# Tightening the Iron Cage: Concertive Control in Self-Managing Teams

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In this paper, I provide an ethnographic account of how an organization's control system evolved in response to a managerial change from hierarchical, bureaucratic control to concertive control in the form of self-managing teams. The study investigates how the organization's members developed a system of value-based normative rules that controlled their actions more powerfully and completely than the former system. I describe the organization and its members and provide a detailed account of the dynamics that emerged as concertive control became manifest through the members' interactions. This account depicts how concertive control evolved from the value consensus of the company's team workers to a system of normative rules that became increasingly rationalized. Contrary to some proponents of such systems, concertive control did not free these workers from Weber's iron cage of rational control. Instead, the concertive system, as it became manifest in this case, appeared to draw the iron cage tighter and to constrain the organization's members more powerfully.•

I don't have to sit there and look for the boss to be around; and if the boss is not around, I can sit there and talk to my neighbor or do what I want. Now the whole team is around me and the whole team is observing what I'm doing.

"Ronald," a technical worker in a small manufacturing company, gave me this account one day while I was observing his work team. Ronald works in what contemporary writers call a postbureaucratic organization, which is not structured as a rule-based hierarchy. He works with a team of peers who are all equally responsible for managing their own work behaviors. But Ronald described an unexpected consequence of this team-based design. With his voice concealed by work noise, Ronald told me that he felt more closely watched now than when he worked under the company's old bureaucratic system. He said that while his old supervisor might tolerate someone coming in a few minutes late, for example, his team had adopted a "no tolerance" policy on tardiness and that members monitored their own behaviors carefully.

Ronald's comments typify life under a new form of organizational control that has prospered in the last decade as a means of avoiding the pitfalls of bureaucracy. This form, called "concertive control," grows out of a substantial consensus about values, high-level coordination, and a degree of self-management by members or workers in an organization. This paper describes and analyzes the development of concertive control after Ronald's company, "ISE Communications," converted to self-managing (or self-directing) teams, a concertive structure that resulted in a form of control more powerful, less apparent, and more difficult to resist than that of the former bureaucracy. The irony of the change in this postbureaucratic organization is that, instead of loosening, the iron cage of rule-based, rational control, as Max Weber called it, actually became tighter.

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## THE PROBLEM OF CONTROL

Control has been a central concept in organizational theory since the time of Weber and remains perhaps the key issue that shapes and permeates our experiences of organizational life. Barnard (1968: 17) best stated the importance of control when he wrote that a key defining element of any organization was the necessity of individuals to subordinate, to an extent, their own desires to the collective will of the organization. For individuals to achieve larger goals they must actually surrender some autonomy in organizational participation. Because of this basic tension, control is always problematic in any organization.

To work through this problem, an organization's members—managers and workers alike—must engage in ongoing formal and informal "processes of negotiation in which various strategies are developed . . . [that] produce particular outcomes" for the organization (Coombs, Knights, and Willmott, 1992: 58). Herein lies the essence of control as it becomes manifest in organizational activity. For any organization to move toward its goals and purposes, its "particular outcomes," its members must interactively negotiate and implement some type of strategy that effectively controls members' activities in a manner functional for the organization.

### Edwards' Three Strategies of Control

Edwards (1981) has identified three broad strategies that have evolved from the modern organization's struggle with controlling members' activities. First is "simple control," the direct, authoritarian, and personal control of work and workers by the company's owner or hired bosses, best seen in nineteenth-century factories and in small family-owned companies today. Second is "technological control," in which control emerges from the physical technology of an organization, such as in the assembly line found in traditional manufacturing. And third and most familiar is bureaucratic control, in which control derives from the hierarchically based social relations of the organization and its concomitant sets of systemic rational-legal rules that reward compliance and punish noncompliance.

A pivotal aspect of Edwards' model is that the second and third strategies, technological and bureaucratic control, represent adaptations to the forms of control that preceded them, each intended to counter the disadvantages of the previous form. Technological control resulted not only from technological advances in factories but also from worker alienation and dissatisfaction with the despotism too often possible in simple control. But technological control proved subject to such factors as worker protests, slow-downs, and assembly-line sabotage. The stultifying effects of the assembly line, with workers as just cogs in the machine, still produced worker alienation from the company. The bureaucratic form of control, with its emphasis on methodical, rational-legal rules for direction, hierarchical monitoring, and rewards for compliance such as job security, already existed in the nineteenth century and was further developed to counter the problems inherent in technological control. The bureaucracy and bureaucratic control, which

become manifest in a variety of forms (Riggs, 1979; Perrow, 1986), have matured into the primary strategy available to managers to control work effectively in the modern organization. But, as with its predecessors, this strategy of control, too, is problematic.

## Bureaucratic Control and the Iron Cage

Weber articulated the bureaucracy as the dominant form of modern control, in both positive and negative senses. While the bureaucracy offers the fairest and most efficient method of control, its system of rational rules may become troublesome, as seen in the infamous "red tape" that constrains and slows the bureaucracy and makes it unresponsive to environmental changes. Also, as Weber warned us, we, in our desire for organizational order and predictability, tend to focus too much on the rationality of the rules in and of themselves, overintellectualizing the moral and ethical values critical to our organizational lives and making decisions according to the rules, without regard to the people involved (Kalberg, 1980: 1158). We become so enmeshed in creating and following a legalistic, rule-based hierarchy that the bureaucracy becomes a subtle but powerful form of domination.

This notion of the inevitable, highly rational, but powerfully oppressive bureaucracy refers to what Weber (1958: 180–181) called the "iron cage." Weber saw the bureaucracy and bureaucratic control as an irresistible force of high rationality that would commandeer and consume all other forms of control. For Weber (1978), we would, out of our desire for order, continually rationalize our bureaucratic relationships, making them less negotiated and more structured. These structures ultimately become immovable objects of control: "Once fully established, bureaucracy is among those social structures which are the hardest to destroy. Bureaucracy is *the* means of transforming social action into rationally organized action (Weber, 1978: 987). As organizational activity increasingly becomes saturated by bureaucratic rationalization processes, it is increasingly constrained by them. A rule requiring a customer service representative to have all refund decisions approved by someone two hierarchical levels above may impede the representative's ability to meet a customer's demands for a quick response. Thus a rule that apparently benefits an organization's effectiveness (getting managerial approval and oversight of refunds) also constrains its effectiveness (slows down response). In Weber's (1978: 987–988) words, the individual organizational actor in a modern bureaucracy "cannot squirm out of the apparatus into which he has been harnessed."

Weber's image of how we become trapped in an iron cage of bureaucratic control suggests that control, as it becomes manifest as organizational activity through Edwards' three strategies, has become less apparent, or not as readily personal, as it has become more imbedded in the social relations of organizational members (Tompkins and Cheney, 1985; Barker and Cheney, 1994). Control in the bureaucratic organization becomes impersonal because its authority rests ultimately with the system, leaving organization members, in

many cases, with what Weber (1958: 182) called "specialists without spirit, sensualists without heart." Whereas the nineteenth-century mill owner overtly controlled workers, ordering, directing, and firing them at will, the bureaucracy's rules are more indirect: They control workers by shaping their knowledge about the "right" ways to act and interact in the organization. A worker seeks supervisory approval for a decision because that is what the worker is supposed to do. The "apparency" of control becomes hidden in the bureaucracy's seemingly natural rules and hierarchy. Thus, bureaucratic control leaves us in a paradoxical situation. The same rational activities that enable collective organizational interaction eventually come to constrain that activity in ways often difficult for us to perceive, much less comprehend, the consequences and ramifications. Our bureaucratic rules ultimately confine us as solidly as if we were in a cage bound by iron bars.

## Concertive Control as a Fourth Strategy

Almost since the beginning of modern organizational study, influential theorists have argued that decentralized, participative, and more democratic systems of control offer the most viable alternatives to the bureaucracy's confining routines and rules (e.g., Follett, 1941; Lewin, 1948). This continual push toward participation and a flat organizational structure has become something of an obsession in managerial literature in the last decade or so (Eccles and Nohria, 1992). Contemporary writers have unleashed a flood of literature announcing the "coming demise of bureaucracy and hierarchy" (Kanter, 1989: 351) and detailing the dawn of a postbureaucratic age in which control emerges not from rational rules and hierarchy but from the concertive, value-based actions of the organization's members (Soeters, 1986; Ogilvy, 1990; Parker, 1992). Characteristic of this movement are influential business consultants such as Tom Peters (1988) and Peter Drucker (1988) who have urged corporate executives to de-bureaucratize their firms and adopt more ideologically based designs drawn around unimpeded, agile authority structures that grow out of a company's consensual, normative ideology, not from its system of formal rules. By cutting out bureaucratic offices and rules, organizations can flatten hierarchies, cut costs, boost productivity, and increase the speed with which they respond to the changing business world.

Tompkins and Cheney (1985) argued that the numerous variations these authors have offered on the postbureaucratic organization represent a new type of control, "concertive" control, built on Edwards' three traditional control strategies. This form represents a key shift in the locus of control from management to the workers themselves, who collaborate to develop the means of their own control. Workers achieve concertive control by reaching a negotiated consensus on how to shape their behavior according to a set of core values, such as the values found in a corporate vision statement. In a sense, concertive control reflects the adoption of a new substantive rationality, a new set of consensual values, by the organization and its members.

