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PREFACE

Writing in the June 1999 issue of IRRA's *Perspectives on Work,* former IRRA President George Strauss (1993) stated, "I've been to IRRA meetings for almost fifty years and have missed not more than five. That gives me some perspective when I say that the 1999 Winter Meeting was perhaps the most interesting of the many I've attended." He lauded the lively sessions, the range of topics, and the redirected focus on real world problems. He wrote, "At last, it seems industrial relations research appears to be catching up with the real world where much is happening. The nature of work is changing, permanent employment relationships are weakening, and more women are working (thus influencing both on-the-job and at-home relationships). These seemed to me to be the most pressing issues discussed at the New York meetings."

The pervasiveness of change within the employment relationship and our field is evident in the papers published in this *Proceedings*. From sessions on innovative practices and industry studies to gender issues and work and family obligations, the operative word in many of the paper titles is "change."

The structure as well as the content of the 1999 meeting reflected the momentum of change. For the first time, The IRRA sessions were arranged in tracks enabling attendees to readily identify sessions to meet their interests. Tracks ranged from the traditional labor-management relations to new research agendas and public policy. In his presidential address, Don O'Brien discussed a theme of change within our field and our Association.

The majority of the papers presented at the 51st Annual Meeting are contained in this volume–Volume 1 of the 1999 *Proceedings*. Papers from three additional sessions held at the New York meetings will appear in the September issue of the *Labor Law Journal,* which serves as Volume 2 of the 1999 *Proceedings*. We are pleased to be able to share the authors' views and insights with the entire IRRA membership.

I thank Jeanette Zimmerman, Proceedings Copyeditor, for her excellent work on this volume. Marion Leifer, who has worked in a variety of capacities for the Association since 1977, helped in the preparation of the manuscript. We are indebted to both Jeanette and Marion for their longstanding contributions to IRRA.

The 52nd Annual Meeting will be held January 7-9, 2000, in Boston. We are working to build upon the energy and momentum of the 51st Annual Meeting. We hope you will join us in Boston.

Kay B. Hutchison
Administrator and
Managing Editor

I. PRESIDENTIAL ADDRESS

The State of the Industrial Relations Research Association

F. DONAL O'BRIEN
Metropolitan Water Reclamation District of Greater Chicago

As I have served as your president for this past year, and particularly as I perform this key responsibility of reporting to you on the state of our association, I am and have been keenly aware that I stand in the footprints of giants in our field and that great leaders will follow me. But while my own contributions to our profession have been modest, I take second place to no one in the strength of my conviction about the importance of this association, not just to good daily labor-management relations, and not just to the in-depth study of all aspects of the employment relationship, but to the well-being of our North American society and our labor economy as a whole.

In as concise a manner as I can, I will lay out where our association's future is clouded and where it is bright. I will talk about the strengths and unique features that give me cautious optimism, and I will acknowledge a few of those whose hard work and dedication have held us all together through some difficult times.

Let's begin with the bad news. Our membership numbers continue to trend in the wrong direction, and dues revenues are linked with that negative trend. From an historical high of 4,810 total in 1987, we're at 3,874 in 1998. Worse yet, that 3,874 includes 572 nonrenewing members who stay on the mailing list, so we're really talking about 3,302 paid memberships. With our bargain-basement dues rates, this is barely enough to sustain the national organization and its activities. (There are a couple of bright spots, which I'll discuss later.) In general, however, our memberships and subscriptions losses are still outpacing the gains we make through new recruits.

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The losses of academics and students, in particular, are the most alarming, considering that those scholars are our core constituency. There are many reasons for these trends. Bruce Kaufman (1992:264-65) has studied the changes in the teaching of industrial relations and had some sobering thoughts about them back in 1992, when he wrote about the "narrowing and hollowing-out of the [IR] field," and when he predicted that "not even the top-tier IR programs will be safe in the 1990s." Other researchers have examined these trends, too, particularly with regard to the shift in emphasis from IR to business-school/HR programs at many universities and with regard to the attraction of the Academy of Management for many of these scholars. Regardless of the origins of the decline, the reality is that we're losing the battle for those researchers' and writers' participation; and without them, we cannot exist as a freestanding association.

Academic membership losses are a major concern, but by no means the only one. Again I cite Bruce Kaufman on

> the growing gap and lack of interaction between the academic and practitioners wings of the IRRA. One of the fundamental goals of the founders of the IRRA was to promote cross-fertilization of ideas and perspectives between academics and practitioners, enriching both the study and practice of industrial relations. Over time, however, the two sides have grown apart until they largely inhabit separate worlds. The domain of the academics is the winter meeting of the IRRA, an event that attracts mainly professors and graduate students, who present and discuss academic research that increasingly has little input from or relevance to practitioners. The domain of the practitioners, on the other hand, is the local IRRA chapter meetings, events sparsely attended by academics and to which they contribute little. (Kaufman 1992:265)

The results of an in-depth survey taken by the National Chapter Advisory Committee of local chapter presidents and leaders this past fall strongly suggest that this dichotomy is growing rather than narrowing. I can add that in my travels to several chapter meetings this past year, I am often questioned on the value to local organizations of maintaining a relationship with a national organization which is seen as composed of people with different interests and having different goals.

At the risk of being the Cassandra of this association, I believe it's my responsibility to you and to all the members of IRRA to be blunt about the implications of all these trends. Absent a dramatic turnaround, particularly in our financial status, there will be insufficient resources to continue the activities of this association. Annual dues are laughably low, especially in comparison with other professional associations and are clearly not enough to support, on their own, the demand for increased services we often hear. Similarly, meeting costs have exceeded meeting prices; we shouldn't be subsidizing lunches out of our meager treasury. The local chapter "free riders" who enjoy the benefit (often without realizing it) of the infrastructure provided by the national organization need to pay their fair share of the costs. In sum, our bottom line, literally, will determine our ability to continue operations or the necessity to cease operations as an independent organization.

So are we witnessing the decline before the final fall of IRRA? Maybe not. In fact, there are several causes for optimism about the health of this patient. First, on the membership front, we have seen turnarounds in 1998 national membership rates among management, union, and legal practitioners, that is, those new and renewing members actually outnumber the losses to nonrenewals in each of those categories.

Second, the overall vitality of our local chapters merits celebration. While the data are admittedly largely anecdotal, the attendance at chapter meetings, especially several one- and two-day gatherings, is substantial. The content and quality of the programs is also worthy of note; these local groups are relating concrete experience and lessons learned in everything from arbitration and public policy changes, to workforce demographic shift impacts, to the continued growth in public sector unionization and its origins and implications. Moreover, the admission of new chapters to the IRRA in California (Gold Rush), Tennessee, and Nevada (Las Vegas), plus the revitalization of the North Texas Chapter, among others, all bespeak major interest at the local level by union leaders, management representatives of a wide variety of employers, arbitrators, lawyers, PERB staff members, and especially FMCS mediators. And in the best chapters you will find academics active in leadership roles.

The role of the National Chapter Advisory Committee deserves a big salute here. Under the superb leadership of Janet Conti they have strengthened the connection between the national organization and the Executive Board and the 60 local groups around the country. They have taken on some tough issues, notably reconfiguration of our dues structures, among other controversial matters, and solicited hard data and concrete proposals from chapter leaders, analyzed those inputs, and made well-thought-out recommendations for building both wings of the IRRA. I cannot thank them enough for their hard work and genuine concern for the association.

Several of the NCAC's recommendations are being implemented now, and others are still in development. They include regional meetings to be centered around the theme of "Rebuilding the Social Contract at Work" plus creation of a vehicle to make our academics' work more accessible to and usable by practitioners—*Perspectives on Work*. Other thoughts on reducing the operational costs of printing and mailing the *Proceedings* and the *Directory* are being reviewed by appropriate committees of the board. Another long-standing request from the chapter leadership has been for a midyear meeting with participation (but not domination) by academics; that's happening in June of this year in Washington, DC. I'll expand on several of these initiatives.

It is no accident that the strategic planning effort by the Executive Board, spearheaded by Tom Kochan, incorporated many of the NCAC's initiatives. The board recognizes that the synergy of the two wings of the IRRA has to be fostered to ensure the long-term viability of this group. While either the national academic network or the various local groups might exist alone for some time, the unique benefits of learning from each other would be quickly lost if the IRRA were to fold. So with a clear focus on intensifying the services to the chapters and the practitioners, the board has endorsed your president-elect's work in securing foundation funding for several improvements.

Let me briefly expand on a couple of them. The first midyear meeting in Washington, DC, will enable *all* our members not just to hear from policymakers but to talk back with them. Congressional staffers, Department of Labor officials, and others will share the podium with researchers and practitioners in what promises to be a watershed event for IRRA. Under the chairmanship of John Burton, this will be a prototype for future midyear association meetings.

Next, the regional meetings. We expect these day-long meetings in major population centers to bring professional and popular-press attention to the IRRA as the best forum for debates of the social and political issues arising from the changes in the nature and organization of our workplaces. Local chapters and groups of chapters provide much of the participation and infrastructure for this effort. The first such meeting will take place in Boston in March, with others to follow in the Midwest, the Pacific Northwest, and the South. Watch for further publicity on those regional gatherings and help us maximize participation from all of our members.

I consider *Perspectives on Work*, edited by Tom Kochan and Hoyt Wheeler, to be the single most concrete advance the IRRA has made in my 20+ years of membership in terms of unifying the practitioners with the academics. It combines tightly written, high-quality analysis and opinion with a format useful to practitioners. This first-class journal is a major achievement and one long sought as a "deliverable" by the leaders and members of our chapters. My thanks to Tom, Hoyt, Susan Cass, Kay Hutchison, and the many of you who have contributed to this signal accomplishment.

Finally, the implementation of the strategic plan has included a major outreach to academics in our own and related disciplines. All of those who study the many aspects of work should be part of this association. Our tent is large enough to cover not just those with degrees in industrial relations but also the psychologists, sociologists, economists, and lawyers who study the nature of work, the organization of work, the motivation of workers, and the resolution of disputes about work. The recruitment efforts aimed at the Ph.D. network and the HR network should make great strides in reaching that goal.

By the way, you may have noticed one unifying theme in all of those enterprises, namely, the leadership of Tom Kochan. No single person has exerted greater energy or realized greater results in those efforts than Tom Kochan, but I'll say more about that shortly.

In 1992 Jim Stern, in his presidential address entitled "Whither or Wither IRRA," offered his observations on and recommendations for the association. They included, among others, the following:

> Membership should be unified for future members so that over the years we will no longer have chapter members who are not members of the national organization, and vice versa. We should hold our major meeting for three or four days in the summer, independent of any other professional association.
>
> Public policy issues should be emphasized at our national meetings, and papers submitted by practitioners should compete equally with those submitted by academics. . . . And, let us not forget to change our name to either the Employment Relations Research Association, the Industrial Relations and Human Resources Association, or some other name that correctly identifies our activities and captures the broad scope that our field encompasses. (Stern 1992:8-9)

I've taken Jim's recommendations as one possible yardstick for our progress. On the last point—changing our name—extensive discussion took place and with strong sentiment voiced by chapters against such a change, we are still the IRRA. Note, however, the emphasis on the letters versus the full title, á la "IBM" or "AFL-CIO."

On most of the other goals, we have seen either progress or actual attainment. Unified membership proposals are under active discussion in two appropriate committees, NCAC and Finance and Membership; the board is being kept apprised of the progress of these discussions. I think a workable solution to this longstanding problem, one acceptable to the majority of chapter members, is achievable in the near future.

Participation in a national, policy-focused, midyear meeting by practitioners and academics is at hand. Mark your calendars for June 17-19, 1999.

As a labor negotiator, I know I'll never get all of what I ask for in one round of bargaining and sometimes not in several rounds. But if my needs are reasonable and can be tailored to fit together with the needs of my counterparts, progress can be measured. By that standard the Association is making good progress toward Jim Stern's goals.

Let me begin to close this by sharing with you my thoughts on the indispensable nature of the relationship between the national organization and the local chapters. It has been remarked on elsewhere that in 1947 and the years soon thereafter, the founders of this association did not envision the growth of local organizations with such autonomy and independence from the national organization. Whatever the origins, we need to meld the two firmly together. Those of us who are practitioners are both the subjects of academics' studies and the beneficiaries of those academics' analytical work. Practitioners give the academics the grounding in reality they need to avoid getting blinded by the elegance of mathematical models which may have increasing distance from or relevance to people in the workplace. On the other hand, it is the quality of the scholarship and the striving for solid analysis of extremely complex variables in micro- and macro-economic contexts that marks this association as the best source for good recommendations on workplace change and public policy change. One only needs to review IRRA's annual *Research* volumes to validate that assertion. Practitioners can use those volumes and now *Perspectives*, if reminders are needed about the importance of the other direction of this two-way street.

So I ask those of you from great universities and colleges to commit yourselves to becoming more active in your local chapters. You and the chapter members will all benefit. For local chapter leaders, in particular, I ask your support for a unified financial arrangement to ensure that the national can survive and can continue to provide all the unique benefits of this association to all our members.

Let me conclude by paying tribute to four people very important to me: My wife, Ellen, who doesn't see me very often it seems because of the time I spend on meetings like this; to Tom Kochan, who I believe is going to preside over a resurgence of scholarly publishing, membership growth, and greatly enhanced prestige for this Association because of the incredible work he's already dedicated to it and because of his unparalleled leadership abilities; to David Zimmerman, my friend of long standing, who's led this organization from behind the scenes, through good and bad times, always with the single purpose of seeing IRRA safe financially and sound professionally; and to Kay Hutchison, our Administrator, who has held this organization together, sometimes it seems through sheer willpower, not to mention diligent editing, wonderful communication, careful husbanding of every penny, and a clear vision of where we are and where we need to go. It is no exaggeration to say that we would not have survived as an organization without her.

You four and all of you who've devoted so much to the IRRA have made this year an especially rewarding experience for me, and I thank you.

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II. THE TIME SQUEEZE: MANAGING WORK AND FAMILY OBLIGATIONS

Work and Family Practices in Biotech Firms

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Most research concerning the boundaries between work and family settings examines how individuals cope with the transitions, synergies, and stresses produced by "spillover" between public and private domains in their lives. This paper loosens the assumption that boundary management is only the individual's responsibility and examines the impact of organizational practices on the likelihood of achieving satisfactory integration between work and home. Firm practices can either promote or stifle innovative efforts and gender equity. I argue for a new conception of the boundary between work and nonwork that is more fluid, more adaptable to different life stages and needs, and more diverse than traditional notions. While owing a debt to the work of Nippert-Eng (1996), this paper is more focused on organizational practices, work structures, and their implications for integration (see also Fletcher and Bailyn 1996).

New American Workplaces

Forecasts suggest that small, entrepreneurial firms are likely to be more typical of future U.S. workplaces than will large, older industrial corporations. Despite the popular image of large corporations dominating the American economy, many people labor in workplaces that are small. Most organizational research on work and family has been conducted in large firms. Yet researchers have found that small firms can provide a more supportive work environment which might be more amenable to efforts to

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integrate work and family concerns (MacDermid and Williams 1997; MacDermid et al. 1994). Most research on spillover and time pressures has used large survey or time diary data sets and has not examined the experiences of employees within particular firms (see Schor 1991; Barnett and Rivers 1996: 28; Robinson and Godbey 1997).

The Study and Data

This study is based on three small to mid-sized firms drawn from the population of 110 biotechnology firms in one U.S. state. In two of these firms, professionals with college degrees or higher educational credentials make up about 60% of the workforce. At all levels below top managerial jobs, half the employees are men and half women, which is unusual. Two firms have about 60 employees, and the third has 150 employees. This paper reports on work in progress, especially semistructured interviews with 30 professionals, including 27 scientists (8 of whom are also managers) and 3 business professionals. Data were gathered over a period of twenty-four months in 1997-98. Observation and focus groups supplemented interviews, and some longitudinal data were obtained. (For further information on the sample, see Eaton and Bailyn [1999].)

In this group, 80% of the 30 employees have children, and 90% are either in two-career families or are single parents. But important gender differences exist in the potential impact of family status on these scientists. The men tend to have more family support from their partners. Of 11 men with children, 6 have the support of either a nonworking or a part-time spouse. All 13 women with children either have no partners or have partners working full-time. In this sample, issues of work and family (including dependent care) are likely to be highly salient to this group, but not equally by gender. The women are almost three times as likely as the men (13 vs. 5) to be in the high-stress situation of being either single parents or parents with a full-time working partner.

The research questions addressed here are (1) What organizational practices influence employees' ability to integrate work and life and to promote gender equity? and (2) What are the implications for firms of providing family-friendly policies and practices?

Findings I: Organizational Practices, Work-Family, and Gender Equity

Biotechnology affirmatively attracts women scientists and provides greater opportunities for both men and women to integrate work and life priorities than academia and some other career alternatives.

Scientists come to work in biotech companies because of the interesting interdisciplinary and applied nature of the work itself, the extrinsic rewards (salaries can be up to three times higher than in academia), and even the smallness of firms. Despite a high level of uncertainty in these firms, insecurity did not seem to be much worse than academia, and the working conditions overall were better. “I didn’t want to work 80 hours a week and then not get tenure,” said one senior woman scientist who is a director and key inventor in one firm. Others spoke of the difficulty of getting research grants. Both women and men noted that the work hours were more reasonable in biotechnology than in academia overall. However, biotechnology firms do not offer a completely family-friendly environment. Some couples postponed starting a family because of their job uncertainty or because of high work demands on one or both partners. A firm’s life stage may require extremely long hours at some points—such as start-up phases before a clinical trial or when Food and Drug Administration (FDA) deadlines loom. Dual-career couples run the risk of both partners not finding “good” jobs in the same area. Commuting marriages mean that two of these employees see their spouses only weekly or, in one case, monthly. So while work structures in biotech firms can provide opportunities for enabling integration, these are not automatic.

Men and women often report qualitatively different experiences with integrating work and life and encounter different expectations from themselves and society.

Even when men and women worked identical hours, they reported different experiences with family responsibilities. One male manager who had three children, an *au pair*, and whose wife worked part-time, spent about two hours a day with his children and was pleased with this level of interaction. In contrast, a woman who saw her daughter the same amount of time and worked similar hours but had a full-time working husband was unhappy. She explained she was thinking of an alternate career that would be more flexible: “I do not want my daughter to go to kindergarten and then after-school care every day and rarely see me except for a couple hours every night!” Children may also put more pressure on mothers. Some men and women experience different reference points concerning family.

Alternative schedules can contribute to more gender-equitable arrangements of work in the family sphere.

With nonstandard work schedules, many women and men preferred to structure their work and family lives so both spouses participated in housework and child care. This often required flexibility on the part of the company.

Several women left home before 7 a.m., leaving husbands to get children ready for school, and returned in time to pick children up from after-school or child care. Two couples arranged for the part-time female partner to work evenings so the father could be with the children at night and the mother during the day. Women especially expressed satisfaction with their partners taking full responsibility for children for some part of the day.

Firm policies and practices vary but still tend to be negotiated individually with employees, often as a "reward" and sometimes in contradictory ways within firms.

One surprising finding was the extent to which, even in small companies, practices varied between different supervisors and directors. Even in new firms, old assumptions about the importance of "face time" still persist, at least with some influential managers. One firm refused to allow any part-time schedules, and its policies forbade anyone except the top few employees to conduct work from home, even in an emergency. Some portion of biotechnology work cannot be done at home because it is lab-based or because of Food and Drug Administration (FDA) or confidentiality concerns. But some scientists estimated that up to half their work could be done elsewhere, particularly report writing, data analysis, and reading.

Another company allowed some part-time schedules but left them to the individual manager's discretion, leading to uneven results. Also, I found no women Ph.D. scientists working part-time. One manager said she "covered up for her people" when they needed flexibility because the CEO did not approve. This practice helps individuals but does not challenge a rigid system. Technology, such as software for monitoring experiments from home, could help with integration, but it was also only available to a few employees.

Findings II: Outcomes for Firms and Employees: Productivity and Commitment

Productivity in biotechnology does not vary directly with hours worked, creating new opportunities for flexibility, integration, and innovation; however, productivity is not well-measured by firms.

In most biotechnology work, productivity and effectiveness are not linked directly to hours worked. This creates potential for more flexible careers. One female Ph.D. project manager said, "Some people work full out and can get more done in seven hours than some other people who work ten hours a day. . . . Most people's work is not set up where number of (assay) plates done per day is important as a measure or a real indicator of productivity." When asked how she managed her direct reports, she said, "I try to deal with content, not time. . . . Most people probably can do their jobs in a 40-hour week." However, she was worried that the CEO would "probably die" if he found out what she had said about 40 hours. "But I just don't believe that more hours is more productivity. If you expect 60 hours a week of people, I find that they burn out. Once they burn out, they can't do much of anything well."

One problem in developing further evidence was that firms did not have clear ways of measuring productivity. While everyone claimed to have a sense of how well the firm was doing, no one could specify what productivity meant in a scientific research job. Clearly, creativity is involved, as well as reliable and well-documented work. Sometimes "face time" (being visibly at work, especially at nonstandard hours) or other measures of hours worked were substituted for outcome-based measures. Without clearer yardsticks to evaluate how employees are productive, firms will not be able to measure productivity outcomes of practices.

Shorter work hours aid work-family integration, and workers on restricted hours reported unexpected efficiencies in their work organization as a result.

Most scientists routinely worked more than 40 hours a week, but this often changed when they had children. One woman Ph.D. scientist said that since she became a parent, "I have to be slightly more organized. Before the baby, I used to work till 6 or 6:30 at night. Now I take work home if there is a real push, but I leave at 5 to pick my son up at day care." She noticed that she could accomplish the same amount of work (but in fewer hours) if she organized her time better. Similarly, part-time schedules negotiated at one of the companies proved satisfactory to the two affected employees and their supervisors. One woman's schedule actually helped other employees avoid weekend trips to work to monitor experiments. Employees and their managers agreed the women were more productive as part-timers, in part because of increased "focus."

One reported outcome of family-friendly policies, especially flexibility, is increased commitment to the firm.

Research shows that "work commitment" is generally high among professionals. But "organizational commitment" varies widely, based on the interactions between employees and firms (Abbott 1988). In biotechnology, retaining key scientists is key to a company's success in the market. A number of full-time and all the part-time employees explained that flexibility was important to their decisions to stay with their firms. For example, one scientific employee now works from 6:30 a.m. to 3:30 p.m. She is accessible after hours and has been promoted several times. She told us that her various flexible arrangements had kept her working with the company even when other employees moved on.

Men also explained that flexibility and good relationships with coworkers were important reasons to stay at a particular company. But they were more likely to leave companies for career reasons in this sample. I interviewed five employees who left the firms during the period of the study, and three men had made career moves, while two women had made moves related to family needs. The salience of work-family flexibility when a firm offers it may be greater to women, given their scarcer support at home compared to men.

Life stages, firm stages, work stages, and personal stages all contribute to different needs for flexibility at different times—there is no one "formulaic" schedule.

Family status and life stage concerns interacted with firm status in shaping employees' careers. Firms in this industry can grow and shrink unpredictably. Many scientists had become parents of small children during the past few years, so their personal needs changed. The "fit" between employees' schedules and needs and those of their families is one factor that makes a significant difference to them in leading an integrated life (Barnett et al. under review; Moen 1996). Mergers and acquisitions, common in biotech, created new stresses for families and employees. People who were used to helping and covering each other were disrupted in their working relationships. Company policies, benefits, and customs were changed, both explicitly and subtly.

Summary and Conclusion

Work and family integration is an active issue for both scientists and managers in biotechnology firms. Company responses vary, both enabling and frustrating work-personal life integration. Positive company responses in this study came from a flexible or creative supervisor who "bent the rules" to provide support. Company practices which hindered integration arose from practices, policies, and old assumptions in which each individual employee has to manage his or her own boundaries alone. Employers can expect extra effort from employees at crucial project times, but employees must also be able to expect understanding from employers when they need flexibility or ongoing nonstandard arrangements. The mutuality and organizational climate for family-friendly flexibility is important to outcomes but seldom discussed overtly in the workplace. Gender patterns still matter profoundly for employees in their day-to-day lives and in their careers, and firms can help offset this social inequity by providing flexibility to meet a variety of needs. This research suggests thoughtful firms and managers can choose to enhance both work and family satisfaction and still have engaged, productive employees.

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The Time-Squeeze: Married Couples' Work-Hours Patterns and Preferences

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With American families increasingly dedicating the time of two spouses—two parents—to the labor market, time for home and family has increasingly become problematic. While dual-earner families have cut back on their family life, the "second shift" remains problematic (Hochschild 1997). We argue that this important shift in *family* employment patterns is fundamental to the rise of the contemporary "time squeeze." However, much of the previous literature in this area has focused on the average time spent at work by the *individual* American worker, without concern for spousal or other family characteristics. These studies include Schor's *Overworked American* (1992) and Robinson and Godbey's *Time for Life* (1997)—books which come to completely different conclusions but which share the basic approach of examining aggregate, gross-level averages of work hours over time.

We diverge from these studies in three respects. First, we emphasize that inequalities in the distribution of work hours across households—and changes in those inequalities—are of fundamental interest and critically important in understanding the increasing sense of being squeezed for time. Second, and relatedly, we argue that a more realistic approach conceptualizes time demands at the family or the household level rather than at the individual level. Indeed, even if we work *fewer* hours today than our fathers worked thirty years ago, the fact that we increasingly find ourselves in households in which there is no stay-at-home partner suggests that time pressures may figure more prominently today than ever before.

Third—and the primary focus of this paper—we suggest that it is critical to consider work hours in relation to *preferences* for work hours, especially if we take the straightforward approach and consider the "time-squeeze" as simply working more than one wants. The relationship between work-hours preferences and work-hours behavior is critical to understanding the rising perception of a "time squeeze" in the U.S. today.

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Trend Data

We begin by examining some simple data on trends in work hours, much like the research that has gone before us but focusing on the situation for husbands and wives and especially for husbands and wives within dual-earner couples. Using straightforward self-report data from the *General Social Survey,* we find evidence that work hours have increased moderately for husbands and a bit more substantially for wives (see Figure 1, Panel A). These findings are largely consistent with the self-report data on weekly work hours reported by Schor (1992) and by Robinson and Godbey (1997) but use different data sets.

While the self-report measures (Fig. 1, Panel A) may or may not represent a real or important trend in work hours (Robinson and Godbey 1997), they provide an important backdrop for our consideration of work hours *at the household level*. Aggregating work hours at the household level, we find that hours in dual-earner couples (see Fig. 1, Panel B) have risen faster and more dramatically than either husbands' or wives' hours alone or, indeed, faster than both those put together. This is a function of increasing hours for wives as well as increasing hours for men who are married to employed women. (We note that we found a very slight *negative* trend in work hours among men married to nonemployed women—the traditional "breadwinner-homemaker" households.) Thus not only are dual-earner households a quickly growing segment of the workforce, there is every indication that they have experienced a very real increase in the *family* work schedule—more prevalent and working harder.

FIGURE 1

Trends in Work Hours over Time from the General Social Survey, 1973-1994

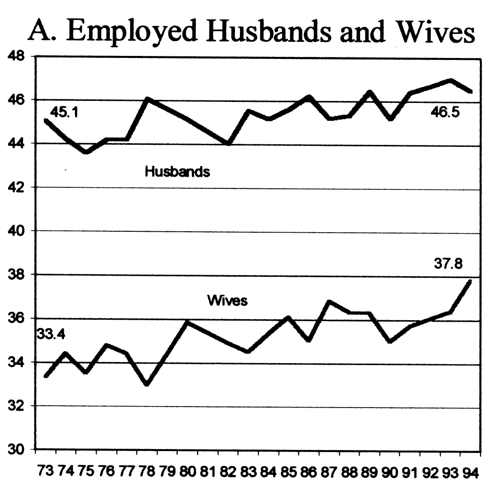
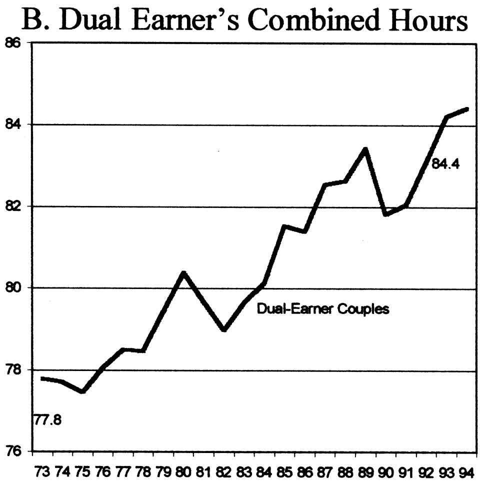


FIGURE 1

Trends in Work Hours over Time from the General Social Survey, 1973-1994



Why are dual-earner families working more today than ever before? Previous analyses, such as that by Juliet Schor (1992) and Arlie Hochschild (1997), have suggested that it is simply because *they want to*, either out of materialist, careerist, or escapist concerns. But is this the case? In fact, previous analyses have largely *assumed* that work behavior straightforwardly represents *preferences* for work behavior. But few researchers in the contemporary time bind literature have actually *asked* men and women what they would, in fact, prefer to work. In the remainder of this paper, we use a large national survey to do just that—to examine the relationship between work-hours preferences and work-hours behavior in married couples.

The Long Work Week: Preferences and Behavior

Our data for subsequent analyses come from the two waves of the *National Study of Families and Households*, a nationally representative, longitudinal study directed by researchers at the University of Wisconsin. The NSFH sampled over 10,000 men and women—and, when present, their spouses and partners—in 1987-88 and then interviewed them a second time in 1993-94. We limit our analyses to respondents who were married at the first wave, who were married to the same partner at the second wave, and in which both husbands and wives were interviewed. Our subsample represents 4,554 couples, or a total of 9,108 interviews with individual men and women. Our data are couple-level: both husbands and wives in our sample were asked to estimate how many hours they *actually* worked last week and how many hours they would *ideally like* to work.

These two measures of work hours—self-reports of both behavior and preferences—represent the core of our analyses and deserve careful exploration. Figure 2 is a graphical representation of the joint distribution of husbands' and wives' work hours, presented as a topographical map. Darker shades represent a high frequency of incidence, and white spaces indicate that fewer than .5% of couples are represented in the cross-tabulation. Note that much of the space in Figure 2 is white. In fact, most possible combinations of work hours did not occur with any frequency. Primarily, couples are located at four corners of the space, which primarily represent the various permutations of not being employed versus full-time employment (or more).

FIGURE 2

Husbands' and Wives' Conjoint Weekly Work Hours, NSFH-2 1993-1994

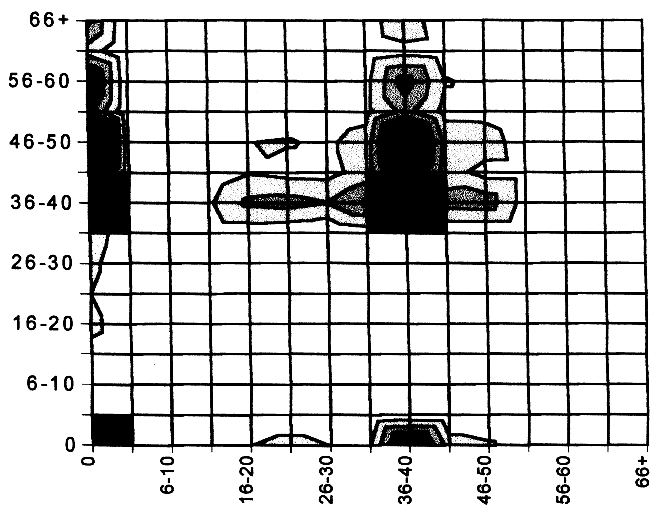
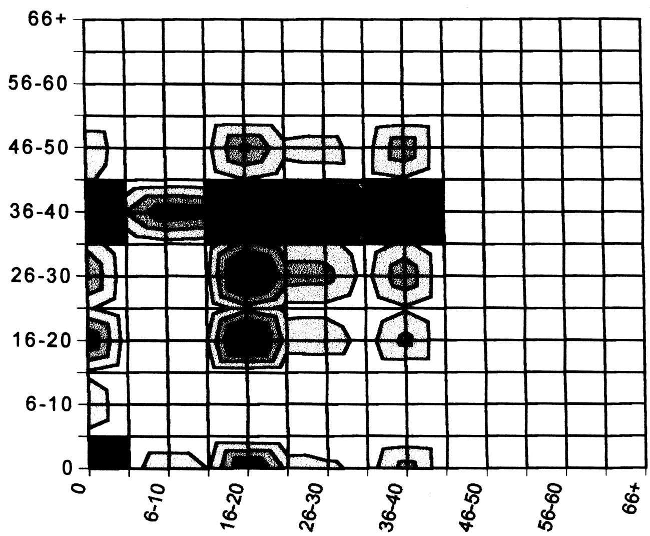


Figure 3 reveals a different image entirely. This mapping illustrates *preferences* for work hours. Where the Figure 2 emphasizes the black and white extremes of working full-time or not at all, Figure 3 is more about shades of gray in a literal and a figurative sense. The contrast between these figures begins to hint at the strong influence of the structure of jobs and workplaces, exhibiting little ability to actually *meet* workers' preferences for work hours and instead constraining work options to institutionalized definitions of a full-time job.

Preliminary analysis indicates that though these images differ, there is a significant link between preferences and behavior. For example, wanting to

FIGURE 3

Husbands' and Wives' Conjoint *Preferred* Weekly Work Hours, NSFH-2 1993-1994



work more at the first wave of the survey was strongly associated with actually working more at the second wave, and similarly, wanting to work *less* was strongly associated with cutting back in work hours at the second wave. But are there differences in that process? Which preferences for work hours are most easily met? Are some people more successful at actually attaining what they want?

To examine the relationship between these two figures, we created a logistic regression model which seeks to unpack the process by which preferences are translated to behavioral outcomes over time. Specifically, our dependent variable is coded as 1 if a person at the second wave is working a schedule that matches their previously stated (at the first wave) preferences and coded as a 0 if they failed to attain (or maintain) their preference. We included several categories of independent variables including a measure of their stated preferences for work hours and measures of their couple-level "work strategy," both measured at time 1 and described and defined in Table 1. We also include measures of their occupational prestige (specifically, professional versus nonprofessional), income and debt, and important life-stage transitions that may have occurred in the interval in question. Finally, we add controls for whether or not the respondent and/or his or her spouse changed work schedules between waves.

TABLE 1

Conceptualization of Work Hours Behavior, Preferences and their Determinants: Definitions and Distributions (n = 4554)

A: Individual-Level Classification of Work Hours

Category	Reported Hours	Behavior at Time 1 Wives	Behavior at Time 1 Husbands	Preferences at Time 1 Wives	Preferences at Time 1 Husbands
Not working	0	45.8%	28.7%	29.3%	23.8%
Part-time	1-24	11.9	3.6	33.7	7.5
Reduced hours	25-34	6.6	2.9	15.6	11.2
Full-time	35-44	27.3	32.7	20.4	47.9
Long hours	45+	8.3	32.0	1.0	9.6

B: Couple-Level Classification of Couple Work Strategy

Category	Wives' Hours	Husbands' Hours	% of couples, T_1	Mean Age	% < 25 years	% 25-65	% > 65 years
Both not working	0	0	17.4	56.8	32	29	39
Traditional	0	35-44	13.1	40.6	4	92	4
Traditional, long hours	0	45+	12.7	38.8	6	92	2
Neotraditional	1-34	35-44	6.7	38.4	3	95	2
Neotraditional, long hrs.	1-34	45+	6.3	37.4	4	95	1
Dual earner	35-44	35-44	10.1	37.8	4	95	1
Dual earner, long hours	35+	45+	12.9	36.3	5	95	0
Husband working part-time	—	1-34	6.5	45.6	4	76	20
Wife breadwinner	1+	0	11.4	43.3	53	36	10

C: Variable Definitions and Distributions

Variable	Definition	Mean	S.D.
Occupation and Income			
Both professional	Both spouses work in prof'l occupations	0.14	0.35
Husband only is prof'l	Husband, but not wife, works as a prof'l	0.21	0.40
Wife only is professional	Wife, but not husband, works as a prof'l	0.14	0.35
Both nonprofessional	Neither spouse works as a professional	0.51	0.50
Income	Log of total family income	10.31	1.22
Indebtedness			
Debt on credit cards	Carries monthly balance on credit	0.47	0.50
Loans and other debts	Owes money to bank, family or friends	0.37	0.48
Overdue bills	Bills left unpaid	0.11	0.31
Mortgage on home	Owns home, holds a mortgage	0.51	0.50
Life Stage and Transitions			
Kids, 0-4 years	Number of preschool children, T_1	0.36	0.66
Kids, 5-18 years	Number of school-aged children, T_1	0.80	1.12
First child	First child born between T_1 and T_2	0.07	0.26
Additional child(ren)	Preschool children at both T_1 and T_2	0.13	0.33
Preschoolers → School-age	Preschool kids at T_1; school-aged kids at T_2	0.16	0.37
School-age children	School-aged kids at T_1 and T_2	0.21	0.41
Children left nest	Kids under 18 at T_1, no kids at home at T_2	0.10	0.30
Post-kids	No kids at T_1 or T_2, wife over 40 at T_1	0.26	0.44
No children	No kids at T_1 or T_2, wife 40 or less at T_1	0.07	0.25

The results from these analyses with logistic regression are presented in Table 2. The strongest results in the model are in the top cluster of results

TABLE 2

Logistic Regression Model Predicting a Prior Preferences Matching Later Behavior: T_2 Behavior Reflects T_1 Preferences (n = 4554)

	Wives		Husbands	
Variable	e^{β}	T	e^{β}	T
Preferences, T_1				
Prefers not working	**2.57**	**78.50**	**2.45**	**66.38**
Prefers part-time	**0.47**	**47.95**	**0.18**	**45.74**
Prefers reduced hours	**0.30**	**63.12**	**0.08**	**73.56**
Prefers full-time (reference)	—	—	—	—
Prefers long hours	**0.49**	**3.64**	**1.74**	**17.08**
Working preference at T_1	**3.69**	**252.84**	**5.69**	**335.32**
Couple Work Strategy, T_1				
Both not working	**1.63**	**8.42**	0.91	0.28
Traditional	1.17	0.89	**0.70**	**4.90**
Traditional, long hours	**1.40**	**3.89**	**0.67**	**5.19**
Neotraditional	**2.21**	**19.22**	**0.74**	**2.37**
Neotraditional, long hrs.	**1.72**	**8.05**	**0.71**	**2.92**
Dual earner (reference)	—	—	—	—
Dual earner, long hours	0.97	0.03	**0.61**	**8.47**
Husband working part-time	**1.60**	**6.33**	**1.85**	**8.67**
Wife breadwinner	**1.26**	**2.08**	0.85	0.74
Occupation and Income, T_1				
Both professional	**1.22**	**1.78**	**1.02**	**2.04**
Husband only is prof'l	1.04	0.12	1.04	0.41
Wife only is professional	**1.24**	**3.00**	1.00	0.00
Both nonprof'l (reference)	—	—	—	—
Income	**1.06**	**2.67**	1.01	0.07
Indebtedness, T_1				
Debt on credit cards	0.96	0.20	**1.13**	**2.04**
Loans and other debts	0.90	1.55	0.95	0.41
Overdue bills	**0.78**	**3.78**	1.00	0.00
Mortgage on home	**0.89**	**1.84**	0.98	0.07
Life Stage Transitions, $T_1 \rightarrow T_2$				
First child	0.96	0.04	0.98	0.01
Additional child(ren)	0.96	0.09	0.93	0.27
Preschoolers $\rightarrow$ school-age	0.86	0.91	1.04	0.06
School-age kids	1.10	0.46	0.89	0.81
Children left nest	0.83	1.59	1.00	0.00
Post-kids	0.96	0.07	**0.71**	**5.58**
No children	—	—	—	—
Changes in Hours, $T_1 \rightarrow T_2$				
Increased hours	**0.24**	**177.20**	**0.07**	**412.43**
Decreased hours	**0.60**	**22.61**	**0.69**	**14.43**
Spouse increased hours	1.02	0.03	1.02	0.04
Spouse decreased hours	1.06	0.36	0.88	1.16
Chi-square for covariates	**1535.4**		**1711.6**	
df	31		31	

and pertain to the importance of preferences. In short, we find that some preferences are easier to meet than others. Easiest of all to attain, with no employer input at all, is simply not working. The exponentiated coefficients presented here indicate that the odds of attaining previously stated preferences are about two and a half times higher for those who preferred to be not working at all when compared to those who prefer the standard full-time work week (2.57 for wives and 2.45 for husbands). Also likely to have few problems meeting their goal are men who prefer to work long hours: their odds of working their preferences at the second wave are nearly twice (1.74) the odds of men who prefer the standard work week of 35-45 hours.

