importance of cost/schedule control but also bragged about instruments lasting many years longer than expected. This fundamentally challenged the "best value" premise that JAR was trying to promote in that product should meet with customer expectations. From a best-value perspective, it is likely that the instruments in the past were overdesigned and, thus, cost the customer more than necessary.

Another example shows similar contradictions between celebrated and enacted values of the past and prescriptions for the future. The executive committee began the "Communications Briefing" where they introduced the need for changes in the company's value system with a video that celebrated their performance highlights of the past. The video, which conveyed significant organizational arrogance in technical achievements, fostered collective pride in the technical excellence of the past. Ironically, this reminder of collective pride in technical excellence was at odds with the espoused theme of the briefing—that JAR needed to change its values to highlight cost/schedule.

The seriousness of management's efforts to change the culture is mitigated by communication of collective pride in the success of JAR. Through company history books, through the semimonthly newsletters and through conversations, the collective pride in JAR's past was clear. The "heroic" figure in JAR's culture was the engineer who solved the most difficult problems. One story, told several times to the first author, involved a JAR engineer who solved a key problem for NASA on the back of a napkin during an emergency meeting. Such stories, told by managers and repeated throughout the organization, reinforced the technical culture and made it more difficult for a cost/schedule culture to take hold.

At times managers seemed aware of their own ambivalence as they discussed ways of negotiating the new and the old JAR cultures. One senior-level manager expressed how he balanced implementing new cost control methods with allowing for professional freedom and technical excellence from programs:

> It's almost like you can't stop them [engineers] from doing a good technical job. So I don't really pay too much attention to that. I try to spend more time on the other aspects of the program. But while I try to put in certain tools and things to help the program managers' job, I don't want to constrain them so that they are all alike.

This manager's comments reflect pride in the technical competence of the organization, a need to provide tools for cost control, but also a general hesitancy on the part of upper-level managers to constrain the freedom that allowed for technical excellence among JAR engineers.

Employee Resistance

Management's communicated ambivalence provided space for employee ambivalence and resistance regarding changes at JAR. As employees sensed that JAR managers were not totally convinced about the need for the changes they were advocating, employees found it easier to reject these changes to the company's value premises. Evidence of resistance to change in the company value priorities was pervasive. Executives talked about employee resistance in meetings as well as during interviews with the researcher. Employees commented openly about how difficult it was to alter their values.

Employee resistance was presented in different but interrelated ways. First, employees viewed the change initiative with suspicion as they had lived through unsuccessful popular programs in the past such as TQM. Despite management assurances that this program was as different as it was a compelling material reason for change, employees usually conducted themselves as if nothing had changed. As one engineer summed it up, "Management can do whatever they want to change or restructure as long as it doesn't affect us. We'll keep doing the work." The employees voiced a common theme that management was out of touch with the "real work" that was being done. Employees wanted to make sure that this work got done, despite as they often stated, all the barriers constructed by managers.

Second, employees relied on their devotion to the old value system to resist changes to that value system (Ferraris et al., 1993). In this *resistance through devotion*, they used their dedication to technical excellence to counter arguments that change was needed. A support staff person on one program team articulated a common theme:

> I think if you asked most people, you would find out that most people are really concerned to make sure that the JAR hardware is there, because if it doesn't work, all of that other doesn't count—cost doesn't count, scheduling doesn't count. If it gets there and it doesn't work, what good is cost and schedule? . . . I think you will find at JAR, when push comes to shove, it has to work. Culture wise, it may seem or have other appearances or conflict, but I don't think it really does.

The logic, based on the culture of the organization, asserted that if it did not work, nothing else really mattered. Absent from this simple but convincing argument is any discussion of key tradeoffs that must be made to achieve best value. This logic defeated efforts at change because it is rooted in long-time cultural beliefs that were not easily abandoned by employees or their managers.

Implications

The changing of JAR's concertive-control value system reveals some important lessons for theorizing about control as well as improving organizational practice. We begin by discussing implications of this work for our understanding of concertive control, and specifically the role of managers in adopting such a practice. Then, we turn to a discussion of management's role in resistance.