This negotiated consensus creates and recreates a value-based discourse that workers use to infer "proper" behavioral premises: ideas, norms, or rules that enable them to act in ways functional for the organization. For example, a newly concertive company may have a vision statement that states, "We are a principled organization that values teamwork." This value may lead one of its members to create a discourse that calls out the premise that "To be principled and value teamwork, we all must come to work on time." The actors can then infer a method of acting (coming to work promptly at 7:00 A.M. not at 7:30), without the traditional supervisor's direction, that is functional for the organization. Thus concertive control becomes manifest as the team members act within the parameters of these value systems and the discourses they themselves create. These new collaboratively created, value-laden premises (manifest as ideas, norms, and rules) become the supervisory force that guides activity in the concertive control system. In concertive control, then, the necessary social rules that constitute meaning and sanction modes of social conduct become manifest through the collaborative interactions of the organization's members. Workers in a concertive organization create the meanings that, in turn, structure the system of their own control. Rule generation moves from the traditional supervisor-subordinate relationship to the actors' negotiated consensus about values.

A second and more important difference between the concertive control model and its bureaucratic predecessor lies in the locus of authority. In the concertive organization, the locus of authority, what actors see as the legitimate source of control to which they are willing to submit (Whitley, 1977), transfers from the bureaucratic system and its rational-legal constitutive rules to the value consensus of the members and its socially created generative rules system. Under bureaucratic control, employees might ensure that they came to work on time because the employee handbook prescribed it and the supervisor had the legal right to demand it, but in the concertive system, employees might come to work on time because their peers now have the authority to demand the workers' willing compliance.

The key question is whether or not the concertive system offers a form of control that conceptually and practically transcends traditional bureaucratic control. I address this question by examining the process through which actors in a concertive organization collaborate to form the rules that structure their day-to-day work and how they give this process legitimate authority. I report on the processes of control that became manifest as a manufacturing organization changed and adapted to a concertive-based structure, in the form of a self-managing, or self-directed team design.

## Self-Managing Teams: An Exemplar of Concertive Control

Currently, the most popular planned organizational change to a postbureaucratic structure is the transformation of a traditional, hierarchically based organization to a flat confederation of concertively controlled self-managing

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teams. Xerox, General Motors, and Coors Brewing have all initiated this kind of change over the last few years. Although self-managing teams have gained much of their popularity in recent years, they are not a new phenomenon. Research and writing on the subject originally dates from Trist's study of self-regulating English coal miners in the 1950s (Trist et al., 1963; Trist, 1981) and includes the Scandinavian experience with semiautonomous teams (Bolweg, 1976; Katz and Kahn, 1978) and early U.S. team experiences, most notably the Gaines Dog Food plant in Kansas (Walton, 1982; Ketchum, 1984). The contemporary version of the self-managing team concept draws on both the past experiences with teams in Europe and the U.S. and the more recent influence of Japanese-inspired quality circles in Western organizations (Sundstrom, De Meuse, and Futrell, 1990; Sewell and Wilkinson, 1992).

Proponents of self-managing teams have described it as a radical change in the traditional managerial and authority structure of an organization (e.g., Orsburn et al., 1990; Wellins, Byham, and Wilson, 1991). In line with the impulse toward postbureaucratic, concertive-based organizations, they assert that traditional management structures entail inflexible hierarchical and bureaucratic constraints that stifle creativity and innovation. These rigid organizations are top-heavy with managers and unresponsive to changing, dynamic markets, ultimately reducing their competitive viability. From the proponents' viewpoint, U.S. organizations must radically change their managerial structure by converting to worker-run teams and eliminating unneeded supervisors and other bureaucratic staff (traditional management structures). Proponents argue that self-managing teams make companies more productive and competitive by letting workers manage themselves in small, responsive, highly committed, and highly productive groups. Thus, the self-management perspective proposes a "radical" shift from hierarchical supervision to hands-off, collaborative worker management.

This change from supervisory to participatory structures means that workers in a self-managing team will experience day-to-day work life in vastly different ways than workers in a traditional management system. Instead of being told what to do by a supervisor, self-managing workers must gather and synthesize information, act on it, and take collective responsibility for those actions. Self-managing team workers generally are organized into teams of 10 to 15 people who take on the responsibilities of their former supervisors. Top management often provides a value-based corporate vision that team members use to infer parameters and premises (norms and rules) that guide their day-to-day actions. Guided by the company's vision, the self-managing team members direct their own work and coordinate with other areas of the company.

Usually, a self-managing team is responsible for completing a specific, well-defined job function, whether in production or service industries. The team's members are cross-trained to perform any task the work requires and also have the authority and responsibility to make the essential decisions necessary to complete the function. Self-managing teams

may build major appliances, process insurance claims, assemble component parts for computers, or handle food service for a large hospital. Along with performing their work functions, members of a self-managing team set their own work schedules, order the materials they need, and do the necessary coordination with other groups. Besides freeing itself from some of the shackles of bureaucracy and saving the cost of low-level managers, the self-managing company also gains increased employee motivation, productivity, and commitment. The employees, in turn, become committed to the organization and its success (Orsburn et al., 1990; Mumby and Stohl, 1991; Wellins, Byham, and Wilson, 1991).

Most current research on self-managing teams concentrates on the functional or economic outcomes of the change to teams. Another body of practitioner-oriented writing recounts how self-managing teams increase organizational productivity, profitability, and employee satisfaction, as well as how corporations deal with problems encountered during the transition to teams (Dumaine, 1990; Lewis, 1990). Other research on self-managing teams tends toward organizational design issues that concern implementing the change (Andrasik and Heimberg, 1982; Carnall, 1982), attitudinal attributes of teamwork (Cordery, Mueller, and Smith, 1991), and leadership requirements within and outside the team (Manz and Sims, 1987). As Sundstrom, De Meuse, and Futrell (1990) and Hackman (1986) have pointed out, however, we still have very little empirical knowledge of how self-managing teams construct new and functional forms of control and how these forms compare with how we have conceptualized control in the past. ISE Communications offered me a useful case for examining this aspect of organizational control longitudinally.

## METHODS

### ISE Communications

ISE Communications, a small manufacturing company located in a mountain-state metropolitan area, converted from a traditional manufacturing structure to self-managing teams in 1988. ISE manufactures voice and data transmission circuit boards for the telecommunications industry and employs about 150 people, with approximately 90 in manufacturing. ISE was originally a division of a large telecommunications firm, and the ISE management team bought it outright in 1984, although the large firm still remains ISE's largest customer. ISE has the traditional manufacturing, engineering, sales/marketing, human resources, and executive staffs found in most production companies. ISE pays its manufacturing employees by the hour, while the support staff members are on salary.

As expected of a manufacturing company in a large metropolitan area, ISE's production workers represent a cross-section of the local working-class community. Out of 90 manufacturing workers (the worker population when I ended my research in Fall 1992), the ratio of females to males fluctuates but tends to stay around two-thirds female to one-third male. Latino/as, African-Americans, and Asian-Americans are ISE's main ethnic groups, making up

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about 60 percent of the workforce. At any given time, ISE's manufacturing department employs around 15 percent temporary workers that the company trains in-house. In fact, only one job on the teams, an electronic technician, requires training not provided by ISE.

Manufacturing circuit boards involves requesting board parts (resistors, potentiometers, transistors, etc.) from the supply room, assembling these parts onto a circuit board, and soldering the parts to the boards. The workers must then test the boards for electronic problems, trouble-shoot any problems they find, and make any necessary repairs. This becomes a time-consuming and labor-intensive process. After a board passes the final tests, the workers must package it and process the necessary shipping paperwork. Building and testing boards requires repetitive tasks that easily become monotonous. Unfortunately, the errors that arise from monotony mean costly and lengthy retesting .delays or repairs. The work requires close attention to detail and tightly coordinated effort.

Early in my research (Spring 1990), ISE was struggling to survive in a highly competitive and innovative marketplace that demanded flexibility, an emphasis on customer service, and increasing productivity. By the time I wrote this paper two and a half years later, ISE had increased both productivity and profitability. ISE's executives believed that the change to teams was a major reason for their company's success.

"Jack Tackett," the manufacturing vice president and one of ISE's founding members, developed and instigated the company's change to self-managing teams. After reading the works of Crosby, Peters, Drucker, and other consultants, studying manufacturing philosophies like "Just In Time" (JIT)—a company-specific manufacturing method that emphasizes low inventories, first-line decision making, and fast, effective employee action—and taking the pulse of ISE's competition, Jack decided that his company's very survival depended on converting to self-management. As he told me:

I thought that if we did things the same way all the time, we were headed for disaster. We could not meet customer demands anymore. Hierarchy insulates people from the customer. The traditional organization cannot know the customer, they are in the dark about what goes on around them with the manager making all the decisions. You can't succeed with that anymore. The demands of the market are too dynamic for a company to be controlled by a handful of managers. The whole company needs to be focused on customer needs and I needed to marshal the resources of the whole organization, not just a few. . . . You have to look forward and say what will it take to survive. You can't look inwardly all the time. You can't look back and say, "Well, we survived this way." I say that we aren't going to survive if we always consider what we're doing now to be successful for the future.