In stark contrast, it appears to be far more difficult to meet the preference for any kind of part-time work. Both wives and especially husbands who prefer part-time work are far less likely to actually *get* part-time work when compared to those who prefer and find full-time work. For example, a wife who wants to work 30 hours a week has odds of attaining that goal only 30% as high as the wife who wants to work 40 hours a week. For husbands, the contrast is even more stark: husbands who want to work 30 hours have odds of attaining their preferred schedule less than 1/10th the odds of husbands who want to work full-time. Herein is the essential contrast between the topographical images I showed earlier: the many couples who would prefer some type of part-time arrangement are simply unlikely to meet that end. This suggests that individuals who prefer part-time hours are frequently faced between a rock and a hard place: 0 versus 40 or more hours of work each week.

Consistent with this interpretation, we find that having experience in part-time work (represented in the next block of variables in Table 2) increases the probability of matching preferences with outcomes. Both husbands and wives who were working part-time at the first interview were significantly more likely than other husbands and wives to be working their previously stated ideal. This provides further evidence that couples which *do* manage to incorporate part-time work into their lives find considerable satisfaction with that work arrangement.

Conclusion

In contrast to previous studies which have emphasized the materialist and/or careerist inclination of husbands and wives in the workforce, our evidence indicates a widespread preference for part-time work in married couples: a preference that is, however, rarely met. Husbands and wives who want part-time work are constrained to choose between either non-employment or full-time work or more. Further analysis suggests that this dilemma is one that afflicts wives more than men. While many men report wanting to work less than they actually do, the difference between preferences and behavior for men represents a relatively minor shift: wanting to work 35-40 hours a week while actually working 45 hours or more. For women, on the other hand, there is a fundamental displacement. Their tendency to prefer a more middling number of hours places them between a rock and hard place, forced to choose between the two extremes of non-work and 40 or more hours a week. Husbands are better able to find a match for their preferences because their preferences better match the breadwinner/homemaker template of full-time employment, reflected in the structure and organization of work. Institutionalized work hour arrangements—which have been historically driven by the reality of an overwhelmingly male labor force married to stay-at-home wives—represent a form of structural lag that is more accommodating to husbands than wives in fitting with their preferences for work. Consequently, women are both over- and underemployed relative to their preferences.

Our evidence suggests that the growth in work hours in dual-earner couples over the last few decades is not a straightforward reflection of some underlying desire for long hours on the job, as described by Arlie Hochschild in *The Time Bind* or Juliet Schor in *The Overworked American*. Rather, we suggest employers have played a major role in shaping the long work day.

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DISCUSSION

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Families and Work Institute

The papers presented on “The Time Squeeze” indicate that the field of work and family life is at a dramatic turning point. In past years—even as recently as last year—the time squeeze was simply defined, measured as a simple construct. The problem was seen as overwork and the solution was seen as shorter working hours. But today’s papers represent a cumulative dissatisfaction with the research to date. They represent the struggle to find new ways of conceptualizing, measuring, and analyzing the elusive issue of time in the work lives and home lives of workers.

We are dissatisfied with our *conceptual models* for understanding the interface between work and family life. There has been ongoing discussion of the need to move away from the notion of separate spheres—the sphere of work and the sphere of family life linked by interference or conflict. But there has been less clarity about effective models to replace it. Phyllis Moen and Yan Yu are suggesting more dynamic, emergent, almost three-dimensional processes.

There is dissatisfaction with the *language* in the field. Again Moen and Yu suggest replacing the word balance with the metaphor of strategic interlocks and interconnections. They dislike the notion of balance because it implies private rather than public solutions. I have disliked it for other reasons. Balance implies that if one side is up, then another is down, which is not true to the data in the field. In the 1997 National Study of the Changing Workforce, we found that when workers have good quality jobs, reasonable job demands, and a supportive workplace environment, then there is a positive residual for the family.

There is dissatisfaction with the *research design*, particularly cross-sectional designs that emphasize the individual at a moment in time. Marin Clarkberg as well as Moen and Yu use the couple as the point of reference and employ a life cycle approach. Marin Clarkberg uses longitudinal data. Susan Eaton uses qualitative data as well and includes the work environment in her sphere of study.

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There is dissatisfaction with *measures*, particularly with a construct as complex as time. Bob Drago and his colleagues have developed a much more comprehensive means of looking at time use by including contractual working time, standard diary time, so-called face time, work invasiveness, and housework. Both the Clarkberg and the Moen-Yu papers include preferred time as well as actual work time, and to minimize error, Clarkberg uses time as a categorical construct.

There is dissatisfaction with the *scope* of study. The Moen-Yu paper looks at other aspects of the work environment, such as job demands, job insecurity, and supervisor support. And finally, there is dissatisfaction with the *results*. In his or her own way, each of the researchers on this panel explores why workers consistently state that they would prefer to work fewer hours and yet do not act on these feelings. Taken together, these papers bring us closer to new models for understanding the complex connections between work and family life, for finding new constructs, new language, and new designs. Yet I think we would all agree that this struggle is still in its early stages.

In a study that I am conducting of how children see their working parents, it has become apparent to me that we need to widen the lens through which we look at time even more. We need to measure not only the number of hours we spend in various pursuits but also what happens during those hours, including what Robinson and Godfrey call time density.

- How rushed or calm is the time?
- To what degree can people focus on what they want to focus on?
- How much do they multitask?
- How often are they interrupted?
- How much control do they have over the tasks and timing of what they are doing?
- How much support do they have in how they spend their time?
- Why aren't people working as they say they want to? (The 1997 National Study of the Changing Workforce does not indicate that people are coming to work to escape from home.)

Along with the advances these papers provide, I think we will begin to gain a much greater understanding of the world of work and family in 1999.

III. LESSONS FROM FIRM-LEVEL DATA: PRODUCTIVITY AND PERFORMANCE

Changing Stock Market Response to Announcements of Job Loss: Evidence from 1970-97

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There has been substantial discussion in the business press and elsewhere recently about the effects of "downsizing" on firms, workers, and families. While the effects of job loss on workers are clearly negative (see, for example, Farber 1997), there have been suggestions in the business press and by policy groups that owners of firms profit handsomely as stock prices increase around the time of job loss announcements (Anderson and Cavanagh 1994; Sloan 1996). These suggestions persist despite a growing body of empirical work (see Table 1) that finds fairly consistent negative reactions of stock prices to announcements of reductions in the labor force (RIFs).

A straightforward interpretation of a negative relationship between announcements of RIFs and stock prices is that the RIFs signal a reduction in product demand relative to existing production capacity. It is more difficult to understand why stock prices might respond positively to announcements of RIFs. One interpretation that resonates with much of the recent attention paid to corporate "downsizing" and "restructuring" is that announcements of RIFs might signal that management has found more efficient ways to produce using less (or cheaper) labor. For example, Exxon and Mobil recently (December 1998) announced a merger, one consequence of which

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will be substantial employment reductions. News reports of the merger state clearly that these anticipated RIFs and the resulting cost savings and increases in efficiency are an important part of the rationale for the merger. To the extent that "efficiency" RIFs have become more common relative to "deficient demand" RIFs over the last three decades, we would expect that the average relationship between announcements of RIFs and stock prices would have become less negative (or even positive) over time.

In order to address this issue, we used the *Wall Street Journal* index to create as complete a list as possible of announcements of RIFs by every firm that was ever listed in the Fortune 500 for each of the twenty-eight years from 1970 though 1997. In this study we report results of a preliminary analysis of these data that shed some light on whether and how the reaction of stock prices to announcements of RIFs has changed over time.

We find some evidence that the stock market reaction to announcements of RIFs has, in fact, changed. The average share price reaction was most negative in the early part of the period covered, and the average reaction has become less negative in more recent years. We conclude by offering some suggestions for investigating the source of the increasing share price effect.

Data

We created our sample by including each firm that ever existed in the Fortune 500 from 1970-1997. This left us with a list of 1703 different firm names over the twenty-eight years. For each year we then searched through the abstracts of each *Wall Street Journal* index by company name for any announcement of a RIF. When an example was found, we recorded the date of the announcement as well as (where available) information on the reason for the announcement, the number of workers affected, whether the job loss was temporary or permanent, whether the instance was related to a foreign subsidiary, and the type of worker involved (production line, managerial, etc.). In this study we present our first analysis of how stock prices reacted to the announcement of RIFs. At this point, we have not analyzed the additional information on detailed characteristics of the RIFs.

In order to measure the stock price reaction, we used daily stock returns for each firm for each day in the sample. These data are collected by the Center for Research in Security Prices (CRSP) at the University of Chicago. Obviously, we needed to match our firm names as reported in Fortune with unique security identifiers used in CRSP. There was no information in the CRSP data for 146 of the 1703 firm names from our Fortune 500 list, probably because they were not traded in the New York, American, or Nasdaq stock exchanges. Of the 1557 unique firm names that were left over, 198 were identified with multiple securities and were dropped from this analysis. Of the 1359 "unique" firm names that remained, 183 names were identified with the same firm as another with either a similar (or in some cases quite different) name.[1] This left us with 1176 unique firms over the twenty-eight years from 1970-1997 for which we have valid stock data for at least some years. We were able to identify 3878 job loss announcements that had matched stock return data for the relevant periods.

Frequency of Job Loss Announcements

The number of RIFs announced by firms in our sample varies substantially across the years we study in ways that, not surprisingly, closely follow the state of the labor market. The number of announcements varied from a minimum of 48 in 1997 (a year of very low unemployment) to a maximum of 285 in 1982 (a year of very high unemployment). Overall, the mean number of announcements per year was 139 with a standard deviation of 64. The simple correlation between the number of announcements and the civilian unemployment rate (Council of Economic Advisors 1998) over the 1970-1997 period was 0.58. With the exception of the first two years in our sample (1970 and 1971), the time series of the number of RIF announcements per year follows the time series of the unemployment rate quite closely.[2] The correlation from 1972-1997 (omitting 1970 and 1971) between the number of RIF announcements and the unemployment rate is 0.68.

Farber (1997) reports "three-year rates of job loss" using data from seven Displaced Worker's Surveys (DWS). He documents a decline in the overall rate of job loss from 13.3% in 1981-83 to 9% in 1987-88 and then a continuous increase to 12.8% in 1991-93. These findings are largely consistent with ours. Interestingly, Farber (1997) shows that the job loss rates in the DWS increased again (to 15.1%) in the 1993-95 sample, while our measure of the fraction of firms with at least one job loss announcement fell in this latter period as did the unemployment rate. However, our tabulations from the most recently released DWS (February 1998) show a decrease in job loss to 12.0% in the 1995-97 period.

The Event Study Method

The event study method that we employ is widely used in the empirical corporate finance literature (Brown and Warner 1985; MacKinlay 1997), and we will, therefore, only describe the very basic ideas here. Cumulative average excess returns are calculated, as described below, using value-weighted return data from the Center for Research in Security Prices (CRSP) at the University of Chicago. Let t index time in trading days, let s indicate the "event date" (the date of the RIF announcement), and let i index firms.

First, the firm daily return, R_{it}, is regressed on R_{mt}, the value-weighted market index for date t, which is available from CRSP. This regression,

$$(1) \qquad R_{it} = \alpha_i + \beta_i R_{mt} + \eta_{it},$$

is estimated for a period from day $s - 60$ to $s - 30$.[3] Next, for days around the event date, we calculate the daily abnormal, or excess, return as the residual from this regression. This is

$$(2) \qquad ER_{it} = R_{it} - (\hat{\alpha} + \hat{\beta}_i R_{mt}),$$

where $\hat{\alpha}$ and β_i are the estimated regression coefficients from equation (1). Intuitively, the excess return is the part of the movement in the stock return of firm *i* that is not correlated with overall market movement in stock returns and presumably reflects unexpected firm-specific factors.

The excess returns calculated for each day around a RIF announcement are used to calculate the cumulative excess return for each announcement. These are computed by adding up the daily excess returns over various intervals called "event windows" around the date of the announcement. We report analyses based on cumulative excess returns computed using three such intervals: (1) the day of the announcement, (2) from 1 day prior to 1 day after the announcement (3-day interval), and (3) from 5 days prior to 5 days after the announcement (11-day interval). As a useful summary of the data, we then compute the mean and median of the cumulative excess returns across all RIF announcements in each year for each of the three event windows. We also compute the fraction of RIF announcements in each year with negative cumulative excess returns for each of the three event windows. If the announcements have no systematic effect on stock returns, then the mean and median cumulative excess return will not differ significantly from zero and the fraction negative will not differ significantly from 0.5. If the announcements have a negative (positive) systematic effect on stock returns, then the mean and median cumulative excess return will be significantly negative (positive) and the fraction negative will be greater than (less than) 0.5. The basic goal of our analysis is to see if there are systematic cumulative excess returns over these windows around job loss announcement dates and whether such returns are positive, negative, or zero.

Has the Market Reaction to Announcements of RIFs Changed over Time?

Our analysis is the first investigation that covers a sufficiently long time period (twenty-eight years) to provide meaningful facts on changes over time in the reaction of stock prices to the announcements of RIFs. While a large number of previous studies have investigated the simple relationship between announcements of RIFs and share price reactions using various time periods, all of these studies use data no earlier than 1979 and use sample periods ranging from two to only nine years. The top panel of Table 1 contains a brief review of some of these studies and reports point estimates of the average cumulative excess returns from the day prior to the day after the RIF announcement (the three-day event window). These studies show a relatively stable and small estimate of the share price reaction to RIF announcements of between -0.05% and -1.29%. The median estimate is -0.50%.

As a basis of comparison with the existing literature, the bottom panel of Table 1 contains estimates based on our sample of the mean cumulative excess return in a three-day event window for the entire 1970-97 time period as well as for three subperiods. The overall mean for the 1970-97 period using our sample is -0.376%, which is within the range of the existing estimates reported in the top panel of Table 1. The estimates by subperiod provide preliminary evidence that the mean cumulative excess returns in response to announcements of RIFs have become less negative over time. The subperiod means were -0.647% for the 1970-79 period, -0.261% for the 1980-89 period, and -0.112% for the 1990-97 period.

TABLE 1

Summary of Selected Previous Studies and Comparison with New Data
Three-Day Event Window (day -1 to day +1)

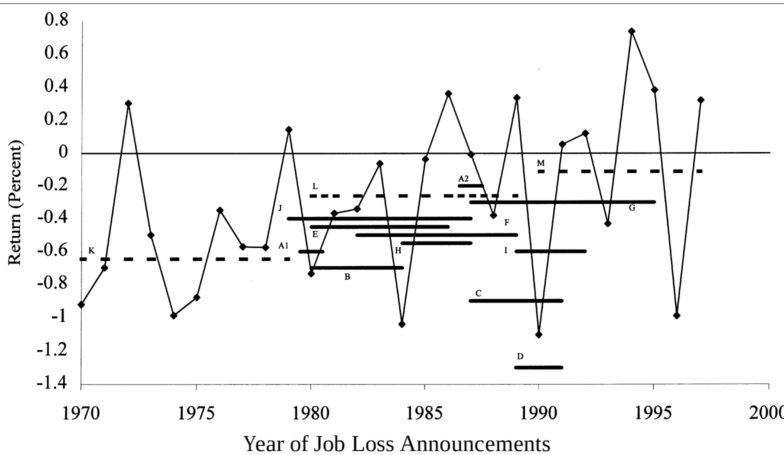
Author(s)	Years Data Cover	Number of Observations	Type of Announcement	Ave. Cumulative Excess Return (%)
Abowd et al. (1990)	1980, 1987	87 and 88	Permanent reductions	-0.6 and -0.2
Blackwell et al. (1990)	1980-84	244	Plant closings	-0.7
Caves & Krepps (1993)	1987-91	513	Manufacturing firms	-0.9
Datta & Iskandar-Datta (1996)	1989-91	228	Broad set	-1.3(a)
Golomba & Tsetkekos (1992)	1980-86	282	Plant closings	-0.5
Gunderson et al. (1997)	1982-89	214	Canadian firms	-0.5
Hallock (1998)	1987-95	1287	Broad set	-0.3
Kalra et al. (1994)	1984-87	132	Plant closings	-0.5(a)
Ursel & Armstrong-Stassen (1995)	1989-92	137	Broad set	-0.6(b)
Worell et al. (1991)	1979-87	194	Broad set	-0.4
Farber & Hallock	1970-79	1503	Broad set	-0.647
Farber & Hallock	1980-89	1491	Broad set	-0.261
Farber & Hallock	1990-97	884	Broad set	-0.112
Farber & Hallock	1970-97	3878	Broad set	-0.376

Notes: (a) From day -1 to day 0 only. (b) day 0 only.

In order to compare our estimates with the estimates derived by others, we have plotted in Figure 1, by year, the mean cumulative excess returns over a three-day window using our data. In addition, we have graphically represented the results of the earlier studies (a-j from Table 1) with dark solid lines. The horizontal span of the lines represents the years the previous studies covered, and the vertical location represents the mean cumulative excess returns over the three-day window (where available). Analogously, we have graphically represented the decadal averages of the cumulative excess returns computed from our data (k-m from Table 1) with dotted lines. The estimates from the earlier literature are remarkably consistent with our own annual estimates. This figure makes clear that periods covered by the earlier studies are concentrated in the 1980s, and as a result, they cannot address the issue of changes over time in the stock market reaction to job loss announcements.

FIGURE 1

Mean Cumulative Excess Returns, Three-Day Window

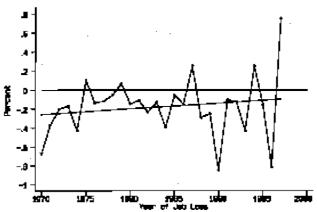


To investigate further the extent to which the share price reaction to RIF announcements has changed over time, Figure 2 contains a series of plots which display the mean cumulative excess returns, the median cumulative excess returns, and the fraction negative cumulative excess returns by year over various event windows. A linear time trend, fitted by OLS, is also included in each plot. The first row of the figure contains the plots for the one-day event window (the day of the RIF announcement) for each of the twenty-eight years in the sample. The second row of the figure contains the analogous plots for the three-day event windows (day -1 to day +1), and the third row of the figure contains those for the eleven-day event window (day -5 to day +5).

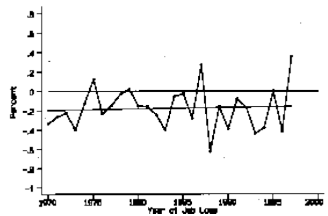
FIGURE 2

Cumulative Excess Returns, by Year

(All Graphs Include Fitted Trend Line)

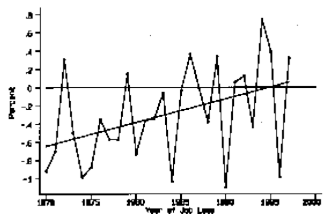


Mean by Year, 1-Day Window

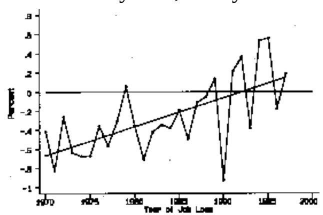


Median by Year, 1-Day Window

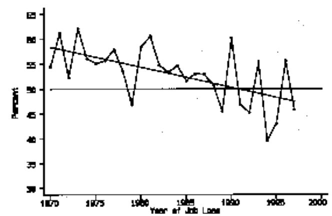
Percent Negative by Year, 1-Day Window



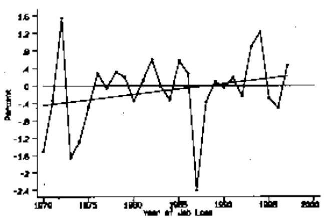
Mean by Year, 3-Day Window



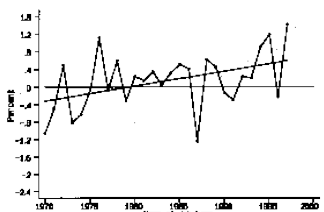
Median by Year, 3-Day Window



Percent Negative by Year, 3-Day Window



Mean by Year, 11-Day Window



Median by Year, 11-Day Window

Percent Negative by Year, 11-Day Window

There does appear to be some evidence that market reaction to job loss announcements has changed over time, becoming less negative more recently. However, the strength of the relationship depends on the particular event window selected. While the slopes of the time trends in each of the figures suggest that the market reactions are becoming less negative, the strongest results are found for the three-day event window. As a crude test, OLS regressions of the annual values for the mean and median cumulative excess returns on a time trend yield significantly positive coefficients at standard levels for the three-day event window.[4] Additionally, an OLS regression of the percent negative cumulative excess returns on a time trend yields a significant negative coefficient for the three-day event window.[5] One possible interpretation of this general pattern is that there has been a shift in the composition of RIFs away from "deficient demand" RIFs and toward "efficiency" RIFs since 1970.

Concluding Remarks

There now is a growing body of work which documents that announcements of RIFs by large firms leads, on average, to small negative effects on stocks prices. We confirm this result using a very large sample of firms over twenty-eight years. We show further that the overall stock price reaction (as measured, for example, by average or median cumulative excess returns), which has always been small (less than 1%), is most negative earlier in the sample and has become less so over time. Additionally, the fraction of announcements of RIFS that are associated with negative stock price reactions has declined steadily over time, perhaps suggesting that there has been a shift in the nature of RIFs away from those caused by deficient product demand and toward those designed to improve efficiency.

Acknowledgments

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Endnotes

[1] For example, Freeport Sulfur is the same as Freeport Minerals, Hoover Universal is the same as Hoover Ball and Bearing, and Standard Oil of California is the same as Chevron.

[2] The unemployment rate in 1970 and 1971 was relatively low (averaging 5.4%), while the number of announcements in those two years was relatively high (averaging 193 per year).

[3] We tried various prediction periods with no perceptible effect on the results.

[4] For the other windows we report on, only the time trend of the median cumulative excess return in the 11-day window is statistically significant at conventional levels.

[5] The time trends of the percent negative cumulative excess return are not significantly different from zero at conventional levels for the 1-day or 11-day windows.

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Human Resource Management and Performance in the Banking Industry

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Although the majority of workers are employed in the service sector, most research on HRM practices examines the effects of practices on productivity and other performance outcomes in manufacturing industries, such as autos, steel, machine parts, and textiles (Ichniowski, Kochan, Levine, Olson, and Strauss 1996). This paper seeks to extend the analysis of the relation between HRM environments and establishment performance to the service sector by examining the retail branch operations of a large commercial U.S. bank. With the exception of Bartel (1998), no study has considered determinants of branch-level performance other than size. Our cross-section analysis finds a substantial positive relation between favorable employee perceptions and attitudes toward branch-level HRM practices and branch performance. While the cross-section nature of our current analysis leaves open the possibility that some omitted factor in fact underlies this result, we provide some evidence from case studies of branches for why this result may reflect a causal relationship between HRM practices and performance.

Getting Inside the "Black Box" of Bank Performance: Sample

Most of the literature on banking industry performance focuses on the effect of scale. Berger and Mester (1997) provide the only example of a study of other correlates of bank efficiency such as organizational form and

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governance, age of the bank, market characteristics, and state geographic restrictions on competition. They found that most of the variance in measured efficiency among 6,000 banks remained unexplained and suggested that the remaining variation in bank performance is due to unmeasured factors such as differences in management practices and ability; in short, the other sources of bank efficiency remained a “black box.”

To get inside this black box and to understand how internal management practices affect bank performance, we investigate retail bank branches. Much of a commercial bank’s activities occur at the branch level where the interactions between customers and a bank’s branch-level employees determine the nature and level of the customers’ business with the bank. The sample for our analysis is a set of the branches of a large U.S. commercial bank that operates in several states. The sample for this study is the set of all branches in the metropolitan area of the largest city in the bank’s home state in 1994, or a sample of 198 retail bank branches.

Measuring Bank Output

Over the past year we met with numerous financial and accounting managers and with several branch managers of our sample’s bank to discuss the best ways to measure branch performance. We learned that branches are evaluated on sales of their deposit and loan products, because growth in footings (the sum of deposits and loans) on a branch’s balance sheet translates into more spread income (profits earned on the product) and a greater financial contribution to the bank’s performance. Branch performance is therefore measured as net sales of deposits and loans during the year (i.e., the growth in total footings in the branch). In 1994 the average rate of footings growth for the 198 branches was 5.8%. The range in growth rate in footings extends from -33% to 53% with a standard deviation of 8%.

Determinants of Branch Performance

The general form for the branch-level performance model can be expressed

(1) $$SALES_{bt} = f(X_{bt}, L_{bt}, HRM_{bt}),$$

where SALES is net sales of deposits and loans, X measures nonlabor inputs including differences in market and location characteristics of the branches that affect sales, L is a measure of differences in productivity of branch workforces, and HRM measures differences in the HRM environments of the branches.

The vector X includes the following variables: population, number of households, per capita income, average household wealth, number of owner-occupied households, median value of housing, and median years of schooling completed for the population, the unemployment rate, and two measures of business activity—number of employees in all establishments and estimated sales in all establishments. These variables are measured at the level of the zip code as collected by the Claritas data service for the bank. The average age of the branch workforce is used to measure differences in the productivity of the workforce (L).

One approach to measuring branches' HRM environments would be to conduct case studies of the branches and interviews with employees in the branch. While we have visited several branches to understand the work environment, this approach is not feasible given the size of the sample with some 200 metropolitan branches and the preliminary stage of our analysis. As an alternative, we use data from the bank's employee attitude survey that measures employee perceptions about many aspects of the work environment.

The Appendix lists the specific survey questions that we use to measure the branches' HRM environments. These questions ask for employees' attitudes about compensation and performance evaluation, training and development, communication and information sharing, teamwork and continuous improvement activity, and employee-manager relations. Responses to the attitude survey questions range from 1, the most favorable response, to 5, the least favorable response. We identify survey responses for each branch's employees and calculate the mean value of the responses to the questions for each branch. Next to each question in the appendix, we report the average values for these branch-specific mean responses. These cross-branch averages range from 1.95 for the question about having enough information to do your job to 3.02 for the question about whether or not compensation decisions are consistent with performance.

Data and Results

The basic cross-section estimating equation is

$$\text{(2)} \qquad \text{Ln}(\text{SALES}_b) = a + b_1 X_b + b_2 L_b + b_3 \text{HRM}_b + u_{bt},$$

where SALES, X, L, and HRM are defined above.

Table 1 reports the coefficients on the attitude survey questions when equation (2) is estimated. This table reports coefficients from 18 separate regressions when the 18 different attitude survey questions listed in the Appendix are entered in turn as independent variables; we enter them separately because bivariate correlations among all pairs of attitude survey questions are high, ranging from .33 to .88. More favorable views about the branch HRM environment as reflected in *lower* scores for the attitude survey questions are always associated with higher values of the net sales variable.

TABLE 1

Effects of Employee Attitudes about HRM Environments on Branch Performance
Dependent Variable: Ln (Net Sales)[a]

EMPLOYEE PERFORMANCE AND REWARDS		TRAINING AND DEVELOPMENT	
1. JUDGE	-.0405**	11. INVEST	-.0151
	(.0166)		(.0137)
2. SERVICE	-.0233*	12. SATISF. TRN	-.0248*
	(.0124)		(.0138)
3. REWARD	-.0282**	13. COACH	-.0153
	(.0116)		(.0119)
4. COMP	-.0220*		
	(.0129)		
5. RECOG	-.0208**	INFO. AND COMMUNICATION	
	(.0102)	14. JOB INFO	-.0445**
			(.0175)
TEAMWORK AND CONTIN. IMPROVEMENT			
6. TEAM	-.0286**	15. LISTEN	-.0189
	(.0125)		(.0122)
7. COOPERATE	-.0272**	16. FEEDBACK	-.0216*
	(.0118)		(.0118)
8. SHARE	-.0229*		
	(.0135)		
		SUPERVISOR RELATIONSHIP	
9. IMPROVE	-.0259*	17. RESPECT	-.0153
	(.0151)		(.0099)
10. QUALITY	-.0239*	18. SATISF. SUPER.	-.0237**
	(.0137)		(.0108)

[a]Reported here are coefficients and standard errors from 18 separate regressions. The control variables in these regressions are total population, number of households, number of owner-occupied households, per capita income, house wealth, average education, unemployment rate, median housing value, total employees in area, total sales in area, and average age of branch employees.

Fourteen of the eighteen estimated coefficients are significant at conventional levels. Most coefficients range from -.020 to -.030. Standard deviations for the five-point attitude survey questions are typically about one-half point. Therefore, a one standard deviation improvement in branch employees' perceptions about HRM practices corresponds to about a one to one and one-half percentage point increase in the net sales performance measure, or some 17% to 25% of the average net sales of .058 in 1994.

The significant coefficients on the HRM measures in the net sales equations shown in Table 1 could reflect improvements in performance of workforces that are stimulated by a greater use of teamwork, information sharing, and employee development. Conversely, given the inherent limitations of cross-section models, the results could simply reflect the effect of some omitted branch-specific factor that leads to high levels of sales and more favorable employee attitudes about their branch's HRM environment.

Branch Visits

We are currently working to develop a longitudinal database on the HRM measures, performance measures, and control variables that will permit the estimation of models that control for branch-specific fixed effects in order to help sort out competing explanations for the empirical results shown in Table 1. However, we can offer additional insight about the nature of HRM policies and their relationships to economic performance from evidence we observed during visits we made to several branches in this sample. Specifically, we asked the bank headquarters to select four branches for us to visit, two in the city and two in the suburbs. Each pair was to consist of a branch that had excellent performance and one that had average performance, but at our request this information was not revealed to us prior to the actual visit. The comparison of urban Branch #1 and urban Branch #2 is illustrative of differences in HRM and performance that we observed.

The manager of Branch #1 had been with the branch for five years at the time of our visit. Sales were disappointing prior to her arrival. In response to low levels of walk-in business, the manager switched to a system of cold calling and required her personal and business bankers to log a certain number of visits and phone calls to potential clients. The manager herself took a hands-on approach to training her staff to do cold calling, often accompanying them on client visits. She established sales units (or teams) composed of a consumer banker, a business banker, and a teller; the teller's responsibility was to refer potential clients to her unit members. The manager promoted the team leader to the title of vice-president, a precedent for the bank. During our meeting the manager frequently excused herself to go out to the platform to work with the employees. At weekly staff meetings she reviewed the branch's performance, informed the employees of new products to sell, and acknowledged the contributions of good performers. Employees were also encouraged to learn multiple aspects of the business and to assist their colleagues; for example, the manager said she would tell her employees, "You are not allowed to say, 'It's not my job.'" A further team-building approach was the manager's invitation to the employees to join her in the basement of the branch three times a week at 5 p.m. for aerobics! After this visit we were not surprised to learn that this branch had shown 15%-18% revenue growth over the past few years, and this growth in revenue did not occur under the approach that had been in place prior to this manager's arrival.

In contrast, the manager at Branch #2 could not identify specific practices he had instituted in order to motivate his employees or to encourage them to work together. The excitement that was palpable in Branch #1 was clearly absent in Branch #2. We subsequently learned that Branch #2's recent annual revenue growth had been 5%-10%.

The main conclusion we drew from our branch visits was that real differences existed in the extent to which the two branches exhibited teamwork, employee development, information sharing, and rewards based on performance, and these differences appeared to stimulate worker behaviors that increased sales. We saw concrete examples at one branch of employee development (e.g., hands-on training to do the cold calling), more teamwork and information sharing (e.g., formation of teams with a teller, consumer banker, and business banker), and performance-related rewards (e.g., special promotion of a high performer to vice president) that were not in evidence at another nearby branch. The greater use of these multiple HRM practices was also correlated with higher levels of performance.

Next Steps

While the empirical results presented in this paper reflect the early stages of our analysis and are confined at this point to cross-section models, they suggest themes that are common to the existing studies conducted using data on manufacturing firms. First, strong positive correlations exist among these HRM practices (Ichniowski, Shaw, and Prennushi 1997). Employees in some branches say that their branches are characterized by high levels of teamwork and problem solving, clear links between performance and pay decisions, the level of training offered, and the extent of communication among employees; employees in other branches see little evidence of any of these HRM practices. Second, a strong cross-section relationship exists between branch performance and higher perceived levels of teamwork, performance-based pay, training, and communication in models that include an extensive set of controls for differences in the characteristics of the population and business activity in the local market area. Third, evidence from site visits suggests that branch managers can take actions that create real differences in the extent to which teamwork, performance-based rewards, training, and information sharing are characteristic of the branch and that these HRM differences can stimulate worker productivity.

Additional data collection and analysis that we have underway for this project will help investigate the relationship between the HRM environments of these branches and their economic performance. We are constructing a longitudinal database that will permit the estimation of models that control for branch-specific and manager-specific effects and are collecting more detailed measures of branch performance and measures of the branches' HRM environments through direct observation in more branch visits.

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Appendix

Attitude Survey Questions Administered to Bank Employees

Employee Performance and Rewards

1. I know the basis on which my performance will be judged. (JUDGE, mean = 1.99)
2. Service to the customer is an important part of the way my performance is measured. (SERVICE, mean = 2.34)
3. In my work unit, people who do a good job are rewarded more than those who don't. (REWARD, mean = 2.89)
4. Decisions about my compensation have been consistent with my performance. (COMP, mean = 3.02)
5. I am recognized for efforts to gain quality improvements. (RECOG, mean = 2.77)

Teamwork and Continuous Improvement

6. My manager/supervisor encourages teamwork among group members. (TEAM, mean = 1.99)
7. The people I work with cooperate to get the job done. (COOPERATE, mean = 2.17)
8. The people in my work group share their knowledge and experience when it can benefit others. (SHARE, mean = 2.04)
9. My manager/supervisor encourages continuous improvement. (IMPROVE, mean = 1.99)
10. Day-to-day decisions and activities in my work group demonstrate that quality is a top priority. (QUALITY, mean = 2.61)

Training and Development

11. The bank invests in the development of employees. (INVEST, mean = 2.45)
12. How satisfied are you with the training you receive for your current job? (SATISF.TRN, mean = 2.20)
13. My manager/supervisor provides coaching and/or guidance to help improve my performance. (SATISF.SUPER, mean = 2.01)

Information and Communication

14. I have enough information to do my job well. (JOB INFO, mean = 1.95)
15. My manager/supervisor listens to my ideas and concerns. (LISTEN, mean = 2.22)
16. I regularly get feedback from my supervisor/manager about my performance. (FEEDBACK, mean = 2.49)

Supervisor Relationship

17. My manager/supervisor respects his/her employees. (RESPECT, mean = 2.07)
18. Overall, how good a job do you feel is being done by your immediate supervisor/manager? (SATISF.SUPER, mean = 2.01)

Responses to question 12 are measured from 1 (very satisfied) to 5 (very dissatisfied). Question 18 is measured from 1 (very good) to 5 (very poor). For all other items, employee responses are measured on a scale from 1 (strongly agree) to 5 (strongly disagree).

Getting the Job Done: Inside the Production Functions of High-Involvement and Traditional Organizations

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Many recent studies document a positive relationship between systems of innovative human resource management (HRM) practices and a firm's economic performance (see Ichniowski et al. 1997). If innovative HRM practices do in fact increase productivity, then the work processes in innovative workplaces must be very different from those in more traditional workplaces. In this paper we examine this yet untested implication of the research on innovative HRM practices and economic performance. Specifically, we extend our previous research which documents large positive effects of innovative HRM systems on performance in a sample of technologically comparable steel finishing lines (Ichniowski, Shaw, and Prennushi 1997) by assembling a unique data set on the patterns of worker interactions in these very comparable production lines. We present preliminary empirical results on differences in how employees actually work in technologically comparable steel finishing lines that are managed under different sets of HRM practices.

Sample and Worker Surveys

In Ichniowski, Shaw, and Prennushi (1997), we analyze data from 36 steel finishing lines. That study identifies four different "HRM systems" with different degrees of innovative practices. At one extreme is the traditional

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HRM system that has no innovative practices, and at the other extreme is the high-performance work system that includes innovative and participatory work practices such as problem-solving teams, broad job design, performance-based compensation, careful recruiting, high levels of employee training, and extensive labor-management communication.

For this study, we sought to obtain new data from employees who work on lines at the low and high ends of this spectrum of innovation in HRM systems. We collected employee survey data at three lines in the high-HRM range (they are in the "high-performance" range because they have the majority of the innovative HRM practices on the line). We label the environment in these lines with these high-HRM practices as *involvement-oriented (or IO),* due to their aim of greater employee involvement. We also collected employee survey data at four other lines closer to the traditional end of the spectrum. In these lines, practices for labor-management communication are in place as our formal policies for work teams; however, little employee involvement in teams exists in these lines. In other respects, HRM practices in these lines parallel those found in traditional HRM systems. We refer to these lines as *control-oriented (or CO)* because they are run with more managerial control and less employee involvement. Therefore, the data for this study come from workers at seven finishing lines from our previous study, three IO lines and four CO lines.

At each finishing line, we surveyed all workers in the finishing line area, or about 90 workers at each line. Our survey presents the respondent with a list of all other personnel with responsibilities for running or managing the line or with other responsibilities related to the day-to-day activities of the production unit. Respondents identify the names of the people with whom they typically communicate about three different topics: operation-related issues, customer-related issues, and work routines. The respondents also indicate the frequency of their interactions on these topics as either "daily," "weekly," or "monthly or less." Respondents could also indicate that they communicated with others who were outside the finishing line area (and thus we did not have survey responses from the outsiders). We aggregated these responses into "other" categories.

Measures of Employee Networks at the Workplace

We use the data from these surveys to map out the nature of employee "networks" at the different finishing lines. The purpose of the network statistics described below is to measure two things: the volume of direct "ties" (i.e., the number of network connections between one worker and another) and the quality of these ties (or the degree to which a worker is connected directly or indirectly to well-informed people). We focus on three network measures:

1. *Degree centrality* measures the sheer volume of communications each person undertakes. It is the number of people that the worker talks to (directly) divided by the total number of people in the mill.
2. *Information centrality* goes beyond the degree centrality measure by incorporating the volume of short indirect ties the individual has. This measure takes all paths from individual "i" to all others and weights them by the distance to the other "j" people, where shorter distances have bigger weights. Thus direct ties, used to calculate degree centrality, are the shortest paths and receive higher weights than indirect paths.
3. *Eigenvector centrality* measures whether individual "i" communicates with others who are central (i.e., well-connected) in the communications network. To describe the calculation of eigenvector centrality, think of the following iterative calculation. First, the degree is calculated for all individuals for each link, called e_{ij}. Second, for each individual "i," his direct links to others are weighted by the magnitude of direct links of person "j" (or e_{ijk}), and e_{ij} is updated. This second step is repeated with continuous updating of e_{ij} until the measure converges.

For a detailed description of these measures and the formulas used to calculate them, see Borgatti, Everett, and Freeman (1996). However, an intuitive description of what these measures capture is helpful. Degree centrality measures the volume of direct ties. Information centrality measures the volume of close indirect ties as well. Information centrality can be thought of as measuring the probability that when a message is sent by person "j," it will be correctly received by individual "i" because the distance between "i" and "j" is relatively long or short. Eigenvector centrality measures whether the individual has ties to others who are themselves prominent or well-connected in the communications network. For example, eigenvector centrality will be high if individual "i" has a direct link to an area manager who has many direct links to a wide variety of people.

Furthermore, increases in the values of information or eigenvector centrality also imply that production workers are communicating more with (or have close access to) people outside their production crew. If production workers simply talk to members of their own crew, degree would be greater, but the other two measures would not be. For example, eigenvector centrality would not have high values in this case because the production workers would only be connected to their own crew members and would not be linked to anyone who was particularly prominent or central to the communications network of the finishing line.