Control

This study demonstrates that the chess match metaphor used to explain management/employee control relations may not be adequate. Any neat dichotomy between managers and employees necessarily oversimplifies reality—especially in high-tech organizations. Sometimes in this chess match of organizational power, we find that the white pieces become the black pieces and the black the white. This research finds that managers who implement a concertive-control system for employees *may themselves come to be controlled by that same system*. Most previous examinations of the role of managers in concertive control systems have focused on the changing roles of managers in becoming coaches, trainers, or facilitators that shape the culture of the organization (Barker, Melville, & Packanowsky, 1993; Drucker, 1994; Peters & Waterman, 1982). But as Barker (1993) suggests, a concertive system of control moves the locus of control away from bureaucratic rules created by managers to the "value consensus of the members and its socially created generative rules system" (p. 412). Although we qualify Barker's suggestion by emphasizing that managers still shape and endorse the appropriate decision premises in organizations, the resulting value consensus and socially created rules system is separate from the direct control of managers. In addition, managers, especially long-term managers who come up through the company ranks, often participate in (re)creating the traditional value consensus and are habitually held accountable by that system as well. Like employees, managers may discipline themselves according to the "communal rational" of the collective (Barker, 1999, p. 107).

This study suggests some limitations to managing change in organizations with strong organizational identification and concertive systems of control (Barker & Tompkins, 1994; Bullis, 1991, 1993; Bullis & Tompkins, 1989; Cheney, 1991, 1999; Kunda, 1992; Simon, 1976; Tompkins & Cheney, 1985). During times of organizational turbulence, concertive systems may be self-limiting. Our analyses showed how changes to the concertive value system challenged the identities of managers and subsequently lead to ambivalent communication. While a very tight system of control, and often initiated by management, concertive systems of control may, ironically, grow beyond the instrumental control of managers (Bullis, 1991; Bullis & Tompkins, 1989; Ferraris et al., 1993). As Bullis phrased it, "The limit of unobtrusive control may be that it creates a situation where the organization itself becomes alienated from its members and its core values" (1991, p. 269). Our study suggests that managers, like employees, may be controlled by their devotion to the concertive-control value system and subtly resist change through ambivalence. To go one step further, in the case of JAR managers, their reluctance to wholly embrace change may reflect an "authentic sense of [organizational] self" (Kunda, 1992, p.183). Adopting new value premises created an *inauthentic identity* as it challenged their professional integrity because many of them still identified with technical excellence as the proper way to do business.

We might further nuance our understanding of managers in normative forms of control by questioning why an authentic sense of organizational self is so desirable, yet so difficult to secure. The actions of managers can be explained in terms of attempts to secure their identities in the context of a modern search for "Who am I?" Willmott (1990), though, frames this search for a secure identity as "self-defeating" because modern society is fractured with identity options that are often times conflicting. As Collinson (2003) puts it, "There appears to be an almost unlimited number of possible sources of identity . . . While some of these coexisting identities are mutually reinforcing, others may be in tension, mutually contradictory and even incompatible" (p. 534). The ambivalence of JAR managers is at least partially explained by discourses that suggest on the one hand that the "competent manager" in contemporary organizations portrays entrepreneurial attributes (du Gay et al., 1996), and on the other hand, that an authentic sense of organizational self is found within the technical excellence culture of the past.

Our research also links control in a concertive system to material forces that shape discourse and identity. JAR executives, because of challenges to JAR's bottom-line, turned to the discourse of the market. They were told that they were losing new contracts because they could not control cost and schedule. On the other hand, many JAR managers knew that their own valuable stock in the company was based on JAR's past commitment to technical excellence. Both the discourse of the market and the discourse of JAR's successful past had significant ties to material influences. This finding is important because it points to a needed intersection in understanding both discursive and material forces that shape systems of concertive control and points to an area for future research.

Resistance

In addition to control, this study also informs our theorizing about resistance. Unlike previous research that demonstrates how managers move to outflank resistance (Clegg, 1989; Delbridge, 1995; Sewell & Wilkinson, 1992), this research suggests that managers, at times, support employee resistance. Also, unlike previous research that ties management sabotage to feelings of powerlessness and insecurity (LaNuez & Jermier, 1994), this research links ambivalence to an identity struggle among competing decision premises. These findings add variation to our understanding of resistance by complicating the assumption that managers try simply to suppress employee resistance, and by offering a specific method—communicated ambivalence—through which managers may support resistance. The communicated ambivalence of managers provided employees and managers space to negotiate the competing discourses of identity that were shaping the future of JAR.