In 1986, Jack proposed a plan for implementing self-managing teams at ISE to his management staff. Jack actually convinced many of them that the change to teams was absolutely necessary for ISE to survive—which, for some of them, meant giving up their management jobs, although Jack did arrange lateral moves for them within

ISE—and recruited them to help him institute the change. Some thought that the change was a "stupid idea." But Jack was adamant that self-management was *the* way to revitalize the company:

I had it firmly set in my mind that this was the way we had to go and these guys [the reluctant supervisors] were going to come up to speed or I was gonna get rid of them. And this team process was the natural opportunity to give people the chance to either get on board on their own or to fall by the wayside.

And the change proceeded with surprisingly little managerial turnover.

After more than a year of planning and training in teamwork skills, which included drafting and distributing ISE's vision statement, Jack and his advisory group started one self-managing team on a trial run in early 1988. He planned slowly to convert the entire production department to teams over the course of a year.

After working through some difficulties, the new team soon began to work better than Jack or anyone else had expected, so Jack and his group decided to expedite the complete conversion. First, they increased the pace of employee training in teamwork, self-supervision, and JIT manufacturing. Then, over a weekend in August of that year, Jack had the manufacturing area completely remodeled and set up for three self-managing teams, originally called red, white, and blue teams. His group rearranged machines, worktables, and other equipment to form three distinct and self-sufficient work areas that gave each team all the necessary equipment needed to produce the types of circuit boards that the new teams would build. The work areas had separate sections for circuit board assembly, testing, repair and touch-up, trouble-shooting, and packaging/shipping, all the key tasks required in making a complete circuit board. On Monday, Jack divided the workers into three teams and assigned each team to manufacture or configure two or three particular types of boards (the teams did not make the same types of boards). Table 1 summarizes the differences between ISE's operations before and after the change.

Jack, the former managers, and the workers now began the difficult process of adjusting to their new work environment. The workers struggled with establishing concertive *control*, which meant they had to negotiate such supervisory issues as accepting responsibility, making decisions, and setting their own ground rules for doing good work, such as deciding who was going to perform which tasks, whether or not the team needed to work overtime or on weekends, and whether to hire or fire team members. For his part, Jack tried to build a supportive climate for the teams. He put three of the former supervisors into a nonsupervisory support group focused on helping the teams solve technical problems. He also provided new team-building and interpersonal-skill training programs. If a team came to him with a problem, Jack would only offer suggestions, requiring the team to make the decision. Then he would support the decisions that the teams made, right or wrong, as long as the teams learned from their mistakes.

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**Structure of ISE before and after the Change to Teams**

| Before the change | After the change |
|---|---|
| 1. Three levels of managerial hierarchy between the vice president and the manufacturing workers. | 1. Managerial hierarchy extends directly from the manufacturing teams to the vice president. |
| 2. Manufacturing assembly line organizes the plant. Workers manufacture boards according to their individual place on the line. | 2. Team work areas organize the plant. Teams are responsible for complete fabrication, testing, and packaging of their assigned circuit boards. |
| 3. Line and shift supervisors form the first managerial link. | 3. Teams manage their own affairs, elect one person to coordinate information for them. |
| 4. Workers have little input into work-related decisions. Managers make all decisions and give all directions. | 4. Team members make their own decisions within guidelines set by management and the company vision statement. Teams have shared responsibility for their own productivity. |
| 5. Management disciplines workers. | 5. Team members discipline themselves. |
| 6. Management interviews and hires all new workers. | 6. Team members interview, hire and fire their own members. |

I began my research at ISE during this initial phase of adjustment to self-management, as the new teams were creating the collaborative process that characterizes the dynamics of concertive control.

My interest in self-managing teams came from my own experience with them. Prior to returning to graduate school, I worked as the "leader" of a self-managing team for a large trucking company, which gave me a well-informed perspective on ISE's experience. I first met Jack at a social event in January 1990, where, after finding out about our mutual interest in teams, he invited me to come study what was happening at ISE.

Data Collection

When I first arrived at ISE, Jack introduced me as a researcher from the university interested in writing about self-managing teams and told me to roam around the plant as I wanted. I initially set about meeting people and getting to know the workplace. I spent my first six months there talking with members of each team and various management and support personnel. I watched workers at different stages of production and asked questions about how and why they were doing various tasks. During this period, I cultivated key informants on each team and developed plans and guides for in-depth worker interviews.

During my initial learning phase, I established a schedule of weekly, half-day (four-hour) visits to ISE. I normally alternated between morning and afternoon visits, and I also included some early evening observations of the second shift. I decided on a weekly schedule, mainly because ISE was a 90-minute drive from my residence. Occasional schedule variations occurred, when key events were

happening at ISE and I would visit more than once a week, and when I had academic constraints, which would limit my visits to once every two weeks or so for brief periods.

After my first six months, I began an extended process of gathering data, primarily from in-depth interviews, observations, and conversations with key informants, but also from such sources as company memos, flyers, newsletters, and in-house surveys. Then I would withdraw from the setting to analyze the data, write, and develop revised research questions. I would repeat this process by returning to the setting, collecting more data, and then analyzing, writing, and revising again. I also observed and recorded team and company meetings, collected examples of naturally occurring team interactions, and closely followed one team's experiences for four months. In addition, I interviewed nonmanufacturing workers and former ISE employees. When my data collection ended, I had accumulated 275 research hours and conducted 37 in-depth interviews that ranged from as short as 45 minutes to as long as two hours.

In conducting the interviews, I tried as much as possible, given the constraints of voluntary participation, to stratify the interviews roughly across teams, including full-time and temporary employees and crossing ethnic and gender lines. I also interviewed Jack, the team coaches, and a few other members of the management and support staffs. I asked open-ended questions about how the teams made decisions, solved problems, and did day-to-day work. Finally, I probed into their responses for key examples.

During all phases of my data collection, my observer role at ISE did not change. The team members knew that I was studying and writing about their work processes. They were very cooperative and generally accommodated my needs for observation space and interview time. While I would, on occasion, discuss my observations with Jack, I have never filled a formal consulting role, nor has Jack ever asked me to disclose what I considered to be sensitive information about my informants.

Data Analysis

I began my analysis by working from the basic question, "How are the control practices in ISE's new team environment different from the control practices in place prior to the change to teams?" This basic question allowed particular themes about control to emerge from my data that I could compare, revise, and refine as I collected more data and grew more familiar with the case. The particular themes and data analyses I present here emerged from my application to the database of sensitizing concepts (Jorgensen, 1989) primarily drawn from Tompkins and Cheney's (1985), Giddens' (1984), and Weber's (1978) theories of value-based control and constitutive rules. For example, I would examine my data by asking such general questions as, "How has a value-consensus occurred in the team's interactions?" or "Have any teams developed new decision premises or rules?" As significant themes emerged from my data, I would ask about them in subsequent

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interviews, which allowed their interrelated patterns and subthemes to take shape.

From this analysis I developed an analytical description of the general character of concertive control as it became manifest during ISE's experience with teams, which I present below. To help ensure the validity of this analytical conceptualization and its attendant claims, I cross-checked my interview data with my field notes and observations, interviews with management or support staff, and relevant hard data (team performance results, consultant surveys, human resource data, previous team-training programs). Finally, I reviewed my analysis, claims, and conceptualizations with colleagues not familiar with or participating in the setting (Adler and Adler, 1987).

The result of my analysis is a three-part narrative about the three phases of the evolution of concertive control at ISE. The first phase covers the period of consolidation following the turbulence of the change to teams (late-1988–late-1990). In this phase, the teams began to develop and apply concertive consensus about values that allowed them to infer functional decision premises and interact effectively with each other. The second phase (late-1990–late-1991) saw the teams develop strong norms from their value consensus and begin to enforce these norms on each other as a set of rules. The third phase (late-1991 to mid-1992) saw the stabilization and formalization of these new systems of rules. The rules became rationalized and codified and served as a strong controlling force of team actions.[1]

## THE DEVELOPMENT OF CONCERTIVE CONTROL

### Phase 1: Consolidation and Value Consensus

Phase 1 began with the chaos of Jack's abrupt changing of the manufacturing area to teams over that weekend in August 1988. While the workers knew that the change was coming, they still walked into a whole new experience on Monday morning. Bonnie, an original ISE employee, described the scene for me:

Well, it was mass confusion. Nobody knew where they were sitting, what team they were on. They had an idea of what was going on at that point and what the team aspect was all about. As far as details, no idea! So, basically, everybody was just kind of like WOW, this is kinda fun! Because everything was different, it was wonderful in a way, the atmosphere had changed. It was fun to see who you were going to be sitting with, what team you were going to be on, what you were going to be doing. For me it was like, what board am I going to be working on? 'Cause before, I had a certain board that I had worked on from the beginning [of her tenure at ISE] and I still wanted to be working on it.

Jack assigned workers to the three new teams by drawing names out of a hat. He also assigned a former manager to coach each of the teams for six to nine months until they got used to managing themselves. Jack directed these coaches, who had themselves been key players (and believers) in the transition to teams, not to direct the teams overly but to let them learn how to manage themselves. The coaches saw their role primarily as preventing disasters and helping the teams to keep the production flowing.

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Although the line that divides the point at which an idea in a worker's mind becomes a behavioral norm and then a rule is very indistinct, the concepts of concertively generated and collaboratively held value consensus, norms, and rules are important heuristics for explaining the processual nature of concertive control. Simon (1976: 223) distinguished between value-based and factual-based decision premises. No longer guided by the old factual premises of the traditional supervisor, ISE's workers found themselves in a process of creating value premises and turning them into factual premises. Adopting these heuristic concepts and expressing their relationship as a transition from value consensus to norms to rules enables me to discuss this elusive process analytically.