Empirical Results

Using the data and network statistics described in the last two sections, we test the following two hypotheses about differences in how work gets done in IO and CO lines:

H1: In involvement-oriented lines, production workers communicate much more on operating issues.

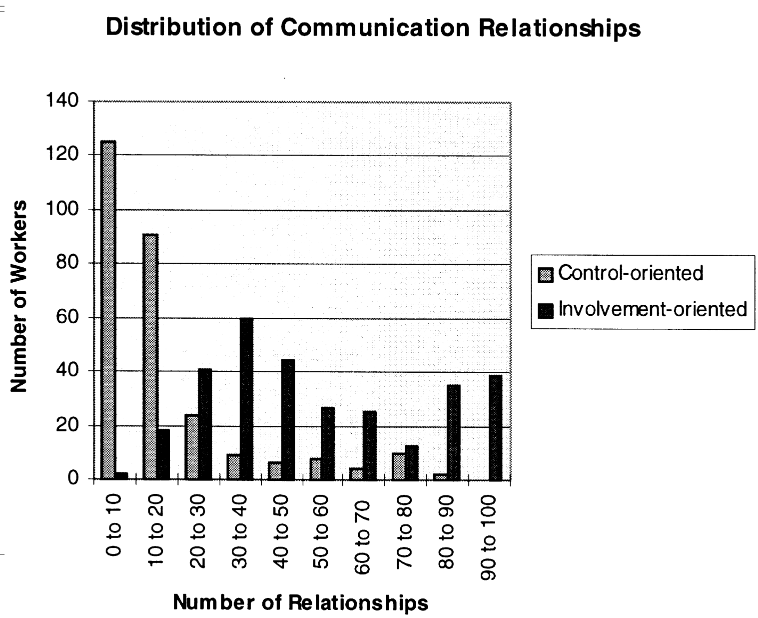
H2: In involvement-oriented lines, production workers are more likely to communicate with a broader range of valuable employees, such as members of other crews, staff, and management.

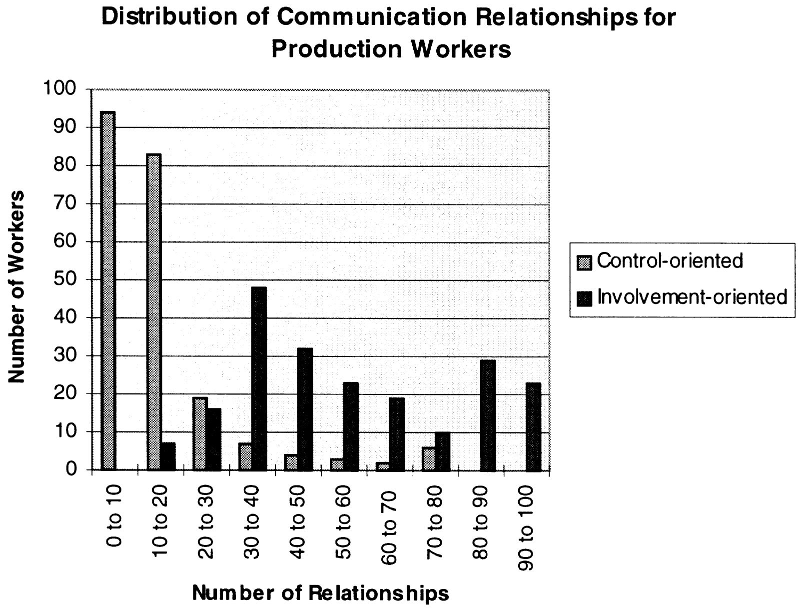
Testing Hypothesis 1. Figures 1a (for all workers) and 1b (for production workers only) provide histograms of the distributions of degree centrality (i.e., the number of direct ties) for all individuals and show the first evidence supporting hypothesis 1. The results are quite striking. For the CO lines, the median worker has only 0 to 10 direct ties, but for the IO lines, the median worker has 30 to 40 direct ties. We also examine the data separately for the three different communications topics (customer-related, operations-related, and work routines) and for "strong" ties (contacts that

FIGURE 1a

The Distribution of Ties for All Workers

The graph shows that the CO lines have quite a different distribution than the IO lines. Of the CO employees, 75% have 30 or less relationships, while 75% of the IO have 70 or less relationships.





occur daily or weekly) versus "weak" ties (contacts that occur monthly or less). The average number of ties per worker in IO lines is always more than double the average number of ties per worker in CO lines for all communication topics and for ties of any strength.

We also investigated mean differences in degree centrality between IO and CO lines by the position of the worker—for production workers, managers, nonproduction staff employees, and foremen (also called team leaders in IO lines). Large differences in the number of weak ties exist for all positions. For strong ties, the differences across IO and CO lines are relatively small for managers, nonproduction staff, and foremen/team leaders, but for production workers, the number of daily or weekly contacts is nearly three times greater in IO lines than in CO lines.

Table 1 summarizes these data on degree centrality using OLS regressions that test for significance levels. The sample for the regressions in columns 2-4 includes three observations for each of the approximately 580 workers we surveyed (one each for the communications about customers, operations, and work routines), or 1736 to 1737 observations. The first column of "all ties" stacks the data in the next three columns (for all ties, strong, and weak ties), so column 1 has a sample of 5210 observations. None of the columns have constant terms, and thus each column contains dummies for the four positions occupied by employees—production, management, staff, and foremen. The last three columns contain additional dummies for the types of communications.

TABLE 1
Regression Results for Degree Centrality

Dependent Variable	DEGREE CENTRALITY (Normalized)			
		With Controls for Communication Topic		
(Column Number)	No Controls (1)	All Ties (2)	Strong Ties (3)	Weak Ties (4)
Production workers	7.211***	8.958***	1.427***	5.266***
	(0.428)	(1.118)	(0.301)	(0.876)
Managers	6.888***	14.240***	2.231***	7.601***
	(0.752)	(2.025)	(0.546)	(1.587)
Nonproduction staff	3.976***	19.143***	2.522*	20.585***
	(1.175)	(5.139)	(1.382)	(4.028)
Foremen/team leaders	15.832***	22.607***	7.805***	5.021
	(1.485)	(4.146)	(1.115)	(3.250)
Involvement-oriented HRM practices	19.339***			
	(0.567)			
Conditional Effect of Involvement-oriented HRM Practices on Positions@				
Production workers		35.701***	6.825***	19.825***
		(1.206)	(0.325)	(0.946)
Managers		24.150***	0.855	19.617***
		(2.561)	(0.689)	(2.005)
Nonproduction staff		13.492**	1.240	2.914
		(5.530)	(1.487)	(4.334)
Foremen/team leaders		34.284***	4.512***	28.364***
		(5.439)	(1.463)	(4.263)
R-square	0.496	0.720	0.582	0.576
N	5210	1737	1736	1737

Notes to table:

*** –Significant at the .01 level
** –Significant at the .05 level
* –Significant at the .10 level

1. Column 1 shows OLS model without controls for communication topic and strength of ties.
2. Columns 2-4 include 2 dummy variables for type of communication topic.

@ The coefficients reported below this line are from interactions between the worker-type dummies and the IO dummy variable.

In column 1, the coefficient on the IO dummy variable indicates that workers at IO lines on average have 19% more ties per worker than do CO workers—a difference that is significant at conventional levels. The columns 2-4 models report results for separate regressions for all ties, strong ties, and weak ties and allow the effect of the IO HRM practices to be different for the different worker positions. Coefficients on the IO*position interaction terms show that the effect of IO on strong ties is most pronounced for production workers and foremen/team leaders. While the coefficient on the production worker dummy is 1.4, IO production workers have strong ties with another 6.8% of their workforces. Coefficients on the IO*position interaction terms are insignificant for the manager and nonproduction staff positions. The column 4 results also show that large positive differences exist in the number of weak ties that workers have in IO lines regardless of position.

Testing Hypothesis 2. To test the second hypothesis that production workers are more likely to communicate with a broader range of well-connected employees in IO lines than in CO lines, we examine the information and eigenvector centrality measures. These two measures are considerably higher in IO lines than in CO lines, regardless of the topic of communication. The average value of the information centrality measure for the sample of IO workers is more than twice than it is for the sample of CO workers for customer and operations topics. The mean values for eigenvector centrality are about 50% greater for these topics among IO workers. The biggest differences in these two measures between workers in IO and CO lines are for production workers.

Regression results in Tables 2 and 3 strongly confirm the finding based on differences in means that production workers gain the most from IO. The IO*position interaction terms show that information and eigenvector centrality are significantly greater for all positions for both weak and strong ties with the lone exception of strong ties for nonproduction staff.

Finally, we examine the distribution of ties for production workers in more detail. The average production worker in an IO line has 5.42 times more direct ties with nonproduction staff, 1.80 times more ties with foremen/team leaders, and 1.38 times more ties with line managers than does the average CO production worker. The average number of ties from production worker to production worker is about 2.20 times greater in IO than CO lines. For CO lines, these intraproduction worker ties are almost exclusively to workers in their own crews, or 89% of all intraproduction worker ties. In IO lines, production workers communicate to more production workers outside their own crews. In IO (CO) lines, the percentage of production worker ties to production workers in other crews is 20% (3%), to maintenance workers is 4% (2%), and to material handlers is 12% (6%). IO production workers have more communications with other production workers, and a larger proportion of these intraproduction worker ties are to production workers outside their own crews.

TABLE 2
Regression Results for Information Centrality

Dependent Variable	INFORMATION CENTRALITY			
		With Controls for Communication Topic		
(Column Number)	No Controls (1)	All Ties (2)	Strong Ties (3)	Weak Ties (4)
Production workers	1.618***	1.433***	0.161***	1.125***
	(0.089)	(0.237)	(0.011)	(0.087)
Managers	1.623***	1.161***	0.115***	1.090***
	(0.156)	(0.429)	(0.019)	(0.157)
Nonproduction staff	0.644**	2.525***	0.263***	1.291***
	(0.244)	(1.088)	(0.048)	(0.399)
Foremen/team leaders	2.002***	2.123***	0.189***	1.154***
	(0.309)	(0.877)	(0.039)	(0.322)
Involvement-oriented HRM practices	2.495***			
	(0.118)			
Conditional Effect of Involvement-oriented HRM Practices on Positions				
Production workers		5.466***	0.247***	1.830***
		(0.255)	(0.011)	(0.094)
Managers		5.719***	0.147***	2.333***
		(0.542)	(0.024)	(0.199)
Nonproduction staff		1.648	0.082	0.738**
		(1.170)	(0.052)	(0.430)
Foremen/team leaders		5.251***	0.240***	2.048***
		(1.151)	(0.051)	(0.423)
R-square	0.360	0.720	0.816	0.618
N	5210	1737	1736	1737

Notes to table:

*** –Significant at the .01 level
** –Significant at the .05 level
* –Significant at the .10 level

1. Column 1 shows OLS model without controls for communication topic and strength of relationship.
2. Columns 2-4 are OLS models with 2 dummies for communication topic.

Conclusion

In this paper we analyze a unique data set on patterns of worker interactions in seven technologically similar steel finishing lines. We find that the typical worker on an involvement-oriented (IO) line communicates far more than does the typical worker on a control-oriented (CO) line. IO workers also communicate with a much greater range of nonproduction

TABLE 3
Regression Results for Eigenvector Centrality

Dependent Variable	EIGENVECTOR CENTRALITY (Normalized)			
		With Controls for Communication Topic		
(Column Number)	No Controls (1)	All Ties (2)	Strong Ties (3)	Weak Ties (4)
Production workers	8.343***	8.434***	5.423***	8.764***
	(0.177)	(0.320)	(0.518)	(0.367)
Managers	7.616***	12.572***	5.934***	11.232***
	(0.310)	(0.580)	(0.942)	(0.664)
Nonproduction staff	5.506***	10.068***	4.668**	15.405***
	(0.485)	(1.471)	(2.383)	(1.685)
Foremen/team leaders	12.268***	15.921***	13.909***	7.875***
	(0.613)	(1.187)	(1.922)	(1.359)
Involvement-oriented HRM practices	4.482***			
	(0.234)			
Conditional Effect of Involvement-oriented HRM Practices on Positions				
Production workers		6.088**	6.888***	4.513***
		(0.345)	(0.560)	(0.396)
Managers		-0.154	-2.278*	2.391***
		(0.733)	(1.188)	(0.839)
Nonproduction staff		1.320	-1.803	-2.676
		(1.583)	(2.564)	(1.813)
Foremen/team leaders		1.010	2.215	6.346***
		(1.557)	(2.522)	(1.783)
R-square	0.629	0.792	0.470	0.732
N	5210	1737	1736	1737

Notes to table:

*** –Significant at the .01 level
** –Significant at the .05 level
* –Significant at the .10 level

1. Column 1 shows OLS model without controls for communication topic and strength of relationship.
2. Columns 2-4 contain 2 dummy variables for communication topic.

workers and a wider variety of production workers. These results suggest that production workers are doing their jobs quite differently on IO lines—that they are communicating and interacting more with coworkers (Appelbaum and Baum [1998] reach similar conclusions). Thus these results suggest that the production functions of innovative-HRM lines do differ considerably from the production functions of traditional lines, and these differences would account in part for the greater performance levels of the more innovative HRM lines.

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Information Technology and Training in Emergency Call Centers

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This paper is motivated by the question of whether information technology (IT) increases or decreases the returns to skill and training, particularly in the service sector. To address this question, we examine the empirical patterns of IT and human resource practice adoption in a particular type of telephone customer service organization, the emergency call center.

Emergency call centers, typically accessed in the U.S. by dialing 911, serve as the first point of contact between an emergency victim and the local police, fire, and health infrastructure. For every telephone call received, a telecommunicator determines the nature of the emergency and the location of the caller and then assists in the dispatch of appropriate emergency services. A number of new technologies have become available in recent years. The 1990s saw widespread adoption of computerized "enhanced 911" (E911) systems that automatically identify a caller's location. In earlier research we found that the adoption of E911 increases productivity by decreasing response time to emergencies and that lower response time leads to lower mortality rates from heart attacks (Athey and Stern 1998a).

This paper extends the scope of our previous analysis to include human resource practices. We focus on three distinct practices affecting training and skill: hiring and screening requirements, total hours of employer-sponsored training, and the adoption of a specific training system known as Emergency Medical Dispatch (EMD) training. We present empirical evidence about the interaction between 911 technology adoption and the use of these human resource practices. Our results suggest that E911 technology is positively related to total training and EMD training and unrelated to hiring requirements.

IT and Training in Emergency Call Centers

Emergency call centers usually serve a political entity such as a county or town; this paper focuses on call centers that provide service for an entire county, and we take the geographic area and population served by a given

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call center as exogenous. The call centers are operated as a public service, usually funded by a combination of state and local subsidies and telephone system taxes, and they are loosely regulated by state government. Call centers vary widely in their use of technology. In some communities, local police and fire departments are reached by calling an operator to obtain the 7-digit telephone number and then contacting the agency directly. In other areas, “basic 911” technology allows callers to use the universal telephone number 911. In both cases, once the call is received, the telecommunicator verbally ascertains the address of the caller as well as any necessary directions. Armed with a map and a pencil, the telecommunicator locates the address, and the service is dispatched. In rural areas or areas with incomplete or unsystematic addressing, this method is error-prone, and crucial minutes may be lost trying to direct emergency services to the scene. Recently, advances in IT have enabled more sophisticated options. E911 systems link digital information about the source of the call with a detailed address database maintained by the call center. The telecommunicator then views the caller’s address and location on a computer screen as the call is received. Even more advanced alternatives are available, including computer-aided dispatching and geographic positioning systems. We will refer to this complete system as “high-tech E911.”

Call centers also face a variety of human resource alternatives. During the early years of emergency call centers (and even today in smaller centers), call taking typically was assigned to untrained police officers or firemen, sometimes as alternative duty for injured personnel or as an informal sanction for weak job performance (Pivetta 1995:61). Over time, the job has been reassigned to lower-wage, nonuniform personnel. Initially, these workers received little training, and anecdotal evidence suggests that the systems suffered from low productivity and high rates of turnover. In response, some call centers increased their levels of training, and many states have adopted standards for training and certification of telecommunicators.

During the 1990s there has also been an increase in the adoption of a specific type of training program, EMD. EMD training programs teach call takers how to gather and use information about medical emergencies. The EMD system utilizes preprinted cards to guide telecommunicators through the process of providing prearrival instructions to callers about a variety of emergency conditions. Further, medical information obtained from the caller can be used to prioritize the demands for limited ambulance and paramedical resources. EMD training typically takes about 40 hours, and it is usually provided by one of several private vendors.

Both advanced technology and human resource practices contribute to the various performance goals of emergency call centers. They have a direct effect by reducing response times to emergencies, which in turn improve outcomes. EMD training may also have other benefits, including improved allocation of ambulances and a direct effect on health.

An immediate question arises as to whether elements of the human resource environment and E911 technology interact in affecting productivity (whether measured narrowly as response time or more broadly as health outcomes). Clearly, the optimal training and skill requirements for workers are different depending on the level of 911 technology. First, a minimal level of computer-specific training is required just to use an E911 system, and thus we expect to see increases in at least some types of training in response to E911 adoption. Second, two of the primary responsibilities of telecommunicators in the older systems, gathering address information and identifying the caller's precise location, are automated with E911. As a result, E911 may make it possible to eliminate the requirement for training or skill beyond the minimum necessary to operate the computer. On the other hand, E911 frees time and mental resources for both the call taker and the caller. The telecommunicator can potentially use that time to gather information to be used to decide how to allocate ambulance resources as well as to provide medical instructions until the ambulance arrives. Consequently, E911 might be a complement to training programs that improve worker decision making such as EMD.

There are two natural approaches available for empirically analyzing the interaction between technology and human resource practices. One approach hinges on the insight that if technology and training are complementary in production, then call centers adopting higher levels of technology will find it more attractive to use more training. Thus complementarity provides support for a positive correlation between the adoption of technology and the adoption of specific human resource practices. Of course, a finding of positive correlation can typically also be attributed to positive correlation in the unobserved costs or benefits of adoption; thus it is particularly useful to identify exogenous variables, such as state regulations, that directly affect the adoption of one choice but not the other.

A second approach is to examine productivity directly. In Athey and Stern (1998a), we take an initial step in this direction, focused on the impact of technology. In that work, we examined the impact of a more advanced level of 911 on response time using a unique, detailed data set composed of cardiac emergencies requiring ambulance services in the state of Pennsylvania in 1995. After carefully controlling for patient severity and other factors, we found that counties with advanced levels of 911 arrive at the scene of the incident 8%-10% faster. Further, in the four counties that increased their 911 level over the course of the year, the response time reductions were even more pronounced. Extending such an analysis to evaluate the interaction between human resource elements and technology poses a variety of challenges, both for consistent estimation (Athey and Stern 1998b) and for measurement (training data has not yet been collected for this sample, and we further expect that it may be difficult to discern the subtle effects of EMD on health outcomes). Leaving a full productivity analysis of the interaction between training and technology to future work, we now turn to evidence regarding adoption.

Adoption of 911 Technology and Training: Evidence from a National Cross Section

This section explores the patterns of adoption of E911 and training in a cross section of U.S. counties in 1995. The primary source of data is a national survey about IT and training undertaken by the National Emergency Number Association (NENA) in 1995. We focus on the subset of 803 call centers that responded fully to the survey and reported serving as the primary call center for a countywide geographic area. We then link these data to county-level demographic variables from the City and County Data Book. A final information source is a survey of state training regulations undertaken by NENA in 1996. This survey identified ten states beginning at the latest in 1995 that required all telecommunicators to undergo state-certified training; one state mandated EMD training for certification. Further, ten states had minimum skill standards such as high school diplomas for telecommunicator certification. Table 1 summarizes our results about training and technology adoption.

The first column of Table 1 confirms that systems with higher levels of 911 are associated with higher levels of training, as would be consistent with complementarity between training and technology. Further, training hours are higher in the single state that mandated EMD training for all telecommunicators. State skill requirements do not affect training. It is more difficult to interpret the finding that training is lower in states which mandate state-certified training. While open to interpretation, this result may reflect a greater efficiency in formal, centralized training programs; it may also represent some sort of selection effect (for example, training standards may have been instituted in laggard states).

The first column of Table 1 also highlights a variety of additional factors that affect the choice about how much initial training to provide. As some fixed costs are required to set up and implement a training program, we expect some economies of scale; Table 1 shows that training is increasing in call volume. Higher levels of income and overall police and fire expenditures also increase the level of training. Finally, we find that when a higher

TABLE 1

Training and 911 Technology Adoption in U.S. Counties in 1995

Procedure	OLS		Ordered Probit		Instrumental Variables	
Dependent Variable	Ln (Hours of Initial Training)		Level of 911 Technology (0 = No 911, 1 = Basic 911, 2 = Low-tech E911, 3 = High-tech E911)		High-tech 911 (D) (0 = No 911, Basic 911, or Low-tech E911, 1 = High-tech E911)	
Basic 911 (D)	.272	(.186)				
"Low-tech" E911 (D)	.315	(.180)				
"High-tech" E911 (D)	.469	(.179)				
LN (initial training)			.121	(.041)	.146	(.097)
Min. skill required (D)	.027	(.096)	-.009	(.104)	.009	(.039)
St. train cert. required (D)	-.302	(.088)				
EMD required (D)	.674	(.319)				
LN (call volume)	.102	(.028)	.178	(.032)	.055	(.017)
Ln (population density)	-.006	(.039)	.206	(.043)	.050	(.017)
Ln (per-capita income)	.546	(.214)	.134	(.250)	.123	(.116)
Ln (police & fire expend.)	.068	(.042)	-.043	(.048)	-.005	(.020)
% fire expenditure	.632	(.326)	-.376	(.375)	-.119	(.157)
Regression statitics (N = 802)	$R^2 = .23$		Pseudo $R^2 = .12$			

Notes: (D) indicates a dummy variable. Instruments in column 3 are state training regulations, including certification requirements and EMD requirements.

fraction of the (combined) police and fire budget is allocated to fire, training increases. Interviews with industry participants suggest that police departments often object to high levels of specialized training, since this may imply a loss of control for the department as well as a loss of employment for injured or disabled police officers.

The second column of Table 1 presents an ordered probit regression of the level of technology. Again, the level of technology is positively related to hours of initial training. It is unrelated to minimum skill requirements for state certification. As with training, technology is strongly related to call volume, indicating a scale economy.

Our evidence in the first two columns of Table 1 is suggestive of complementarity between technology and training, and we believe that the controls included in the first regression capture some of the most important factors driving adoption. However, we still cannot rule out the possibility that an unobserved factor might affect both choices. For example, industry participants report that because the process of adopting advanced technologies and training requires significant (and often unrewarded) effort on the part of government employees, the motivation and skills of the call center director may increase the level of training as well as the level of technology. In order to account for this problem, the third column of Table 1 presents an instrumental variables (IV) regression. We focus on the relationship between training and high-tech E911, the strongest technology-training relationship, both theoretically and as pairwise correlates in this sample. We use a variety of state training regulations as instruments for the level of training; thus we are assuming that state regulation of training is uncorrelated with the unexplained component of technology adoption. We find that training and the adoption of high-tech E911 are positively correlated, although the relationship is significant only at just below the 10% level. By way of comparison, an OLS regression with the same specification yields a coefficient on initial training of .039 with a standard error of .015.

Taken together, the evidence suggests that there is a positive relationship between training and the use of IT in emergency call centers. Although we interpret our findings as preliminary, they do appear to refute the hypothesis that the automation brought about by E911 adoption has had economically significant "deskilling" effects in emergency call centers.

The Adoption of 911 Technology and EMD Training: Evidence from North Carolina

A limitation of our empirical analysis of U.S. counties is that we cannot distinguish between different types of training, which may be important since (as discussed above) different types of training may have different relationships with 911 technology. In particular, it is interesting to discover whether all of the increase in training concerns the use of computers or whether qualitatively new skills are required. Thus we now turn to a data set which allows us to link technology adoption to EMD training. We take advantage of a survey administered by the North Carolina Office of Emergency Medical Services in both 1992 and 1995. The survey includes county-level information about 911 technology and whether the county has adopted an EMD system. The response rate was fairly high: information is available for about 93 counties in 1992 and 99 counties in 1995, out of 103 counties. The survey is linked to demographic information from publicly available data sets, including the City and County Data Book and the Census of Governments.

For each year, we divide the sample according to the level of technology provided by the county and whether the county has adopted EMD training. Table 2 reports the means of several variables conditional on this division and highlights three main findings. First, higher levels of technology and EMD training are observed in 1995 than 1992, consistent with the fact that both technology and training options diffused nationwide during the 1990s. Second, counties with E911 are more likely to also have implemented an EMD program. For example, while overall only 13% of counties had EMD in 1992, 24% of the counties with E911 had EMD. The positive relationship is weaker in 1995 but still present. Moreover, out of 8 counties that switched from no 911 to E911, 3 adopted EMD at the same time; only 8 of the remaining 83 counties adopted EMD during this time period. This suggests that implementation of new technology (and in particular, drastic increases in technology) may induce investment in the training program or vice versa. Third, some of the positive covariation seems to be explained by common driving forces, such as population and overall fire and police expenditures. We explored the relationship further using multivariate regressions, controlling for the same demographic variables considered in the last section (these regressions are not reported). We find that a significant positive correlation remains between technology adoption and training in 1992, while the correlation stays positive but becomes insignificant in the 1995 cross section. Taken together, these results are consistent with the hypothesis that E911 technology increases the returns to skill and training. Of course, an instrumental variables analysis using a larger data set might be more definitive.

TABLE 2
Demographic Conditional Means for North Carolina Data—By Year

1992				
EMD		911 Level		
Training		None (26%)	Basic (34%)	Enhanced (40%)
NO (87%)	Number of counties	23	30	28
	Population (000s)	40.6	43.0	102.2
	Fire & police exp. ($ mils)	2.2	2.5	7.9
YES (13%)	Number of counties	1	2	9
	Population (000s)	56.1	62.2	146.5
	Fire & police exp. ($ mils)	3.4	3.2	12.7

1995				
EMD		911 Level		
Training		None (6%)	Basic (35%)	Enhanced (59%)
NO (78%)	Number of counties	6	29	41
	Population (000s)	19.8	39.4	69.1
	Fire & police exp. ($ mils)	0.8	2.3	4.5
YES (22%)	Number of counties	0	5	16
	Population (000s)		64.0	140.9
	Fire & police exp. ($ mils)		4.1	12.6

Conclusion

Emergency call centers (and telephone customer service centers more generally) provide a rich empirical setting in which to gain additional insight into both the determinants of adoption of human resource practices and technology and the effects of adoption on service sector productivity. Our results about adoption suggest that advances in IT have coincided with increases in training, in particular in the use of cognitively demanding training programs such as EMD. However, direct measurement of the effects of these practices on productivity awaits future research.

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IV. THE IMPACT OF HEALTH CARE REFORM ON LABOR-MANAGEMENT RELATIONS IN THE HEALTH CARE INDUSTRY

Health Care Reform's Impact on Hospitals: Implications for Union Organizing

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Market-based reforms are rapidly changing the landscape of the American health care system (A.H.A. 1996; Pindus and Greiner 1997). Over the last decade, a great deal of attention has been paid to these reforms, especially the advent and rapid growth of managed care and the vertical and horizontal integration of provider institutions. The ramifications of these changes on both individual and institutional consumers has also been widely considered by scholars and policymakers. Yet, even though these market reforms are driving the massive restructuring of work in hospitals and other health care organizations, comparatively little attention has been paid to the impact these changes have on health care employees and their work environment.

This paper reports the results of an exploratory study examining the relationship between health care market reforms, nurses' perceptions of the climate for patient care in hospital settings, and nurses' interest in union representation. A model is proposed to help explain nurses' support for union representation in the presence of market-based reforms.

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Health Care Market Reform

Over the last decade, market-driven health care reform has touched virtually every aspect of the health care system. Probably no single aspect of reform has had a more profound effect than the proliferation of managed care. Managed care is an insurance-based approach to the delivery of health care services that includes a number of cost-control strategies such as prepayment arrangements and preadmission authorizations. These strategies are usually administered by health maintenance organizations (Zerwekh and Claborn 1997).

Hospitals and health care systems have also engaged in widespread mergers and consolidations in an effort to take advantage of economies of scale and strengthen their positions in the health care marketplace. In 1994, for example, 10% of hospitals were involved in some type of merger or consolidation (Lutz 1994).

In part as a result of the pressures of managed care and mergers, many hospitals have restructured nurses' jobs by reducing the number of nurses, increasing workloads, and expanding nurses' responsibilities (Greiner 1996; Shindul-Rothschild et al. 1996). In many instances nurses have been replaced with less qualified and less expensive personnel, such as aides and licensed practical nurses. At the same time, the remaining nurses have seen their responsibility for supervising such employees increase dramatically.

All of these reforms have two primary goals in common—reducing the cost and increasing the efficiency of health care services (A.H.A. 1996). Not surprisingly, these changes have been accompanied by a growing number of public complaints and protests by health care employees who contend that the changes have greatly increased their job stress. They argue that these reforms ultimately make it impossible for health care workers to provide appropriate care. A front-page story in *The New York Times*, for example, quoted nurses as describing their work under managed care as "hit-and-run nursing" that leads to "mistakes, abuses, and oversights" (Kilborn 1998:A1).

In addition to substantial anecdotal evidence that market-based reforms have a negative impact on the health care workplace, some exploratory research on this issue reaches the same conclusions. A 1997 study by Armstrong-Stassen et al. concluded that being involved in a merger had a negative impact on hospital nurses' perception of their work environment. Specifically, nurses in hospitals that had undergone a merger reported a heightened fear of job loss and reduced satisfaction with their nursing careers. A second study by Davidson et al. (1997) found that downsizing, cost containment measures, and job restructuring had a negative effect on most aspects of hospital nurses' job satisfaction.

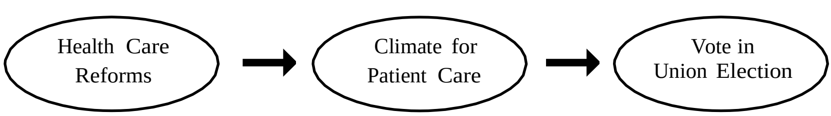
Based on this evidence, we hypothesized that market-based health care reforms would be negatively associated with nurses' perceptions of the climate for patient care in hospitals (i.e., the perceptions of nurses who have experienced such reforms would be more negative than those who had not experienced reform). Climate for patient care is a construct that was developed specifically for this study. It is comprised of several attitudinal dimensions, including perceptions of voice in the workplace, bureaucracy, paperwork, administrative support, and staffing.

Secondly, we hypothesized that climate for patient care would be negatively related to nurses' inclination to vote for a union in a representation election (i.e., the more negative the perception of the climate, the more likely the nurse would vote for a union). This hypothesis is based on a substantial body of literature tying intrinsic job satisfaction (including control or power over work and working conditions, feelings of achievement, and influence over work outcomes) to an individual's propensity to vote for union representation (Bigoness 1978; Lawler and Walker 1984).

This hypothesis is also tied to the occupational characteristics of the nursing profession. Nurses are socialized to be selfless caregivers and advocates for the patient's well-being (Zerwekh and Claborn 1997). This aspect of the profession significantly increases the relative importance of intrinsic versus extrinsic considerations in nurses' evaluation of their employment situation. We contend that this ordering of priorities extends to the decision to vote for a union in a representation election.

These two hypotheses suggest a partial model for explaining nurse behavior in representation elections where the nurses' workplace has been impacted by market-based health care reforms. The model suggests that reforms have a positive impact on nurses' inclination to vote for a union. The key to the relationship between these two "actions" is the intervening psychological process in which nurses evaluate the impact that reforms have on climate for patient care in their workplace. This model, with climate serving as a key intervening variable, is depicted in Figure 1.

FIGURE 1



Methodology

Data for this study were gathered in a March 1998 survey of registered nurses employed in Pennsylvania hospitals. The survey instrument included questions addressing nurses' perceptions of the climate for patient care, their experience with health care reform, and their attitudes towards unions.

The climate section of the survey consisted of 41 items drawn from the relevant literature in nursing and health policy and from the results of focus groups conducted with working nurses. Five response alternatives were provided for these items ranging from strongly disagree (1) to strongly agree (5). The reform section consisted of two questions asking whether the respondent's hospital had been involved in a merger with another hospital or hospital group and whether jobs in the respondent's hospital had been restructured in any significant way over the last five years. Respondents were also asked questions concerning their attitudes towards unions, including whether they would vote for a union if an election were held in their workplace.

The survey was mailed to 1500 nurses randomly selected from Penn State's nursing alumni group and Penn State's Extended R.N. to B.S.N. Degree Program. The alumni group consists of B.S.N. and M.S.N. graduates of Penn State's School of Nursing. The Extended Degree Program list includes mostly working registered nurses engaged in part-time undergraduate study at Penn State. Of the 1,500 surveys distributed, 505 were returned, and 483 of these were fully completed for a final return rate of 32%.

Analysis and Results

Based on exploratory factor analyses and reliability analyses, a multidimensional measure of climate for patient care consisting of 25 items was developed. The measure included 5 factors of 5 items each: voice (a = .90), administrative support (a = .92), staffing (a = .91), paperwork (a = .86), and bureaucracy (a = .85).

Correlation analysis was employed to test the hypothesis that market-based health care reforms are negatively associated with nurses' perceptions of the climate for patient care in hospitals. The correlation results suggest that a statistically significant negative relationship exists between both experience with a hospital merger and the restructuring of nurses' jobs and nurses' perceptions of climate for patient care. The correlation coefficient was -.16 (.001 level of significance, n = 496) for the relationship between mergers and climate and -.16 (.001, n = 487) for the relationship between restructuring and climate. The contingency tables presented in Table 1 clearly indicate that nurses who have been involved in either of these two aspects of reform have more negative perceptions of the climate in their hospitals than do nurses who have not experienced these reforms. This analysis cannot statistically determine causation. However, as involvement with a merger or job restructuring is not voluntary, logically it would appear that involvement in reform influences perception of climate.

TABLE 1
Contingency Tables: Climate for Patient Care and Involvement in Mergers and Restructuring

	Report *Negative Climate*[a]	Report *Positive Climate*[b]	*Total*
Merger			
Involved in:	166 (60%)	112 (40%)	278
Not involved in:	93 (47%)	106 (53%)	199
TOTAL	295	218	
Restructuring			
Involved in:	217 (57%)	161 (43%)	378
Not involved in:	38 (42%)	52 (58%)	90
TOTAL	255	213	

[a]Negative climate—mean < 3 [b]Positive climate—mean > 3

Correlation analysis was also used to test the hypothesis that climate for patient care is negatively related to nurses' inclination to vote for a union in a representation election. The correlation coefficient was -.37 (.001, n = 460), again supporting the hypothesis. The contingency table (Table 2) demonstrates that nurses with a negative perception of climate are more likely to vote for the union. Again, this analysis cannot definitively determine causation. However, it appears more plausible that a nurse's perception of climate would influence her decision to vote for or against a union than that her decision to vote would influence her perception of climate.

TABLE 2
Contingency Tables: Climate for Patient Care and Inclination to Vote for a Union

	Vote for a Union		
	Yes	No	Total
Report Negative Climate[a]	150 (62%)	91 (38%)	241
Report Positive Climate[b]	58 (28%)	143 (72%)	199
TOTAL	295	218	

[a]Negative climate—mean < 3 [b]Positive climate—mean > 3

Implications

This exploratory study provides empirical evidence to support the widespread anecdotal evidence that market-based health care reforms have a negative impact on nurses' work environment. The study also suggests that nurses who hold negative perceptions of the climate in which they work are more likely to vote for a union in a representation election than are nurses who perceive their climates positively.

This suggests that the rapid proliferation of reforms in the American health care system presents a significant opportunity for unions to organize the nursing workforce. As nurses experience these reforms, they perceive a loss of control over something they value highly—an environment in which they can provide the highest care possible to patients.

Nurses have historically struggled with the conflict they see between their obligation to their patients and their profession and union representation (Zerwekh and Claborn 1997; Ventura 1997). Although salary levels are uneven across the profession and discontent with working conditions is widespread, only about 14% of registered nurses in the United States have chosen to be represented by a collective bargaining agent (Ventura 1997). Market-based reforms present an opportunity for the unionization of nurses and other health care professionals such as physicians precisely because they are perceived as threatening quality of care. However, in order for unions to take advantage of this opportunity, they need to convince nurses that joining a union will help them gain greater control over patient care.

There is some evidence that the labor movement is cognizant of this opportunity. Most groups that have attempted to organize nurses focus at least some of their attention in organizing drives on how unions can give nurses a greater voice in the workforce, in general, and over patient care, in particular. In a 1994 interview, Richard Trumka, currently AFL-CIO secretary-treasurer, addressed this issue:

> Collective bargaining allows professionals the ability to demand that the standards of their profession be respected and enforced. When health care professionals do not have the protection to speak out on behalf of patients, the patient care provided and the patients lose. (*California Nurse* 1994:9)

These results suggest that in this era of change, unions need to provide nurses and other health care professionals with convincing evidence and arguments that forming a union can afford them greater control over patient care in the face of market-based reforms. Whether unions can effectively respond to this opportunity remains to be seen.

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Labor-Management Cooperation and Hospital Adjustment of Practices

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Health care delivery in the United States is undergoing broad and dramatic change. Evolving institutional and financial structures are reshaping the health care delivery system. As competitive pressures increase, new technologies emerge, and patient characteristics change, hospitals must find ways to shift and reshape practices to stay vital and competitive. Smoothly accommodating these changes by altering patient care practices and staffing in a way that reduces disruption and improves organizational performance is the difficult task at hand for many hospital administrators.

This paper focuses on the role of labor-management relations in shaping nursing staffing in hospitals as they respond to a changing competitive environment. In theory, unions can either constrain management by limiting change in work practices or they can broaden opportunities by providing employees with a voice in the decision-making process, thus improving the quality of decision making and easing the implementation of workplace changes. I find that the latter "adjustment capacity" that results from increased labor participation is potentially an important resource as hospital administrators react to developments in the health care market. Moreover, more extensive cooperation between union leaders and hospital managers leads to wide direct participation by employees throughout the hospital (Preuss 1998a). This participation in hospitals processes is critical in improving organizational performance and in enabling hospitals to compete successfully within evolving markets.

Minneapolis/St.Paul: A Model for Hospital Restructuring

In many ways Minneapolis/St. Paul is an ideal setting for an examination of restructuring in hospital care. The region was one of the first in the country to experience extensive managed care growth and the dramatic

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changes in the health care market that came in its wake. Only over the past few years have most other regions in the country begun to experience similar hospital restructuring, making the Twin Cities a precursor and model for other areas (OTA 1994).

The Minneapolis/St. Paul region also provides a unique opportunity to examine the effects of labor-management cooperation on hospital restructuring. The hospitals in this area are highly unionized, with over 80% of registered nurses and 60% of all hospital employees belonging to unions. The region is also significant in terms of the extensive cooperation that has developed between unions and hospitals in the Twin Cities in order to address patient care and restructuring initiatives. While this effort was unique a few years ago, other cooperative efforts have recently developed in New York City and at Kaiser-Permanente in California. Learning from Minneapolis/St. Paul is important both for other hospitals undergoing restructuring as well as for other industries striving to find ways to compete in rapidly evolving competitive markets.

Labor-Management Relations and Hospital Adjustment

Long-term hospital success is dependent on their ability to adopt appropriate staffing levels, find the proper mix of skills and work practices in nursing units, and retain the flexibility needed to adjust these factors as necessary. Hospital administrators are searching not only for new business strategies but also for new ways of organizing nursing care practices. Some of these new practices involve changes in the mix of nursing skills, staffing intensity, and work organization practices on nursing units.

Labor-management relations can potentially play one of two competing roles in hospital restructuring. On the one hand, unions can be seen as placing constraints on management decision making. Due to the presence of a union or the threat that a union will form, managers are limited in their decision-making scope when considering organizational change (Freeman and Medoff 1984). Similarly, specific workplace practices, such as the division of labor, can become institutionalized within contracts and used as a tool to maintain employment stability and limit management discretion (Slichter, Healy, and Livernash 1960). This perspective would suggest that unions have the effect of limiting changes in hospital staffing intensity and slowing the time it takes to adjust work practices in response to changing environmental and competitive demands.