In addition, we join with Collinson (1994) in cautioning that it is important not to "overstate and/or romanticize oppositional practices" (p. 53). At first glance, JAR employees might seem very effective in opposing changes advocated by management. What appears as employee resistance to management initiated change, however, might also reflect the subtle and not so subtle ambivalence of managers. This is significant because it suggests we must temper our conception of employee resistance as an expression of agency (Giddens, 1984; Kondo, 1990; Willis, 1977). Rather, in some cases, what seems like resistance to control may be more of a reflection of management ambivalence, and perhaps even a consensus of ambivalence. Theorizing about resistance must take special caution not to attribute too much agency to either employees or managers, but to instead find a balance that describes how employees and managers interact together to form situational expressions of control and resistance. For example, almost contemporaneous to this study, another analysis found that one of the organizational causes of NASA's Columbia disaster was the dominance of the "managerial bureaucratic control culture" over the "technical concertive culture" within NASA (Tompkins, 2005).

This research furthermore posits a new strategy for resistance and suggests employees and managers may use similar tactics for resistance to changes in a concertive control system. Adding to a list of strategies of resistance developed through close empirical study (Collinson, 1994), we suggest that *resistance through devotion* reflects the tendency for organizational actors to rely on traditional discourses of identity and to use those discourses to counter challenges from other discourses (Bullis, 1991; Bullis & Tompkins, 1989; Smith & Eisenberg, 1987). At JAR, both managers and employees used the discourse of JAR's successful past to effectively counter arguments stemming from the discourse of enterprise.

At this point, we must note the situational nature of this research as a limitation to the above findings. JAR employees, as described previously, are different from those in many other organizations in that they are highly educated professionals. As such, we are not making general claims about employees, like those described in Ehrenreich's *Nickel and Dimed* (2001), and their abilities to resist management's attempts to alter concertive control systems. On the other hand, our close study in this context does raise important questions that should be pursued in other contexts.

Conclusion

In this study, we explored how challenges to the identities of managers arose as a result of changes in a concertive value system in one high-tech organization. This study suggests that managers may subtly support employee resistance through communicated ambivalence and that concertive systems of control might not only be an "iron cage" (Weber, 1958) for employees, but also for managers. Finally, this case should not be read as a failure of management, but rather a reflection of the material, discursive, and identity struggles which both managers and employees must negotiate. While tempted simply to explain the ambivalence of JAR managers as poor management, we suggest that this may accurately reflect the ambivalence many managers experience when confronted with changes in value premises. Close empirical studies that take into account managers as well as employees are needed to further understand how control and resistance are enacted and balanced in organizational practice.

Notes

[1] JAR Technologies is a pseudonym for a real aerospace company. Because of the highly competitive and sometimes classified nature of their work, the organization asked that their name be kept confidential.

[2] Faster, better, cheaper was meant to apply only to "non-manned" spacecraft although reports analyzing the Space Shuttle Columbia tragedy do suggest that the "Fasterbettercheaper" mentality did creep into the human space flight program (Tompkins, 2005, p. 176). A second, more conservative set of expectations still exists for "manned" space flight. JAR operated mostly outside of the human space program.

[3] It is a circular coincidence that the concepts of organizational identification and concertive control were inspired by empirical studies of NASA (Tompkins, 1977, 1978). The theory of concertive control was first articulated by Tompkins and Cheney (1985). This study revises the original theory on the basis of an empirical study of a NASA contractor. For a recent study of the Columbia disaster that reveals a somewhat different control-resistance dynamic between managers and engineers, see Tompkins (2005). Both studies do agree in the way that management culture at NASA has changed over the past 40 years.

[4] The International Organization for Standardization created a series of quality programs, called the ISO Standards for both production and service work. ISO 9000 is a quality system designed to provide detailed work procedures for the planning, implementation, and documentation of manufacturing and service work. Since 1987, ISO standards have been widely adopted by businesses around the world.

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