The challenge for the teams during this first phase was learning how to work together and supervise themselves functionally: They had to learn how to get a customer's order manufactured and out the door. To do this, they had to merge, or consolidate, a variety of differing perspectives on how to do good work. For example, the new team members knew the separate activities involved in circuit board production, but they did not know how to control their individual efforts so that they could complete the whole process themselves. They knew how their former supervisors valued good work, but they lacked a means of articulating this value for themselves. To meet this need, the teams began developing their own value consensus as to what constituted, both collectively and individually, good work for the teams and patterns of behavior that put this consensus into action. Jack had already provided the foundation of this consensus in the vision statement that he had written for his new teams.

When ISE began converting to self-managing teams, Jack, along with ISE's president, crafted a vision statement that articulated a set of core values and goals, which all employees were to use to guide their daily actions. ISE's seven-paragraph vision statement functioned in the consolidation phase as a socially integrating myth that merged basic human values and "day-to-day [employee] behavior with long-run [organizational] meaning and purpose" (Peters and Waterman, 1982: 282). Within this context, ISE's vision statement gave Jack a formula for creating his new concertive organization that centered on all the new team members working together in concert under the guidance of shared values rather than the old ISE managerial hierarchy.

The vision's fourth paragraph detailed the essential values that the teams would draw from during the consolidation phase:

We will be an organization where each of us is a self-manager who will:

—initiate action, commit to, and act responsibly in achieving objectives
—be responsible for ISE's performance
—be responsible for the quality of individual and team output
—invite team members to contribute based on experience, knowledge and ability.

The values expressed here, such as personal initiative, responsibility, commitment to the team, quality of individual and team contributions, along with Jack's directive for all to be self-managers, provided the necessary and legitimated preconditions for the teams to draw their value consensus, essential for concertive control.

Early in my research I saw a framed copy of the vision statement near Jack's desk and asked him what he saw as its purpose. He replied, "The vision provides the company the guiding light for driving day-to-day operations for each of the teams." The goals and values in ISE's vision statement served as the nexus for consolidating the teams' material reality (how work gets done) with their ideational reality (their values) (Jermier et al., 1991: 172). When ISE converted to self-management, Jack distributed copies of the vision

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statement to all team members, and framed copies appeared in each team's area and in central locations like the break room. This led the new team members to talk with each other separately and at team meetings about the vision, particularly its fourth paragraph, and how it related to their work. Out of this talk came the functional patterns that allowed the teams to work together.

When I first began my research (early 1990), I readily noticed the results of this process. The team members talked openly about initiating action, taking ownership for their team's success, taking responsibility for satisfying ISE's customers' needs, emphasizing team quality, and expecting member contributions. The teams had learned to direct their work through planned and ad-hoc team meetings run by a peer-elected coordinator who did just that—coordinated information, such as production schedules, parts supplies, and companywide memos. All the teams met formally for about 15 minutes at the start of the workday to plan the day and solve any known problems. When serious problems arose during the workday, such as an unknown parts shortage holding up production, the teams would meet briefly and decide how to deal with the problem.

During team meetings workers would spend some time talking in administrative terms about the work they had to do and in abstract terms about values expressed in the vision: responsibility, quality, member contribution, commitment to their team and the company. The most prevalent example of these discussions occurred when team members had to decide whether or not to work overtime to meet their production schedules. My illustration comes from my field notes of one of many such situations the blue-team members found themselves in while I was tracking their decision making during the fall of 1990.

Early Friday afternoon, Lee Ann, the coordinator, was anxiously awaiting word from the stockroom that a shipment of circuit potentiometers had arrived. The vendor, about 800 miles away, had promised the shipment would arrive that morning, and the blue team had to get a customer's board order out that evening. Jim, from the stockroom, came running down to the blue team's area about 12:30 to tell Lee Ann that the potentiometers had just arrived, and she called the other eleven members of the team together for a short meeting.

She looked at the team, "We've got the 'pots' in but it's gonna take us two extra hours to get this done. What do you want to do?"

Larry groaned,"Damn, I've got plans for five-thirty!"

Suna spoke up, "My daughter's school play's tonight!"

Johnny countered, "But we told Howard Bell [their customer] that we would have these boards out today. It's our responsibility."

Tommy followed,"We're gonna have to stay. We have to do this right."

What followed was a process in which the team negotiated which values and needs (individual or team) would take precedence here and how the team would work out this problem. The team decided to work late; members valued

their commitment to a quality product delivered on time to their customer more than their individual time. Lee Ann volunteered to coordinate for the late shipment and to tell Jack Tackett that they would be working overtime (they could do this without his approval). Another team member went to arrange for the building to stay open for them. Larry said that he could put off his plans for two hours. The team agreed to let Suna leave, but she promised to work late the next time they were in a bind.

This vignette depicts how the teams concertively reached a value consensus that, in turn, controlled their individual and collective work. They brought the abstract values of the vision statement into concrete terms. The team members agreed on the priority of their commitment to the team's goals and responsibility for customer needs, and they acted based on this value consensus. These points of agreement also set strong precedents for future action. The blue team's agreement to work overtime to meet customer needs was not a one-time quick fix; it became a pattern that team members would follow as similar situations arose. In a conversation some time after the above meeting, Diego described for me the continuing power of the blue team's value consensus about personal responsibility: "I work my best at trying to help our team to get stuff out the door. If it requires overtime, coming in at five o'clock and spending your weekend here, that's what I do."

Although there were slight differences, this value consensus and these decision premises emerged powerfully and with remarkable consistency across the new teams. Early in 1991, I was sitting with Wendy watching her work with the blue team. I asked her how she reacted to missing a customer requirement:

I feel bad, believe it or not. Last Friday we missed a shipment. I feel like *I* missed the shipment since I'm the last person that sees what goes to ship. But Friday we missed the shipment by two boards and it shouldn't have been missed. But it was and I felt bad because it's me, it's a reflection on me, too, for not getting the boards out the door.

Over time, the teams faced many situations that called for members to reach some sort of value consensus. Other values, not explicitly stated in the vision but influenced by its general thrust, began to appear in the team members' talk and actions. These values helped them unite, learn how to work together, and navigate the turbulence of the change and the possible failure of the company. Team members like Wendy talked about taking ownership of their work, being committed to the success of their team, and viewing ISE as a family and their teammates as family members. Debbie, another original team member, told me about this new feeling of ownership: "Under the old system, who gave a hoot if the boards shipped today or not? We just did our jobs. Now, we have more buy-in by the team members. We feel more personal responsibility for the product." Other values included the need for everyone to contribute fully. The team members called this "saying your piece" at team meetings so that the team's decision would be better (and their consensus stronger). Another part of this value was the

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need for all team members to learn all the jobs required by the team so that they could fill in and cover for each other.

This was also a time when ISE was struggling desperately and almost went under. In mid-1990, layoffs reduced the teams from three to two. The power of their values helped the teams navigate this difficult period. One of my most vivid memories of this time comes from Liz, who became one of my primary key informants. In August 1990, when the workers did not know if ISE would survive the quarter, she told me how she thought of ISE as a family and how she "spends more time with these people than my real family." She told me that if ISE closed down, "I'm gonna turn the lights out. I love this place and these people so much, I've got to be the last one out. I've gotta see the lights go out to believe it."

The teams' value-based talk and action during the consolidation phase created, in Weber's terms, a new substantive rationality. The team members had committed themselves "first and foremost to substantive goals, to an ethic" that overrode all other commitments (Rothschild and Whitt, 1986: 22). Substantive rationality, in this context, extends from what Weber called "a unified configuration of values" (Kalberg, 1980: 1164) held by a collectivity of people, in this case ISE's team members. This value configuration, or consensus, is intellectually analyzable by the members; they use it to make sense of and guide their everyday interactions. In an organizational situation, a consensus about values informs and influences members' outlooks on and processes of work activity, such as on making. In doing this, the members place a psychological premium on themselves to act in ethical ways in terms of their values (Weber, 1978: 36; Kalberg, 1980: 1165). The values, then, are morally binding on the team members because they represent the will of the teams and were arrived at through the democratic participation of the team members (Homans, 1950: 125–127; Rothschild and Whitt, 1986: 50). The old rationality and ethic of obeying the supervisor had given way to a new substantive rationality, the teams' value consensus, and a new form of ethical rational action, working in ways that supported the teams values: Wendy's taking personal responsibility for her team's failure, Debbie's buying in to the team's success, Johnny's reminding the team of its customer commitment, and Diego's willingness to come in at 5 A.M. all illustrate this point.

These examples also point out another significant aspect of substantive rationality. The ethical rational action spawned by a value consensus will take on a methodical character (Kalberg, 1980: 1164): The teams will develop behavioral norms that put their values into action in consistent patterns applicable to a variety of situations, just as team members applied their norm of working overtime to meet customer demands to a variety of situations requiring extra work. Thus, the teams could turn their value consensus into social norms or rules. The teams had manifested the essential element of concertive control: Their value-based interactions became a social force that controlled their actions, as seen in Larry's willingness to forego his plans in order to work

overtime for the team. Authority had transferred from ISE's old supervisory system to the team's value consensus. These norms of ethical action, based in consensual values, penetrate and subjugate other forms of action by the team members. As this occurs, these norms take on a "heightened intensity" (Kalberg, 1980: 1167); they become powerful social rules among the team (Hackman and Walton, 1986; Hackman, 1992). This process played a pivotal role in the next phase of ISE's experience with teams.