On the other hand, unions can also enable and facilitate adjustment and change in firm practices and strategies. In fact, unions may promote the adoption of more comprehensive organizational change efforts (Eaton and Voos 1992; Frost 1997; Rubenstein 1996). By operating as a unified voice for employees, unions can enable the development of better organizational innovations and ease their adoption in a way that is mutually satisfactory for both the employees and the firm. With the development of cooperative labor-management relations, unions and managers can increase the amount and type of information communicated, address problems as they arise, and develop workplace practices that meet both competitive concerns and employee needs. While research suggests that labor-management cooperation increases the extent of workplace innovation adopted in firms (Eaton and Voos 1992), no research has examined the role of labor-management cooperation on an organization's capacity to continually adjust its practices in response to changing competitive demands.

Labor-Management Relations and Hospital Performance

Most organizations are complex entities that typically require the coordination of work across numerous functional boundaries (Lawrence and Lorsch 1967; Gittell 1996). In any effort to restructure work practices, changes in the job function of one group of workers typically spills over into other areas. Such changes in job definition or responsibility almost invariably require redefining jobs in other groups within the organization. For example, increasing the task responsibilities of nursing assistants necessitates a shift in work tasks for LPNs or RNs.

To successfully accomplish restructuring, it is in hospitals' best interest to establish cooperation across multiple occupational groups and unions that coexist in a single hospital or network. In hospitals, this issue is particularly salient—the National Labor Relations Board may recognize up to nine different unions in a single hospital. In Minneapolis/St. Paul, several hospitals have as many as five unions representing different employee groups. Cooperation with a single union may fail to address critical changes that occur across functional boundaries and may fail to achieve productivity gains from shifts in the traditional boundaries among groups.

Methods and Data

The analysis of labor-management cooperation, hospital adjustment, and financial performance is based on a ten-year panel data set of 14 hospitals in the Minneapolis/St. Paul area. Agreement to participate in the study included the release of proprietary, patient discharge data. These data were combined with additional measures from the Minnesota Department of Health and the Federal Mediation and Conciliation Service. The dependent measure in examining hospital adjustment is registered nurse staffing intensity. The capacity to fluidly adjust RN staffing is critical to organizational success in the hospitals' efforts to control costs. To examine hospital financial performance, I adopt a measure of income (profit) per patient day from hospital operation. To control for specific factors that may shape hospital staffing intensity and hospital financial performance, I incorporate several control variables. Control variables include patient acuity, managed care penetration among the hospital's patients, RN wages per full-time equivalent, patient mix, hospital size, and year. In addition, specific measures are developed that gauge the extent of union representation among seven occupational groups and the presence of a labor-management committee between the union representing each occupational group and the hospital administration.

The analysis is conducted using a cross-sectional time series data structure and correcting for autocorrelation over time (Greene 1993). Each hospital/year is an independent observation. With 14 hospitals and nine years, the total sample is 126. I examine the effect of unionization and labor-management cooperation on the ease of hospital restructuring through a partial adjustment model with a lagged dependent variable. In a partial adjustment model, the lagged dependent variable reflects the extent to which practices in the previous period determine current practices even under a changed environment. To evaluate the effect of practices on adjustment flexibility, variables are interacted with the lagged dependent variable. As a result, a significant and negative result on this interaction suggests that a particular practice reduces the effect of previous staffing levels on those currently observed, thus easing organizational adjustment. Ordinary least squares point estimates are presented in the partial adjustment models (Beck and Katz 1995). The effect of unionization and labor-management cooperation on hospital financial performance is examined through a fixed-effects model to control for hospital specific factors that may shape performance over time.

Results

In an environment requiring regular adjustments to changing demands, labor-management cooperation is positively correlated with the hospital's capacity to respond to changing competitive pressures through shifts in staffing levels. Refer to Table 1, row 14, for the observed result on the interaction between the extent of cooperation and the previous year's staffing levels. This result suggests that more extensive cooperation allows greater flexibility in staffing. In contrast, the extent of unionization does not affect hospital-staffing adjustment.

More extensive labor-management cooperation, however, does not only make hospital practices more flexible; it also leads to two other important outcomes: higher staffing intensity and better hospital financial performance. In Table 1 (row 12), more extensive cooperation is shown to be

TABLE 1

Adjustment of Hospital Skilled Staffing Intensity

Variable	RN Hours per Patient Day Coef. (std error)
1. **Lagged Dependent Variable**	0.758 (0.085) ***
Patient Acuity	
2. Case mix index	7.230 (1.359) ***
3. Percent of patient days in ICU	16.19 (3.828) ***
Competitive Pressures	
4. Managed care penetration	-0.005 (0.015)
5. RN wages per full-time equivalent	-.0002 (.0000) ***
Control Variables	
6. Log total hospital patients	0.563 (0.467)
7. Patient service mix 1	0.013 (0.446)
8. Patient service mix 2	0.181 (0.183)
9. Patient service mix 3	0.985 (0.257) ***
10. Year	0.463 (0.088) ***
Labor-Management Relations	
11. Proportion of groups unionized	0.221 (1.528)
12. Extent of labor-management cooperation	0.857 (0.265) ***
13. Proportion of groups unionized × lagged dependent variable	-0.199 (0.144)
14. Extent of labor-management cooperation × lagged dependent variable	-0.057 (0.022) ***
No. of Obs.	114
# of Groups	13
Time Periods	9

* = p < .1
** = p < .05
*** = p < .01

positively correlated with higher RN staffing levels even after controlling for patient and competitive characteristics. In addition, more extensive labor-management cooperation is positively correlated with better hospital financial performance (Table 2, row 12). This analysis finds that comprehensive cooperation across all union groups is correlated with nearly $80 more income per patient day in comparison to hospitals with no cooperative relations with unions. With hospital income per patient day ranging from -$147 to $284, comprehensive cooperation has a dramatic economic benefit for hospitals.

There are several explanations for this result. First, better-performing hospitals may have higher staffing levels and adopt a cooperative approach

TABLE 2
Determinants of Hospital Financial Performance

Variable	Income per Patient Day Coef. (std error)
Staffing	
1. RN hours per patient day	-5.289 (4.651)
2. RN skill mix	-231.9 (113.9) **
Patient Acuity	
3. Case mix index	15.67 (106.2)
4. Percent of patient days in ICU	653.9 (292.6)
Competitive Pressures	
5. Managed care penetration	3.086 (1.120) ***
6. RN wages per full-time equivalent	-0.002 (0.002)
Control Variables	
7. Log total hospital patients	-71.17 (47.62)
8. Patient service mix 1	-29.80 (39.30)
9. Patient service mix 2	47.04 (23.23) **
10. Patient service mix 3	49.03 (22.69) **
11. Year	13.05 (6.925) *
12. **Labor-Management Cooperation**	13.60 (4.431) ***
Pr > F	0.0000
No. of Obs.	115
n	13

* = p < .1
** = p < .05
*** = p < .01

to working with unions. Better management in these hospitals may enable both the higher staffing levels observed and the foresight to cooperate with unions. A second explanation might be that cooperation enables hospitals to adopt better-performing work practices even at higher staffing levels. For example, these hospitals may decentralize supervisory responsibilities to employees, reducing overall patient care costs and improving hospital performance. This possibility is supported in that labor-management cooperation increases direct employee involvement in decision making (Preuss 1998b). A third alternative is that cooperation enables hospitals to compete in a different way within a turbulent environment. By easing the adjustment process and increasing employee involvement, hospital administrators can flexibly respond to evolving patient demands both by increasing staffing to attract patients and by decreasing staffing levels for the types of patients that require lower staffing intensity. In contrast, hospitals in which staffing adjustments are slow might not be able to take advantage of opportunities as they arise, out of a concern with losing flexibility when lower-cost practices become necessary in the future.

These results ultimately suggest that as competitive pressures increase for hospitals, their ability to nurture labor-management cooperation makes it easier to alter hospital staffing and provides a critical competitive advantage. Strong labor-management ties can be a resource that simultaneously increases organizational performance and improves outcomes for employees.

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Changing Labor-Management Relations in Nursing Homes

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While hospital mergers, downsizings, and managed care contracts attract public attention, changes in the smaller nursing home industry are less visible. Yet pressures in the changing health care system are affecting all aspects of care—including long-term institutional care for the frail elderly and disabled. This paper summarizes changing labor-management relations in nursing homes. While the industry is only about 12% unionized, the unionized sector plays an important role in representing 150,000 front-line employees in setting minimum standards and in influencing legislative and reimbursement climates. The health system changes are increasing stress on front-line caregivers and residents, leading to disputes over staffing, safety, and basic working conditions and alleged poorer care for residents.

I outline here three kinds of innovative responses in labor-management relationships to the pressures and challenges both parties are facing: quality care efforts, extra-bargaining activities in the legislative and regulatory arenas, and joint labor-management training programs. This study is based on extensive previous field research which examined the link between work organization and employment conditions in nursing homes, proposing a key role for both management philosophy and employee involvement in delivering consistently higher quality care (see Eaton 1997 and 1998, for example). Past research includes case studies conducted in 20 facilities in California and Pennsylvania, and research for this paper included interviews with industry experts and union representatives as well as a literature review of current developments.

The Nursing Home Industry

The nursing home industry is projected to be a $100 billion industry by the year 2000 (Brown and Garten 1994). Today 75% of nursing homes are owned by private for-profit firms, 20% by private nonprofit institutions,

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and 5% are public. Public funds pay for the majority of nursing home care. Fifteen percent of the revenues go to the top six nursing home corporations (Beverly, Genesis, IHS, Paragon, Sun, and Vencor), whose operating profits increased by 122% on a revenue increase of 19% between 1996 and 1997 (SEIU n.d.:10). The industry overall is experiencing significant cost pressures.

More than 1.7 million individuals live in 17,000 U.S. nursing homes, and experts expect this population to double in twenty-five years and triple in thirty-five years. An estimated 50% to 70% of nursing home residents suffer from some kind of dementia, of which Alzheimers Disease is the best known. More than 80% of nursing home residents are women, as are 90% of nursing home workers. Approximately half of all nursing home workers are workers of color. The nursing home industry employs 1.3 million workers, and approximately 12%, or 156,000, are unionized. Of these, the Service Employees International Union (SEIU) represents two-thirds, or just over 100,000. The next largest unions are the United Food and Commercial Workers (UFCW) and the American Federation of State, County, and Municipal Employees (AFSCME), which represents mainly public sector nursing home workers. A variety of other unions represent the rest of employees. Unions continue to organize in nursing homes, although units are typically small (fewer than 100 employees) and there are few national data available on recent organizing win/lose rates or first contracts achieved.

Most nursing home wages are low. Nationally, nurse aides in the mid-1990s earned only an average of $6.06 per hour and made up 85% of all nursing staff in nursing homes, providing approximately 90% of direct care (Wunderlich et al. 1996: 161, Table 6). Many nursing home staff are not covered by health insurance; a recent union report suggests that at least 20% of workers and 25% of their children have no health insurance, while another 23% rely on Medicaid or other public insurance plans (SEIU n.d.:1).

Staff turnover rates are extremely high, averaging more than 100% annually for nurse aides, 56% for registered nurses, and even 27% for administrators (Wunderlich et al. 1996:160). One reason is the difficult working conditions. Nursing homes are more dangerous places to work than coal mines, manufacturing plants, or construction sites, with lost-time injuries and illnesses averaging 17 cases per 100 workers in 1993 (p. 163).

Research suggests that not all nursing homes are equally difficult places to work and live; a small percentage of long-term care facilities have adopted either a more intensive medical focus with greater staffing, training, wages, and benefits; or a “regenerative” model of care which focuses on community-oriented, growth-enhancing activities for residents and which reorganizes work for aides and other front-line workers accordingly (see Eaton 1997; Fagan et al. 1997). But most facilities follow the traditional model of organizing work and care.

The Role of Managed Care in the Nursing Home Industry

Managed care has changed the face of health care delivery in America. While in 1988 only 29% of Americans were covered by managed care, by 1996 that percent had nearly tripled to 75%, and the numbers are increasing (AFL-CIO 1997: 3). However, most managed care plans do not cover nursing home stays except in the short term. Some nursing homes now provide “subacute” care for patients who are recently discharged from the hospital. This begins a “domino” effect, as nursing homes are also responding to managed care by discharging those who can live in the community with home health care or assisted living services. Nursing homes are also beginning to enter the growing hospice market and to develop special AIDS care and Alzheimers units. With Medicaid and Medicare rates being cut, more facilities are seeking managed care contracts.

In this search, large chains have an advantage. This is the main reason for the continuing consolidation of the nursing home industry, according to Arvid Muller (1998), senior research analyst for the Service Employees International Union. In June 1998 two large nursing home chains, Manor Care and Health Care and Retirement Corp., created “another mega-chain seeking to win the race to attract managed care contracts” (SEIU 1998). In 1996 a ventilator company, Vencor, bought Hillhaven Nursing Homes, at that time the second-largest chain. Recently, a new chain called Mariner Post-Acute Network brought together Paragon, Living Centers, and Mariner, all of which provide a continuum of care. Many nursing home chains pursue a regional strategy and negotiate statewide or regional contracts.

So while they face economic incentives to merge, to consolidate, to increase services, and to cut costs, facilities face increasing demands from frailer residents who require more care. Since approximately 60% of nursing home costs are labor costs, managers often look first to employees to cut costs. This increases the pressures on front-line workers, many of whom complain of understaffing, lack of training and support, inadequate supplies, and unresponsive management. The public, too, seems to be demanding higher quality services, with a rash of recent articles documenting poor or neglectful care in facilities. Also, patient advocates such as the National Citizens’ Coalition for Nursing Home Reform are becoming more vocal in their demands for changes.

Innovative Responses by Labor and Management: Linking Patient Care Quality and Working Conditions

The most innovative responses involve linking working conditions to improved patient care. Some "regenerative" facilities make this link. Labor agreements, organizing, and even strikes are beginning to focus around issues related to quality of care. The Service Employees International Union, with two-thirds of all organized nursing home employees as members, has taken the lead in developing contract language and consumer-worker coalitions. The national union helped to bargain language into master agreements with GranCare and Horizons nursing home chains which provided for joint patient care committees to review problems that affected *both* residents and staff. Some of these are staffing, supervision, training, and work organization as well as food quality and resident rights issues. The language provided that patient care committees would work

> to correct or improve the delivery of patient care, staffing, working conditions, and health and safety on the job. The Employer will make a good faith effort to implement recommendations of the Committee and will advise the Committee, in writing of action taken on its recommendations. (AFL-CIO 1997:38)

While the contracts created the potential for more joint labor-management work, the enforcement language is relatively weak. The committees rely on agreements being reached between front-line paraprofessional workers and their supervisors or managers.

The United Food and Commercial Workers union has also been organizing nursing home workers, particularly in the South, with the theme "Care for the Caregivers." The union combined the organizing with an effort to "Bargain for Better Care" in ten unionized facilities in Alabama, which led to a contract that increased involvement of workers in patient care issues, as well as significantly improved pay and employer-paid health benefits which reduce turnover (UFCW 1997:2). The union made clear connections between working conditions and care:

> Shortchanging the caregivers with low staffing and high turnover produces the problems that plague nursing homes. Key indicators of poor care quality—incontinence, bed sores, and the use of restraints—go up as staffing levels and working conditions go down for the caregivers. (p. 2)

Labor disputes have come to involve patient care issues as well, though national data on strikes is limited. Recently, a strike against two nursing homes owned by Sun Health Care Corp. in Lowell and Brighton, Massachusetts, focused on workers' charges that the company was sacrificing patient care because of low wages. After a 10-week strike, the parties settled with higher starting wages as one element. These had been a key point of contention, with the union arguing that a higher start rate would reduce turnover (Associated Press 1998).

Extrabargaining Efforts: A Second Innovation

A second innovation is that unions are going outside bargaining settings to address some of their members' concerns. In Michigan and Minnesota, union-led coalitions that included patient care advocates and some higher-quality providers were successful in passing "wage pass-throughs" at the state level. Although each is structured differently, the general idea is that funds are allocated to pay higher wages to nursing home workers, and facilities can submit additional costs for reimbursement. At this time, the SEIU reports wage pass-through proposals in the legislative process in some 20 states (Muller 1998).

Unions have also led efforts to pass "minimum staffing" standard bills which are more difficult to achieve. The 1996 Institute of Medicine study (Wunderlich et al. 1996) called for additional registered nurses but did not call for additional front-line staff. The Health Care Financing Administration is conducting a staffing study which is projected to be complete in fall 1999 which may recommend additional paraprofessional staffing.

Much of the policy and legislative activity required to make changes in nursing home conditions must occur at the state level because of Medicaid funding requiring 50 separate state strategies and efforts. Both advocates and labor-management groups have called for more consistent federal legislation. Enforcing national standards for care needs more attention too, say unions.

Joint Labor-Management Training Initiatives: A Third Innovation

Training is a critical issue in nursing homes. Nearly everyone agrees that workers do not get enough training in geriatric issues. While training alone will not solve what are often staffing-related problems such as back injuries, research has shown that good training helps in dealing with troubled, disoriented, racist, wandering, or abusive patients and also in recognizing symptoms of depression or illness. Federal training requirements for paraprofessional workers are minimal at 75 hours to become a certified nursing assistant. Compare this with 1,280 hours required for a hairdresser's license in a typical state.

A third notable innovation is the creation and improvement of joint labor-management training initiatives in a few geographic areas. One well-regarded union-run training center is run by Local 1199-C of the Hospital and Health Care Workers' Union (AFSCME) in Philadelphia, headed up by Jim Ryan. The staff prepares workers for new jobs in long-term and managed care programs. This center has also conducted successful welfare-to-work training. It is funded through a cents-per-hour checkoff in Local 1199C's existing contracts as well as through external contracts.

Some training programs are developed by management, such as Genesis Health Ventures' Geriatric Nursing Assistant Specialist Program. Unions also often bargain "senior" and "specialist" positions into contracts so that paraprofessional employees may begin to climb something like a career ladder. Most observers agree that these positions are usually a way to pay good workers a little more, but they do not really constitute a career ladder.

Conclusions: Future Trends

From reviewing the industry's labor-management relations at this time, I foresee more of the same kinds of tensions in the future. If anything, as the demand for nursing home care rises and the population ages, we will see more attention to issues of quality and access to care. Further, we may see fewer and fewer workers willing or able to work at just above minimum wage in difficult, unsafe conditions where they do not achieve the rewards of caring relationships with residents because of constant cost pressures, understaffing, and shorter stays. A common theme sounded by advocates is that poorer care can actually be more expensive in the long run, not just in quality of life for residents but in increased bed sores, falls, incontinence, drug costs, and increased staff turnover from frustration and powerlessness to deliver quality care (Burger 1994).

The solutions at a social level are not clear. The problem is not only the amount of money in the system (since funding for nursing homes has continually increased) but how it is being used. The key issues for workers—staffing, health and safety, employee turnover, low wages and benefits—are all tied in some way to patient care quality and to changes in the way work is organized. Some providers, such as the Pioneers group, are committed to changing the overall culture in nursing homes to benefit both workers and residents. But their efforts still represent only a small force within the industry (see Fargo et al. 1997). Unions will need to address the larger issues of culture and philosophy of care before workers' interests can be met. The issues raised by advocates—too much neglect, abuse, dehydration, injury, and disrespect—will not be solved without addressing workers' issues either.

While unions and employers could once create a positive climate in "one facility at a time," this is becoming increasingly difficult, if not impossible. With chains consolidating, one could imagine bargaining industrywide standards or at least state or regional standards, where unions represent sufficient portions of the workforce (as in San Francisco or Philadelphia). However, if only 12% of workers are organized, it will be difficult for labor to have a major impact on industry trends, except where unions are exceptionally well-organized (as in Michigan and Minnesota). As the population ages, chains consolidate, and workers doing the hard, dirty work of caring for the frail elderly become more scarce, it seems increasing labor-management tensions are inevitable.

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DISCUSSION

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The three papers presented today offer an interesting continuum. Paul Clark et al. offer a view of increased receptivity to union representation among registered nurses (RNs) in Pennsylvania, while Gil Preuss and Susan Eaton provide a glimpse of the changing climate for union-management relations in acute care and long-term care, respectively. In one sense, Preuss and Eaton tell us what health care workers such as those surveyed in Pennsylvania may be getting themselves into.

It is notable that the RNs examined by Clark et al. appear more receptive to union representation based on their perceptions that changes in their own institutions have had a negative effect on their practice and on their ability to deliver quality care. These have been times of great uncertainty for nurses and other members of the health care workforce, giving rise to concerns about professional autonomy, changes in working and practice conditions, and about the quality and even safety of care provided to patients throughout the health care continuum.

That nurses might look favorably at union representation as a means to address these concerns is not surprising. Union representation and collective bargaining among RNs in the United States have a history dating back over fifty years, initially involving the American Nurses Association (ANA) and many of its affiliated state nurses associations and subsequently involving more traditional labor unions as well. When ANA and many state associations decided to take up collective bargaining, it was out of their recognition that issues of economic security for nurses were professional issues and because of the potential that collective bargaining provides for nurses to assert control over their practice conditions in health care institutions, to increase their autonomy and to provide an organized voice in dealing with employers over working and practice conditions.

That recognition is no less valid today. Collective bargaining provides a tool; it brings the potential for addressing a range of issues that has grown in importance to RNs. Among these issues are staffing levels and skill mix

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as well as more "traditional" issues like wages, hours, working conditions, seniority, and overtime, many of which have become more prominent in many health care institutions as a result of health system change. Focusing on nurses' concerns regarding professional practice issues and on unions' potential for addressing these issues has helped spark a number of fresh organizing victories for state nurses associations and other unions in the past few years in a number of states.

The Clark et al. paper provides interesting and valuable data and analysis about nurses' receptivity to union representation and its relationship not just to concerns about health system change in general but to nurses' own experiences of changes that have taken place in their own institutions. It is important to emphasize that an inclination to vote for union representation as indicated on a survey does not directly translate into organizing victories. Receptivity to the concept of representation is very significant and clearly indicates a potential for successful organizing efforts. The authors identify a sense of urgency for unions if they are to avail themselves of the organizing opportunities created by health system change. Of course, in order to turn an inclination to vote for a union into actual representation, unions need to reach these employees and organize them.

Furthermore, in today's environment, organizing efforts and union election campaigns are often met with fierce employer opposition, often conducted by specialized outside consultants. Even apart from this is the need for employees (in this case, RNs) to examine what their expectations are regarding representation, to assess how realistic these expectations may be, and also to identify whom they will seek to represent them.

In the Minneapolis-St. Paul area, the location of the Preuss study, RNs have generally been represented by one union, the Minnesota Nurses Association, making the latter question a less significant one in that part of the country. That fact, along with the high level of unionization among health care workers generally and RNs particularly—contributes to creating the conditions for an instructive case study of labor-management relations in the Twin Cities region. Of course, few parts of the country can boast the level of unionization that exists among health care workers in that region, perhaps making the Twin Cities experience a difficult one from which to generalize, at least at this time.

But this makes the lessons of that experience no less instructive. This experience demonstrates the potential for strong unions in the health care industry to explore cooperation with employers—even on difficult issues—and actually achieve something as a result. The issue of formal labor-management cooperation in the current health care environment has been a source of contention, with some believing that such cooperation over matters related to reorganization and restructuring means being complicit in employer efforts to decrease staffing levels and to reduce skill mix, leading to a decline in patient care quality.

In this respect, I think that one of the more remarkable findings in the Preuss paper is particularly relevant: specifically, that hospitals were able to improve their economic performance while increasing RN staffing. The common wisdom, of course, would dictate a reduction in RN staffing as an elementary step toward improving hospitals' financial pictures. Nursing organizations have long argued that any cost savings achieved by reducing RN staffing and skill mix are likely to be illusory, or short-term at best, because of the broad range of patient care functions that RNs can perform and because of the impact of RN staffing on reducing complications that can extend or intensify expensive hospitalization. In other words, nursing has argued, RNs are sufficiently cost-effective that despite their comparatively high salaries, their use in sufficient numbers can save money for their employers. It is, of course, not clear if these specific arguments led to the adoption of higher staffing levels or what other factors may have helped to relate higher staffing levels with improved financial performance. But it would appear that a collaborative relationship may at least allow for arguments such as these to be heard and considered by employers.

Preuss informs us that despite successes such as these for both labor and management, the forms through which labor-management cooperation developed on a regionwide basis have largely fragmented. In an increasingly competitive environment, hospitals are less able to function as a united entity, it is no longer a matter of the interests of area employers versus the interests of area unions; hospitals in each region find themselves with diverging interests, goals, and strategies as well. In this respect, it is interesting to note that one hospital has maintained cooperation with its unions, seeing this as a competitive advantage.

If anyone was inclined to feel disappointment over the decline of labor-management cooperation in acute care, it is somewhat sobering to read Eaton's account of an industry where, it would appear, there is virtually nowhere to go in labor-management relations but up.

This is something of an exaggeration, of course. Eaton describes some collaborative union-management initiatives to train new certified nursing assistants. There would also appear to be some pockets of hope offered by some of the less traditional, higher-quality providers. But why is the overall picture, as Eaton characterizes it, so "grim"? For one thing, I have to wonder if the strong tradition of large, for-profit chains contributes to the adversarial, hostile stance of many employers. In acute care, the growth of large for-profit chains is more recent and still represents a minority of institutions and systems. In nursing homes the influence of for-profits, including large chains, is greater and of longer standing.

Eaton demonstrates that nursing homes are also subject to most of the same kinds of pressures that face acute care hospitals—the growth of managed care, cost-reduction pressures, increased competition, mergers, and acquisitions. There are also pressures that are unique to the nursing home industry or at least are unique twists on some of the same pressures. The nursing home industry now has its own Medicare prospective payment system. The Boren Amendment, which had been used by the nursing home industry to maintain “reasonable” Medicaid reimbursement rates, was repealed as of last year. It is unclear how much either of these changes will ultimately affect nursing home financing and organization, but both have the potential to have a major impact.

Eaton points to trends for unions representing nursing home workers to take up quality of care issues and for nursing home advocates to take up issues regarding nursing home staff. Both trends are significant, because each group does in fact share interests with the other and because a working alliance between the unions and nursing home advocates (and, more broadly, residents, family members, and the community at large) creates a potentially very powerful coalition.

Nursing home quality has been a focus of concern by some for many years. Nursing home advocacy groups are an established, visible, and vocal presence. Nursing home quality of care and quality of life are issues that have intermittently been the subject of attention of the public and policymakers for some years. One prominent result of advocacy and public awareness efforts is the landmark nursing home reform legislation enacted by Congress in the Omnibus Budget Reconciliation Act of 1987.

The tradition of advocacy efforts in the nursing home sector, then, is in many ways unique. There is no real parallel in the acute care sector, where institutions play less of a direct role in patients’ day-to-day lives; they are cared for briefly in hospitals, but they generally live in nursing homes. In acute care, patients are generally viewed (accurately or not) as less vulnerable and basic safety concerns have not traditionally risen to the same level of prominence as in nursing homes in the view of policy analysts and policymakers. For these and other reasons, acute care has been less of a focus among community activists and advocates, providing fewer or less prominent potential partners for unions and others concerned with acute care.

Still, a common trend in both sectors is for unions to tie in their concerns with patient care issues, a trend that has been developing for some time. In both sectors, workforce issues and their linking of acute care to patient care and outcomes has been a focus for researchers and others. As the health care system becomes increasingly integrated, and as the same external forces continue to shape all sectors of the health care industry, it becomes increasingly important to examine and to compare the experiences of different sectors and to look at strategies and approaches that reach across sectors—for instance, linking broader public concerns about changes in health care financing, organization, and delivery to some of the consequences of those changes on patient care in specific institutions or sectors. Just as the environment for health care delivery is rapidly changing, the context in which issues of concern to health care employees may be voiced and addressed is also changing.

DISCUSSION

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The three papers submitted for this presentation focus on the impact of cost reductions on the quality of care delivered by professional and nonprofessional health care workers. The issues presented are timely. The reason for the push to reduce costs has been identified as "managed care and profitability." All of the papers suggest that improved relationships with the unions representing the staff lead to better care. The descriptions of the reality of health care services were extensive and set the tone for the serious issues raised.

The Gil Preuss paper focuses on the role of labor/management relations in shaping nursing practices in hospitals as they respond to a changing competitive environment. He suggests the use of labor management committees to improve productivity and therefore staffing levels will increase. The use of the RN skill mix and the related expenses are highlighted. The outcome of lowering the patient days by a higher RN mix in the intensive care areas is cited but not analyzed. Preuss appropriately makes the point that as competitive pressures increase for hospitals, a natural action to take is to enhance labor management ties in order to improve organizational performance and increase outcomes for employees. Suggested further research would be helpful if structured as a case study in a major academic teaching institution which traditionally is slow to respond to market place demands and reported to have higher cost per patient.

Paul Clark et al. focus on union organizing of RNs in the context of merger and restructuring of jobs. The paper highlights several points. Market reforms diminish care and increase employee stress. There is a negative correlation between "climate for patient care" and vote for unions. Mergers produce an inclement "climate for patient care." An important insight that emerged was demonstrated in the analysis of data. The restructuring of RN jobs has a greater negative impact on RN perceptions than a merger. Although these points may be somewhat self-evident, the analysis and review adds to the literature and supports the need for strategic planning around changing of roles. I would suggest further research in this area to

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include “the impact on labor relations and clinical outcomes when RN jobs are restructured in already unionized settings.”

Susan Eaton’s paper focuses on the nursing home industry. Several points are made to support that quality of care to the residents of homes is at risk as well as the well-being of the employees. Funding systems currently in place do not enhance the ability of the homes to standardize the staffing levels in order to respond to the increase in the intensity required. Low wages in the industry result in higher turnover. Lack of investment in training increases work-related incidents. The highly regulated OBRA Guidelines developed in 1988, although designed to protect against the above, have not fully realized its intent. The movement of unions being increasingly concerned about both the care delivered and the impact of the work on the residents of the homes is a positive step toward improvement. However, the innovations noted in the paper such as labor-management committees are not new and suggested consumer worker coalitions can be an added problem. I suggest further analysis be done to identify how investment in training can lower worker compensation costs and to make use of other creative incentives for worker retention. Continued research could focus on the “impact of staffing levels and the skill mix of care givers related to patient outcomes in nursing homes.”

History in health care will record the 1990s as a beginning of reform. Reform means change, and change brings chaos and stress no matter how well and sensitively planned. The leaders of institutions providing health care should take the initiative to have a good relationship with its employees. Measures of success should be mutually developed. Rewards and incentives can be provided in a manner that does not violate labor practices. Management should advocate for its staff and not be in a position to have a third party initiate advocacy. Greater attention can be given to improving working conditions if less time is spent on union management sessions. Labor unions representing workers in that environment can improve the changes by overseeing due process and monitoring the outcomes of the care delivered and the employee feedback.

Ultimately, management and employees have much to gain by aligning together to improve the services and be more competitive regardless of the profit status of the institutions. Development of a win-win strategy can close the gap in the drive to reaching both the goals of the institution as well as the staff and unions.

Finally, we need to involve the physicians in the processes that restructuring requires. They can be champions for change, and working with front-line employees in the hospitals and nursing homes can ease the transitions that become inevitable.

V. THE CHANGING NATURE OF IR AND WORK IN THE TELECOMMUNICATIONS INDUSTRY

The Impact of Restructuring on Managers: Evidence from Telecommunications

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A transformation in employment relations is occurring in the U.S. as increased competition pressures firms to restructure in order to reduce costs and increase flexibility. It has been asserted in both the popular press and academic articles (e.g., Cappelli 1997; Shaw, Champlin, Hartmann, and Spalter-Roth 1994) that managerial employees are assuming an increasing portion of the costs of this restructuring through layoffs, decreasing career opportunities, and increased workloads. Yet with a few notable exceptions (e.g., Osterman 1996; Heckscher 1995), there is little in the way of good qualitative and quantitative evidence of the effects of restructuring on the jobs and careers of managers.

In this paper I assess the effects of one telecommunications company's restructuring efforts on its lower- and middle-level managers, using an internal labor market framework to determine the extent to which the structure of managerial careers has shifted. Osterman (1992) defines the internal labor market as including the nature of jobs and skill requirements, rules governing mobility and the deployment of labor, employment security rules, and wage structures. Here I focus on jobs and skill requirements, mobility opportunities, and employment security. I do not, however, analyze managerial wage systems because the information I obtained during my

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field interviews indicated that restructuring within this company does not extend to substantial changes to managerial wages and benefits programs.

The company's restructuring efforts have been directed toward reducing costs, improving efficiency, and increasing operating flexibility through downsizing, consolidation, and reengineering. At the same time, the company has shifted to a competitive strategy emphasizing customer service and quality, for which a well-trained, committed workforce is essential. The company faces a number of unique issues in attempting to implement this strategy. It operates in the most competitive and tightly regulated market in the telecommunications industry and has consistently had the worst performance and service record among the Regional Bell Operating Companies (RBOCs). In addition, it has been plagued by highly contentious labor/management relations and high labor costs. To successfully compete on quality and customer service, however, the company needed the support of its unions. A former company chairman and CEO said of restructuring, "When we assessed where we were going . . . we clearly identified that we had many obstacles [to] delivering quality services to our customers and growing our earnings for our shareholders. And labor relations were key" (telephone 4-27-92).

This case represents a potential "worst-case scenario" for managers. The combined need to address substantial quality and service problems and to improve its relationship with its unions shaped the company's approach to restructuring primarily by constraining its ability to shift the costs of restructuring to its unionized workforce. As a result, the company's strategy emphasizes the utilization and development of its nonmanagement workers and provides workers with substantial employment security. In contrast, managers have not received explicit employment security guarantees, nor have enhancement initiatives been targeted toward managerial jobs and careers.

The Restructuring Process

The company has addressed the need to cut costs through significant force reductions, reengineering, and consolidation of operations. By the end of 1993, more than 19,000 employees had been eliminated, including 13,000 managers. The company has attempted to reduce managerial employment through attrition by offering a special pension enhancement as an incentive to managers to retire early. In addition to downsizing, the organization has undertaken various reengineering initiatives intended to cut costs through the consolidation and streamlining of its operations. A major effort in this area was the consolidation of work centers throughout the region into megacenters capable of providing "one-stop" shopping to large, medium, and small businesses as well as residential customers. Ten megacenters have replaced approximately 50 customer services work centers operating throughout the region. Although a number of core work processes have been reengineered as well to increase quality and efficiency of operations, the company's restructuring strategy does not include any attempt to reorganize work to push decision making further down into the organization. Formal participatory structures such as self-managed teams are virtually nonexistent.

Rather than reorganize the way in which work is done, the company is attempting to gain a competitive advantage by upgrading the skills of its nonmanagement workers. The company determined that a highly skilled, broadly trained, flexible technical workforce is essential to successfully implementing its quality/service competitive strategy and has therefore made a significant investment in its nonmanagement workforce with the establishment of a unique employer-funded retraining program. The program is intended to prepare workers to function in multiskilled technical jobs at the highest level in the nonmanagement hierarchy. This training program is central to the company's strategy of investment in its employees. However, it is not open to managers. In fact, no new management training and development programs have been introduced as part of restructuring.

Managers appear to be particularly vulnerable within the context of this company's restructuring efforts. They are neither buffered from the negative consequences of downsizing, nor has the company made explicit investments in their careers or employment security. To assess the impact of restructuring on managers, I analyze quantitative data collected from a survey of lower- and middle-level managers as well as qualitative interview data collected from managers. Specifically, I describe changes to the nature and skill requirements of these managers' jobs, their workloads and hours of work, their mobility opportunities, and their employment security. I then discuss the effects of these changes on the attitudes of managers toward their jobs and the organization and examine the implications of the changing employment relationship for managers' families.

Methodology

Data were collected from field interviews with managers conducted in 1995 and 1996 as well as from respondents to a survey mailed in 1997. The sample includes 385 managers in the company's two primary business units (customer services and network operations) who responded to the mail survey (response rate = 35%). Customer services is comprised of sales and marketing of telecommunication services (ensuring that services are delivered) and billing. Network operations is responsible for installing and maintaining switching and transmission equipment for the system. The sample is comprised of first- through fourth-level managers. Approximately one-half of the sample (N = 191) are first-level managers (i.e., traditional first-line supervisors). Two-thirds are in network operations, and one-third is in customer services. The sample is primarily white (88%), with an average age of 43 years and average tenure of 19 years. Fifty-three percent have completed a four-year college degree. The network and customer services groups are highly segregated by gender, with 71% of network managers male and 72% of customer services managers female.

Implications of Restructuring for Managerial Jobs and Careers

Changing Nature of Jobs and Skills

As indicated in Table 1, there has been little change in the fundamental organization of work in this company as a result of restructuring. Neither increased employee participation nor extensive decentralization of decision making has occurred. The vast majority of these managers, for example, have never participated in a QWL team, a QA team, or an interdepartmental or cross-functional team. Decision making remains fairly centralized, although there is some evidence that managerial influence is increasing. Between one-quarter and one-third of all managers report they have more influence now than they have had in the past over decisions about hiring and training workers, the type of quality initiatives to undertake in their units, and relations with the local union. Still, there is little indication that managers, particularly first-level managers, have been truly empowered with substantial control over decisions that affect their work. Not only do first-level managers have little decision-making authority, their discretionary authority has not increased substantially. Just 7% of first-level managers have seen an increase in their influence over employee selection decisions, and only 18% have more influence over relations with the union. Twenty-six percent report having experienced greater authority for determining their workers' training needs. The data presented in Table 1 also indicate that the skills required for managerial jobs are changing and in many cases have become more complex. Nearly two-thirds of managers say that their jobs require more complex skills now than they did two years previously. An additional 28% say their jobs now require different though equally complex skills than in the past.

Workloads and Hours of Work

Table 1 also provides evidence suggesting that one implication of the company's cost-cutting strategy is that managers are doing more work and

TABLE 1

Managerial Decision Making, Skill Requirements, Workloads, and Hours of Work

	All (n = 385)	Network (n = 248)	Customer Services (n = 137)
*Substantial Control Over***			
Quality initiatives	34	33	37
Labor relations	31	30	31
Training	36	38	34
Hiring/selecting	21	25	22
*Increased Control Over**			
Quality initiatives	34	31	38
Labor relations	25	24	28
Training	31	26	38
Hiring/selecting	24	25	22
*Have Not Participated In**			
Quality team	79	79	79
QWL team	85	87	82
Cross-functional team	62	61	63
*Skill Requirements**			
More complex	64	66	59
Different, equally complex	28	26	31
Workloads			
Increased span of control*	56	55	57
Supervise more than 15	43	36	55
Frequently understaffed**	67	74	53
Employees frequently lack skills**	59	57	62
Hours of Work			
Work 10+ hours/day	60	63	53
Increased hours at work*	79	81	78
Increased hours at home*	65	69	59
Too much overtime*	63	69	54

*% of positive responses to yes/no question.
**% of positive responses to question (1-2 on 5-point scale).

working longer hours. First, downsizing and the shift to the megacenter structure have resulted in substantially greater spans of control for these managers. More than half report that their spans of control have increased over the previous two years. Forty-three percent supervise at least 16 people. Customer services managers in particular have seen their spans of control increase significantly with the move to megacenters. Under the previous decentralized structure, first-level customer services managers supervised from 10 to 15 customer services representatives. Now 60% of first-level customer services managers supervise at least 21 workers.

Network managers have seen their spans of control increase as well. While craftworker-to-manager ratios were traditionally around 8:1, network managers are clearly supervising more employees than they did in the past. Fifty-five percent say their span of control has increased; 36% now supervise more than 15 people.