There were four key points in the consolidation phase: (1) The teams received ISE's vision statement, which framed a value system for them; (2) the teams began to negotiate value consensus on how to act in accordance with the vision's values; (3) a new substantive rationality emerged among the teams that filled the void left by the former supervisors and the formal rationality associated with following their directives (the teams' values now had authority); and (4) the teams began to form normative rules that brought this rationality into social action.[2] The consolidation phase left ISE with a core group of long-time ISE team workers, committed to the company and to teamwork. The employees had developed a consensus about what values were important to them, what allowed them to do their work, and what gave them pride. And they would guard this consensus closely.

Phase 2: Emergence of Normative Rules

ISE did survive through 1990. In early 1991, the company began to prosper, and a large number of new workers had to be integrated into the teams. These workers were unfamiliar with the teams' value consensus and they posed an immediate challenge to the power relationships the older employees had formed. Further, when ISE began to hire new workers, they hired them on a temporary basis and let the teams decide who to hire on as full-time workers. ISE also added four new teams to the two remaining original teams, for a total of six—red, blue, a new white, and green, silver, and aqua. Jack had to place some of the older, experienced workers on these new teams to help them get organized, and the teams had to integrate their new teammates into their value-based social order. As the team's value consensus and particular work ethic began to penetrate and subjugate the new members' individual work ethics, this process took on a heightened intensity. The substantive rationality of the teams' values gave them authority, which they would exercise at will.

Members of the old teams responded to these changing conditions by discursively turning their value consensus into normative rules that the new workers could readily understand and to which they could subject themselves. By rationalizing their value-based work ethic, the new team members could understand the intent and purpose of their team's values and norms (e.g., why it was important to work overtime to meet a customer need), use the norms to make sense of their daily work experience, and develop methodical patterns of behavior in accordance with the team's values (Miller and O'Leary, 1987; Hackman, 1992).

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ISE's teams developed in ways consistent with traditional studies of small groups and teams, most notably Tuckman's (1965), Homans' (1950), and Lewin's (1946) models of group formation and Walton and Hackman's (1986) model of work-group value and norm development. While cognizant of the parallels ISE's teams have to these fundamental models, I have sought to situate the story of how the teams developed a new form of control within the broader framework of the social forces (rationality, authority, social rule generation, etc.) that shaped the teams' organizational context.

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## Concertive Control

The longer-tenured team members expected the new workers to identify with (they called it "buy into") the teams' values and act according to their norms. By doing this, ISE's teams were asserting concertive control over the new workers: The new members began to take part in controlling themselves. Slowly, the value-based norms that everyone on the team once "knew" became objective, rationalized rules that the new members could easily understand and follow.

Around March–April 1991, I began to notice that the way the team members talked, both informally and at team meetings, had changed. They did not talk so much about the importance of their teamwork values as they did about the need to "obey" the team's work norms. Team meetings began to have a confrontational tone, and the new workers' attitudes and performance became open topics for team discussion. When the longer-tenured team members saw someone not acting in accordance with their norms, such as not being willing to do whatever it took for the team to be successful, they said something about it. Liz, an original team member, told me of the old team workers' feelings: "We've had occasions where we've had a person say, 'I refuse to sit on the [assembly] line.' And we had to remind him, 'Hey, you are a part of the team and you go where you're needed and you do it'." Team meetings became a forum for discussing norms and creating new rules. Team members could bring up anybody's behavior for discussion. Again, Liz clarified their feelings: "If you notice that somebody's not getting anything done, then we can bring it up at a meeting, you know, and ask them what the problem is, what's causing them not to be able to get their work done."

The new team members began to feel the heat, and the ones who wanted to be full-time members began to obey the norms. The teams' value-based concertive control began to penetrate and inform the new workers' attitudes and actions. Stephi, who was a temporary employee at the time, told me how she personally tried to conform to the values and norms of her team:

When I first started I really didn't start off on the right foot, so I've been having to re-prove myself as far as a team player. My attitude gets in the way, I let it get in the way too many times and now I've been watching it and hoping they [her team] will see the change in me and I can prove to them that I will make a good ISE employee.

Stephi's words indicate that concertive control at ISE now revolved around human dignity. The team members rewarded their teammates who readily conformed to their team's norms by making them feel a part of the team and a participant in the team's success. In turn, they punished teammates who had bad attitudes, like Stephi, with guilt and peer pressure to conform (Hackman and Walton, 1986; Mumby and Stohl, 1991; Hackman, 1992). The power of the team's concertive work ethic had taken on its predicted heightened intensity.

A pivotal occurrence during this phase was the teams' value-based norms changing from a loose system that the

workers "knew" to a tighter system of objective rules. This transformation most often occurred when new members were not acting according to the team's work norms, such as coming to work on time. Danny told me how easily this change came about:

Well we had some disciplinary thing, you know. We had a few certain people who didn't show up on time and made a habit of coming in late. So the team got together and kinda set some guidelines and we told them, you know, "If you come in late the third time and you don't wanna do anything to correct it, you're gone." That was a team decision that this was a guideline that we were gonna follow.

The teams experienced the need to make their normative work ethic easily understandable (and rewardable and punishable), and they responded by making objective guidelines.

The team members' talk turned toward the need to follow their rules, to work effectively in concert with each other. In mid-1991 I found Ronald, a technician and my key informant on the green team, angrily cleaning up a mistake made by a new technician who had not followed the rules: "All this should have been caught three months ago, and I'm just now catching it. And upon looking into it, it was because the tech wasn't taking his responsibility for raising the flag or turning on the red light when he had a problem." Later that day, I was sitting with the silver team when I saw Ryan confront a newer team member who was working on four boards at a time instead of one, which the team had discovered increased the chance for error. Ryan stood above the offender and pointed at him, "Hey quit doing that. You're not allowed to do that. It's against the rules."

By turning their norms into rational rules, the teams could integrate new members and still be functional, getting products out the door on time. The "supervisor" was now not so much the teams' value consensus as it was their rules. You either obeyed the rules and the team welcomed you as a member, or you broke them and risked punishment. This element of concertive control worked well. As Danny, a temporary worker at this time told me, "If you're a new person here, you're going to be watched."

Even the coordinator's role and responsibilities became more objectified during this phase. Some teams agreed on five specific tasks for the coordinator to do, other teams had seven. The teams now elected coordinators for six-month periods rather than one month. The coordinator role began to take on the aura of a supervisor. People began to look to coordinators for leadership and direction. Lee Ann, a coordinator at this time, told me one day, "Damn, I feel like a supervisor, I just don't get paid for it."

The second pivotal occurrence during this phase involved how authority worked among the teams. After the consolidation phase, authority had moved from the former supervisory system to the new value consensus of the teams, but during the second phase, the old team members, all full-time employees, were the keepers of this new system. They identified strongly with it and expected new members to demonstrate their worthiness to participate with

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them in the concertive process. They began to use rewards and punishments to encourage compliance among the team members. Temporary workers either obeyed the rules and became integrated into this system, or they found the door. The teams' interactions left little room for resistance. This placed strong pressure on the temporary workers to conform to their team's rules. Tommy, a temporary worker then, explained the pressure:

Being temporary, you could come in any day and find out you don't have a job no more. So, that's kind of scary for a lot of people who have, you know, kids and a lot of bills to take care of. So they tend to hold it in, what they want to say, to the point where they can't do it anymore and they just blow up, which causes them to lose their job anyway.

Before the change to teams, the line supervisors would generally tolerate some degree of slackness among the workers and allow someone many chances to screw-up before taking drastic action. But now the team members exercised their new-found authority with much less patience. In mid-1991 I walked into the blue team's area one morning and found the temporary workers very agitated and the full-time workers nowhere around. I asked Katie what was happening. She said that the full-time workers had gone off to fire Joey. Joey was a temporary who worked hard but had a tendency to wander off across the shop and socialize. While he did not do this often, he had the knack of doing it when Martha, the coordinator, or another full-time worker happened to notice his absence. The previous day, Joey had been caught again. That morning, after the team meeting, the full-time workers said that they were going to go to the conference room to talk about Joey's problem. Right before I came to the team's area, they had called him back to the conference room. Katie looked back over her shoulder toward the conference room and sighed, "He's a good worker, but they [the full-time workers] don't see that. They don't know him. Now they're back there, judge, jury, and executioners."

While peer pressure may be essential to the effective work of any team (Walton and Hackman, 1986: 186; Larson and Lafasto, 1989: 96), the dynamics of ISE's teams during this phase go much deeper. The above episode was not a simple case of the full-timers beating up on the temporaries. What seemed to be peer pressure and power games on the surface was in fact a manifestation of concertive control. Authority here rests in the team's values, norms, and now rules. Team members rewarded themselves for compliance and punished themselves for noncompliance. They had invested their human dignity in the system of their own control (Parker and Slaughter, 1988; Mumby and Stohl, 1991). As participants in concertive control, the team members had begun a process of functionally constructing both their work activity and their own identities (Cheney, 1991).

The second phase represents a natural progression of the value-based substantive rationality the teams had created in phase 1. The teams demystified their value consensus for new members by making it intellectually analyzable. The

norms of phase 1 now became guidelines or rules, increasingly objectified and clarified for the team members, which allowed for effective interaction. The values forming the teams' substantive rationality provided the boundaries of action and interest within and among the teams (Kalberg, 1980: 1170), but the control of actions and interests in the teams is not stable; it has to be fixed at particular points in time. The emergence of rational rules during the second phase served this function. These rules made concertive control concrete, almost as tangible as their old supervisor's book of job descriptions. It was the locus of authority resting with the teams themselves, however, that gave the rules their power. It empowered the teams to enable certain activity and constrain others. The locus of authority made concertive control work for ISE's teams.

Four key points characterize the development of concertive control at ISE during the second phase: (1) The teams had to bring new members into the particular value-based social systems they had created during phase 1; (2) To meet this need, the teams began to form normative rules for doing good work on the teams, creating what Hackman and Walton (1986: 83) called a team's "core norms." Longer-tenured team members expected the new members to identify and comply with these rules and their underlying values; (3) The rules naturally began to take on a more rationalized character; and (4) Concertive control functioned through the team members themselves sanctioning their own actions. While the influx of new members may have served as a catalyst for the emergence of normative rules on the teams, the rules came about through the natural progression of the team's value consensus into what Weber called a "methodical way of life" on the organizational/team level (Kalberg, 1980: 1164). This was how the new members could learn their teams' value consensus and participate in their new form of control. Further, these particular tensions between full-time and temporary workers were not enduring. What did last was the impact of rationalizing the rules and the fact that authority rested with the peer pressure of the teams.

## Phase 3: Stabilization and Formalization of the Rules

During this time (late-1991 to mid-1992), the company began to stabilize and turn a profit. A large number of temporary workers had been integrated into the full-time pool during phase 2, which resulted in the number of temporary workers falling from a high of almost 50 percent at times in phase 2 to as few as 10 percent during phase 3. But the stabilization phase also saw the teams' normative rules become more and more rationalized: Their value-based substantive rationality was giving way to rationalization (Cooper and Burrell, 1988: 93). What were simple norms in phase 1 (we all need to be at work on time) now became highly objective rules similar to ISE's old bureaucratic structure (if you are more than five minutes late, you're docked a day's pay). On the surface, day-to-day control still looked much different than when ISE had traditional supervisors, but, on a deeper level, this control seemed hauntingly familiar and much more powerful.

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The most noticeable change occurred in the coordinator's role. From my first days at ISE, I had tracked a continual pressure to make the coordinator's duties clearer and more specified. Thus, the coordinators' work gradually had become more formalized. If the team members needed something from the human resources department, they would ask the coordinator to get it. If Jack needed information about a team's work, he would ask the coordinator for it. The coordinators began to take on more and more specific tasks: scheduling, tracking production errors, holding regular meetings with each other, and so forth. In early 1992, the role became formalized as a permanent position, now called facilitator. The teams nominated workers for the six positions, and a committee of workers and managers (including Jack) interviewed the nominees and selected the new facilitators. These six workers received a 10 percent boost in their hourly wage to signify their new importance. They also drew up a list of duties for the role, which really just formalized what the old coordinators had already been doing. Lee Ann, who became the blue team's facilitator saw this process, too, as she told me about a month after assuming the new role: "It's more formalized acceptance that somebody is gonna be the one to answer the questions, and you might as well have someone answering the questions of the team and of management. And, I get paid for it, too." The most interesting aspect of the change in the coordinator role for me was that the workers wanted it, not so much to reinvent hierarchy on the teams but because formalizing their work life seemed so natural to them.

Formalizing the aspects of their work appeared to give the teams a sense of stability that would insulate them from the turmoil of the past year, and so rules proliferated in all aspects of the teams' activity. As Brown (1978: 368) suggested, the rules were taking on their own rationality and legitimacy. What was once an abstract value, such as "a team member should be able to do all the work roles on the team," had now became a set of specific guidelines for how long new members had to train for a specific function (assembling, testing, repairing, etc.) and how long a team member would have to work in assembly before rotating to a new team job, such as repair.

During phase 3, I saw the teams' social rules become more and more rigid. The teams seemed to be trying to permanently fix their social rules. Two examples stand out for me. In mid-1992 I was talking with Liz, who had also become a facilitator, about how members directed each other's actions now, as opposed to three years before. Liz told me that her team had been talking about drafting a "code of conduct" for team members that spelled out the behaviors needed to be a good team member. She began to get very excited about the possibilities of making these actions clear and concrete. She said, "If we can just get this *written down* [emphasis hers]. If we can just get our code of conduct in writing, then everyone will know what to do. We won't have so many problems. If we can just get it written down." I found the second telling example when I visited ISE again two weeks later. I had been following how the

teams were dealing with attendance and how their rules for coming into work on time were becoming more specific. A team member who came in five minutes or more late would be charged with an "occurrence" and considered to be absent for the whole day. If a worker accumulated four occurrences in a month, the team facilitator would place a written warning in that person's company file. A worker who came in less than five minutes late received a "tardy," and seven tardies equaled one occurrence. While I knew that all the teams had some kind of attendance policy, what I found this day truly surprised me. When I walked into the red team's area, I saw a new chart on its wall. The chart listed each team member's name down the left-hand side and had across the top a series of columns representing days of the week. Beside each name were color-coded dots that indicated "on time," "tardy," or "occurrence." The team had posted this board in plain sight for all team members to see, and the team updated its board every day. I found a similar chart in use by the other teams.

Three thoughts went through my mind. The first was the powerful insight of Ronald's comment, which opened this paper: "Now the whole team is around me and the whole team is observing what I'm doing." The second was that this policy seemed uncannily similar to something I would have expected to find in the old supervisory system. The third was that the teams had now created, in effect, a nearly perfect form of control. Their attendance behavior (and in a way their human dignity) was on constant display for everyone else on the team to monitor: an essentially total system of control almost impossible to resist (Foucault, 1976). The transformation from values to norms to rules had gained even more heightened intensity.

The fact that the teams were creating their own rational rule systems was not lost on all the team members, but they expressed the feeling that these rules were good for them and their work. As Lee Ann told me at this time:

We are making a lot of new rules, but most of them come from, "Well see, because so and so person did such and such, well we're not gonna allow that anymore" [concertive control at work]. But the majority of the rules that we are putting in are coming from what the old rules were [before the change to teams]. They had a purpose. They did stop people from making, like expensive mistakes. . . . With more people on the teams, we have to be more formal. We have seventeen people on my team. That large amount of people moving is what's causing the bureaucracy to come back in.

Lee Ann's use of "bureaucracy" perplexed me. Had ISE's teams reinvented a bureaucratic system of control? Certainly the substantive rationality and its focus on value consensus that characterized phase 1 now had become blurred with a new formal rationality that focused on making rules, which appeared to fit with Weber's prediction that "a *multiplicity* of rationalization processes . . . variously conflict and coalesce with one another at all societal and civilizational levels" (Kalberg, 1980: 1147), including among ISE's teams. And certainly much of the pressure toward formalization came from the team's need to be productive and efficient in order for ISE to survive in its competitive market (Kalberg, 1980: 1163). But as I later reflected on Lee Ann's comment and

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my experience at ISE, the nature of this blurring of substantive and formal rationality became clearer.

The progression of the teams' value-based work ethic from norms to rational rules indicated that the workers had created micro-level disciplines that rationalized their work behaviors so to make them purposeful, functional, and controlled (Foucault, 1980; Barker and Cheney, 1994). Discipline, here, refers to a willingly accepted social force that rationalizes organizational work to ensure normalized and controlled individual and collective action. During phase 3, the teams developed formalized rule systems out of the normative ethics of their original value consensus. These disciplinary systems enabled the teams to work effectively, integrate new members easily, and meet their production demands. The team members willingly accepted these disciplines because they themselves had created them. And these disciplines appeared to work. During phase 3, ISE became profitable again. ISE's top management believed that the change to teams was one of the key reasons (along with other key changes in engineering and marketing) for the company's success. Jack credited the change to teams with cutting his factory costs 25 percent since 1988.

But the teams' formalization of their value system and norms did not mean that they had recreated a bureaucracy. Authority in ISE's concertive system rested with the teams and their interactions with each other. The character of ISE's concertive control was still much different than when it operated under bureaucratic control. As they integrated more temporary workers into the ranks of full-time members, the team members still held authority over each other. They still expected each other to follow the rules and, as evidenced by their attendance charts, still monitored each other's behavior carefully. The team members themselves still rewarded or punished each other's behavior. They did not give this function to the new facilitators: they kept it for themselves.

Close to the end of my data collection, Liz told me of an incident that had occurred a few days before, involving Sharon, a single mother who had some difficulty getting to work at 7 A.M. The team had been sensitive to her needs and had even given her a week off when one of her children was sick. The day before the incident, enough time had passed for Sharon to drop one of her many occurrences. She even announced this to the team by making a joke of it, "I just dropped one occurrence, so that means I can have another." The next morning one of her children was sick again and she was late. And the team remembered her "joke" of the night before.