Not only have spans of control increased, downsizing and consolidation have resulted in fewer, less experienced managers among whom work can be distributed, as well as insufficient numbers of adequately trained workers through whom managers must try to accomplish work. Both the number of managers and the managerial hierarchy itself have been reduced through downsizing and consolidation. In addition, as managers take early retirement, the company is left with a shortage of managerial experience in some areas. One manager described the impact of the company's seemingly opposing restructuring strategies in this way, "Process reengineering is pushing toward an emphasis on improving the quality of the workforce at the same time downsizing has left us with a very inexperienced first-level management force. And the experience problem goes right up the line because of the [Special Incentive Pension] offer."

Downsizing also means managers are trying to accomplish work with fewer employees than in the past. For some managers staffing shortages are a critical problem. One-third of the managers surveyed said they almost always have too few employees to handle the workload, while an additional third said they are frequently understaffed. Understaffing is a substantial problem for managers in a network where 41% of managers say they almost always have too few workers to handle the workload.

Managerial workloads are also affected when operations are consolidated and workers find themselves in new jobs they have not previously held, with coworkers they have never met. Many more inexperienced people are in jobs, intensifying the need for training, direction, and coaching from supervisors at the same time that the ranks of managers are declining and spans of control are increasing. This situation puts pressure on supervisors to meet their workers' needs for training and direction, and they are frustrated by their own inability to do so. One network manager who supervises 22 workers reported that the majority of his workers lack the skills necessary to do their jobs because so few experienced, technically trained workers were willing to relocate to the megacenter in which he works. "Many of them are [not from technical craft backgrounds]. Some want to learn. But the technology they're using requires a longer learning curve. Training just focuses on the basics. Then they're expected to figure out how to do it on their own. They don't always get direction. I can't get to everyone everyday." The lack of adequately trained staff is a substantial problem for most managers. Indeed, 59% say they frequently have workers who lack the skills necessary to handle the workload.

Given their increased workloads, it is not surprising that managers are working more hours, both on the job and at home. Seventy-nine percent of managers say they are spending more time at work now than they did two years ago. In addition, 65% say they are working more hours at home on job-related work than they did two years ago. Combining time spent working on the job and at home, 60% of managers are now working more than ten hours per day. While some managers may find their increased workloads challenging, many are not pleased with the additional time their jobs require. Roughly two-thirds of the managers I surveyed say they are required to work more hours than they would like to.

Managers are also being monitored more closely as pressure to improve productivity intensifies. Electronic beepers and cellular telephones are standard equipment for these managers. As a result, the line between managers' work and nonwork time appears to be blurring. For example, a group of first- and second-level customer services managers reported that because workloads and time constraints made it impossible to meet with one another at work to discuss problems and issues, they routinely held manager "meetings" on the drive to work in the morning via cellular telephones. In addition, these managers wear pagers at all times at work so that they can be reached at anytime, in effect eliminating the possibility of brief work breaks during the day.

Mobility Opportunities

At the same time that managers are dealing with increased workloads and hours of work, they also face declining mobility opportunities within the company (Table 2). Fewer layers of management exist to which managers can be promoted, and consolidation of functions means that fewer opportunities to transfer laterally are available for managers. However, the decline in opportunity appears to be smaller than that reported in other companies. For example, 36% of managers surveyed here report that promotional opportunities have declined over the last two years, in sharp contrast with Batt's (1996) findings for another RBOC where 89% of managers said promotional opportunities had declined. Furthermore, although 26% of these managers say that opportunities for lateral transfers within the company have decreased in the two years prior to the survey, 41% say transfer opportunities have actually increased. These findings imply that despite substantial restructuring, managers in this company continue to have some opportunity to advance their careers within the organization.

TABLE 2

Managerial Opportunity and Security

	All (n = 385)	Network (n = 248)	Customer Services (n = 137)
Internal Opportunity			
Decline in promotions*	36	44	21
Decline in lateral opportunity**	26	35	11
Skills are useful internally**	83	79	89
*External Opportunity***			
Have external opportunities	47	51	38
Skills are useful externally	71	69	75
*Security***			
Less secure in job	51	50	53
Unsure company will be successful	38	44	29
Do not think I will be able to work here entire career	36	37	35

*% of positive responses to yes/no question.
**% of positive responses to question (1-2 on 5-point scale).

Security

Although managers continue to have opportunities for career mobility within the company, they are increasingly insecure about their employment (Table 2). Just over one-half of all managers report feeling less secure in their jobs now than they did several years ago. In addition, managers are less certain about their futures with the company. Thirty-six percent of managers do not believe they will be able to continue working for the company for as long as they would like to. This uncertainty may be more related to perceptions about the company's long-term viability than about the managers themselves. Thirty-eight percent say they are unsure of the company's ability to succeed.

Manager Response to Restructuring

A concern raised by both academics and practitioners is that when restructuring results in a break of the psychological contract between an organization and its employees, morale will suffer and employee motivation will diminish. Osterman (1996) suggests that the potential for negative responses to restructuring is of particular concern among managers, the group most likely to have internalized the organization's objectives and values. The evidence provided in Table 3 suggests that this has not been the case with this group of managers.

TABLE 3
Manager Responses to Changing Employment Relations

	All (n = 385)	Network (n = 248)	Customer Services (n = 137)
*Commitment to the Company***			
Willing to work hard	81	77	88
Loyal	70	67	77
Take pride in the company	74	68	85
Have similar values	41	36	52
Unlikely to retire early	61	65	48
*Support Company Strategy***			
Agree success depends on upgrading worker skills	89	91	85
Satisfied with **			
The company	56	50	66
My job	64	62	68
Pay	60	58	62
Benefits	68	61	82
Participation in decision making	47	47	47
Promotional opportunities	35	32	39
Employment security	36	39	30
*Implications for Managers' Families***			
Difficulty balancing work and family	54	59	45
Family says I spend too much time at work	59	65	49
Job takes up too much time	41	46	33

**% of positive responses to question (1-2 on 5-point scale).

Despite downsizing and increased workloads, somewhat less opportunity for career advancement, and less employment security, these managers remain strongly committed to the company. Eighty-one percent of managers say they would be willing to work harder than they had to in order to help the company survive. Seventy-four percent are proud to be working for the company, and 70% are loyal to the company. In addition, these managers appear to want to keep working for the company. Sixty-one percent of those managers who are eligible to retire early under the company's special enhanced pension benefit say it is unlikely that they will do so, despite the fact that this enhanced pension is widely viewed within the company as a very generous, one-time-only benefit. Sixty-five percent of managers agreed that it is unlikely that the company would offer a similar retirement package in the future.

The managers surveyed here are not, for the most part, dissatisfied with their employment situations. More than one-half are satisfied with the company. Managers also tend to be satisfied with their own jobs as well as with their pay and benefits. Roughly two-thirds of all managers say they are satisfied with their job, pay, and benefits.

Managers are less satisfied, however, with the influence they have over decisions affecting their jobs. Less than one-half of all managers say they are satisfied with this facet of their jobs. Furthermore, first-level managers are significantly less satisfied with their decision-making authority than are other managers, a likely reflection of the differences in their decision-making authority discussed previously. Only 34% of first-level managers are satisfied with the influence they have over decisions that affect their jobs, compared to 59% of higher-level managers who are satisfied with the influence they have.

Managers are also less satisfied with their mobility opportunities and employment security than they are with the company or their jobs. Only about one-third of managers are satisfied with their opportunities for promotion. Approximately the same percentage of managers is satisfied with their employment security. Indeed, there is some ambivalence among many managers regarding their sense of security. On the one hand, they have witnessed reductions of management positions while the company has neither made additional investments in their careers nor provided them with employment security guarantees. On the other hand, there is a sense among many managers that the company is taking the right steps to ensure its long-term future, a future these managers believe will include them. This ambivalence is clear in one manager's comments about her own sense of security. "There is no job security. The company can move me anywhere, anytime. But the megacenter concept gives me a sense of security. I feel half-way safe."

These managers seem to be adapting to a new employment relationship with only relatively small declines in their job-related attitudes. But the effects of restructuring extend beyond the workplace and into the homes of many of these managers. One key consequence of the greater amount of time managers are spending on work is increasing conflict between the demands of work and the demands of their families. More than one-half say it is often difficult to balance their job and home life. Fifty-nine percent say that their families think they spend too much time at work; 40% say their job takes up too much of their time.

Conclusion

In this case I describe one company's restructuring strategy, a strategy that potentially represents a worst-case scenario for managers. This strategy offers little to buffer managers from the negative effects of restructuring or to enhance their jobs and careers. As a result, managers are experiencing heavier workloads, and they are working more hours, both on the job and at home. Their jobs are changing, requiring different and more complex skills. Yet they have not been given substantially greater influence over decisions that affect their jobs. Nevertheless, they remain strongly committed to the organization and hold fairly positive attitudes towards their jobs. This apparent contradiction can be explained in part by the fact that these managers continue to have opportunities to advance their careers both within and outside of the company.

While there has been a decline in opportunities for promotion and transfer, managers perceive these declines as small relative to what has occurred in other companies. In fact, some managers actually perceive an improvement in opportunity. Employment security has declined as well, but again, not to the extent reported elsewhere. Furthermore, managers believe they are well positioned for future jobs that do become available within the organization. Eighty-three percent say their skills are useful for jobs within the company that they expect to hold in the future (Table 2). There has been a loosening of the employer/employee bond within this organization, but the internal labor market continues to be relevant for managers.

Furthermore, the organization of work has not fundamentally changed. Neither teams nor other structures designed to increase employee participation have been introduced widely. Unlike managers in other companies who have seen their responsibilities be assumed by teams, the responsibilities of these managers are not being pushed down the ranks to workers. Consequently, managers may believe that their jobs are less vulnerable to elimination.

In addition, managers seem to have faith in the company’s ability to succeed. In interviews, managers largely expressed support for the shift to the megacenter structure, although they are frustrated with the transition process itself. Even the implementation of the technical training program for workers, a clear indication that the company has chosen to invest in its nonmanagers rather than its managers, has found management support. Managers see the investment in worker training as an indication that the company is responding appropriately to increasing competition. Nearly 80% of managers agree that worker skills must be upgraded in order for the company to be successful in the future. To the extent the company can secure its future, managers are likely to feel their own employment is more secure.

Finally, the company is operating in a growth industry, and managers feel positive about their own abilities to succeed in the external market should it become necessary to do so (Table 2). Almost one-half of all managers say they have employment opportunities outside of the company.

Managers also believe that their skills will be valued in the external market. Seventy-one percent say that their present job skills will be very or extremely useful in obtaining a job outside of the company. This perception that employment options exist for them in the external market implies that managers are less dependent on their current employer for security.

So far, the company has implemented its restructuring strategy without substantial negative fallout for its managers. Managers continue to hold favorable attitudes toward their jobs and the company and are less insecure about their futures than are their counterparts in other telecommunications companies. Unfortunately, managers appear to be paying for this sense of relative security with increasingly heavy workloads, more time working both at work and at home, and greater difficulty juggling their jobs and families. As this company adjusts its strategy in the face of continuing regulatory and technological change, the full effect of restructuring on its managers is unclear. It is unlikely, however, that spans of control, workloads, and hours of work can increase indefinitely without some fraying of managers' positive work attitudes.

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VI. REFEREED PAPERS— INTERNATIONAL AND COMPARATIVE

Unionization Determinants of Multinational Firms

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During the past half century, perhaps the most remarkable feature of the American economy is its transformation from an overwhelmingly domestic focus to its current integration in the global economy. For instance, in 1950 foreign direct investment (FDI) by U.S. firms totaled $11.8 billion, and by 1995 U.S. firms' FDI had increased to $880 billion. After adjusting for inflation, aggregate FDI by U.S. firms increased almost twelve-fold during 1950 to 1995, which dwarfs the four-fold increase in real GDP during this period.

An important dimension of this increased offshore investment by U.S. multinational firms is the industrial relations (IR) and human resource (HR) strategies they employ in their increasingly numerous facilities outside the United States. In this paper we analyze these employment relations strategies, and we give particular attention to U.S. operations in Taiwan and South Korea. The emergence of union militancy in Korea and union independence from the government in Taiwan during the 1980s and 1990s make these two countries particularly worthy of study (Freeman 1994).

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Workplace Transformation in the U.S.

During the past fifteen to twenty years, U.S. employers have implemented many work and employment practices designed to increase workplace efficiency. As domestic and global product market competition has intensified, many employers have developed and installed HR and IR practices that result in more flexible and productive workforces. We have identified three pertinent dimensions of this workplace transformation. First, some of these HR practices may involve changes that occur at the employees' expense. For instance, employers have pursued flexibility by expanding training and reducing job titles, thereby allowing them more opportunity to quickly move employees among tasks as production needs change. Many employers also have adopted practices that allow for rapid fluctuations in the size of their workforces and their labor costs as market demand changes, including an increased use of outsourcing (or subcontracting) of various types of work and more use of temporary and part-time employees (contingent workers) who have few fringe benefits and no job security. As these examples indicate, many employers have transformed employment in a manner that shifts some of the risk associated with product market success or failure from the stockholders to the employees (Kochan, Katz, and McKersie 1986).

Second, some other workplace changes have been much more employee-friendly. Many employers have "empowered" employees to become more fully involved in their work and to be directly rewarded for superior performance (Appelbaum and Batt 1994; Osterman 1994). These "empowering" practices include self-directed work teams that have considerable task autonomy; substantial employee involvement in decisions regarding work scheduling, job assignment, and even discipline of other employees; reduced layers of management as employees take on tasks historically performed by supervisors; extensive and ongoing training; and various forms of performance-based pay.

Third, American employers historically have been strongly opposed to the presence of unions in their facilities (Lawler 1990). There seems to be general agreement that during the 1980s and 1990s employer resistance to unions stiffened compared to earlier postwar decades. Among nonunion firms, this resistance usually emerged as efforts to defeat union organizing drives. Among unionized firms, these efforts emerged as seeking union concessions at the bargaining table, increasing the use of permanent replacements during strikes, and investing away from unionized facilities (including moving facilities to domestic and international locations to be operated on a nonunion basis).

The "new employment relations" in the U.S., then, involves a mix of employer-initiated HR and IR policies and practices (Kochan, Katz, and

McKersie 1986). First, it involves a shift in union-management power relations that favors employers. This includes strong resistance to union organizing by nonunion firms and the containment of union influence by unionized firms. Second, it often involves the increased (and unilaterally imposed) sharing of market risk with employees in the form of reduced job security. Third, it involves a substantial increase in the use of employee empowerment and performance-enhancing work practices to provide employees with more work autonomy and to increase their ability and incentive to be more productive.

U.S. Firms and Their Employment Relations Strategies around the Globe

Each country has its own employment relations system in that its employers, unions, government, and the "web of rules" that bind them together vary substantially across national borders (Dunlop 1958; Kerr, Dunlop, Harbison, and Myers 1960; Rothman, Briscoe, and Nacamulli 1993). As a result, U.S. firms that have established operations in other countries have encountered a huge variety of national systems within which they must adapt.

U.S. employers strongly prefer to operate nonunion facilities regardless of their global location. Just as they seek to operate on a union-free basis in the U.S., so they usually seek to avoid unions in their international operations, other things equal. They also seek to avoid countries that centrally impose restrictive employment terms. For instance, a recent analysis of U.S. firms' foreign direct investment across 19 Organization for Economic Cooperation and Development (OECD) countries found that American employers invested less than otherwise in countries with high union density rates, with governmentally imposed stiff layoff restrictions, and/or with extension policies that bind employers to abide by the terms of national or regional collective bargaining agreements (Cooke 1997). In contrast, U.S. companies invested more in OECD countries with higher average educational levels and in countries requiring works councils (Cooke 1997). This research indicates that U.S. employers are more willing to invest in developed countries that impose employee representation process requirements but are less willing to invest in countries with higher unionization probabilities and/or that impose employment terms directly upon employers.

Cooke's research suggests that U.S. firms' facilities in economically advanced countries should be less unionized than indigenous firms. However, we are not aware of any research that analyzes the relative levels of offshore unionization experienced by multinational corporations (MNCs) of different nationalities (i.e., which are headquartered in different countries). In our analysis we explore this topic among multinational firms operating in Taiwan and Korea.

Multinational Unionization in Taiwan and Korea

Research Methods

Data for this study were collected via a survey of human resource managers in firms operating in Taiwan and Korea. A random sample of larger firms (those with 100 or more employees), both foreign-owned and indigenous, was drawn from business directories in these two countries. The respondents were asked a number of questions related to firm unionization and its determinants. The questionnaires were administered to individuals with principal responsibility for HRM in each firm. The sample consists of a total of 186 firms: 138 in Korea, including 40 indigenous firms and 98 foreign firms (41 American-, 42 European-, and 15 Japanese-owned); and 48 in Taiwan, including 22 indigenous and 26 foreign firms (14 American-, 10 European-, and 2 Japanese-owned). Among all firms in the two-country sample, 93 (50%) were unionized, with 63 of 138 firms (46%) unionized in Korea and 30 of 48 firms (63%) unionized in Taiwan. Table 1 describes the sampled firms.

TABLE 1
Firm Characteristics
(means, standard deviations)

Variable	Korea		Taiwan	
Union density	.37	(.40)	.33	(.44)
% Japanese-owned firms	.10	(.31)	.03	(.19)
% European-owned firms	.30	(.46)	.19	(.39)
% Indigenous firms	.29	(.45)	.50	(.51)
% Joint ventures	.24	(.43)	.17	(.38)
% Full-time employees	.92	(.09)	.95	(.13)
Freestanding HR department	.70	(.46)	.88	(.32)
Age of company (years)	19.79	(16.11)	17.14	(11.70)
Number of employees (log)	5.78	(1.58)	6.07	(1.22)
Manufacturing firm	.57	(.49)	.62	(.49)
Differentiator score (1-6)	4.81	(.89)	5.15	(.95)
HR values score (1-6)	4.22	(.93)	4.49	(.86)
N	138		48	

The dependent variable in our study is the percent of the firm's non-managerial workforce that is unionized. Union density is a much better proxy for the support the union enjoys within the firm than is a dummy variable measuring only the union's presence or absence, and union density is a particularly meaningful measure of union presence in these two countries where unions usually do not have exclusive bargaining rights. As can be seen in Table 1, mean union densities in the sampled facilities are rather low, though the large standard deviation indicates a wide range of facility-specific union penetration rates across our sampled facilities.

Separate regression analyses are performed for the Korean and Taiwanese samples. The principal independent variables in the analysis are dummy variables indicating the parent company's country of origin. There are three such variables: Japanese firms, European firms, and indigenous firms. The reference category is American firms. Thus the firm ownership variables indicate the difference in union density, other things being equal, for European-owned, Japanese-owned, and locally owned firms relative to American-owned firms. For the reasons explained above, we expect that American subsidiaries in Korea and Taiwan will exhibit lower union densities than firms owned by other MNCs. This would suggest the national origin variables would be negative in sign. Some of these MNC firms are joint ventures with local partners, which might alter the relationship between MNC nationality and union strength. Thus a joint venture dummy variable is included as a control measure, although no specific relationship is anticipated.

Several other control variables are also included. Part-time employees are less likely to have the same degree of attachment to a firm as are full-time employees. Thus we include the percent of part-time employees in the analysis and expect this to be negatively related to union density. The existence of a freestanding HRM department in the firm, which is a proxy for the firm's willingness and ability to invest in high-commitment work practices as well as willingness to orchestrate union avoidance campaigns, is expected to reduce union density. We anticipate that older firms, which perhaps have greater internal rigidity and in any case have been available longer as union organizing targets, will have higher union density levels. Larger firms (measured by the natural logarithm of full-time employees) are more attractive union-organizing targets than small firms, and therefore we expect they will have higher union densities. A dummy variable indicating whether the firm is part of the manufacturing sector is included, although no specific relationship to union density is posited.

Porter's (1985) well-known typology of organizational strategies distinguishes between *cost leaders* and *differentiators*. A firm that selects a cost leadership strategy seeks to become *the* low-cost producer in its industry, which creates a sustainable competitive advantage. In contrast, a differentiator firm seeks to make its products unique along one or more dimensions valued by customers (e.g., technical prowess, product durability, outstanding service, etc.). If successful, these unique features will enable the firm to levy premium prices, which provides a sustainable competitive advantage. We included a six-item scale that measures the degree to which a firm follows a differentiator rather than cost-leader strategy. This is based on responses to Likert-style items on our survey form assessing such things as the firm's commitment to product quality and service to customers rather than competing on the basis of price. The summed scale demonstrates high reliability (coefficient alpha > .80). Firms that stress differentiation are presumed to prefer greater workplace flexibility and thus have a strong incentive to avoid unions. At the same time, low-cost producers have a strong incentive to operate without unions in order to keep their costs down. As a result, we are unsure how this business strategy variable will be related to union density, so we do not specify direction.

Questions also asked for upper management's perceptions of the importance of human resources as a source of the firm's competitive advantage. Following Bae (1997), this is assessed using six items that were adapted from Lewin and Yang (1992). The human resource value scale measures top management's belief that its employees and HR practices are sources of competitive advantage. We anticipate that firms in which top management strongly values human resources will introduce HR policies and practices that reduce conflict between labor and management. Thus the HR value score is posited to be negatively related to union density.

Results

Empirical assessment of the framework developed above involves using ordinary least squares to regress union density on the set of independent variables. Because these relationships may differ between Korea and Taiwan as a function of variations in culture, legal, and political systems, and social and economic institutions, we have done separate regressions for each country.

The regression results are reported in Table 2. In the Korean sample, the overall regression equation is statistically significant ($F_{11,126} = 4.59$; $p < .01$) with an adjusted R^2 of .22. We expected that American firms would have the lowest union densities of all four national origin categories, but that is not the case. Japanese-owned firms have higher union densities than American-owned firms, but the difference is not statistically significant. European-owned firms have higher union densities than American-owned firms, and the difference is only significant at the .10 level. Finally, the strongest relationship here is with respect to Korean-owned (indigenous) firms, which have significantly lower union densities than American-owned firms. Thus to the extent that country of origin serves as a proxy for union avoidance desires, our results suggest that American MNCs have a slightly greater propensity in this direction than MNCs from the other advanced industrialized countries (especially European countries). More importantly, MNC facilities in Korea, including American-owned firms, are generally more highly unionized than indigenous firms.

TABLE 2
Determinants of Union Density
(OLS regression results, t-statistics in parentheses)

Variable	Korea	Taiwan
Constant	18.26 (.45)	-26.62 (-.44)
Japanese firm	3.68 (.30)	55.44 (1.89)*
European firm	15.07 (1.78)*	3.73 (.243)
Indigenous firm	-26.68 (-2.51)***	.75 (.064)
Joint venture	-0.64 (-0.074)	8.62 (.487)
Percent full-time employees	-40.69 (-1.282)	1.90 (.045)
Has freestanding HR department	-7.14 (-0.886)	45.88 (2.397)**
Age of company (years)	0.54 (2.139)**	1.64 (3.302)***
Number of employees (log)	13.47 (4.199)***	11.75 (2.238)**
Manufacturing firm	-12.60 (-1.969)**	27.40 (2.403)**
Differentiator score	-9.90 (-2.745)***	-5.44 (-1.042)
HR values score	4.10 (1.177)	1.30 (.201)
Adjusted R^2	.22	.49
F Statistic	4.45***	5.17***
N	138	48

*** significant at .01 level, ** significant at .05 level, * significant at .10 level

Other results in the Korean analysis indicate, as predicted, that larger firms and older firms are associated with higher union densities. In addition, firms that score higher on Porter's product differentiation scale are associated with reduced union densities.

In the Taiwanese sample the overall regression is statistically significant ($F_{11, 36} = 5.16$; $p < .01$) with an adjusted R^2 of .49. In this analysis the dummy variables for firm national origin are not statistically significant for European-owned and indigenous firms. The Japanese-owned firms had significantly higher union densities than the American-owned firms (although only at the .10 level), but with only two Japanese-owned firms in our Taiwanese sample this difference may not be meaningful. Thus union densities in American and European firms operating in Taiwan are not significantly different from indigenous firms, a result quite different from the Korean analysis. At the same time, larger firms and older firms in Taiwan—as in Korea—are associated with higher union densities. Taiwanese firms that emphasize a product differentiation strategy report lower union densities, though this result is not statistically significant.

Two interesting differences emerged between the two countries. In Korea manufacturing firms reported lower union densities than other firms, but in Taiwan manufacturing firms are more highly unionized than firms in other sectors. More intriguing, Taiwanese facilities with freestanding HR departments report significantly lower union densities compared to Taiwanese plants without such departments, but in Korea the presence or absence of such an organizational unit has no relationship with unionization levels.

Conclusions

Three conclusions emerge from this analysis. First, the sampled American firms located in Korea behaved in a manner generally consistent with Cooke's (1997) analysis: American firms in Korea had lower union density rates than the Korean facilities owned by MNCs of other nationalities, though these differences are not large. In Taiwan, American firms had lower union density coefficients than facilities owned by other MNCs (the coefficient signs were in the expected direction), but these differences were not significantly different.

Second, these results indicate that unionization status of host-country MNC-owned facilities vary across national boundaries. Because the influence of selected independent variables varies across these two countries, it is important that future research adequately account for country-specific determinants of unionization.

Third, our results indicate that unionization status among MNC facilities around the world usefully can be examined with analytical models that combine country-specific and MNC-specific measures with variables that have long been known to influence unionization status of domestic U.S. workplaces (e.g., firm age, firm size, industry sector, etc.). The application of such models to MNC facilities in many more countries would enable IR scholars to develop an improved understanding of the determinants of MNC unionization rates around the world.

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The Cultural Embeddedness of Labor Institutions: Lessons from Two Post-Communist Economies

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This paper analyzes the relationship between institutional change and actors' reactions in two former communist societies. Utilizing survey data of union members in the Hungarian and east German clothing industry, it compares members' reactions to unions' efforts to transform themselves into a viable and representative institution in two different institutional settings.

There is widespread evidence in the social sciences of the necessity of a complementary culture for the successful establishment and effective functioning of societal institutions (e.g., Almond and Verba 1963; Granovetter 1985). More specifically, studies have pointed to the importance of the cultural embeddedness for the successful stabilization and persistence of new democratic institutions (see Linz 1978; Jacoby 1994). This should be especially evident for the development of trade unions in central east Europe. Thus union members' commitment and support seems to be essential for the establishment and functioning of unions in post-communist societies, as a result of the dramatic changes in union-membership relations (from "obligatory" membership of a communist "service station" to membership of a modern interest institution).

There is, however, a widespread argument that an abiding cynicism and distrust among the people towards new civil institutions (including unions) is the predictable legacy of Communist rule and the immediate problem in central east Europe to overcome (e.g., Mishler and Rose 1997:419). Various authors explain this with a continuing "legacy of communist labor relations" in workers' attitudes (Blanchflower and Freeman 1993:13), a continuing "socialist mentality" (Sztompka 1993a:243) or attitudinal "path dependencies"

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(Stark 1992). However, specific studies on union members in transitional economies do not exist. There are a few surveys on workers' general attitudes toward the market economy (e.g., Shiller et al. 1991) and more specifically towards the labor market (e.g., Blanchflower and Freeman 1997). Yet in both instances their focus is in examining differences between communist and capitalist worker attitudes (the data are from the very early years of the transformation), and they consist of very broad questions.

This study begins to fill this gap by providing a comparative quantitative study—the first of its kind—of union members in one industry in two post-communist societies a decade after the collapse. There are two interrelated aims. First, it evaluates the extent of the cultural support of unions in two different institutional settings. It tests a major hypothesis of the literature that post-communist institutions are not yet culturally embedded, the absence of which impedes their successful institutionalization. Second, the comparative nature of this study enables us to examine possible explanatory factors of the existence or absence of a complementary culture. Thus to what extent are union members influenced by the communist legacy or by different institutional structures of their interest representation?

Research Setting and Hypothesis

Hungary and east Germany were chosen because the two countries present alternative structures of interest representation on two dimensions: (1) reformed (old) unions in Hungary vs. transferred (i.e., west German) unions in east Germany; (2) a decentralized, fragmented structure of enterprise unions and union-controlled mandatory works councils (installed in 1992, informative and consultative rights) in Hungary vs. a newly implemented, clearly distinguished dual structure of industrial unions for collective bargaining and works councils for local interest representation (informative, consultative, and codetermination rights) in east Germany.

The question arises: To what extent do different institutional designs rather than common communist legacies have an impact on the existence of a complementary culture? Let us turn to the underlying assumptions of the two explanatory factors in more detail. First, cultural theories emphasize that norms, beliefs, and attitudes are a form of diffuse support that results primarily from socialization experiences (see Almond and Verba 1963). Thus one could argue that communist societies created a variety of civil institutions, such as unions and youth leagues, but these were in fact parts of the state apparatus. The consequence was arguably massive alienation and distrust of the Communist regime and a lingering cynicism toward both political and civil institutions (e.g., Mishler and Rose 1997). Consequently, the "legacy approach" argues that the disappointing communist labor relations induce people's negative attitudes towards the current unions. In contrast, rational theories of political behavior view commitment as a form of specific support that is contingent primarily upon assessments of institutional performance (Mishler and Rose 1997:434). Thus people's perceptions of the effectiveness of their unions today determines their level of commitment. In other words, it is assumed that people adapt to the changing structural conditions, whereas the former approach assumes that attitudes are not so easily changeable and that the communist socialization still has a visible impact on people's current attitudes and behavior (although the direction of the impact is not defined).

Applied to the Hungarian and east German context, we can specify two strands of hypotheses. First, with regard to former union experiences affecting union commitment today, one should distinguish between negative and positive (although unlikely according to the literature) experiences. A successful gradual modernization of the former unions should then be conditional upon former experiences being positive. In other words, if I was satisfied with the communist union, it is likely that I will be supportive of a survival and gradual reform of my union. An abrupt dissolution of the union and its substitution with a new (foreign) union institution will not so easily gain my support. On the other hand, if former negative experiences predominate, a gradual union reform is likely to face more difficulties in convincing people of their gradual reform efforts. In these circumstances a radical transfer of new institutions as in east Germany should have it "easier"—in particular if these "new" institutions are known for their successful functioning in the West.

Second, if current structural characteristics of interest representation dominate people's attitudes, two contrasting arguments can be made. First, on the surface, enterprise unions should facilitate members' cultural support because of their closer relationship between members and union officials compared to industrial unions (which have frequently no shop steward basis in east Germany).

Alternatively, members' attitudes might also be influenced by unions' current performance which depends on their economic context as well as on unions' organizational structure. Situating this study in the clothing industry has the advantage of comparing a booming and a depressed employment situation. The Hungarian clothing industry is growing and booming, whereas in east Germany it is a declining sector. Hence the employment conditions in the Hungarian clothing industry could facilitate union restructuring and performance (and members' confidence), whereas in the east German case the desperate economic situation could impede union's effective functioning.

However, the different institutional context of union organization might also have an impact on union performance and people's perceptions. In Hungary the performance of local union officials (rather than the national performance of the union) seems crucial for members' evaluation of the unions' effectiveness. In transitional times (privatization and marketization of firms) local union leaders are likely to face tough times defending their workers' interests. Moreover, according to Visser (1995:54) "A fragmented and decentralized union structure is less likely to perform well than a cohesive, centralized union organization." In east Germany on the other hand, even if the union is not (temporarily) successful in industry-level collective bargaining, the strong statutory rights of the works council guarantee—at least in theory—a minimum interest representation. This might allow members to be more confident in their interest institutions, even in uncertain times of restructuring and recession. In sum, these are clearly tentative hypotheses dependent on different conditions rather than tight theories which might be easily testable and refutable. This is, however, an unavoidable, generic characteristic of the current research in post-communist societies.

Method and Samples

To construct a scale to test the extent of a solidaristic culture among union members, we adopted the concept of union commitment (e.g., Gordon et al. 1980). Functioning labor institutions are then understood to require three major attitudinal and behavioral attributes of their members: (1) a commitment to collective values, i.e., solidarity (measured as union and group identity); (2) a willingness to actively support the institutions (measured as willingness to engage in organized and in self-initiated activities); and (3) a perceived necessity of the institutions and a positive evaluation of their performance (measured as perceived works council/union instrumentality and instrumentality of collective action). The "strength" of the dimensions is measured by the absolute level of the frequencies. All categories were measured by multi-item scales; all questions were answered on five-point Likert scales; and factor analysis was used to test the validity of the assumed variables.

The fieldwork for this research was conducted four years after the major transitional period: 1994 in east Germany and 1997 in Hungary. A questionnaire was distributed through local union leaders and works councillors (in the German case). In Hungary 1,000 questionnaires were distributed in 38 companies (there are 45 unionized clothing firms in Hungary); 498 were returned (and were usable), giving a response rate of 66%. In east Germany approximately 1,100 questionnaires were distributed in 53 firms, and 440 were returned completed, giving a response rate of approximately 40%. The demographic characteristics of both samples are similar and representative

(80% blue collars in Hungary and 75% in east Germany, 88% females in Hungary and 70% in east Germany, and a normal age distribution).

Findings

We discuss means (scale 1 [disagree] - 5 [agree]) and significant differences (t-tests: * $p < 0.05$, ** $p < 0.01$) of the Hungarian and east German samples with regard to the three facets of a supportive culture. It was very clear from the individual items (see Table 1) that in most cases a majority of Hungarians did not identify with their union and were significantly different than their strongly identifying east German counterparts. The picture provided by workgroup identity was slightly different. Hungarians proved to strongly identify with their group and in most cases significantly more than the Germans. Hungarians also felt less isolated in their groups and consequently felt group solidarity decreasing less than east Germans and thought that groups are better problem solvers than individuals. However, Hungarians were less willing than east Germans to accept group decisions if they are different than their beliefs. Finally, Hungarian members did not reveal strong them-and-us feelings against management. They had more trust in their supervisors than east Germans. Moreover, they were

TABLE 1

Collective Identities

	Means Hung	Means EGer	Sig T H/EG
Union Identity			
I share the aims and values of the union.	3.62	3.88	**
I am proud of being a union member.	2.50	3.37	**
I feel strong ties with the other union members in my plant.	2.75	3.07	**
I seriously think about quitting the union in the future.	2.46	2.32	
I would remain in the union, even if I were unemployed.	2.68	2.97	*
Workgroup Identity			
I accept group decisions even if I have a different opinion.	3.32	3.99	**
I prefer to work in groups rather than alone.	3.91	3.67	*
I increasingly feel isolated in my group.	2.13	2.19	
In the old days group solidarity was much better.	3.73	4.00	* I
identify strongly with my group.	3.56	3.29	*
Only those who depend on themselves at work get ahead.	3.29	3.67	**
In general, problems are better solved in groups than alone.	4.12	3.99	
Them-and-Us Feelings			
I don't trust my supervisor a great deal.	3.22	3.70	**
Today workers are exploited here.	3.83	3.48	**
Management tries to reduce the influence of the workforce and union.	3.52	4.18	**

less likely to think that management tries to reduce workers' influence compared to the Germans. On the other hand, Hungarians were more convinced than their counterparts that they are being exploited today.

Overall, the three dimensions of collective identity revealed a complicated picture of the Hungarians' collectivist and individualistic attitudes, whereas east Germans presented a more homogenous picture of collectivist and committed union members.

The three factors of perceived collective instrumentality revealed significantly different results between the two samples (Table 2). The Hungarians were in all but one case significantly less convinced of their unions' effectiveness than east Germans (most of whom scored relatively low levels too, except for their strong support of the necessity of the works council institution). The samples were more similar with regard to the necessity of collective support for the interest institutions. However, the effectiveness of strikes were acknowledged by only 46% of Hungarians, compared to 75% of east Germans. The final item dealt with people's evaluation of the former communist unions. The samples differed in that almost 70% of the Hungarians had a more positive view of their former communist unions than the reformed unions today, whereas only a third of the east Germans preferred the former (communist) unions. In sum, Hungarians were more negative about their institutions' effectiveness than their German counterparts; they also regarded collective action as not an effective tool, and they preferred the former union to their current one in contrast to the Germans who preferred their current union.

The frequency distribution in Table 3 reveals a relatively higher level of willingness to join organized forms of participation (such as strikes) than to become active on one's own. In other words, the involvement in self-initiated activities was much lower in absolute terms than in organized activities in both samples. Overall, Hungarian members were significantly less involved in organized activities than east Germans. With regard to self-initiated (more difficult) activities, the Hungarians revealed a more complicated picture. Although they were less likely than their counterparts to stand for works council election, they were more inclined to stand for a union post and to recruit new members compared to the Germans. Even more surprising, asked about their self-image as active or passive members, more Hungarians viewed themselves as being active than east Germans. In short, the willingness to engage in collective activities in both countries depended on the type of activity. East Germans were highly interested in joining organized activities but were less motivated to act on their own initiative. In contrast, the Hungarians were low on organized activities but scored high on self-initiated action.

TABLE 2

Collective Instrumentality

	Means Hung	Means EGer	SigT H-EG
Instrumentality of Works Council/Union			
We don't need a works council/union as management cares enough for us.	2.10	1.48	**
The works council (H: union) does not oppose management strategies strongly enough to improve job security.	3.85	3.14	**
Our works council (H: union) is not powerful enough to negotiate better working conditions.	3.89	3.38	**
H: Our union section is not successful in raising our wages/EGer: Our union is not doing enough to secure the adjustment of east German wage levels.	3.66	3.94	**
Instrumentality of Collective Action			
Works council (H: union) will only be effective if they get active support from the workers.	4.13	4.22	
Strikes are an effective means of strengthening the union during collective bargaining.	3.35	3.98	**
Evaluating Former vs New Union			
The former communist union represented my interests better than today's union.	3.64	2.69	**

TABLE 3

Willingness to Participate in Collective Activities

	Means Hung	Mean EGer	SigT H-EG
Organized Participation (Organized by Union/WC)			
If the union were to call a strike, I would participate.	2.79	3.82	**
I will attend the next works council (H: union) assembly.	3.66	4.42	**
Self-initiated Participation			
If asked, I would stand for the works council election.	2.34	2.78	**
If asked, I would serve on a committee for the union.	2.40	2.18	*
I constantly try to recruit new members to the union.	2.79	2.32	**
I don't see myself as a union activist.	3.35	3.85	**

Discussion

In short, the findings suggest that supportive cultural conditions exist in the east German but not in the Hungarian case. East German members yielded in most cases collectivist (supportive) results. They identified strongly with their union and acknowledged the necessity of the new collective institutions. Moreover, although they did not perceive them as highly effective, this did not lead to a rejection of the institutions as such. Thus despite their realistic perception of the currently low effectiveness of their union and works councils, members seemed to be prepared to invest a considerable portion of goodwill into these institutions. They decided deliberately to support their institutions. Thus in contrast to the literature's scenario of individualistic, apathetic, alienated union members in the East, these workers turned out to be a stabilizing, strongly supportive factor for the newly introduced works councils and union. These results are particularly remarkable in the case of the clothing industry where individualistic reactions might have been anticipated (i.e., declining industry, female workforce and a traditionally nonmilitant union). It allows the conclusion that the formal institutional transfer in this sector at least is accompanied by successful normative institutionalization at the membership level.[1]

Hungarian results contrasted significantly to that of the east Germans, however, without being consistently less or more committed. Their pattern is more complicated: First, with regard to the core items of union commitment ("union identity," "union instrumentality," and "willingness to become active"), a majority of Hungarians clearly lacked support for their institutions. One can conclude that the normative institutionalization of the Hungarian clothing union was not yet successful. Members did not provide their union with any real goodwill which seems necessary in transitional times. Second, the strong work-group identity is clearly an indicator that the Hungarians cannot be simply characterized as pure individualists. Additional evidence of this is their relatively strong self-image as union activists and willingness to stand for union election.

This somewhat contradicting attitudinal pattern of Hungarian union members might be simply explained as an outcome of the societal transformation and its attendant confusions. However, the same should hold true for the east Germans but apparently did not have a visible impact. Another possibility might be to refer to stereotypical cliches of cultural differences between the countries: Germans as "institution-believers" vs. Hungarians as "flexible individualists." But as Max Weber convincingly argued, "Trying to explain differences between countries by 'national mentality' is but an admission of ignorance." This was further examined by testing the impact of the country factor ("Hungary/east Germany") on members' union identity in the merged data set. The regression analysis of the merged sample (union identity as dependent variable) revealed no significant direct or indirect influence of nationality and thus provides a further support that "country" is not a sufficient explanation for attitudinal differences among Hungarians and east Germans.