When Sharon showed up, the team reacted in the same way a shift supervisor in ISE's old system might have. The team confronted Sharon immediately and directly. They told her that they were very upset that she was late. They bluntly told her how much they had suffered from having to work short-handed. Stung by the criticism of her peers, Sharon began to cry. The team's tack shifted to healing the wounds they had caused. They told her that they had not meant to hurt her feelings but that they wanted her to

understand how her actions had affected them. They asked her to be certain to contact them immediately when she had a problem. The episode closed with the team telling her, "we really count on you to be here and we really need you here." When I checked a month later, Sharon had not recorded another occurrence.

In phase 3, the team members still kept the authority to control each other's behaviors: concertive control still occurred within the teams. In many ways, the formalization of the team's normative rules made this process easier, as seen in the incident with Sharon. The teams had created an omnipresent "tutelary eye of the norm,"[3] with the team members themselves as the eye, that continually observed their actions, ready either to reward or, more importantly, punish. Being under the constant eye of the norm appeared to me to have an effect on the workers. To a person, the older team workers told me that they felt much more stress in the team environment than they had under the old ISE system. The newer members also complained of the constant strain of self-management. This sense of heightened stress that ISE's workers expressed to me was similar to that found in other team-based organizations (e.g., Grenier, 1988; Mumby and Stohl, 1991). Parker and Slaughter (1988) even called the self-management concept management by stress.

My key informants also appeared more strained and burdened than in times past. I had watched Liz change from the totally committed team member in 1990, who saw her team as a family and wanted to be the last one to turn out the lights, to a distant, distracted facilitator in 1992, too harried and pressured to take any enjoyment in her team or to think of it as a family. Lee Ann, in a conversation with me in August 1992, expressed the same feelings:

After you've been here awhile, you're gonna get super-involved, then you're gonna get burned out. I see this with person after person. You get really involved, you take it home with you, you eat with it, you sleep with it. You work 12, 16-hour days and you just burn out. You may step out just a bit, let someone else get super-involved for awhile, then you'll pick it up again. But you won't have that enthusiasm anymore.

The tutelary eye of the norm demanded its observants become super-involved or risk its wrath, and critical to this phase, the eye also demanded that its observants demonstrate this involvement by following its rules, its rational routine. That was work life in the eye of the norm, in ISE's brand of concertive control.

In phase 3, the teams' activity appeared to stabilize around sets of formalized rules that provided a rational and effective routine for their day-to-day actions. As in the previous phases, this formalization did not change the locus of authority in the teams but rather strengthened it. The team members directed and monitored each other's actions. Concertive control still occurred within the teams themselves. Four key points characterize phase 3: (1) The normative rules of phase 2 became more and more objective, creating a new formal rationality among the teams; (2) The teams appeared to "settle in" to the rational routine these formal rules brought to their work. The rules

made it easier for them to deal objectively with difficult situations (such as Sharon's coming in late) by establishing a system of work regulation and worker self-control; (3) The team members felt stress from the concertive system, but they accepted this as a natural part of their work. They did not want to give up their feeling of being self-managers, however, no matter how intense the system of control became; and (4) The work life at ISE stabilized into a concertive system that revolved around sets of rational rules, as in the old bureaucracy, but in which the authority to command obedience rested with the team members themselves, in contrast to the old ISE. The team members had become their own masters *and* their own slaves.

## CONSEQUENCES OF CONCERTIVE CONTROL AT ISE

Table 2 summarizes and juxtaposes the manifest and latent consequences emerging from the system of concertive control that evolved at ISE between 1988 and 1992. This table depicts how concertive control, in a process akin to Lewin's (1946) model of "unfreezing-moving-refreezing," matured from a loosely held consensus about abstract values to a tightly bound system of rational rules and powerful self-control. ISE's experience with teams and the analysis I have reported here are consistent with other research reports of self-management systems at the level of the worker (e.g., Grenier, 1988), which suggests that concertive control has a particular character: Concertive control, as it becomes manifest in organizational interaction, is more powerful and has a greater ability to control than the bureaucratic system it replaces.

Writers on concertive control have warned that this new system could become a stronger force than bureaucratic control. Tompkins and Cheney (1985: 184) asserted that concertive control would increase the strength of control in its system, and Tannenbaum (1968) proposed that if management will give up some of its authority to the workers, it will, in turn, increase the effectiveness of control in the firm. Tannenbaum (1968: 23) wrote that participative (self-managing in this case) organizations could not be productive "unless they have an effective system of control through which the potentially diverse interests and actions of members are integrated in concerted, that is, organized behavior. The relative success of participative approaches, therefore, hinges not on reducing control but on achieving a system of control that is more effective than that of other systems." This "more effective system of control," in terms of self-managing teams, comes from the authority and power teammates exercise on each other as peer managers.

Peer management increases the total amount of control in a concertive system through two important dynamics. The first is that concertive workers have created this system through their own shared value consensus, which they enforce on each other. But in doing so, as seen in ISE's experience, the teams necessarily create a system of value-based rational rules, such as their strict attendance policy. They have put themselves under their own eye of the norm, resulting in a powerful system of control.

Table 2

**Manifest and Latent Consequences of ISE's Experience with Concertive Control**

| Manifest | Latent |
|---|---|
| 1. Teams developed value consensus by drawing from ISE's vision statement. | 1. Teams began to form a value-based substantive rationality, which led them to develop a mutually shared sense of ethical rational action at work. |
| 2. Team members identified with their particular value consensus and developed emotional attachments to their shared values. | 2. Authority transferred from ISE's old bureaucratic control system to the team's value system. The team members' human dignity became invested in submitting to this authority. |
| 3. Teams formed behavioral norms from the values that enabled them to work effectively, thus put their values into action. | 3. The teams became methodical about putting their values into action. Their values began a natural progression toward rationalization, which allowed the values and norms to be intellectually analyzable by all members. |
| 4. Older team members expected new members to identify with the norms and values and act in accordance with these value-based norms. | 4. Concertive control became nested in the team. Members themselves took on both superior and subordinate roles, monitoring and directing. |
| 5. The teams' normative rules grew more rationalized. Team members enforced their rules with each other through peer pressure and behavioral sanctions. | 5. ISE's concertive system became a powerful force of control. Since they had created it themselves, this control was seemingly natural and unapparent to the team members. |
| 6. Teams further objectified and formalized the rules and shared these rules with each other. The work environment appeared to stabilize. | 6. The teams had developed their own disciplines that merged their substantive values with a rule-based formal rationality. These disciplines enabled the teams to work efficiently and effectively. The teams controlled their work through a system of rational rules and the self-monitoring of their own individual and collective actions. |

The second reason for the increased power of concertive control is that the way it becomes manifest is less apparent than bureaucratic control. Team members are relatively unaware of how the system they created actually controls their actions (Tompkins and Cheney, 1985). Concertive control is much more subtle than a supervisor telling a group of workers what to do. In a concertive system, as with ISE, the workers create a value-based system of control and then invest themselves in it through their strong identification with the system (Barker and Cheney, 1994). Because of this identification, the team members are socially constructed by the system they have created (Mumby and Stohl, 1991). When this happens, the team members readily accept that they are controlling their own actions. It seems natural, and they willingly submit to their own control system. ISE's team members felt that developing a very strict and objective attendance policy was a natural occurrence. Likewise, their challenging Sharon's personal dignity when she violated the policy was another natural occurrence. And

ISE's teams work effectively without Jack's constant (i.e. more apparent) monitoring. Thus, ISE's team workers are both under the eye of the norm and *in* the eye of the norm, but from where they are, in the eye, all seems natural and as it should be. Their system of rational rules winds tighter and tighter about them as the power of their value consensus compels their willful obedience.

ISE's experience with concertive control, then, is consistent with two theoretical predictions about the future of organizational activity. The first, which extends from Weber (1978) to Foucault (1976, 1980), asserts that organizational life will become increasingly rationalized and controlled. The second, which emerges primarily from Tompkins and Cheney (1985), Tannenbaum (1968), and Edwards (1981), posits that organizational control will become less apparent and more powerful.

The development of concertive control at ISE also complements the traditional literature on work-group norms and team development (e.g., Sundstrom, De Meuse, and Futrell, 1990; Hackman, 1992). ISE's experience with concertive control illuminates the linkages between the emergence of group norms and the broader organizational issues of authority, rationality, power, and control.

ISE's teams developed a concertive system of control that grew from value-laden premises to strong norms, to rational rules for good work in the teams. ISE's system became deeply embedded in the social relations of the members, which served to conceal the character of concertive control. Because of this, the concertive, value-based rules increased the overall force of control in the system, making it more powerful than bureaucratic control had been. Unlike the bureaucratic hierarchy, authority and the possibility of appeal first and finally resided in the peer pressure of the teams.

ISE's experience with concertive control still begs the question: Does the concertive system offer a form of control that conceptually and *practically* transcends traditional bureaucratic control? My analysis of ISE's experience with teams indicates that, on the one hand, a concertive system creates its own powerful set of rational rules, which resembles the traditional bureaucracy. But, on the other hand, the locus of authority has transferred from the hierarchical system to the teams' values, norms, and rules, which does not resemble the bureaucracy. Concertive control works by blurring substantive and formal rationality into a "communal-rational" system (Barker and Tompkins, 1993). Concertive workers create a communal value system that eventually controls their actions through rational rules.

More importantly, however, my analysis suggests that concertive control does not free workers from Weber's iron cage of rational rules, as the culturalist and practitioner-oriented writers on contemporary organizations often argue. Instead, an ironic paradox occurs: The iron cage becomes stronger. The powerful combination of peer pressure and rational rules in the concertive system creates a new iron cage whose bars are almost invisible to the workers it incarcerates. ISE's team workers, as Weber (1978: 988) warned, have harnessed themselves into a rational apparatus

out of which they truly cannot squirm. As ISE's experience demonstrates, uncommitted workers do not last in the concertive system. Concertive workers must invest a part of themselves in the team: they must identify strongly with their team's values and goals, its norms and rules. If they want to resist their team's control, they must be willing to risk their human dignity, being made to feel unworthy as a "teammate." Entrapment in the iron cage is the cost of concertive control.

## REFERENCES

Adler, Patricia A., and Peter Adler
1987 Membership Roles in Field Research. Beverly Hills, CA: Sage.

Andrasik, Frank, and Judy Stanley Heimberg
1982 "Self-management procedures." In Lee W. Frederiksen (ed.), Handbook of Organizational Behavior Management: 219–247. New York: Wiley.

Barker, James R., and George Cheney
1994 "The concept and the practices of discipline in contemporary organizational life." Communication Monographs, vol. 60 (in press).

Barker, James R., and Phillip K. Tompkins
1993 "Organizations, teams, control, and identification." Unpublished manuscript, Department of Communication, University of Colorado, Boulder.

Barnard, Chester
1968 The Functions of the Executive. (Originally published in 1938.) Cambridge, MA: Harvard University Press.

Bolweg, Joep F.
1976 Job Design and Industrial Democracy. Leiden: Martinus Nijhoff.

Brown, Richard Harvey
1978 "Bureaucracy as praxis: Toward a political phenomenology of formal organizations." Administrative Science Quarterly, 23: 365–382.

Carnall, C. A.
1982 "Semi-autonomous work groups and the social structure of the organization." Journal of Management Studies, 19: 277–294.

Cheney, George
1991 Rhetoric in an Organizational Society: Managing Multiple Identities. Columbia, SC: University of South Carolina Press.

Coombs, Rod, David Knights, and Hugh C. Willmott
1992 "Culture, control, and competition: Towards a conceptual framework for the study of information technology in organizations." Organization Studies, 13: 51–72.

Cooper, Robert, and Gibson Burrell
1988 "Modernism, postmodernism, and organizational analysis: An introduction." Organization Studies, 9: 91–112.

Cordery, John L., Walter S. Mueller, and Leigh M. Smith
1991 "Attitudinal and behavioral effects of autonomous group working: A longitudinal field study." Academy of Management Journal, 34: 464–476.

Drucker, Peter E.
1988 "The coming of the new organizations." Harvard Business Review, Jan.–Feb.: 45–53.

Dumaine, Brian
1990 "Who needs a boss?" Fortune, May: 52–60.

Eccles, Robert G., and Nitin Nohria
1992 Beyond the Hype: Rediscovering the Essence of Management. Cambridge, MA: Harvard Business School Press.

Edwards, Richard C.
1981 "The social relations of production at the point of production." In Mary Zey-Ferrell and Michael Aiken (eds.), Complex Organizations: Critical Perspectives: 156–182. Glenview, IL: Scott, Foresman.

Follett, Mary Parker
1941 Dynamic Administration: The Collected Papers of Mary Parker Follett. Henry C. Metcalf and L. Urwick, eds. London: Pitman.

Foucault, Michel
1976 Discipline and Punish. New York: Vintage.
1980 Power/Knowledge. New York: Pantheon.

Giddens, Anthony
1984 The Constitution of Society: Outline of the Theory of Structuration. Berkeley: University of California Press.

Grenier, Guillermo J.
1988 Inhuman Relations. Philadelphia: Temple University Press.

Hackman, J. Richard
1986 "The psychology of self-management in organizations." In Michael S. Pallak and Robert O. Perloff (eds.), Psychology and Work: Productivity, Change, and Employment: 89–136. Washington, DC: American Psychological Association.
1992 "Group influences on individuals in organizations." In Marvin D. Dunnette and Leaetta M. Hough (eds.), Handbook of Industrial and Organizational Psychology, 2d ed., 3: 199–267. Palo Alto, CA: Consulting Psychologists Press.

Hackman, J. Richard, and Richard E. Walton
1986 "Leading groups in organizations." In Paul S. Goodman and Associates (eds.), Designing Effective Work Groups: 72–119. San Francisco: Jossey-Bass.

Homans, George C.
1950 The Human Group. New York: Harcourt, Brace & World.

Jermier, John M., John W. Slocum, Jr., Louis W. Fry, and Jeannie Gaines
1991 "Resistance behind the myth and facade of an official culture." Organization Science, 2: 170–194.

Jorgensen, Danny L.
1989 Participant Observation: A Methodology for Human Studies. Newbury Park, CA: Sage.

Kalberg, Stephen
1980 "Max Weber's types of rationality: Cornerstones for the analysis of rationalization processes in history." American Journal of Sociology, 85: 1145–1179.

Kanter, Rosabeth Moss
1989 When Giants Learn to Dance. New York: Simon & Schuster.

Katz, Daniel, and Robert L. Kahn
1978 The Social Psychology of Organizations. New York: Wiley.

Ketchum, L. D.
1984 "How redesigned plants really work." National Productivity Review, 3: 246–254.

Larson, Carl E., and Frank M. J. Lafasto
1989 Teamwork: What Must Go Right/What Can Go Wrong. Newbury Park, CA: Sage.

Lewin, Kurt
1946 "Research on minority problems." Technology Review, 3: 48.
1948 Resolving Social Conflicts: Selected Papers on Group Dynamics. New York: Harper & Row.

Lewis, Betty
1990 "Team-directed workforce from a worker's view." Target, Winter: 23–29.

Manz, Charles C., and Henry P. Sims
1987 "Leading workers to lead themselves: The external leadership of self-managing work teams." Administrative Science Quarterly, 32: 106–128.

Miller, P., and T. O'Leary
1987 "Accounting and the construction of the governable person." Accounting, Organizations and Society, 12: 235–265.

Mumby, Dennis K., and Cynthia Stohl
1991 "Power and discourse in organizational studies: Absence and the dialectic of control." Discourse and Society, 2: 313–332.

Ogilvy, Jack
1990 "This postmodern business." Marketing and Research Today, Feb.: 4–20.

Orsburn, Jack D., Linda Moran, Ed Musselwhite, and John H. Zenger
1990 Self-Directed Work Teams: The New American Challenge. Homewood, IL: Irwin.

Parker, Martin
1992 "Post-modern organizations or postmodern organizational theory?" Organization Studies, 13: 1–17

Parker, Mike, and Jane Slaughter
1988 Choosing Sides: Unions and the Team Concept. Boston: South End Press.

Perrow, Charles
1986 Complex Organizations: A Critical Essay. New York: Random House.

Peters, Thomas J.
1988 Thriving on Chaos. New York: Knopf.

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

Riggs, Fred
1979 "Introduction: Shifting meanings of the term 'bureaucracy'." International Science Journal, 31: 563–584.

Rothschild, Joyce, and J. Allen Whitt
1986 The Cooperative Workplace. Cambridge: Cambridge University Press.

Sewell, Graham, and Bary Wilkinson
1992 " 'Someone to watch over me': Surveillance, discipline and the just-in-time labour process." Sociology, 26: 271–289.

Simon, Herbert A.
1976 Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations. 3rd ed. New York: Free Press.

Soeters, Joseph L.
1986 "Excellent companies as social movements." Journal of Management Studies, 23: 299–312.

Sundstrom, Eric, Kenneth P. De Meuse, and David Futrell
1990 "Work teams: Applications and effectiveness." American Psychologist, 45: 120–133.

Tannenbaum, Arnold S.
1968 Control in Organizations. New York: McGraw-Hill.

Tompkins, Phillip K., and George Cheney
1985 "Communication and unobtrusive control in contemporary organizations." In Robert D. McPhee and Phillip K. Tompkins (eds.), Organizational Communication: Traditional Themes and New Directions: 179–210. Newbury Park, CA: Sage.

Trist, Eric L.
1981 "The evolution of socio-technical systems." Occasional Paper No. 2. Toronto: Quality of Working Life Centre.

Trist, Eric L., G. Higgin, H. Murray, and A. B. Pollock
1963 Organizational Choice. London: Tavistock.

Tuckman, Bruce W.
1965 "Development sequences in small groups." Psychological Bulletin, 63: 384–399.

Walton, Richard E.
1982 "The Topeka work system: Optimistic visions, pessimistic hypothesis, and reality." In Robert Zager and Michael P. Roscow (eds.), The Innovative Organization: 260–287. New York: Pergamon.

Walton, Richard E., and J. Richard Hackman
1986 "Groups under contrasting management strategies." In Paul S. Goodman and Associates (eds.), Designing Effective Work Groups: 168–201. San Francisco: Jossey-Bass.

Weber, Max
1958 The Protestant Ethic and the Spirit of Capitalism. New York: Scribner's.
1978 Economy and Society. Guenther Roth and Klaus Wittich, eds. Berkeley: University of California Press.

Wellins, Richard S., William C. Byham, and Jeanne M. Wilson
1991 Empowered Teams: Creating Self-Directed Work Groups that Improve Quality, Productivity, and Participation. San Francisco: Jossey-Bass.

Whitley, Richard
1977 "Organizational control and the problem of order." Social Science Information, 16: 169–189.