A third possibility is to investigate to what extent this particular attitudinal pattern in the Hungarian sample reflects the Hungarian structure of interest representation or communist legacies. We argue in favor of the former: Our conjecture is that members do not strongly identify with the union because the fragmented, decentralized union structure makes people more likely to identify with their shop stewards and comembers at their plant rather than with the union as an institution (what the questionnaire asked for). The union headquarters in Budapest is far away and has no real impact on their working lives. Thus the union seems to be more "personalized" than in Germany. This could explain why Hungarians do not see the union institution as instrumental but nevertheless engage as individuals in collective activities. Union members might be characterized as "individualistic activists." Consequently, they do not support or trust in the interest institutions in their own right, as opposed to the east Germans who provide their new institutions with a surplus of goodwill and support and follow organized activities more easily than become active on their own initiative. In sum, the Hungarian union seems to have an individualistic membership with some activists but no binding ideology or shared value system in which the institution is embedded and which is arguably necessary to make the union an effective institution.

Let us now turn to the impact of former communist workplace relations. We found that the Hungarian and east German evaluation of their former communist unions was quite different: overall, Hungarians were positive; east Germans negative (these different attitudes challenge the literature's assumption of a shared disappointment with former unions throughout central east Europe). Thus if former experiences have a crucial impact on people's attitudes today, one should expect east Germans to be relatively positive about their new transferred unions and Hungarians to be positive about the fact that the communist unions were not abolished but reformed. The east German data might comply with this hypothesis, but not the Hungarian case. This provides additional, tentative support for our argument that the attitudinal differences in the two countries might be due to other factors, notably the structure of their interest institutions. This was further examined in a test of possible explanatory factors of members' commitment. A separate regression analysis was conducted for both samples with union identity as dependent and several antecedents commonly used in the literature (union instrumentality, job satisfaction, them-and-us feelings, group identity, evaluation of the former communist union, and demographic variables). The purpose was to analyze whether the evaluation of the former union had any impact on union identity. In both samples, union identity was not influenced by people's comparison of unions' effectiveness in former and current times. Moreover, in both cases current instrumentality items scored high.

However, one could argue that the evaluation of former unions might influence the current perceptions of the union/works council and hence influence union identity indirectly. Indeed, both are strongly correlated.[2] Yet repeating the regression analyses without union (and works council) instrumentality made the item "evaluation of former unions" not significant. Thus there seems to be no direct link between this item and union identity. In other words, the fact that most Hungarians thought the former union was more effective than the union today or that east Germans thought the former union was not better did not influence their current union solidarity. In contrast, union identity in east Germany was strong and in Hungary it was weak.

Conclusion

To what extent can the findings be generalized? The data are clearly a "snap-shot" and not representative either for the clothing industry or for the whole union membership in the two countries. However, as argued earlier, this industry presents a critical case study: that union members in the declining clothing industry in east Germany with a relatively weak union and constrained works councils still trust and support their new interest institutions is a remarkable indicator for the stability and successful institutionalization of the (west) German dual system of industrial relations. On the other hand, the fact that union members in a growing, prosperous industry in Hungary are not showing any collective support towards their reformed unions highlights the severe problems of a decentralized, fragmented union structure during transitional times.

Our findings also illustrate the complexities of union members' attitudes in transitional economies and emphasize a more cautious approach to "cultural legacies" on members' attitudes and behavior. A mobilization potential among union members exists in both countries and challenges the widespread hypothesis that the economic and political transformation simply erodes collectivism in post-communist societies. Yet, there is some evidence that other factors such as the institutional structure and performance of the interest organizations rather than communist attitudinal legacies seem to induce or impede the development of union solidarity. The German works council with its statutory rights seems to facilitate the creation of commitment among members even if the union is not perceived as powerful enough to represent its members' interests satisfactorily. Arguably, weaker forms of works councils with only information and consultation rights and which are in addition incorporated in an enterprise union structure are not able to fill this "representation gap."

To conclude, our preliminary findings highlight the advantages of mandatory interest representation to enhance workers' trust and commitment in their new industrial relations institutions. This should also have a positive impact on the overall industrial relations climate at the workplace level. German-style works councils can thus be seen as major stabilizing factors for the labor movement in transitional economies. However, it remains an open question for future research in central east Europe to what extent decentralized union structures can escape the vicious circle of weak union performance and low trust and commitment of their members.

Endnotes

[1] This was further substantiated in an additional comparative study with union members in the west Germany clothing industry (Frege 1988) which revealed in most cases no significant differences between east and west Germans.

[2] Correlations coefficient in Hungary = .453** (union instrumentality); in East Germany: .163** (union instrumentality), .556** (works council instrumentality).

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An Analysis of Public Policy Options to Address the Representation Gap: Elites' Values and Diverging Approaches in Canada and the U.S.

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One of the most prominent aspects of the North American employment relationship is associated with employee participation.[1] Not only is employee participation regarded as a basic factor of industrial democracy (Adams 1995), but it is also a potential source of competitive advantage (Huselid 1995). One would logically expect a high degree of consensus on the values of employee involvement among the actors of the employment relationship. Instead, a "gap" exists between the level at which employees would like to participate and that which employers would allow them to participate (Freeman and Rogers 1995). The government, as the "neutral" actor in the employment relationship, is often left with the task of deriving public policy options to address the "gap."

In many European countries, policymakers have addressed the gap with mandatory employee participation (e.g., works councils in Germany). In North America, legislators have shied away from mandatory employee participation (Adams 1995) and rather have endorsed collective bargaining as "employee voice." It is clear that collective bargaining, as practiced in North America, follows the principles of the 1935 Wagner Act (discussed later). As such, the differences between Canadian and American approaches to labor law have been deemphasized (Meltz 1990).

The purpose of this paper is to examine two recent attempts to reform labor laws in Canada and the U.S. Specifically, the paper aims to highlight the positive correlation between public policy options and elites' values as well as to identify the diverging approaches to public policymaking in Canada and the U.S. After a brief description of the representation gap,

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section two reviews theoretical background information on the convergence hypothesis (Kerr, Dunlop, Harbison, and Myers 1960) and strategic choices (Kochan, Katz, and McKersie 1993). Section three outlines early divergence of Canadian and American public policy options with respect to employee involvement. This section also provides a description of Bill 40 and the recommendations of the Dunlop Commission as recent attempts to reform employee participation. Section four isolates the key determinants of the public policy options, and section five provides concluding remarks.

The Representation Gap

The representation gap is associated with the difference between actual and potential performance of an organization where actual performance is less than potential performance, and the reason for the residual is related to the lack of employee involvement. In Canada, Betcherman, McMullen, Leckie, and Caron (1994) suggested that there is a representation gap. In the U.S., Freeman and Rogers (1995) used data from a cross section of firms and employees to report that "employees want greater participation and representation at their workplaces than they now have. For all age, sex, race, occupation, education, and earnings groups, there is a *representation/participation gap* between what employees believe they can contribute at the workplace and what current work organizations allow them to do." Specifically, 63% of the respondents would like to have more influence, 35% would like the status quo, and only 1% would like to have less influence. The respondents welcomed employee involvement initiatives but concluded that the programs have not gone far enough to encourage employee participation. Thirty-one percent of the employees reported that they were personally involved in an employee involvement program, and 64% of the respondents without an employee involvement program would like to have one. Only 30% of the employees rated existing systems of employee involvement as effective. It is, therefore, clear that the level of employee involvement accorded to North American workers is below the level which they would like to have, and more importantly, employees believed that an increased level of participation would increase their effectiveness.

Theoretical Background Information

The conclusions of *Industrialism and Industrial Man* (Kerr et al. 1960) form the basis of many studies on comparative industrial relations. First, the authors presented evidence to show a positive relationship between the convergence of industrial relations systems (toward a middle-class system of Europe or North America) and the spread of industrialization. Second, they argued that there is a direct relationship between the values of elites in the systems and industrial relations practices. Locke, Kochan, and Piore (1995) developed an alternative approach to assess comparative industrial relations in which they build on concepts developed in the strategic choice perspective (Kochan, Katz, and McKersie 1993). In the *Transformation of American Industrial Relations*, Kochan, Katz, and McKersie (1993) proposed that employers were faced with similar environmental constraints and opportunities but were free to make different strategic choices to manage long-term outcomes. They concluded that the combination of environmental contingencies *and* employers' strategic choices underlie industrial relations practices. Essentially, they introduced evidence which shows that environmental forces alone cannot explain the "transformation" of industrial relations practices. Although Kochan, Katz, and McKersie assessed the strategic choices of employers, they fully acknowledged that other actors of the industrial relations system could also influence long-term outcomes. With respect to public policy options, the values of political elites (Kerr et al. 1960) may have a direct impact on industrial relations practices.

The similarity of the economic and industrial structures of Canada and the U.S. has motivated an examination of the convergence hypothesis. With respect to union density, Troy (1992) proposed that economic and industrial contingencies have resulted in a similar downward trend in both Canada (at least in the private sector) and the U.S. Furthermore, according to Troy, the economic climate would eliminate the subsidy on public sector union growth in Canada, and eventually union density would converge between the two countries. Meltz (1990), in contrast, highlighted the diverging trends in union density in Canada and the U.S. In this regard, he illustrated that both countries recorded a 33% union density in the 1930s, but Canada retained that level in the 1990s while the level in the U.S. declined to 12%. Meltz (1990) concluded that the divergence resulted from eleven reasons, which included the arguments that Canada has more labor-friendly labor laws, that the presence of the social democratic NDP is very influential, and that Canadian employers are less inclined to resist unions. In other words, Meltz (1990) argued that the diverging outcomes are largely explained by the diverging processes.

Diverging Public Policy Options

Early Differences in Canadian and U.S. Approaches to Employee Participation

In 1935 the U.S. enacted the National Labor Relations Act (the Wagner Act). The drafters of the Wagner Act had to tackle the history and the tradition of a system which preferred the rights of the individual over the collective interests of organized labor. The drafters incorporated the findings of a federal commission that was given the responsibility to investigate industrial conditions in the U.S. around the turn of the century. “In words redolent of the logic of the Wagner Act, the commission’s final published recommendations in 1902 asserted that *only* the organization of workers into unions and the establishment of the closed shop could equalize bargaining power between employees and employers, guaranteeing workers democratic citizenship in the shop as well as the state” (Dubofsky 1996). Union recognition (certification), collective bargaining, industrial disputes, and grievance arbitration became key components of the employment relationship in the union sector of the U.S.

In 1944 Canadian legislators driven by the logic of the Wagner Act introduced P.C. 1003. In many respects, P.C. 1003 resembled the Wagner Act. However, one of the most significant differences between the Wagner Act and P.C. 1003 is related to employee participation in the nonunion sector. Section 8(a)(2) of the Wagner Act explicitly prohibits “company unions.” Many reasons underlie the ban on “employer-dominated” organizations: they can be a union avoidance strategy; they can be an inappropriate substitute for industrial democracy; they can be used to manipulate employees; they can be an empty form of participation because of the lack of power; they cannot take labor cost out of competition; and they can be a source of industrial conflict (Kaufman 1997). According to Kaufman, the outright ban on “company unions” might have been a harsh conclusion, given the arguments that union avoidance was not the primary objective of many organizations in the 1920s, that trade unions were not the most attractive option for many workers in the 1920s, and that many “company unions” delivered tangible benefits. In contrast, the Canadian strategy to allow “company unions” in P.C. 1003 is related to primarily two reasons (Taras 1997). Taras emphasized the role of the Minister of Labor (William M. King) in the decision and the tradition of British-style Whitley councils. The implication is that Canadian and American legislators, although faced with similar environmental pressures, have made different legislative choices with respect to employee participation.

Recent Differences in Canadian and U.S. Approaches to Employee Participation

Recently, both Canada and the U.S. have attempted to reform labor laws. The following two examples are used to highlight some basic differences in Canadian and U.S. approaches to employee participation.

The Canadian case: Bill 40 in Ontario. Unlike the U.S., labor laws fall under the provincial jurisdiction in Canada. In this example, the Ontario case is used to illustrate the Canadian approach to public policy option for the representation gap. Ontario is an interesting case because the province is the economic engine of Canada, and for the first time in 1991 it was governed by the left-leaning NDP. It is no secret that the NDP has always been an ally of the labor movement. As such, one of the top priorities of the NDP was to enact Bill 40 in January 1993 (a prounion bill), which may be used as a gauge of "labor-friendly" reforms to labor law (Abraham and Voos 1996).

The major components of Bill 40 can be grouped into two categories. The first group of changes was targeted at union growth. First, Bill 40 increased the pool of employees who were eligible to become union members.[2] Second, it eased the difficulty of organizing nonunion workplaces.[3] Third, the NDP legislation also addressed the issue of combining part-time and full-time employees into one bargaining unit.[4] Last, a series of preconditions was removed so that either the employer or the union could request an arbitration of the first contract.[5]

The other group of changes was related to the administration of strikes. Prior to Bill 40, employees were not allowed to picket the employer at public places (e.g., malls). Bill 40 removed this restriction, and employees were allowed to "inform" the public of the issues which underlie the impasse. More importantly, Bill 40 restricted the use of replacement workers during a strike.[6] The intentions of the amendments were to strengthen the strike sanction.[7]

The American case: The Dunlop Commission Report. The mandate for the Dunlop Commission (1994) included the following three areas. First, the commission concluded that labor-management cooperation had mutual benefits for workers, employers, and the national economy. As such, the commission opened discussions on the effects of Section 8(a)(2) of the NLRA. As previously discussed, the clause implicitly prevented labor-management cooperation, but the clause was designed to prevent company-dominated unions. The commission considered various modifications of Section 8(a)(2) (e.g., allow employee participation if it meets certain standards such as the election of committee members) but recommended that the National Labor Relations Board (NLRB) be given the mandate to interpret employee participation so that it is not automatically illegal because the parties discussed terms and conditions of the employment relationship. Other recommendations of the commission which were intended to encourage employee participation include the involvement of employees on government-mandated committees (e.g., health and safety), the protection of employees from discriminatory treatment for involvement with employment participation programs, the redefinition of supervisory duties to allow supervisory decisions to be made by employees who would not subsequently be excluded from the bargaining unit, and the negotiation of an agreement before the establishment of a plant to encourage Saturn-like establishments. Kochan (1998) is optimistic that the recommendations will have their intended effects. He insisted that unions and professional associations are experts of “bottom-up” management, and they must be fully involved to make employee participation a success. Likewise, employers do not have to worry about breaking the law because they discuss employment-related issues with employees.

Second, the commission discussed the interaction of collective bargaining and worker representation.[8] The commission concluded that the law has inadequately provided workers with the right to be represented by a union for the purpose of collective bargaining (Kochan 1998). Among the options which were suggested to address this shortfall were works councils, minority unions, codetermination, severe penalties for employers who break the law, the legislation of procedures to discourage delays, stronger protection against employee discharge, an expedited solution to reinstate employees whose rights were violated, and first contract arbitration. The commission opted to recommend strategies to reduce conflict, to encourage prompt elections, to require the NLRB to obtain injunctions to reinstate workers who were illegally dismissed, and to set up a system for first contract arbitration. Kochan (1998) proposed that the settlement of first contracts through binding arbitration is a significant recommendation, especially if accompanied by a tripartite First Contract Arbitration Board to adjudicate first contract disputes.

The third question the commission addressed is related to the resolution of employment-related disputes. The main recommendation was to adjust the Occupational Safety and Health Act (OSHA) to include employee participation in dispute resolution. The commission also recommended a more prominent role for arbitration of disputes which are associated with employment standards. According to Kochan (1998), the arbitration route to dispute resolution has to overcome the skepticism and criticism accorded to the general system of arbitration.

Explanations for the Public Policy Options

The content of Bill 40 and the recommendations of the Dunlop Commission were driven by primarily two factors. First, the two options were based on a different set of assumptions (or definition of the problem). In this regard, the leaders of the NDP were ideologically aligned to the institution of collective bargaining.[9] Therefore strengthening the institution of collective bargaining by reforming labor laws to facilitate union growth formed the crux of the NDP's approach to employee participation. In contrast, the commissioners for the Dunlop Commission viewed collective bargaining,[10] employee participation in the nonunion sector, and labor-management cooperation[11] as alternative strategies for employee involvement.

The idea of elites' values driving employment practices is supported by the evidence (Kerr et al. 1960). Historically, the decision to permit "company unions" in Canada heavily depended on the involvement of William M. King, who had experienced the value of employee involvement as an administrator in the steel industry (Taras 1997). Recently, the prounion Bill 40 directly resulted from the values of NDP leaders. The complexity (and compromise) which characterizes the recommendations of the Dunlop Commission can be traced to values of the academic/employer/labor/practitioners team.

Concluding Remarks

According to Meltz (1990), Canadians have approached labor law differently than Americans. Meltz's assertion seems valid in terms of public policy options to approach the representation gap. Canada and the U.S. were faced with similar economic contingencies. The government of William M. King elected to allow employee participation in nonunion workplaces in the Canadian variation of the Wagner Act, which has resulted in "employee participation" in the nonunion sector (Taras 1997). Similarly, policymakers in both Ontario and the U.S. were faced with a similar set of issues in terms of the representation gap. The Ontario government chose to reform labor laws to enhance the institution of collective bargaining, but policymakers in the U.S. deferred the decision to a commission which recommended a combination of labor law reforms, a minimum form of employee participation, and labor-management cooperation. One can only speculate on the impact of the different choices since Bill 40 was repealed and the recommendations of the Dunlop Commission await implementation by the American Congress.

Endnotes

[1] Employee participation, employee involvement, worker participation, and participatory management are used interchangeably throughout this paper.

[2] Bill 40 retained the exclusion of managers, supervisors, doctors, interns, and residents from union membership but allowed professionals such as lawyers, architects, dentists, and land surveyors to form a union. Security guards who had primary responsibility to oversee buildings (instead of people) were allowed to be in their own bargaining unit, and domestic workers could also form a union once two or more employees indicate such an interest.

[3] The threshold for a representation vote was reduced from 45% to 40%, but the 55% level remained for automatic certification. The $1 fee as evidence of union membership was replaced by a simple signature on a membership card. The Ontario Labor Relations Board (OLRB) is permitted to grant certification to a union if the true wishes of employees were somehow obstructed by the behavior of the employer. Before Bill 40, an employer's illegal conduct *along* with adequate membership support for collective bargaining were the criteria for an OLRB-issued certification. In the event of an unfair labor practice, the OLRB is required to conduct an expedited hearing on the certification within 15 days from the request by the offended party.

[4] Before Bill 40, if either the employer or the union requested a separate bargaining unit for part-time employees, then the OLRB was obligated to do so. The drafters of Bill 40 were not convinced that the "community of interests" of part-time and full-time employees were that different and would therefore allow the two groups to be in the same bargaining unit if there is a 55% membership support for the combination of the two groups of employees into a single bargaining unit. From a union's perspective, the combination of part-time and full-time employees into one bargaining unit could result in economies of scale.

[5] The negotiation of a first contract is a very challenging issue for both the employer and the union. In this regard, inexperience with the bargaining process could result in an impasse. First contract arbitration, a feature of Bill 40, is analogous to a "trial marriage."

[6] The application for the restriction of replacement workers must follow a lawful strike position. Managers and contractors from a nonstruck plant of the same employer can be transferred to the struck plant to continue the operations of the struck employer. Managers and non-bargaining-unit employees were allowed to work at the struck plant. However, if a manager or an employee refused to do the job of an employee on strike, then the employer cannot force the manager or employee to do so since he or she was protected by a no-reprisal clause.

[7] The impacts of Bill 40 may never be measured with any degree of accuracy. In June 1995, Bill 40 was repealed and replaced with Bill 7 (a probusiness Bill). The newly elected PC government argued that Bill 40 had tilted the balance too much in favor of unions. The most prominent changes of Bill 7 included a mandatory secret ballot on the vote for certification, strike, and contract ratification; the decertification of a union for a breach of the duty of fair representation; and the removal of the ban on replacement workers.

[8] The commission relied on the following empirical findings to justify its recommendations with respect to employee rights to join a union and to engage in collective bargaining (The Dunlop Commission Report 1994). The certification process is highly adversarial, and this adversarial relationship carries through to subsequent stages of the collective bargaining process. Over the years, the probability has increased that an employer would discriminate against an employee for exercising his or her legal rights. The certification process ignores the wishes of about 33% of employees who voted for a union but were not granted one because the majority of their coworkers did not want a union. Finally, one-third of nonunion workers would vote for a union if an election was held at their workplaces.

[9] It is clear that the wage rate for union workers is above that for nonunion workers. Moreover, the threat of a union may encourage employers to increase the wages of

nonunion workers. As such, union membership or unionization is associated with economic benefits (Kumar and Meltz 1992; Verma and Warrian 1992; Rose 1992). It is also clear that unions have introduced a degree of "due process" in the North American workplace. Management is obligated to meet with the union that represents employees of the bargaining unit to agree on the terms of the employment relationship. This meeting usually occurs every two to three years. More importantly, the collective agreement of the terms of the employment relationship determines the conduct of both the employer and the union. In this regard, the employer cannot unilaterally "manage" as it sees fit. The employer must do so within the letters of the collective agreement, especially with respect to the resolution of employment disputes (grievance arbitration).

[10] The drafters of the Dunlop Commission's report recognized the drawbacks of the institution of collective bargaining. In this regard, the most severe disadvantages of the Wagner Act model are associated with the certification process because it is the primary channel for union growth (Adams 1995). As previously mentioned, in the period spanning the six decades between the 1930s and the 1990s, union density in Canada hovered around 33%, but union density in the United States of America decreased from 33% to 12% (Kumar 1993). Also, critics of the Wagner Act model of employee involvement emphasize that it is indirect, it is inflexible, and it focuses too much on an adversarial style (Kochan, Katz, and McKersie 1993; Weiler 1990). For example, the negotiation of a collective agreement (between the employer and the union as the representative of employees) determines the nature of the employment relationship for a relatively long period of time (two to three years), which may be a barrier to the flexible management of the organization in light of global competition. Furthermore, the adversarial model persists through certification, negotiation, grievance arbitration, and the negotiation of a new agreement.

[11] This position was based on research which indicated a positive correlation between firm performance and employee participation (Kochan and Osterman 1994; MacDuffie 1995; Huselid 1995; Cutcher-Gershenfeld 1991; Arthur 1992).

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DISCUSSION

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For Singh, the unit of analysis is the province (Canada) and country (U.S.). One must first ask if it is possible for policy at this level of analysis to be strategic. Dunlop and colleagues argued that national policy responds to the economic and social environment in which it occurs. But strategic thinking must rise somewhat above the environment. Conscious choices must be made by a few key policymakers that will capitalize on the country's historical position and its human resources. Do policymakers have the authority or the vision to make such choices?

Secondly, we must worry whether elites reflect their own values, the values of the stakeholders they represent, or the values of the society as a whole. We will not know whether Bill 40 or the Dunlop Commission reflects the broader views of society until each is accepted into law for a significant length of time. Thirdly, Canadian society differs broadly from the U.S. despite its similar industrialization. In politics, the Canadian parliamentary system does not permit the "cohabitation," as the French would put it, of two political parties that is possible in the U.S. system. Thus a comparison of policymaking across two dissimilar political systems makes it hard to know what is reflected—the political systems, the underlying values of the policymakers or the values of the broader society.

For Frege and Toth, countries are also the unit of analysis, but they draw inferences about the functioning of the macro-level system by examining individual-level, attitudinal data in one industry. The findings are largely based on descriptive statistics, which means that findings may be sensitive to sampling design and response rates. There is no indication that either the firms or the individuals were sampled randomly. Given the methodology for the survey, multivariate analysis would seem to be required, where demographic and firm-level characteristics can be held constant, with a dummy variable to distinguish between the two countries.

The paper would be strengthened by formalizing each hypothesis and then testing with the data. One of the hypotheses is to distinguish between

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two antecedents of union member attitudes: (1) the communist legacy of cynicism or (2) the different institutional arrangements for collective bargaining in the two countries. What is the union member outcome—job satisfaction, cynicism, or satisfaction with the performance of the union?

The Feuille et al. paper gets its inspiration from a recent study by Cooke in which investment patterns of U.S. firms are related to the union densities of countries considered for investment. Feuille et al. turn Cooke's model around to ask, Do firms from countries other than the U.S. have fewer tendencies for union avoidance? The answer to this key question is yes and no. In Taiwan the answer is definitely no. None of the ownership variables is significant. Only the Japanese firms had significantly higher densities, and because there were only two, the authors rightly discounted this result.

In Korea, Japanese and European firms practice less union avoidance than American firms, but Korean-owned firms are more prone to union avoidance. The most interesting finding is not dealt with in the paper: Why would large Korean-owned firms have a stronger union avoidance strategy than American multinationals? The authors could have used American multinationals as the base for the dummy variables included in the regression. The surprising result for Korean-owned firms would then have been made more explicit.

DISCUSSION

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The three papers presented here analyze the determinants of labor representation schemes in six countries across three continents: Canada, the United States, Korea, Taiwan, eastern Germany, and Hungary. Themes considered include the representation gap, the role of elite values, the impact of country of origin of the firm, and the cultural determinants of support for unions. The analysis in each of the three papers is complex and deserving of careful attention.

The paper by Singh uses elite values to analyze recent Canadian and United States proposals for labor law reform to deal with a perceived representation gap between desired and actual workplace representation. In the historical discussion, the point of comparison is the prohibition of employer domination in the United States and a statute more permissive of employer sponsorship in Canada. Bill 40, by the New Democratic Party government in Ontario in 1991, proposed the expansion of unionism and union-based collective bargaining, while the Dunlop Commission in the United States proposed both weakening the prohibition on employer domination and also more experimentation with new, union-based organizational forms, implying a loosening of strictures on unions imposed through the system of majority status elections.

Singh argues that both proposals originate from the values of the proposing policy elites. Given that there appears to be a representation gap and that both proposals are now dead letters, the conclusion could be enhanced with a discussion of future policy initiatives in this area.

The paper by Feuille et al. examines the determinants of union density in Korea and Taiwan by firm ownership (indigenous, European, United States, and Japanese) and hypothesizes that United States-based multinational corporations should have lower union densities than locally owned firms. The hypothesis is based on results for western Europe which suggest a preference by United States-based firms for locations in countries where

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the likelihood of unionization is lower. Alternate explanatory variables include age and size of firm and degree of product differentiation.

The results are more conclusive for Korea than for Taiwan. In Korea, union densities for U. S. firms are lower than for European and Japanese firms but higher than for Korean firms; in Taiwan the results are not statistically significant. In both countries higher union densities are associated with larger, older firms and with less product differentiation. In the case of Korea, the results largely confirm the hypothesis of lower union densities for U. S. firms than for other foreign-owned firms, while in neither case do U. S. firms have lower union densities than local firms, contrary to the original hypothesis. The paper would be enhanced by discussion of the nature of unions, processes for union recognition, and measures of density. Consideration should be given to whether observed densities reflect company preferences or those of workers or governments.

The especially complex paper by Frege and Toth analyzes sources of worker support for unions in the clothing industry in post-Communist eastern Germany and Hungary. Hypotheses reflect questions with regard to the legacy of Communist rule versus recent experience with unions, fragmentary versus established structures of representation, and the presence of a solidaristic culture under differing economic conditions. Solidaristic culture is evidenced by commitment to collective values, willingness to actively support labor institutions, and a positive evaluation of labor institution performance.

The transplanted systems of unions and works councils of Germany, evaluated under adverse economic conditions in the presence of a more solidaristic culture, were seen more favorably than the reformed (but still in transition) unions of Hungary, evaluated under favorable economic conditions in the presence of a culture with significant individualistic elements. The general result is that recent experience, well-constructed institutions, and favorable cultural conditions dominate, with the fully organized, transplanted German system being better supported. One wonders, however, if the role of economic conditions is underestimated. For example, if economic conditions were worse, would not Hungarian labor institutions seem more useful and necessary?

VII. VALUE-ADDED APPLIED IR RESEARCH

Do Industrial Relations Events Have Long-Term Effects on Plant Performance? The Case of Commercial Aircraft Manufacturing

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To what extent do industrial relations factors such as strikes, slowdowns, and employee involvement policies influence the long-term efficiency of an enterprise? To attempt to answer this question, we use information gathered from a large U.S. commercial aircraft manufacturing firm during a period when the U.S. dominated world production in this industry. This industry is of particular importance because it has been one of the dominant export sectors of high value-added goods in the U.S. economy. In 1995 the U.S. aircraft industry recorded a trade surplus of $21.3 billion, or about 57% of total commercial export volume (Napier 1996). The industry is the second largest employer of manufacturing jobs in the U.S., behind only automobile manufacturing. The sector is characterized by huge investments

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in capital, substantial research and development costs, and long product development periods sometimes exceeding a decade from the research and development stage to the roll out of the final product. Also, the life of the product cycle is long, frequently exceeding twenty years. The assembly of the final product includes elements of mass production and of a customized product. Although the assembly process is generally homogenous across each plane, each section of the commercial aircraft has unique elements specific to the final customer. Labor costs as a percentage of total value added is low, but hourly earnings of production workers are about 40% above the average wage in manufacturing, and the firm employs a substantial number of scientists and engineers (Kleiner, Nickelsburg, and Pilarski 1995). In recent years the industry in the U.S. has faced increasing competition from Europe in the form of Airbus, a multinational organization that has been able to obtain the kind of production process needed to be internationally competitive with high value added, capital intensive infrastructure, and a rapid learning curve.

One of the main reasons that the U.S. is able to maintain its competitive advantage is because of its high levels of factor market competitiveness that include managerial talent and policies and the productivity of its production workforce (NRC 1985). From the perspective of examining production, the industry has been the source of one of the first economic analyses of the learning curve, which was developed with applications to commercial aircraft production and then was modeled more generally for other industries (Asher 1956; Arrow 1962). Given the oligopolistic structure of the industry, unions have been a major factor in this highly organized sector, and they have succeeded in obtaining high wages and benefits for their members (Karier 1985).

The economic success in the product market has not necessarily meant peaceful or harmonious industrial relations. Throughout the post-World War II period, the major firms in the industry have generally had acrimonious labor relations, with strikes, work slowdowns, and threats of work stoppages as a regular part of the collective bargaining process. Unlike those industries where strikes rarely occur, the firms in this industry endure concerted activities during most contract negotiations. In recent years, in response to greater foreign competition, several attempts have been made by both labor and management to change the focus of industrial relations in the industry from that of confrontation to one of cooperation.

The main goal of this paper is to examine the role of major industrial relations events on productivity in the production of large commercial aircraft. We focus on how long it took the firm to attain productivity levels comparable to ones at the prelabor relations event. In order to do this, a major commercial aircraft manufacturer agreed to give us information from the organization's main management information system database, under the condition that we do not use its name in publication. We will call the company Big Plane or BP.

A unique aspect of our study is the opportunity to examine the impact of industrial relations events by reducing unobserved heterogeneity in production, an issue that has plagued other studies that do not have a long and detailed time series data set. We do this by examining one plant that produces the same standardized product with largely the same workforce and using virtually the same technology over a relatively long period of time.

Rationale for Industrial Relations Events and Productivity

Most previous studies of the economic performance effects of industrial relations variables such as strikes, work to rule, or employee involvement has used the stock market or firm-level profits as the relevant measure of the outcomes of these events, even though they often occur at a single plant of a multiplant facility or within a single business line of a multibusiness line organization (Becker and Olson 1987). Consequently, any impacts of these variables are biased downward, whereas the direct effects of these events are likely much larger if they are directly measured at the level of the establishment. In this section of the paper we examine the effect of highly visible industrial relations events such as strikes, work slowdowns, and the implementation of an employee involvement program.

In the context of a production function, labor (L) is affected by changing industrial relations events in the following manner where

(1) $$Q = AL^{\beta} K^{y} v,$$

and K is capital, L is labor, Q is output, and v is a log normal random variable that captures the idiosyncratic random element in production. We assume that

(2) $$L = N \times H \times S,$$

where N is the number of workers, H is the number of hours, and S is the intensity or the effort of the workers. The industrial relations environment is assumed to influence N, H, and S so that production by substitution of equation two into one yields

(3) $$Q = A(NHS)^{\beta} K^{y} v.$$

In this case the industrial relations environment will influence the level of output through L by reducing the number of production workers, setting hours of work and the allocation of workers among tasks, and perhaps most importantly the effort that workers are willing to put forth in production (Kleiner, Nickelsburg, and Pilarski 1995).

Our Quantitative and Qualitative Data on Production

Estimates of the role of industrial relations on production come from internal company plant-level data obtained from one of the largest manufacturers of large commercial aircraft. BP grew about as fast as the other major firms in the industry as measured by commercial revenue, overall employment, and planes delivered for most of the period of our study.[1] BP accounted for between 25% and 30% of total industry output, employment, and revenues from the 1970s through the early 1990s.

BP gave us their monthly productivity data on the production and assembly of its main commercial aircrafts in its principal plant from January 1974 through November 1991 for a total of 215 monthly observations on production. Our key data are for the same general model of plane which was produced throughout the period in one plant, although in 1980 there was a redesign and update of the basic model that caused major changes in productivity. We engaged in several on-site interviews with many of the top production-related managers and union leaders in the plant who told us about current and past events and when they began and ended. A unique aspect of our study was our detailed discussion of production-related issues as well as labor-related politics within the leadership of the local union in the plant.

Capital per production worker remained constant in the production of this plane and its larger companion version that was produced in the plant. Learning about production by employees was the only major innovation in the production process.

Labor and Management Relations in Production

In addition to the production data for BP, we also have monthly data on the labor relations aspects of the employment relationship. There were more than 22,000 members of the local union who worked in the plant complex in 1992, and this local had the largest membership of any plant local in the United Automobile Workers (UAW) in the U.S. and Canada. This Big Plane plant experienced a wide array of industrial relations events and conditions during the 1970s through the early 1990s. For example, there were three strikes, a work-to-rule slowdown as a substitute for a strike during stalled negotiations, and a move to total quality management approach that included strong elements of employee involvement that could impact productivity.

There were two competitive political parties vying for control of the local union. One was generally more cooperative in its stance toward management, while the other took a more confrontational approach. Given the highly democratic and competitive nature of the local union, there were four changes in the union presidency over the period we examine, which reflected varying attitudes toward labor's cooperation with managerial policies. For each of our variables, we know the beginning and ending month in which each of the events occurred and the general policy directions of the union and management leader. This institutional knowledge allows us to design a before-and-after experimental research design.

The three strikes during the period of our study lasted from one to three months. The last one occurred in 1983, and it was the most bitter one. It included threats of the destruction of plant equipment as well as threats from management that the production workers would be replaced if a quick solution to the impasse was not reached. Prior to the last labor agreement in our sample, there was an in-plant slowdown that lasted almost eleven months. It included traditional work-to-rule procedures, where the production workers strictly followed the letter of the contract and refused nonmandated overtime work as well as other job assignments that were not explicitly stated in the labor contract. Given the costly effects of the previous strike at the plant to employees, the unionists thought that they could impose costs through lower short-term productivity without losing a paycheck.

Managerial Policies' Impact on Plant Performance

The major managerial innovation was the implementation of a total quality management program (TQM) within the plant which was a top-down approach in an effort to become a "high-performance workplace" that would help the plant deal with new serious foreign competition (Ichniowski, Shaw, and Prennushi 1997). As part of this program the company spent about $53 million in direct training costs over a two-year period, and the firm hired a new vice-president of industrial relations with considerable experience in Japanese-style management to implement the program. First-line supervisors surmised that their jobs were in jeopardy if a total quality management program with teams succeeded. As part of the TQM program, a major objective of the firm was to drive grievances by employees to zero, with the vice-president receiving a substantial bonus if worker complaints were below a certain level. This intraorganizational employee involvement policy was abandoned two years after it was launched in January 1989.

Estimating the Effect of Industrial Relations Events on Productivity

Industrial relations in the BP plant have undergone a number of major changes. In Table 1 we show how long it took to return to the pre-event standardized hours per plane per month following strikes, slowdowns, and employee involvement programs. To assess these changes, we use two different measures of the return to pre-event standardized person hours per plane. In columns one and two we estimate how long it took for the plant-level productivity to return to the average of the three-month period output ending two months prior to the event.[2] In this way we attempt to control for any anticipated buildup or reductions that may have taken place directly before the event. This table shows how many months it took for the plant to return to within 1% and 5% of its pre-event productivity levels. For example, in the first row the table shows that for the first strike in our data sample, it took four months for the plant to return to within 1% of its prestrike productivity and only two months for the plant to return to within 5% of its prestrike level of output. For the other events that took place at the plant it took about the same time for organizational labor productivity to return to within 1% and 5% of their pre-event levels of average output. This value ranged from two to four months—not considered long by any standard metric.

TABLE 1
Number of Months for Productivity Levels to Return to Pre-Industrial Relations Event Values

Industrial Relations Events	Months to Return to within 1% of Pre-event Productivity	Months to Return to within 5% of Pre-event Productivity
Strike 1	4	2
Strike 2	2	2
Strike 3	4	4
Work to Rule	1	1
TQM	1	1

Note: a. The productivity level prior to the industrial relations events is the average productivity of the three-month productivity levels two months before the event.
b. 1% and 5% refer to within 1% and 5% of the prior productivity levels.

The most divisive strike, number three, was the longest and most bitter, and it was not surprising to find that it took four months for the plant to return to prestrike levels of productivity. The work-to-rule event lasted almost eleven months and served as a substitute for a strike. However, even with this relatively long process of intentional reductions in productivity, it only took the employees a month to reach about the average of the pre-slowdown levels of output. Finally, the TQM approach, with attempts at heavy levels of employee involvement, resulted in reduced productivity in the short run. However, after the two-year-long program ended, the plant was able to achieve pre-TQM levels of output within one month after the program ended. Overall, it appears that for this plant the impact of strikes, work-to-rule slowdowns, and employee involvement programs have short-lived effects. Although industrial relations events are dramatic and inspire lots of emotional outpourings from both labor and management during and shortly after the event, the long-run effects are fairly minor as measured by output per worker.

Although we show that concerted activities like strikes and slowdowns have no long-term impact on productivity, they are certain to have strong effects on short-term profits. The union in this case did impose significant costs of disagreement on the plant managers and shareholders in the short run. However, after the strike or slowdown, the production employees did not “forget” what they knew about manufacturing and were able to return to previous levels of production after a relatively short period.

Conclusions

The purpose of our analysis has been to examine the impact of major industrial relations factors on long-term productivity for a major firm in an industry that is the largest manufacturing exporter and second largest manufacturing employer in the U.S. We use a before-and-after research design over a 18-year period with monthly data. This analysis provides a unique opportunity to examine the impact of industrial relations by minimizing unobserved heterogeneity in production through examining one plant that produces a standardized product. Our results show that major labor and industrial relations events do not matter a great deal on output returning to long-term labor productivity values. Strikes, slowdowns, and employee involvement events substantially reduce productivity and most likely profits during the time that they are occurring, but this plant seems to be able to recover to approximately pre-event levels within one to four months.

An implication of our analysis for the firm performance literature is that studies which argue that labor relations events have long-term effects on productivity based on cross-sectional analysis or have data with short time periods may overstate the impact of industrial relations factors. We encourage this type of detailed examination of plants in sufficient depth so that the role of industrial relations policies and practices on organizational efficiency can be rigorously examined in a more thorough fashion.

Acknowledgments

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Endnotes

[1] We were not able to separate out military from civilian employment for this measure of firm or industry growth.

[2] Estimates using regression analysis with plant-level production controls that included planned rate of production, learning curve, learning curve squared, parts shortages, and the span time of production, produced consistent results with those found in Table 1.

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VIII. REFEREED PAPERS—LABOR MARKETS AND LABOR ECONOMICS

Gender Wage Differentials in Performance Pay and Time Wages

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Numerous studies have decomposed gender wage differentials into two components: (1) the part explained by gender differences in the endowments of productivity- or wage-related factors (e.g., education, work experience, industry, etc.) and (2) the part due to differences in the returns to those factors across gender. The latter is said to reflect the unexplained portion of the gender pay gap and is conventionally used as a measure of potential wage discrimination.

What has been neglected is whether gender wage differences and the above decomposition of those differences differ between performance-related pay and straight-time wages. One would expect that for payment schemes which are more objective and linked closer to productivity, wage discrimination should be harder to implement and thus less prevalent, resulting in a smaller unexplained portion of the gender pay gap. For example, under piece-rate compensation, workers are paid for each unit of output produced. Subjective, possibly prejudicial evaluations by supervisors are less important in determining earnings for these workers relative to time wage workers.[1]

Pieceworkers, however, are not protected from discriminatory job assignment. Beach (1975:699) reports that "unions also criticize the inequities

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caused by 'loose' and 'tight' piece rates. Foremen may reward friendly workers with jobs having 'loose' rates (gravy jobs) while penalizing others through assignment to jobs having 'tight' ones." In the service sector where commissions and tips substitute for piece rates, Talbert and Bose (1977) found that among a sample of retail sales clerks, men are more likely to be assigned to "big ticket" departments selling furniture, refrigerators, etc., and thus earn more commissions. Neumark (1996) finds evidence of hiring discrimination against women (waitresses) in high-price restaurants where wage and tip earnings are also higher.

In addition, Prendergast and Topel (1993:355) criticize the usual assumption that

> agents' performance can be controlled by tying compensation to objective performance measures such as output or sales. It ignores the fact that most compensation arrangements involve superiors' *subjective* [italics in the original], and hence noncontractible, judgments about employee performance.

Furthermore, they "believe that subjective performance evaluation is a central, but understudied, factor in incentive and organizational design" (p. 364). If discriminatory job assignment is possible and to the extent that payment schemes such as bonus or merit pay may depend on the discretion and bias of a supervisor's judgment, then performance-related pay may be no less and possibly more discriminatory than time wages.

The only study we are aware of that touches on gender pay gap and method of pay is by Chauvin and Ash (1994). They use a 1988 survey of U.S. business graduates from two universities which provides data on base pay and contingent pay (i.e., earnings contingent on individual or group performance such as bonuses, commissions, gainsharing, profit sharing, etc.). They find that the unexplained "discriminatory" portion of the gender gap in total pay (i.e., the sum of base pay and contingent pay) is sizable and mainly due to gender differences in performance-contingent pay rather than base pay. Surprisingly, the gender gap in base pay is almost entirely explained by gender differences in endowments of observed characteristics.

Given these striking results for white-collar employees with business degrees and the subjective, possibly discriminatory nature of performance evaluation, we examine whether gender wage differentials vary across method of pay for another sample of workers, in particular, Swedish blue-collar workers in the metalworking industries.

Data

The data we use in this paper are based on a cross-section of Swedish production workers. These individuals are randomly drawn from those covered in 1985 by the collective bargaining agreements for the "metalworking industry" (ISIC 38, manufacture of fabricated metal products, machinery, and equipment). The data are collected from the registers of individual firms with information on the firm (industry, location, firm size, and plant size) and the worker (gender, age, occupation, hours, and earnings) for the second quarter of 1985. The information on hours worked and earnings is very detailed, with a decomposition of both by method of pay (straight-time wages versus performance-related pay) and details on overtime, shift work, and other compensation.

Performance-related pay is catchall and includes all hours where compensation is at least partly dependent on current output or performance. Unfortunately, the survey does not provide further details on the type of payment-by-results scheme, although other sources indicate that piece-rates are not dominant. According to Elvander (1989:4), the distribution of working hours by method of pay for Swedish blue-collar workers in 1985 was only 12% for pure piece-rate systems, 49% for other performance-related wages (e.g., bonus or merit pay), and 39% for fully fixed wages. In contrast to performance pay, time wages in our data are not determined by fluctuations in current performance, although they may be linked to past performance, for instance, via promotions or demotions.

An important feature of our data set is access to a subsample of individuals who received pay under *both* performance-related pay and time wages. This subsample of "mixed-pay workers" may encompass production workers who usually receive, say, piece rates except when hourly wages are applied for setup or needed maintenance work or for production runs where quality cannot be easily measured and is impaired by incentives linked to quantity. The mixed-pay sample provides an identical group of men and women across the two payment schemes and hence lessens concerns of sample selection problems such as the sorting-across method of pay by unobserved worker ability suggested by Lazear (1986), which might differ in degree across gender.

Table 1 indicates average log wages by gender and across method of pay in our data. The difference in mean wages between males and females is about 5% to 6%. These simple or unadjusted wage differentials are relatively small in comparison with gender pay gaps observed for other countries as well as for Sweden. These comparisons are not surprising, since from an international perspective Sweden has a great deal of wage compression. More importantly, our data are restricted to a more narrowly defined population than other Swedish studies (e.g., Löfström 1989). Previous studies (see Cain 1986) show that gender wage differentials tend to be smaller in samples restricted to certain industries, occupations, and firms.

TABLE 1

Mean Log Wages in Performance Pay and in Time Wages by Gender

	Males			Females		
	Number of obs	ln W	Standard Deviation	Number of obs	ln W	Standard Deviation
All Workers:						
Performance or Time Pay	2,673	3.8572	.1104	783	3.8068	.0952
Performance Pay	1,656	3.8904	.1012	565	3.8312	.0923
Time Wages	1,652	3.8150	.1248	486	3.7624	.1078
Performance–Time Pay Premium		7.8%			7.1%	
Single Pay Workers:						
Performance Pay	1,021	3.8966	.0960	297	3.8401	.0844
Time Wages	1,017	3.8150	.1091	218	3.7606	.0862
Performance–Time Pay Premium		8.5%			8.3%	
Mixed Pay Workers:						
Performance Pay	635	3.8805	.1084	268	3.8213	.0995
Time Wages	635	3.8150	.1466	268	3.7639	.1228
Performance–Time Pay Premium		6.8%			5.9%	

The incidence of performance-related pay is higher among females than males in our data which is consistent with U.S. evidence put forward by Goldin (1986). She finds that women were more likely than men to be paid piece rates and suggests a monitoring explanation for differential sorting by gender across method of pay.

Comparing wages across method of pay in Table 1, the wage premium of performance pay over time wages is 5.9% to 8.5% larger depending on the worker group. Notice that the performance-time pay premium is larger in the single-pay worker sample (i.e., workers paid only performance pay or only time wages) than in the mixed-pay worker sample, increasing by 1.7 percentage points for males and 2.4 percentage points for females. The larger observed pay premium in the single-pay sample is consistent with sorting of workers across method of pay by unobserved ability.

Empirical Analysis

To investigate the extent of wage discrimination in performance-related pay and in time wages, we use the Blinder (1973) procedure to decompose observed gender wage differentials into differences due to characteristics and those due to returns to characteristics. We first estimate separate standard semilogarithmic wage equations for each method of pay by gender.

This estimation is performed for the all-worker sample and for the mixed-pay worker subsample. With the latter, sorting of workers across method of pay by observed or unobserved characteristics is less of a problem.

Using the coefficient parameter estimates b, we calculate the following breakdowns for each method of pay:

$$(1) \qquad \overline{\ln W}_m - \overline{\ln W}_f = (\overline{X}_m - \overline{X}_f)b_m + \overline{X}_f(b_m - b_f)$$

or alternatively,

$$(2) \qquad \overline{\ln W}_m - \overline{\ln W}_f = (\overline{X}_m - \overline{X}_f)b_f + \overline{X}_m(b_m - b_f),$$

where W is hourly earnings, X is a vector of explanatory variables (age, age-squared, six plant-size dummies, eight occupation dummies, ten three- or four-digit level industry dummies within ISIC 38, and 15 region dummies) with the corresponding regression parameter vector b, the bar over a variable indicates the sample mean, and subscripts m and f denote male and female, respectively. The gender differences in log wages are thus decomposed into two components: (1) differences in average characteristics $\overline{X}_m - \overline{X}_f$ weighted either by male (b_m) or female (b_f) returns and (2) differences in returns to characteristics $b_m - b_f$ weighted either by male ($\overline{X}_m$) or female ($\overline{X}_f$) characteristics. Despite its well-known limitations (see Cain 1986:743-48), the second component is widely used as a measure of potential wage discrimination, and we shall do the same here.

Table 2 reports the computed Blinder decompositions for the all-worker as well as the mixed-pay worker sample. For either sample, the conclusions are quite similar. In the first row of Table 2, the mean gender wage differential by method of pay are shown. As discussed earlier, these differentials are not large, reflecting the fairly low level of Swedish wage inequality and a data set restricted to blue-collar workers in a specific, although large, two-digit industry. The second and third rows of Table 2 show how much of the gender wage gap can be attributed to gender differences in observed characteristics (weighted by male returns to these characteristics) and to differences in returns to characteristics (weighted by female characteristics), respectively. The estimates indicate that by far most of the gender wage differential is due to the latter.[2] The same holds true using the alternative weighting scheme in Rows 4 and 5 of Table 2. Thus the main part of the wage gap is unexplained and is the part widely interpreted as due to discrimination.

Turning to a comparison of gender wage differentials by method of pay, we find that the unexplained differential $X(b_m - b_f)$ is no greater, if not slightly smaller, for performance pay than for time wages. For the all-worker sample, the unexplained component is only marginally smaller for performance-related pay when differences in returns are weighted by female characteristics (i.e., .0431 versus .0437 in Row 3) but noticeably smaller when weighted by male characteristics (i.e., .0409 versus .0509 in Row 5). For the mixed-pay worker sample, the unexplained component is smaller for performance pay regardless of the weights used. In none of the worker samples or alternative weighting schemes, however, is the unexplained component of performance-related pay smaller than that for time wages by more than 1.1 percentage points, nor is the difference statistically significant at conventional significance levels.[3]

TABLE 2
Decomposition of Gender Wage Differentials

	All Workers		Mixed-Pay Workers	
	Performance Pay	Time Wages	Performance Pay	Time Wages
$\overline{\ln W_m} - \overline{\ln W_f}$	.0592	.0526	.0592	.0511
$(\overline{X}_m - \overline{X}_f)b_m$	.0162	.0089	.0079	-.0059
$\overline{X}_f\,(b_m - b_f)$	.0431	.0437	.0513	.0570
$(\overline{X}_m - \overline{X}_f)\,b_f$	.0183	.0017	.0144	-.0045
$\overline{X}_m\,(b_m - b_f)$	.0409	.0509	.0448	.0557

Conclusion

Using data for Swedish blue-collar workers in the metalworking industries, we find that the gender wage gap is relatively small. Regardless of method of pay, this gap is for the most part due to differences in returns to characteristics across gender or the unexplained component of the wage gap. The unexplained wage differentials are slightly smaller for performance pay than for time wages, although the difference is not statistically significant. This comparison suggests that performance-related pay is no more discriminatory than straight time wages. Despite concerns over supervisors' subjective judgments of employee performance used in most compensation schemes, the discretion and possible gender bias introduced in performance evaluation is no greater for performance pay than for time wages.

Several factors might explain our results. Objective and thus less discriminatory performance measures may be relatively easy to implement for production workers in manufacturing where output can be quantified. In addition and in contrast to the claims quoted earlier, the use of subjective measures in performance-related pay may not be that prevalent. Baker, Jensen, and Murphy (1988:599) argue that "the lack of trust between employees and supervisors and their distaste for conflict lead organizations to avoid pay-for-performance systems based on *subjective* [italics in the original] performance evaluation."[4] Even when these subjective measures are used and assuming that favoritism in a supervisor's subjective evaluation of subordinates is relatively costly to an organization, the performance rewards in compensation may be downweighted in order to constrain supervisor bias (Prendergast and Topel 1996).

Endnotes

[1] This bargaining advantage for piecework employees has long been recognized:

> The worker who improves his output does not have to ask the employer for a raise–and possibly bargain over the amount. He gets it instantly, automatically, and in exact proportion to the increase in his output. The unusually fast and competent worker who knows that he is producing more than other employees and who knows that he is entitled to higher pay than they receive is not dependent upon the *fairness or whim* [italics added] of the foreman for his reward. (Slichter 1941:288)

[2] It is surprising that not more of the gender pay gap is explained by differences in characteristics, since among our X variables is a not too coarse set of occupational dummies. These controls hopefully account for a good deal of any occupational segregation which may contribute to the gender pay gap.

[3] To implement the statistical significance tests, the four wage equations (i.e., two methods of pay for males and for females) in each worker sample are "stacked" and then estimated as one large wage equation. The question whether the difference in the unexplained components of Table 2 is significantly different from zero may be answered simply by testing a particular linear restriction on the regression coefficients.

[4] Two of the quoted authors, however, argue in later work that an optimal incentive contract may at times rely on subjective performance assessments since they complement or improve upon available objective measures (see Baker, Gibbons, and Murphy 1994).

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Trade, Global Markets, and Alternative Work Arrangements

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Increasing globalization of product and services markets is transforming the organization of work. Firms are seeking ways to make their workforces more flexible to respond to changes in product demand. One version of workplace flexibility is the use of contingent work arrangements. We present a comparative analysis of the use of part-time workers (one form of contingent work) in the U.S. and Canada in response to the Free Trade Agreement (FTA). We ask three questions: (1) Does the use of part-time work increase with increase in international trade? (2) Has the implementation of the U.S.–Canada FTA increased part-time work? (3) Does the U.S. and Canada differentially use part-time work in response to free trade?

Features of Contingent Employment

The definition of contingent work rests on a model of the labor market that divides the labor force into two types: core and contingent (Belous 1989). Core workers include permanent, full-time employees with a strong affiliation and long-term attachment to their employer. Contingent workers have no long-term attachment to a particular employer and include temporary, part-time, and self-employed workers plus some business services employees. The distinction between core and contingent used to approximate that between "good" and "bad" jobs.[1] However, this is changing in most industrialized economies with workers in what were core occupations working under contingent arrangements (BLS 1997a).[2]

The BLS identified four alternative work arrangements: independent contractors, on-call workers and day laborers, temporary agency workers, and

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contract workers. Cumulatively, just under 10% of the workforce was employed under these arrangements (BLS 1997a). In addition, approximately 18.3% of the workforce not in one of the four alternative arrangements was employed part-time (Tilly 1996). The Canadian formal categorization of alternative work arrangements includes part-time, part-year, own-account, and temporary employment. In 1989 this set of contingent work arrangements accounted for 35.6% of total employment in Canada (Krahn 1991).

There is debate about whether rising contingent employment is primarily a supply- or demand-driven phenomenon. The supply explanation argues this type of job meets the needs of the labor force, specifically women, students, and retirees (Kosters 1995). The supply-side argument does not fully explain the rise in contingent work. Tilly (1996) found that the changes in the labor force explained the growth in voluntary but not involuntary part-time employment. The BLS found that 59.2% of those employed in temporary help work arrangements would prefer a traditional arrangement (BLS 1997a). The basis of the demand argument is that contingent work meets employer needs for workforce flexibility (Tilly 1992).

Research Questions

The Relationship between Free Trade and Use of Contingent Workers

While none of the current literature has examined the effects of trade on employment arrangements, effects on other employment outcomes have been examined and give a mixed picture of the effect of trade on work. There is evidence that the growing earnings inequality within developed countries can be partially attributed to increased international trade (Borjas and Ramey 1994; Richardson 1995). Wood (1995) found relative wages for unskilled workers in developed countries had deteriorated due to trade with developing countries. In contrast, Edwards (1997) examined income distribution in developing countries and found no increased inequality as a result of trade liberalization.

Most evidence suggests that unemployment is affected by trade when a distinction is made between trade-sensitive and insensitive industries. Three studies of displacement effects of trade suggest that employees who lose their jobs in trade-sensitive industries experience unemployment spells of longer duration than those losing jobs from trade-insensitive industries (Addison et al. 1995; Bednarzik 1993; Kruse 1988). However, Lee (1996) concludes that the balance of evidence does not support trade as a primary explanation for rising unemployment. These studies indicate that empirical results are mixed, so the question of the effect of trade on part-time work is treated as exploratory in this paper.

The Effect of the Implementation of the FTA on the Use of Contingent Labor

With the elimination of tariff barriers under FTA, employment practices affecting the cost of doing business will be subject to increased competitive pressures. Given that contingent workers are thought to cost less than core workers, employers in both countries may view the implementation of a free trade agreement as signaling more foreign competition and increased part-time work.

Why Canada and the U.S. Might Be Expected to Diverge in Their Responses to Global Competition

Outcomes such as employment levels, income distribution, and the division of work between core and contingent can be understood as economic inevitabilities. An alternative view is that such responses to product market competition are mediated by the social contract between employees and employers.

Although both the U.S. and Canada can be viewed as market economies, there is evidence of differences in the social contracts of the two countries. Verma and Thompson (1988) found that Canadian employers are more likely to mitigate the negative effects of product market competition on employment and move to a cooperative industrial relations model. Block and Roberts (1996) compared ten labor standards in the U.S. and Canada and found Canadian rules were less favorable to worker welfare for only two standards. Taras (1996) documented adjudicative and administrative trends in the implementation of labor laws that facilitated union certification and supported collective bargaining in Canada that were absent in the U.S. Card and Freeman (1994) observed a similar evolution in collective bargaining laws and administration. Based on this research, our expectation is that Canada will be less likely to turn to part-time labor in response to increased trade activity.

Data and Method

Our data are for eleven manufacturing sectors[3] in the U.S. and Canada for 1982 through 1992. This study was limited to manufacturing to allow for comparable measures of imports, exports, and output. The measure of contingent work is the ratio of part-time employment to total employment within each industry, used because comparable data over time and across countries were available.[4] Part-time is defined as those working fewer than 35 hours per week.

Imports, exports, and output are all measured as value of shipments by industry by country.[5] Two types of measures of import and export activity regularly appear in the literature. The first set (Definition 1) measures import activity as import penetration (= imports/output plus imports minus exports) and export activity as revealed comparative advantage (= exports minus imports/exports plus imports) (Faini and Venturini 1993). The second set (Definition 2) defines import activity as a different form of import penetration (= imports/output plus imports) and export activity as an export penetration (= exports/output) and directly captures the importance of exports to total sector production (Addison et al. 1995). Models using both sets were estimated.

Implementation of the FTA is measured by a dummy variable equal to 1 for the years after January 1990 when the agreement took effect, and 0 otherwise. A dummy variable equal to 1 for country is also included if the observation is from the U.S. Union density is measured by the share of employees in an industry covered by a collective bargaining agreement.[6] Union density rates were included to take into account institutional factors likely to limit the firm's use of part-time workers. A trend variable was also included.

A common problem with longitudinal data is cross-sectional variation (Greene 1990). The data were first corrected using a Prais-Winsten transformation. To test for the presence of cross-section variation, three models were estimated: two with OLS, an unconstrained regression and a fixed-effects model, and one with GLS, a random-effects model. The hypothesis that the coefficients are equal across cross-sections was rejected at the .000 level ($F_{10, 225} = 38.53$), indicating the presence of cross-section heterogeneity. Results from both the fixed and random effects models are presented because the data satisfy the assumption of zero correlation between the errors and the regressors required for the random effects model, and the GLS estimates are asymptotically efficient, whereas the OLS estimates are not (Greene 1990).

Results

Table 1 shows the regression results using both definitions of import and export activity. Whether or not the part-time share of industry employment is affected by the level of international trade is addressed in the left-hand panel of Table 1. Both the OLS and GLS estimates suggest that when import activity is measured as a share of domestic consumption, it has a positive and significant effect on the part-time share of total employment. However, the coefficient for import activity is insignificant if exports are not netted out of the denominator, suggesting that employers respond when imports affect the domestic product market.

The coefficient for revealed comparative advantage is small and not statistically significant. However, the coefficient on export activity as measured by export penetration is positive and statistically significant. The measure of

TABLE 1
Regression Results
Dependent Variable: Part-Time Share of Employment

	OLS Estimates		GLS Estimates		OLS Estimates		GLS Estimates	
N = 242	Definition 1	Definition 2	Definition 1	Definition 2	Definition 1	Definition 2	Definition 1	Definition 2
Constant	—	—	.037*	.033*	—	—	.036*	.033
			(2.40)	(2.146)			(1.710)	(1.699)
Import Activity	.044***	.018	.042***	.018	.048***	.019	.047***	.016
	(3.726)	(1.145)	(3.578)	(1.186)	(3.724)	(.846)	(3.650)	(.752)
Export Activity	.009	.042***	.007	.030**	.014*	.039***	.014*	.036**
	(1.516)	(3.265)	(1.332)	(1.978)	(2.353)	(2.938)	(2.520)	(2.76)
FTA	.012*	.012*	.011*	.011*	.014*	.013*	.014*	.013*
	(1.953)	(1.953)	(1.96)	(1.978)	(2.287)	(2.121)	(2.290)	(2.162)
Union Density	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
	(.482)	(.419)	(.470)	(.421)	(.416)	(.356)	(.409)	(.359)
Trend	-.002*	-.002*	-.002*	-.002*	-.002*	-.002*	-.002*	-.002*
	(-2.320)	(-2.244)	(-2.304)	(-2.237)	(-2.197)	(-2.058)	(-2.195)	(-2.036)
U.S.	.050***	.053***	.049***	.052***	.056***	.060***	.055***	.060***
	(13.513)	(13.319)	(13.429)	(13.206)	(9.570)	(9.284)	(9.522)	(9.250)
Import-U.S. Interaction					-.087**	-.013	-.085**	-.007
					(-2.569)	(-.321)	(-2.527)	(-.169)
Export-U.S. Interaction					-.030*	-.093	-.030*	-.110
					(-2.308)	(-1.095)	(-2.295)	(-1.307)
Adjusted R^2	720	703	278	278	726	723	096	148

Note: t-statistics are in parentheses.

*** Significant at .001 level or better ** Significant at .01 level or better * Significant at .05 level or better revealed comparative advantage contains no information about the level of traded goods relative to total domestic production. Rather, it indicates the importance of net exports to overall trade activity. Export penetration, on the other hand, directly measures exports as a share of total domestic output. These results suggest that the greater an industry's dependence on foreign markets relative to domestic markets, the greater the share of employment that is part-time. On the other hand, comparative advantage without reference to total output in the industry does not affect part-time employment.

The coefficients for industry-specific union density rates are not significant in any of the models, raising the question of whether the trade unions are able to impose restrictions on the use of part-time work in the face of increased trade competition.

The second question was whether the implementation of a free trade agreement led to greater use of part-time workers. The coefficient for FTA is positive and statistically significant in all of the regressions. The interpretation of the effectively identical results across regressions is that part-time employment increased by one percentage point due to the implementation of FTA. This shift takes place in a small but statistically significant downward trend in the use of part-time workers across the industries included in this study. It may be that manufacturing firms are substituting other forms of contingent work for part-time employment.

The third question was whether the U.S. had a greater propensity to use part-time workers in response to increases in trade activity. This was examined by adding a set of interaction variables to each regression equal to the product of the U.S. dummy variable and the measures of trade activity. The results are shown in the right hand side of the table. All of the coefficients for the interaction variables were negative but statistically significant only in the Definition 1 regressions.

The negative coefficients for the U.S. import penetration not only indicate that U.S. employers are less likely than Canadian employers to respond to import penetration with part-time workers but also suggest that U.S. employers decrease their use of part-time workers as import penetration increases. The results are similar for export activity: U.S. employers appear to decrease their use of part-time workers as their comparative advantage increases.

One explanation, which cannot be readily investigated, is that U.S. employers are shifting to other forms of contingent work, while Canadian employers retain permanent employees but shift them to part-time. This would be consistent with the social contract explanation of other employment outcomes. Further, differences in nonwage payroll costs may explain the difference. U.S. payroll taxes are 8.7% compared to 5.9% (1993) in Canada (Abbot and Beach 1997). Also, while not mandatory, 77% of medium and large U.S. employers offer health insurance, potentially adding to the cost of permanent part-time workers (BLS 1997b).

Conclusion

The first question was whether free trade results in increased part-time work. Part-time employment increases with both import and export activity; however, that relationship depends on how import and export activities are defined.

The effect of the implementation of the FTA is small but consistent across all of the models estimated. This one-time shift indicates that firms try to incorporate more flexibility into their workplaces once they expect to be subject to new, trade-induced competitive pressures.

Finally, the expectation that U.S. employers would be more likely to use part-time workers was not supported. One explanation is that while it is an alternative work arrangement, part-time work in many workplaces still implies a long-term permanent relationship. Whether for reasons of social contract or benefit costs, Canadian employers appear to be willing to sustain the relationship in response to increased trade activity, while U.S. employers do not.

Endnotes

[1] Contingent workers earn less, are less likely to be trained by the employer, and are less likely to receive legally mandated work-related benefits than core workers (Tilly 1992, 1996).

[2] Among the OECD countries for which there are data, part-time employment increased between 1973 and 1991 in all but Greece and Portugal. Allowing for across-country variation in the definition of temporary labor, temporary employment grew from 6.5% of total employment in 1981 to 7.6% in 1991 (Delsen 1995).

[3] The industries include textiles; clothing; lumber and wood; paper and allied products; printing and publishing; chemicals and allied products; petroleum and petroleum products; leather products; stone, clay, and glass; electrical and electronic equipment; and transportation equipment.

[4] Canadian employment data were made available from the Division of Household Survey of Statistics Canada. The U.S. part-time employment was calculated from annual Current Population tapes or CD-ROM, depending on the year.

[5] Import, export, and output measures were taken from publications of Statistics Canada, the United Nations, and the Bureau of Economic Analysis. Available from authors by request.

[6] The U.S. density rates are derived from the Current Population Survey by Hirsch and MacPherson (1993). The authors converted those into 2-digit rates. The Canadian

rates were calculated from unpublished data from the Survey of Employment, Payrolls, and Hours. Both data sets only included rates from 1983. A trend regression was estimated for each country to extrapolate a 1982 density measure.

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Union-Nonunion Wage Differentials in the U.S. Hotel Industry

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Unions exert their greatest impact on wages at the lower end of the wage distribution. Card (1996) demonstrated that for workers in the lowest quintile in the earnings distribution, unions raised wages by 27.9% in 1987. Motivated in part by the trend of the expanding employment share in low-wage service-sector jobs, by evidence of unions' disproportionately large impact on wages at the lower reaches of the occupational skill hierarchy and by findings that institutions (like collective bargaining) significantly influence wage determination, I conduct a study of how unions affect wages of union and nonunion workers in the hotel industry. The hotel industry is an obvious focus for such an analysis because much of the employment in the industry is composed of service jobs requiring low levels of skill.

Another motivation for my study of the industry is the AFL-CIO's recent organizing initiatives in Las Vegas, Nevada, which is by far the largest center of hotel employment in the nation. The focus of the campaign in Las Vegas also extends to the hospital and construction industries. The emphasis on hotels and hospitals can be interpreted as an acknowledgment that unionization in the service sector is taking on increasing significance for the labor movement.

Methodological Issues: Threat and Spillover Effects

Previous research has demonstrated that unions raise wages of workers they represent. Evidence on the impact of unions on workers not covered by a union contract, however, is not so clear. Ambiguity especially arises because of two well-known methodological problems. First, the union threat model suggests that firms preferring to remain nonunion increase wages strategically to mitigate the threat of unionization. If the threat effect prevails, wages of workers not covered under a union contract would be higher than would be the case in the absence of unions. Firms obviously respond to union threats based on the subjective probability that unionization will occur (Hundley 1987). Thus nonunion firms competing in the same labor

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and product markets as unionized firms are presumably more likely to pay higher wages. Workers in such firms, in effect, become beneficiaries of a positive externality produced by the union presence.

The second methodological difficulty, the spillover effect, occurs simultaneously to—and offsets—the threat effect. The logic of the spillover effect suggests that if unions increase the price of labor, one expects to find reduced employment in the union sector, which increases the supply of labor available to the nonunion sector and thus depresses wages of nonunion workers. If the spillover effect prevails over the threat effect, the existence of a union sector produces lower wages than would have been obtained otherwise—a result that can be viewed as a negative externality suffered by workers in the nonunion sector.

Workers and Collective Bargaining in the Hotel Industry

To test for union wage effects in the hotel industry, I obtained data on workers employed in the industry from the 1995 and 1996 Current Population Survey—Outgoing Rotation Files (CPS-ORG) files.[1] Pooling the 1995 and 1996 samples to increase observations and selecting only nonmanagerial, nonprofessional, and nontechnical workers hourly wages of $1.00 per hour or more resulted in 384 observations on unionized and 1,632 observations on nonunion workers in the industry. I adjusted wages observed in 1995 according to the annual consumer price index for urban consumers to make them compatible with 1996 wages. Table 1 contains summary statistics. Respondents who reported themselves covered under a union contract are assigned union status, otherwise they are listed as nonunion. Unadjusted mean hourly wages are substantially higher for respondents covered under a union contract. Union workers also tend to be somewhat older, less likely to work part-time, and more likely to live in a large city and work in a service occupation than their nonunion counterparts.

Cobble and Merrill (1994) describe the structure of collective bargaining in the U.S. hotel industry, and Waddoups (1998) outlines the union environment in Las Vegas's branch of the industry. However, it is appropriate to recognize that the Hotel Employees and Restaurant Employees International Union represents a majority of hotel workers in the U.S., although the Teamsters, Service Employees International Union, Operating Engineers, among others, also represent a substantial number of workers in the industry. Collective bargaining tends to be decentralized with local unions negotiating contracts responding to variations in local product and labor market conditions.

Most unionization is concentrated in the major convention and tourist centers. For example, the CPS data indicate that hotels in Las Vegas employ

TABLE 1

Summary Statistics: Hotel Workers in the United States, Las Vegas, and Other Major Centers of Unionized Hotel Employment

Variable	Unionized In U.S.		Nonunion In U.S.		Unionized Las Vegas		Nonunion Las Vegas		Unionized Other SMSAs		Nonunion Other SMSAs	
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Age	39.953	11.137	36.082	12.539	40.073	10.420	38.898	11.490	41.115	11.870	35.098	10.836
High School	0.398		0.403		0.445		0.449		0.351		0.399	
Some College	0.227		0.263		0.183		0.293		0.229		0.290	
Bachelors Degree	0.070		0.063		0.051		0.095		0.084		0.038	
Graduate Degree	0.010		0.011		0.015		0.020		—		—	
Northeast	0.216		0.152		—		—		0.450		0.197	
West	0.677		0.373		—		—		0.420		0.388	
South	0.034		0.310		—		—		0.031		0.317	
Hours Less than 35	0.091		0.327		0.080		0.082		0.046		0.224	
Service Occupation	0.862		0.689		0.847		0.782		0.863		0.710	
Production, Construction, etc.	0.047		0.055		0.066		0.082		0.046		0.038	
Transportation	0.008		0.007		0.015		0.014		0.000		0.016	
Operators	0.037		0.045		0.051		0.041		0.031		0.060	
Handlers	0.008		0.005		0.022		0.014		0.000		0.011	
Agricultural	0.008		0.009		0.007		0.000		0.008		0.000	
Year (1 = 1995)	0.349		0.322		0.299		0.320		0.374		0.333	
MSA (> 2.5 mill.)	0.253		0.154		—		—		0.588		0.760	
MSA (bet. 1 and 2.5 mill.)	0.081		0.199		—		—		0.000		0.000	
Proportion Female	0.469		0.597		0.445		0.313		0.489		0.525	
Proportion African Am.	0.167		0.162		0.146		0.095		0.221		0.235	
Proportion Hispanic	0.255		0.180		0.299		0.197		0.321		0.290	
Actual Hourly Wage	12.315	8.026	9.203	13.325	12.465	8.948	13.559	8.156	12.237	6.720	9.999	5.717
Las Vegas	0.357		0.090		—		—		—		—	
Unionized Cities*	0.340											
Number	384		1632		137		147		131		183	

Source: 1995 and 1996 Current Population Survey–Outgoing Rotation Files.

*Includes Atlantic City, Chicago, Honolulu, Los Angeles, New York City, and Washington D.C.

approximately 14% of all hotel workers and 36% of all unionized hotel workers in the U.S. Other tourist and convention centers listed in Table 1 employ another 34% of union members. Most of the other unionized hotels are in urban centers, such as San Francisco, Boston, Detroit, and Philadelphia. Hotels elsewhere and in the southern U.S. remain largely nonunion.

Empirical Methodology

I established union wage differentials in the hotel industry by first using OLS to estimate the following log wage equations for union workers:

$$\ln W_{iu} = X_{iu}\beta_u + \varepsilon_i \quad (1)$$

and the following for nonunion workers:

$$\ln W_{in} = X_{in}\beta_n + \varepsilon_i\,, \quad (2)$$

where W is a measure of the hourly wage; the subscripts u and n indicate union and nonunion status; Xs are vectors of human capital, demographic, occupational, and regional variables that may affect wages; βs are vectors of parameters (including intercept terms); and εs are vectors of error terms.[2]

Estimates of the parameters in equations 1 and 2 are located in Table 2. Cobble and Merrill (1994:452) listed highly unionized cities in the U.S. as Atlantic City, Boston, Chicago, New York, Las Vegas, Los Angeles, San Francisco, and Washington, D.C. Because there were so few observations on hotel workers in Boston and San Francisco in the CPS-ORG data, I excluded them from the UNIONIZED CITIES variable. I added Honolulu, Hawaii, to the variables because of the relatively large number of observations on hotel workers and substantial union presence there. In addition, because hotels in Las Vegas employ such a large portion of workers in the industry, I created an additional dummy variable controlling for employment in Las Vegas.

One would expect that high union density, other things equal, would increase bargaining power and wages of union workers in highly unionized environments relative to union workers elsewhere. Results of the regressions, however, suggest that being employed as a union member in either the LAS VEGAS or UNIONIZED CITY group does not necessarily lead to higher wages compared to one's *unionized* counterparts elsewhere. Though both parameter estimates are positive, neither reaches conventional levels of significance.

Next consider the parameter estimates on the LAS VEGAS and UNIONIZED CITIES variables in the nonunion equation. Both are positive and highly statistically significant. Nonunion workers in the unionized cities earn hourly wages approximately 19.1% higher than their nonunion counterparts elsewhere, other things being equal. The analogous figure in Las

TABLE 2

Estimates of the Natural Log of Hourly Wage for U.S. Hotel Workers by Union Status

	Union (OLS)		Nonunion (OLS)	
Variable	Coefficient	t Statistic	Coefficient	t Statistic
Constant	1.5506***	4.9170	1.4341***	14.3050
Age	0.0282*	1.9590	0.0246***	4.7170
Age Squared	-0.0003*	-1.6580	-0.0003***	-3.8680
High School = 1	0.0916	1.5440	0.1372***	5.2890
Some college = 1	0.2543***	3.6830	0.2317***	7.5350
Bachelors Degree = 1	0.1112	1.1040	0.3592***	7.7540
Graduate Degree = 1	1.0124***	4.4100	0.4064***	4.1110
Residence in Northeast = 1	0.1374	1.3730	0.0677*	1.8960
Residence in West = 1	0.1812*	1.7620	0.0259	0.8050
Residence in South = 1	-0.2131	-1.3100	0.0346	1.0970
Usual Weekly Hours Less than 35	0.2424***	2.8640	-0.1263***	-5.5730
Service Occupation	-0.0568	-0.5190	-0.0019	-0.0660
Production, Construction, etc.	0.2636*	1.7380	0.0715	1.3810
Transportation	0.4256	1.4290	0.1595	1.1770
Operative	-0.3310*	-1.7280	-0.1037*	-1.7000
Handler	1.0904***	3.5900	-0.1885	-1.2300
Agricultural	-0.1445	-0.5250	-0.0350	-0.3180
Year = 1995	0.0253	0.5390	0.0635***	2.9790
Residence in Large City (> 2.5 million)	0.1817**	2.3010	0.0282	0.7790
Residence in City between 1 and 2.5 Million	0.1001	1.0230	0.0521*	1.9030
Female = 1	-0.1584***	-3.3380	-0.1219***	-5.3190
African American = 1	-0.1718**	-2.4250	-0.1237***	-4.0870
Hispanic - 1	-0.2040***	-3.2520	-0.0875***	-2.9950
Unionized Cities = 1	0.0956	1.4160	0.1749***	4.3460
Las Vegas = 1	0.0542	0.7940	0.3384***	8.3520
Number in Sample	384		1632	
Adjusted R Squared	0.2209		0.2398	
F Statistic	5.52***		22.44***	

Source: 1995 and 1996 Current Population Survey–Outgoing Rotation Files.
* Significance between .1 and .05 levels.
** Significance between .05 and .01 levels.
*** Significance at less than .01 level.

Vegas is nearly 40%. It appears that nonunion workers in highly unionized environments earn substantially higher hourly wages than their nonunion counterparts in less unionized areas. The results also suggest that the threat effect operates rather strongly in such markets.

To calculate the log union-nonunion wage differential, I computed

(3) $d = (b_u - b_n)X$,

where bs are vectors of parameter estimates. The union-nonunion differential is given by

(4) $[\exp(d)-1]$.[3]

Table 3 contains the results of the calculations from equation 4 for different combinations of attributes represented in vector X. The union-nonunion differential calculated at the sample means is 18.67%. Thus the average union worker's hourly wage is 18.67% higher than the wage of his or her nonunion counterpart, holding everything else constant. I also used the equation to estimate union-nonunion differentials in Las Vegas and the other unionized cities. The differential for Las Vegas is -5.87%, indicating that nonunion workers' wages exceed similar union workers' wages. Such a finding is not unprecedented; Podgursky (1986) obtained similar results in large firms outside the manufacturing sector under conditions of high union density. For other unionized cities in the present analysis, the predicted

TABLE 3

Union-Nonunion Wage Differentials for Nonmanagerial, Nonprofessional Technical Workers in U.S. by Various Characteristics

Characteristics	Union-Nonunion Differential
Sample Means	18.67%
Place of Employment	
Employment in Las Vegas	-5.87
Employment in another Unionized City	15.52
Employment Elsewhere	15.05
Personal Characteristics	
No High School Diploma	21.30
High School Diploma	15.89
Some College	24.07
Bachelors Degree	-5.34
Work less than 35 Hours	54.61
Work in Service Occupation	15.91
Female	16.83
Male	21.18
African American	16.60
Hispanic	8.89
Other Race or Ethnicity	22.34
Age 55 Years	19.09
Age 25 Years	17.90

Source: 1995 and 1996 Current Population Survey–Outgoing Rotation Files. Calculated according to equation 4.

differential is 15.52%. Elsewhere in the U.S., the differential is 25.05%, again supporting the notion that union threats have a substantial upward impact on nonunion wages. Other interesting results in Table 3 suggest that union coverage is particularly rewarding for part-time workers.

Conclusions

My analysis of the U.S. hotel industry suggests that hourly wages are substantially higher for nonmanagerial, nonprofessional, and nontechnical workers covered under a union contract compared to similar workers without union coverage. The threat of union coverage in a local area also appears to increase the wages of nonunion workers, other things being equal. In fact, hourly wages are actually higher for nonunion workers in Las Vegas. The magnitude of the difference in Las Vegas compared to other locations suggests that perhaps employment in hotels with casinos or lack of controls for firm size (which unfortunately are unavailable in the CPS-ORG data) adds unobserved heterogeneity that may affect the results. Additional research is required to assess such possibilities.

Acknowledgment

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Endnotes

[1] Hirsch and Macpherson (1997) describe the CPS-ORG data in detail.

[2] Using a standard two-stage procedure, I found no evidence of selectivity bias, suggesting OLS is an appropriate technique for estimating equations 1 and 2 (Lee 1978).

[3] See Curme and Macpherson (1991) for a similar methodology.

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DISCUSSION

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The Roberts and Hyatt paper presents an analysis of three very interesting questions: (1) What is the effect of free trade on the use of part-time work? (2) Has the U.S./Canada FTA increased part-time work? and (3) Does the use of part-timers in response to free trade differ in Canada and the U.S.? The paper also contains a lot of information in only ten pages, thanks to the tight focus of the questions, clear empirical work, and good, concise writing. The authors' findings include:

1. Mixed results on question 1, depending on how trade sensitivity is defined, but in general more trade => higher part-time share.
2. Use of part-timers experienced a boost after 1990 (within the context of a more general decline over time).
3. Response to trade is different in the U.S. than in Canada: more foreign trade => lower share part-timers in the U.S. and higher in Canada (not consistent with prior belief).

The main question I had in reading the paper was, What about unemployment? The authors discuss studies of trade and unemployment, and for questions 1 and 2, analyzing what is happening to the full-time/part-time distribution of jobs *conditional on employment* is interesting by itself. But looking at part-time work in isolation becomes problematic for question 3, especially with the prior belief the authors have about the differential effect of trade on part-time employment in Canada and the U.S. The basic idea in the paper is that increasing foreign trade means more competition, and Canadian employers, who are generally more sympathetic to their workers than U.S. employers, will be less likely to turn to part-time employment arrangements in response to this increase in competition. As long as unemployment is unaffected by competition, the empirical prediction associated with this story is clearly that part-time rates will increase in the U.S. in response to competition but will not (or will increase by a smaller amount) in Canada.

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But if laying off workers in response to increasing competition is also an option—as other research demonstrates it is—then it is harder to formulate a clear prediction about how the rate of part-time work conditional on employment will be affected by free trade. Suppose, for example, that in response to global competition, all U.S. employers simply fired half of their part-time workers, while Canadian employers shifted 10% of their full-time workers to part-time. This is consistent with the authors' argument about Canadian employers being more willing to engage in rent-sharing but would show up in the data as an increasing part-time rate for Canadians and a decreasing one for the U.S. (as the authors in fact find). To summarize: in order to make sense out of the differential prediction about U.S. and Canadian employers, it is essential to look at the unemployment outcome also.

A few minor comments about estimation of the impact of the FTA which in the paper is estimated using a time trend and a post-1990 dummy. I would be interested to see this specification compared to a set of unrestricted year dummies and test whether the constraint is appropriate. Alternatively, you could test for a break in trend and endogenize the break point (see Hamilton's time series text for details). And however you end up specifying FTA, I would be interested to see a U.S.–FTA interaction included as an alternative to the U.S.–trade activity specification presented in the paper to test the hypothesis of differential Canada/U.S. response to free trade.

Waddoups presents a concise analysis of union/nonunion wage differentials in the hotel industry and finds that the wage differential at the sample mean is 18.67%, roughly the same order of magnitude as earlier studies. The most surprising finding is that in Las Vegas the union-nonunion wage differential is *negative*—that is, unionized workers earn *lower* wages than their nonunionized counterparts. The author points out that this may be due to the lack of firm size information. While this is possible, two other possibilities are worth discussing since they highlight areas where the analysis might productively be extended.

First, the paper could take more seriously the possibility of selection, which is currently relegated to a footnote. If the workers in the union and nonunion sectors were truly identical, and we assume that leaving the union is free, then why wouldn't unionized workers in Las Vegas just renounce their union membership? Especially since the Card (1996) paper that the author cites finds evidence of selection at both ends of the wage distribution (operating in opposite directions so that *on average* there is no selection effect), it would be worth exploring this possibility more fully.

Second, the paper could consider nonwage benefits. It has been shown elsewhere that unionized workers receive a higher share of compensation as fringes, so including information health insurance (which is available in these data) would add an interesting dimension to the analysis and might help explain the counterintuitive result for Las Vegas. (That is, if all the unionized workers in Las Vegas get health insurance and their otherwise identical nonunionized counterparts do not, that would explain a negative union wage differential.) Most empirical work that has been done on wages relies on a theoretical apparatus that is actually about total compensation, but it's rare for empirical work to consider nonwage compensation. (A counterexample is a recent working paper by Brooks Pierce on "compensation inequality" which estimates the effect of including the value of health insurance benefits on estimates of wage inequality.)

The paper by Paul Chen presents a good, concise empirical analysis of gender gap in wages and how the components of the gap differ according to the compensation mechanism (performance pay versus time wages). Using data on Swedish metalworkers, the author finds that (1) the gender wage gap is approximately the same size for performance pay or time wages (5%–6%), and (2) about the same fraction of the gender wage gap in either performance pay or time wages is accounted for by differences in observables rather than by differences in the return to observables (which is normally considered to be "discrimination"). Chen concludes from the second result that performance pay is no more (or less) discriminatory than time wages.

As Chen notes, whether performance pay allows room for more or less discrimination than time wages depends entirely upon the actual performance pay scheme. At one extreme of objectivity is a simple piece-rate system: the worker sells output to the firm, which pays a fixed rate per unit of output. Examples at the other extreme, where employment contracts based on performance are highly subjective, are artists being commissioned to do work for collectors, assistant professors being promoted, or orchestras hiring performers (see Goldin and Rouse, NBER working paper 5903, Jan. 1997). So the real question about a compensation system that determines scope for discrimination is not whether it is "performance-based" but rather whether it is objective or subjective.

In the absence of information on the specific performance pay arrangement the workers in these data faced, I like Chen's approach of comparing the Blinder decompositions as a way of determining the degree of discrimination in the two compensation mechanisms. An interesting extension would be to validate this approach by trying it in a setting where more is known about the specifics of the performance pay arrangement. (To the extent that I'm asking the author to get more data, this is not a particularly constructive suggestion for the current paper. It's meant not as a criticism but rather as a suggestion about where to go next.)

IX. GENDER ISSUES IN ACADEMIC CAREERS

The Effect of Publishing Productivity and Gender on Tenure

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It is difficult to imagine an issue of greater importance to one's academic career than tenure. When it is conferred, it provides recognition of professional achievement and a level of job security virtually unmatched in the labor market. When tenure is denied, it conveys a stigma of failure and is likely to cause downward mobility. In this study we assess whether there are gender differences in the tenure process within seven years of completing the Ph.D.

Tenure statistics suggest that women may be at a disadvantage in the promotion and tenure process. The percentage of women full-time faculty who were tenured remains significantly below that of men: 46% of women versus 64% of men in 1975 and 51.4% versus 72.6% in 1997 (Bell 1998). The percentage of Ph.D. recipients who are women roughly doubled between 1972 and 1991, from 16% to 37% (Ries and Thurgood 1993), suggesting that a larger number of women are failing to achieve tenure today than twenty years ago.

The Determinants of Promotion and Tenure

An extensive body of literature has examined the determinants of publishing productivity. Most studies find that women are significantly less

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productive than men (see Cole and Zuckerman [1984] for a review), but the differential is narrowing and may not hold in all fields (Park and Gordon 1996).

Several studies examine the attainment of academic rank by gender. Women who earned Ph.D.s in psychology in 1965-74 attained significantly lower rank in their last job than men (Hurlbert and Rosenfeld 1992). Women faculty in the top thirty economics departments (1969-90) were significantly less likely than men to be promoted to associate professor (Broder 1993). Long, Allison, and McGinnis (1993) found no gender difference in promotion to associate probabilities among biochemistry Ph.D.s (1956-67) at research universities, but it took women longer to be promoted to associate professor than men. Women postdoctoral fellow scientists and engineers (1955-85) achieved significantly lower rank than their male counterparts.

The correlation between rank and tenure is far from perfect. In 1997, 97% of full, 86.3% of associate, and 20.2% of assistant professors had tenure (Bell 1998). To our knowledge, only two studies have estimated the effects of gender on tenure as opposed to promotion. Park and Gordon (1996) found that among Ph.D.s in strategic management (1980-86), men were more than twice as likely to receive tenure by the seventh year after the Ph.D. than women at the mean of the independent variables, controlling for productivity. There was no gender difference in the average number of journal articles, and women received almost twice as many citations per article as men. Only articles in the twenty "primary" journals in strategic management were included, resulting in an undercount of total publications. (The average annual publication rate was 0.31.)

Collins, Parrish, and Collins (1998) analyzed the probability of being considered for or of being granted tenure (among those considered) at their first faculty position for Ph.D.s (1978-86) who were listed in Hasselback's (1992) *Accounting Faculty Directory.* There was no significant gender difference in either the probability of being considered or of being granted tenure. There were only 28 women in the sample, causing low statistical power. Neither study of tenure used a methodology that properly deals with "censored" cases.

Hypotheses

Determinants of Time to Tenure

Tenure is a significant reward conferred in the academic labor market. Thus productivity is expected to increase the probability of tenure receipt. The quality of the Ph.D. program (PHDQUAL) may increase the probability of tenure receipt, even controlling for productivity, by capturing unmeasured aspects of the quality of role performance. It may also function as a signal of ability and create a presumption that pretenure levels of productivity will continue into the future. More prestigious departments are expected to impose higher research standards than less prestigious departments. Thus the quality of the faculty member's first tenure-track job (QFJ) is expected to reduce the probability of receiving tenure. We also expect an interaction effect between QFJ and publications. Research productivity (especially in academic journals) is expected to increase tenure probabilities at top schools.

The sociological literature on gender differences in academic careers focuses on the accumulation of advantage and disadvantage. Small differences in access to resources early in the career generate differences in performance and create a feedback loop that amplifies and reinforces differences over time (Long, Allison, and McGinnis 1993). We do not test this proposition directly, but we assess whether there are gender differences in resources early in academic careers.

Methods

All but two of the above studies—Broder (1993) and Long, Allison, and McGinnis (1993)—use regression techniques to estimate the probability of achieving promotion or tenure by a certain time using a single cross-section of data. However, individuals achieve tenure over a surprisingly long span of time (between one and twenty years after the Ph.D. in our sample). Surely *when* someone achieves tenure is nearly as important as *if* they do. The typical approach is incapable of estimating differences in "waiting time" to tenure and lacks a means of incorporating time-varying explanatory variables. Our dependent variable is whether or not a faculty member received tenure. There is one observation for each year that each individual is untenured and "at risk," plus the year that tenure was achieved. Although we have information on the entire time distribution of tenure receipt, the productivity measures relate to the first seven years. Thus our analysis is restricted to this seven-year period. If a faculty member was not promoted by that time, the case is censored. If censored cases are ignored, the estimated effects of the independent variables are biased (Yamaguchi 1991). To avoid this problem, we use a type of survival analysis, the discrete-time logit model (Allison 1995), to estimate the time structure of the tenure process, using both time-varying and non-time-varying variables in the analysis. All productivity measures are time-varying. We expect the probability of promotion to change over time, independent of other determinants. Thus we enter the number of years (YEARS) since receiving the Ph.D. and its square

(YEAR^2). We allow the estimated coefficients to differ by gender (via interaction terms) and test for their joint significance with a likelihood ratio test.

Data

The data were collected from two surveys of a sample of accounting faculty drawn from Hasselback's *1990 Accounting Faculty Directory*. In order to draw an equal number of men and women, we sampled all women but only a 14.5% random sample of men who earned a Ph.D. or DBA in accounting between 1970 and 1984. The initial survey was sent to 452 faculty in 1991 and elicited background information, but not tenure. Individuals whose Ph.D. was not in accounting were dropped, yielding a final sample of 387. Surveys were returned by 307 individuals for a 79.3% response rate. Publication data were gathered from ten databases, and respondents were sent the results of our search and asked to verify the information. In 1997 a brief follow-up survey was sent to elicit information on whether the respondent had ever received tenure, and if so, the year it was awarded and the institution conferring it. All 264 of the initial respondents who could be located were sent follow-up surveys. There were 210 responses—97 women and 113 men, for a 79.5% response rate (54.3% of the original sample).

Measures

Measures of publishing productivity include articles published in ACADEMIC journals, articles published in the TOP5 journals (Hull and Wright 1990), articles published in PRACTITIONER journals (these are acceptable outlets in some accounting departments), and BOOKS. All department quality measures (PHD QUAL, QFJ, and TENURE SCHOOL QUAL) are ratings of doctoral program quality (3.01-4.99) based on faculty productivity, admissions standards, and quality of the curriculum (Gourman 1987). Departments without Ph.D. programs were assigned a rating of 2.00.

Results

Table 1 reports the means and standard deviations of the study variables broken down by gender. First, we consider the evidence that when women begin their academic careers, they experience disadvantages in resources compared to men. Although men and women do not differ significantly in the quality of their Ph.D. program or the number of articles published before the Ph.D., the quality of women's first tenure track job (QFJ) is significantly lower, and their teaching load before tenure is significantly higher. Women also serve on significantly more committees. Women publish significantly fewer articles in academic journals, due entirely to publishing less in the top five accounting journals. Their work was also cited less often.

TABLE 1

Means (Standard Deviations) of Study Variables, by Gender

Variable	Women	Men
PHD QUAL	3.98	4.12
	(0.64)	(0.61)
PRE-PHD PUBS	0.41	0.38
	(1.03)	(1.20)
QFJ	2.89	3.21**
	(1.05)	(1.09)
TEACH LOAD	6.23	5.81*
	(1.75)	(1.64)
COMMITTEES	3.00	2.34***
	(1.72)	(1.35)
TOTAL ARTICLES	4.77	6.27
	(4.37)	(10.71)
ACADEMIC	1.51	2.24**
	(1.98)	(3.15)
TOP 5	.21	.82***
	(.51)	(1.55)
OTHER ACADEMIC ARTICLES	1.30	1.41
	(1.72)	(2.13)
PRACTITIONER	3.25	4.01
	(3.75)	(9.60)
BOOKS	0.27	0.28
	(0.63)	(0.60)
CITES	2.11	5.12**
	(5.07)	(12.17)
TIME TO TENURE	7.29	7.17
	(3.26)	(3.63)
% TENURED AT 1ST JOB	.50	.50
	(.50)	(.50)
TENURE SCHOOL QUAL	2.89	3.03
	(1.06)	(1.14)
DIRECTION OF MOVEMENT	-.03	-.19
	(.63)	(.86)
PHD YEAR	80.23	77.98***
	(2.90)	(4.12)
N	97	113

*** Difference is significant at the .01 level.
** Difference is significant at the .05 level.
*Difference is significant at the .10 level.

There were no significant gender differences in several productivity measures: the total number of journal articles, the number of articles published in academic journals below the top tier, and the number of articles published in practitioner journals. Compared to men, women's appointments were in lower-ranked departments that presumably place less emphasis on the quality of publications. Thus we would not expect a significant difference in overall tenure rates.

As expected, there are no significant differences in the average time it takes to achieve tenure (roughly 7.2 years), the probability of achieving tenure at the first job (50% for both men and women), or the quality of the department awarding tenure. Men experienced slightly more downward mobility than women (DIRECTION OF MOVE), since men began in higher-rated departments (QFJ) and ended in equally rated departments (TENURE SCHOOL QUAL).

Table 2 reports the discrete time logit estimates of achieving tenure in the first seven years after receiving the Ph.D. There is a significant gender difference in the coefficients when the effect of the quality of the first job (QFJ) is allowed to vary with the type of journal in which they publish. For women there is a significant positive interaction between ACADEMIC journal articles and QFJ, while for men there is a significant negative interaction between

TABLE 2
Discrete Time Logit Coefficients (Standard Errors) of Time to Tenure

Variable	Women		Men	
ACADEMIC	-0.76**	0.26*	-0.07	0.16*
	(.36)	(0.11)	(.30)	(0.07)
ACADEMIC*QFJ	0.38***	—	0.05	—
	(0.12)		(0.07)	
PRACTITIONER	-0.21	0.04	0.28**	0.01
	(.20)	(0.06)	(0.14)	(0.01)
PRACTITIONER*QFJ	0.10	—	-0.06**	—
	(0.06)		(0.03)	
BOOKS	0.14	0.28	0.37*	0.38
	(0.27)	(0.24)	(0.23)	(0.23)
PHD QUAL	0.21	0.27	-0.20	-0.16
	(0.29)	(0.29)	(0.24)	(0.24)
QFJ	-1.19***	-0.24	-0.25	-0.33*
	(0.37)	(0.18)	(0.19)	(0.16)
YEAR	0.54	0.73	1.84**	1.88*
	(0.65)	(0.66)	(0.82)	(0.81)
$YEAR^2$	0.006	-0.01	-0.11	-0.11
	(0.067)	(0.07)	(0.08)	(0.08)
INTERCEPT	-3.52*	-6.47**	-7.19**	-7.19**
	(2.01)	(1.89)	(2.29)	(2.26)
N (Person year observations)	516	516	642	642

***Coefficient is significant at the .01 level.
**Coefficient is significant at the .05 level.
*Coefficient is significant at the .10 level.

PRACTITIONER journal articles and QFJ. The logit estimates are transformed into the percentage change in the odds of promotion from a unit change in the independent variable by $100(e^b - 1)$ to aid in interpreting the results.

Tenure decisions concerning women are more sensitive to the quality of their research record in prestigious departments than are tenure decisions about men. At the mean number of academic articles (1.5), a unit increase in QFJ reduces the odds a woman will receive tenure by 46.2%, while with four academic articles, QFJ increases her odds of receiving tenure by 39.1%. For men, one additional practitioner article increases the odds that he will achieve tenure by 9.1% at the mean QFJ and by 4% in the most prestigious departments. Women experience no such benefit. One additional academic article increases a man's odds of receiving tenure by 17.3%, and a unit increase in QFJ reduces his odds of receiving tenure by 28.1%.

While top-ranked departments differentiate between publishing in academic versus practitioner journals, they do not differentiate between articles published in the top five journals and other academic journals. (TOP5 was not significant.) Teaching load and committees also do not significantly influence tenure outcomes.

Conclusions

Our sample of accounting faculty shows no gender differences in the proportion who were tenured or in the time to tenure. It is thus not surprising that we found no significant main effects of gender on tenure. Gender differences reside in the sensitivity of tenure decisions by prestigious departments to the qualitative dimensions of research records. Highly productive women who focus on academic outlets are tenured in the best accounting departments. But fewer women than men obtain first appointments in such departments, and thus fewer have access to the resources (greater support for research, more research-active colleagues, lower teaching loads) that enable them to achieve such a record.

A significant caveat of this study is that the data and thus the conclusions are limited to survivors. Only 6 respondents—3 men and 3 women—had not achieved tenure by 1997. Tenure data for the entire period suggest that individuals who are denied tenure at their first job are able to remain in academia and eventually achieve tenure elsewhere, although it takes up to twenty years to do so. The extent to which this is due to the very strong demand for accounting faculty during this period (and thus whether it generalizes to other fields) is not known. Individuals who left academia before the 1991 survey are unaccounted for. Thus whether there is a gender difference in the probability of remaining in academia after being denied tenure cannot be ascertained with these data.

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Productivity, Incentives, and Earnings: Does a Union Gender Differential Exist in Public Academic Environments?

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Earnings differentials in academic labor markets have been examined extensively since the mid-1970s. The research on salary differentials in academia has generally found that there are significant gender differences that widen during the careers of men and women. See Bayer and Astin (1975); Johnson and Stafford (1974); Ferber, Loeb, and Lowry (1978); Strober and Quester (1977); Ferber and Kordick (1978); Barbezat (1987, 1989, 1991); and Weiler (1990). The importance of rank in salary determination has also been studied. Weiler (1990) separated the influence of the department's rank on salary by treating it in a separate equation and found that standard formulations underestimate the degree of salary discrimination. Broder (1993) finds that senior level female academics experience a gender differential consistent with a hypothesis of discrimination when considering endogeneity of academic rank, prestige of institution, and article production.

Johnson and Stafford (1974) conclude that over one-half of the academic year salary differentials found between full-time female and male Ph.D. faculty members at American universities are due to gender. They attribute this difference to voluntary decisions by women to interrupt their careers. However, this finding is controversial as Strober and Quester (1977) show that only a small fraction of full-time female faculty interrupt their careers.

Lindley, Fish, and Jackson (1992) conclude that there is no consensus on whether salary differences by gender occur at entry level or are evidenced with experience and rank. Hirsch and Macpherson (1994) find women's salaries initially lower but steeper and more concave than men's salaries over time. Gordon, Morton, and Braden (1974) record a female-male differential

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which they say is explained by differences in individual characteristics such as age, seniority, education, rank, race, and discipline. Hoffman (1974) adjusts the Gordon, Morton, and Braden (1974) model by recognizing that "sex discrimination may occur through slower promotion rates for females in which case rank itself would reflect discrimination." Weiler (1990) suggests that rank and seniority are correlated for men but not for women.

Why Do Gender Differentials Exist?

The underlying reasons for the differential in earnings between men and women remain controversial. Studies measuring male-female wage differentials have generally focused on explanations at the individual and occupational level. Human capital studies at the individual level explain male-female wage differentials in terms of differences in the characteristics of workers, such as education and experience, that affect their productivity and subsequent earnings. Occupational-level studies attribute male-female wage differentials to occupational segregation whereby women are being excluded from higher-paying occupations. Most studies of male-female wage differentials among faculty attribute differences to human capital factors such as age, experience, and highest degree held, since most have been conducted at the individual level within *one* institution. Studies leave much of the differential unexplained, leading to a belief that discrimination is "common" in academics and is due to "sex bias" (Bergmann 1982).

Union's Effect on Wages

Two conclusions generally emerge from the research on the union impact on wages: (1) wages for unionized workers are higher than those of nonunionized workers (Ashraf 1992, 1997), and (2) unions have a leveling effect on wages within organizations and reduce wage dispersion among workers (Blanchflower and Freeman 1992). If this is true, then one could expect a reduced male-female wage differential in unionized settings, or conversely, a higher male-female wage differential would be observed in nonunionized environments. Public sector studies generally support these findings.

Smith (1992) concludes that studies of the role of unionization on faculty compensation have produced varying results as to the impact of unionization. Some studies have reported average salaries that are significantly higher in unionized institutions than in nonunionized ones (Birnbaum 1974; Morgan and Kearney 1977). Other studies have concluded that unions had no significant impact on salaries (Brown and Stone 1977; Marshall 1979). Still others have concluded that salaries at unionized institutions were actually lower than those at nonunionized institutions (Kesselring 1991; Hu and Leslie 1982; Guthrie-Morse, Leslie, and Hu 1981). Despite the differences, there is a continuing perception that the presence of a union does raise wages above nonunion levels for college faculty (Gomez-Mejia and Balkin 1992).

Smith (1992) uses average hourly pay and finds that the male-female wage differential is less in unionized schools than nonunionized schools but that the differential is still significant for all ranks within unionized institutions. Gander (1997) supports Smith's finding that the presence of a faculty union does have a significant and positive effect on relative female faculty pay. In our study we use individual salaries obtained from state government documents. We find far greater wage dispersion in nonunion faculty salaries.

Effects of Unions on Productivity, Profits, and Wage Dispersion

It has long been argued that unions increase worker productivity, given the firm's level of capital, by providing a "voice mechanism through which workers' suggestions and preferences can be communicated to management" (Freeman and Medoff 1984). Following Blanchflower and Freeman's (1992) argument, workers have a direct means for expressing their ideas or concerns and thereby an enhanced motivational level and will be less likely to quit. The tenure guarantee in academic institutions for unionized and nonunionized faculty members negates this argument. In fact, we find the opposite in our results; productivity measures are higher in nonunionized academic settings.

Unions tend to reduce the dispersion of earnings among workers (Blanchflower and Freeman 1992). Our data support this finding (see Table 1). The union relative wage advantage in the U.S. appears to fall in the 10% to 20% range. That is, our best estimate is that American union workers receive wages that are some 10% to 20% higher than those of comparable nonunion workers (Freeman and Medoff 1984). It has been argued that unions everywhere tend to reduce the dispersion of earnings among workers (Blanchflower and Freeman 1992). They also reduce the wage gap between white and black workers in the U.S. (Freeman and Medoff 1984).

TABLE 1
Male-Female Wage Differentials (%)

Rank	Union	Nonunion (all)	Nonunion (omit research)
n	56	149	114
Full	26.10	29.60	14.90
Associate	6.60	3.20	3.20
Assistant	4.80	3.60	7.00

One argument in favor of the union is that wages are taken out of competition, therefore there should be less variability and subjectivity in the wage determination process. If this is true, then one would expect less variation in wages, or conversely, a higher male-female wage differential would be observed in nonunionized environments. Smith (1992) finds that the male-female wage differential is less in unionized schools than nonunionized schools but that the differential is still significant for all ranks within unionized institutions.

Hypotheses

Given the previous research findings on both union and nonunion earnings coupled with human capital and other economic theories, there are several findings that we expect. We expect to see significant gender wage differentials in the nonunion faculty salaries and would also expect to see no gender wage differential or very small gender wage differentials in the union faculty salaries. Union salaries are expected to vary less and be more readily predictable. Returns to productivity are expected in both nonunion and union salaries but are expected to be greater in nonunion salaries. Salaries for both union and nonunion faculty are expected to vary by discipline of preparation as well as ranking of institution (e.g., research versus nonresearch institution).

Methods

Measures

Although there are many productivity measures we employ in this study, the specific dependent measures for productivity examined here are the self-reported number of published refereed journal articles. We utilized two different measures which asked respondents for the actual number and the number compared to other faculty in their department. Several alternative measures of publication were examined to ascertain which was the better predictor. We examined actual number of refereed journal publications, presence of any refereed journal publication, and percent above discipline average publications (stratified by research versus nonresearch institutions). The best explanatory measure was presence of any refereed journal publication. Survey respondents were asked to evaluate their performance on a number of productivity dimensions for the 1993-95 school terms.

Survey Response and Data Description

The survey was mailed to academics in departments/schools/colleges of business in public and private universities in Minnesota and Wisconsin. The names were obtained from recent college catalogues, or if not available, schools were contacted individually in order to obtain their latest business instructor roster. We compiled a list of instructors in the business departments, then eliminated every tenth person on our list to arrive at a sample of 820. A total of 289 useable surveys were obtained for a response rate of 35%. All major business disciplines are represented in our sample.

Results

Wage Levels and Wage Dispersion

Our findings support those of Gomez-Mejia and Balkin (1992) who find that women's salaries begin to lag behind those of men once they are in institutions. We find that the gender wage differential increases from assistant to associate to full professor across the entire sample (see Table 1). The gender wage differential is greatest at full professor for all subsamples (union, all nonunion, and nonunion with research universities omitted) as well. Union status actually increases the wage gap when comparing unionized faculty to nonunionized faculty (omitting research universities) from 14.9% to 26.1%. Including research universities brings the nonunion differential to 29.6%. Even if this comparison is used, there is not a significant difference between the union and nonunion wage differential. The only statistically significant difference between male and female mean wages is at the rank of full professor, both in the full sample and the nonunion sample—somewhat less than the 37% average differential between male and female salaries reported by the College and University Personnel Association (Smith 1992).

The pattern of the size of the gender wage differential is similar to what many other researchers have found (e.g., Smith 1992). We found that the gender wage differential in business schools is $15,619 at the rank of full professor, $3,755 at associate, and $2,724 at assistant rank. Comparing union and nonunion (omitting research universities), gender wage differentials at each rank were $6,695 versus $8,826 for full and $5,770 versus $1,917 for associate. Union status resulted in a smaller wage differential at the rank of full professor and a larger wage differential at the rank of associate professor, similar to Barbezat (1991), Gander (1997), Leslie and Hu (1977), and Katz (1973), whose empirical results tended to strongly support the hypothesis of sex discrimination. Mean wage level was lower in all disciplines for unionized faculty except economics, similar to Kesselring (1991); Hu and Leslie (1982); and Guthrie-Morse, Leslie, and Hu (1981). Our findings of a negative gender wage differential was striking both in the amount and consistency across disciplines and union or nonunion settings.

Our sample shows less dispersion of wages within disciplines in unionized settings than nonunionized settings, supporting Bellas (1997) and

Blanchflower and Freeman (1992). Disciplines with a greater percentage of females experience a lower mean salary. Males and females are not distributed equally across the different ranks. A greater percentage of females who are unionized are in both full and associate professor ranks. Females have a much lower presence at both the associated and full professor levels.

Regression Results

Results of regressions to determine significant predictor variables of faculty salary are presented in Table 2. The models examining determinants of salary for the full sample provided some unexpected results. Union was not a significant predictor of salary. No discipline was significant, numerous productivity measures were not significant, and rank was not significant. These findings disagree with those of Gordon, Morton, and Braden (1974) who find the female-male differential to be explained by differences in individual characteristics. We find that holding a position at a research institution had a significant and positive impact, not having a Ph.D. was significant and negative, years of tenure were significant and positive, having a refereed journal publication was significant and positive, and being female was significant and negative. Our model explained 56% of the variance in faculty salaries for the entire sample. (These findings were robust whether salary was examined in actual dollars or was transformed into the log of salary.)

TABLE 2
Determinants of Salary (at time survey time+1)

	All	All	Union	Union	Nonunion	Nonunion
Constant	55042**	54887**	56992**	57292**	52889**	52102**
	(2431)	(2338)	(2095)	(1737)	(3461)	(3430)
Research institution	27381**	27549**			26836**	27247**
	(2288)	(2174)			(2630)	(2624)
No PhD	-7795*	-7829*	-8794*	-9023**	-8220	
	(3890)	(3879)	(3807)	(3671)	(5704)	
Years tenure	367**	365**	389**	393**	414**	414**
	(107)	(107)	(115)	(113)	(149)	(149)
Refereed journal publication	5019**	5046**	524		7472**	7942**
	(2024)	(2017)	(2006)		(2888)	(2881)
Gender	-5143**	-5171**	-3951*	-3857*	-5296*	-5392*
	(2044)	(2037)	(2011)	(1962)	(2730)	(2750)
Union	-480					
	(2007)					
N	205	205	56	56	149	149
R^2	0.56	0.56	0.33	0.34	0.55	0.55

**p-value < 0.01 *p-value < 0.05 (standard error)

Examining the union subsample alone provided similar results in terms of significance and direction, with the exception that refereed journal publication was insignificant in the union subsample. (Position at a research institution was omitted from the union subsample equation because there were no unionized research institutions in our entire sample.) We could not find a model that explained more than 34% of the variance in union salaries. Many other variables were examined, including number of credits taught, committees served on, and numerous other productivity measures. The two unexpected findings from this model were the continuing negative, significant impact (over $3,900) of being female, even in a unionized setting and the lack of significance of a refereed journal publication.

The nonunion subsample showed minor differences from the model for the entire sample. Lack of a Ph.D. was not significant. Refereed journal publication remained significant and positive as did the return to holding a position at a research institution and years tenure. Gender was significant and negative (female = 1); the salary penalty for nonunion females was over $5,200.

Conclusions

The two most striking findings from this analysis are first that variance in union salaries was more difficult to predict than in nonunion salaries (R^2 of 0.34 for union faculty versus 0.55 for nonunion faculty). Union membership or employment in unionized setting does not remove the gender wage differential. It decreases somewhat, but even after holding other factors constant, it remains significant at almost $4,000 per year. And finally, there was no return to refereed journal publication in the union subsample.

Our findings show that the gender wage differential between males and females in this sample was not greatly impacted for faculty in a unionized setting (see Table 2). This result may discourage females from entering or remaining in the academic profession in an economy where other employment options are available. Further research may explain the cause of the gender wage differential displayed in these data.

The difficulty we encountered predicting union faculty salaries presents a question: If presence of a Ph.D., years of tenure, and productivity measures do not explain a large portion of the variance in faculty salaries, what other measures do? Recall that we examined over ten productivity measures, different disciplines of preparation, and even attainment of tenure. Further research is needed to ascertain just what measures are significant factors in explaining union faculty salaries.

These results also present a disturbing lack of reward to productivity in the unionized setting. Faculty members in nonunionized settings receive over $7,000 for a refereed journal publication, while faculty members in a unionized setting receive no significant difference in salary for a refereed journal publication. Faculty in a unionized setting may be less likely to spend their resources producing any research or publishing if there is no reward for it. Unless universities have made a strategic decision that they do not want faculty to publish or engage in certain other types of productive activities, it may be wise to reexamine the current reward system.

Our findings could be a result of actual union-nonunion differences or result from the differences between the Minnesota and Wisconsin public state university systems. All the unionized universities were public universities in the State of Minnesota and the nonunion universities were public universities in the State of Wisconsin. This sample was used because salary data is public information for faculty from these schools. A larger sample including information from several different states must be analyzed together to see if these findings are supported. It may also be important to include nonpublic union and nonunion faculty and settings.

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DISCUSSION

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The papers of this session contribute to our understanding of academic careers and of differences experienced by male and female faculty. In the first paper, Bellas and Toutkoushian provide important insights on hours worked by faculty and on the allocation of faculty time among such activities as teaching, research, and service. The authors then examine whether differences across demographic groups in hours worked and allocation of time help explain differences in research output.

The authors consider three different measures of hours. The first is limited to paid work at the employing institution. The second measure adds unpaid work at the employing institution, and the third also includes unpaid professional service outside the institution. I wanted greater motivation and interpretation of the two broadest measures of work. For faculty paid on a salary basis, what are these unpaid activities in the employing institution? What are faculty doing these 5.4 hours each week? Unpaid professional service, included in the third measure, presumably constitutes service, which suggests that the percentage of time devoted to service or any other activity is not fixed but rather depends on which hours measure is used.

The empirical analysis quantifies the greater time commitment of female faculty to teaching and of male faculty to research and indicates that males on average work an additional two hours per week. The authors then show that differences in rank, type of academic institution, and other factors explain much but not all of the difference between male and female faculty in hours worked and distribution of time between teaching and research. They then tackle the issue of whether the higher research output of males can be explained by differences in such factors as hours worked, allocation of time, and type of institution. As before, the authors find that the explanatory variables greatly reduce but do not eliminate the effect of gender.

Bellas and Toutkoushian conclude by offering policy recommendations, some of which go beyond the analysis of the paper. One proposal is to raise the rewards for nonrefereed papers relative to refereed articles. Because

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the paper does not examine faculty pay, it is unclear how this proposal would affect pay differentials—or why less successful researchers should be rewarded more highly. Despite such policy recommendations, the paper does a nice job of increasing our knowledge of differences by gender in faculty time allocations.

Maranto and Rodgers examine another important issue in academia: gender in the tenure process. They gather data on faculty who received a doctoral degree between 1970 and 1984 and were listed in a 1990 directory of accounting faculty. They then track these individuals for seven years after completion of the degree or until tenure is received. A limitation of the sample is that it underrepresents faculty who are denied tenure. A person who completes the doctoral degree in the 1970s and receives tenure is more likely to show up in a 1990 directory of faculty than is a person who completes the degree at this time but is denied tenure.

Even so, the data provide insights into the tenure process. They indicate that female faculty in accounting started at lower-rated departments and with a higher teaching load. Not surprising in this light, female faculty published fewer academic articles on average, especially in the top-rated journals. Nonetheless, the percentage of faculty tenured in their initial job was the same for male and female faculty, as was the average time to tenure.

Despite these apparently similar outcomes, Maranto and Rodgers find evidence that the tenure process may differ for male and female faculty. The probability of tenure depends on an interaction between quality of the initial job and number of articles, but for female faculty only academic articles matter, whereas for male faculty only practitioner articles are relevant. This latter finding is surprising, especially given the fact that males are initially placed in more prestigious departments, which might be expected to emphasize academic articles.

Given these interesting findings, the authors might provide further data analysis, e.g., present the distribution of tenure by years since degree, separately for male and female faculty. Second, alternative specifications could provide a robustness check. How would results change if the authors included their citation variable or estimated probability of tenure in a given year as a function of quality of the current department rather than the initial department? The authors might also try estimating a more flexible relationship between probability of tenure and years since degree. If tenure decisions are concentrated at approximately seven years, the relationship is not likely to be quadratic.

In the final paper of the session, Mahoney and Ready analyze a unique data set they collected consisting of a survey of union faculty from Minnesota and nonunion faculty from Wisconsin. In both union and nonunion institutions, raw salary data reveal that males earn more than females at all ranks; but given the small sample size, gender differences in salary are statistically significant for only one category: nonunion full professors.

In the regression analysis, Mahoney and Ready conclude that only nonunion faculty are rewarded for having published a refereed article in the past two years, which suggests that union faculty may have less incentive to publish. Consistent with this interpretation, union faculty on average published 32% fewer refereed articles—but only the nonunion sample contained faculty from research universities. Therefore, the lower research output of union faculty may result, at least in part, from the fact that union faculty in the sample came exclusively from nonresearch universities, which place relatively greater emphasis on teaching.

The regressions reported indicate that women receive lower salaries than men in both union and nonunion settings, but the authors agree that further research is needed to determine whether part of the wage gap might be attributed to omitted variables. I would like to see regression results that include more than one measure of research, add field dummies, and allow salary to change, preferably in a nonlinear fashion, with experience and seniority. But whereas future research is warranted, all three papers contribute to the literature.

X. REFEREED PAPERS— LABOR-MANAGEMENT RELATIONS

Collaborative Bargaining in Ohio Public Schools: An Analysis of Its Use and Performance

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The purpose of this paper is two-fold. First, it measures the extent to which collaborative collective bargaining occurs among public school districts in Ohio. Second, it attempts to gauge the performance of the collaborative bargaining process based on the views of labor and management contract negotiators concerning bargaining procedures and outcomes.

During the summer of 1996, staff of the Ohio Education Association (OEA), the Ohio School Boards Association (OSBA), and the Ohio State Employment Relations Board (SERB) began discussions which centered around the impact of collaborative bargaining in school districts. Anecdotal evidence gathered from labor relations practitioners representing both management and labor seemed to suggest that the collaborative model of collective bargaining is being used with increasing frequency in Ohio's school districts. Further, there appeared to exist some contradictions in terms of satisfaction with the process itself as well as its outcomes. Through the discussions it was determined that the time was right for a comprehensive

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study of school district bargaining in order to provide an empirical foundation to the existing anecdotal evidence.

A survey was constructed for the purpose of measuring the use of both traditional (positional) bargaining and collaborative (interest-based) bargaining and the level of satisfaction associated with the respective procedures. The survey includes perceptual measurements of quality of labor-management relations before, during, and after collective bargaining; views regarding the distribution of bargaining power between the parties; identification of specific techniques or practices used to negotiate labor agreements; estimates of the duration of the collective bargaining process; perceptions concerning bargaining outcomes; and levels of satisfaction with the contract and the procedure used to reach the agreement.

OEA mailed the survey to its 729 local association presidents, and OSBA likewise mailed the survey to administrators from each public school district. The responses were submitted to SERB for coding and analysis.

This study is significant because most of the research on collaborative bargaining is based on case studies looking at the outcome of negotiations and the relationship between a single employer and union where collaborative bargaining occurred. This research effort attempts to evaluate bargaining processes in a much more comprehensive manner by analyzing information collected from a large number of employer and employee organization representatives and comparing attitudes and perceptions on the basis of the type of procedure followed. While the data for this study are qualitative in nature, the large sample size offers findings of a much broader scope than do earlier case studies.

Findings and Analyses

Over 700 surveys were completed and returned. This represents a response rate of approximately 50%. Given the high level of participation, it is viewed that the research findings are representative of bargaining conditions throughout Ohio's public school system.

Most negotiation efforts (63%) are still conducted using the traditional, positional method of bargaining. However, over one-third (37%) of the respondents indicated having used a collaborative procedure to negotiate the most recent collective bargaining agreement.

The survey results further suggest that collaborative bargaining may eventually replace the traditional procedure as the preferred method among Ohio schools. Where indicated, 56% of respondents stated that they either intend to use or would like to use a collaborative procedure for the next round of negotiations. Among those who used positional bargaining for the most recent set of negotiations, over one-quarter expressed a desire to follow collaborative principles for the next bargaining round. Only 4% involved in collaborative bargaining indicated that the parties will return to the positional method for the next set of negotiations. The reason for the growing interest in collaborative negotiations is evident. Quite simply, when compared to positional bargaining, collaborative efforts produce much more favorable results.

Overall, a majority of survey respondents view the relationship between labor and management as constructive. Over half (55%) of all participants categorized the relationship between the administration and the unit prior to entering the last set of negotiations as at least somewhat cooperative. Only one-third reported the prenegotiation labor-management relationship to be adversarial. Also, more than 60% characterized the tone of the most recent contract talks as cooperative. Less than 30% indicated an adversarial bargaining environment existed.

It was further found that most respondents also hold a favorable view concerning the quality of the most recent collective bargaining agreement as well as the procedure used to negotiate the contract. Of all respondents, 70% indicated they were at least somewhat satisfied with the quality of the contract. Most (62%) felt the outcome of negotiations was mutually beneficial to both parties. Over two-thirds of the participants expressed some level of satisfaction with the bargaining procedure that was used to negotiate the agreement.

While on balance the survey group provided largely positive feedback concerning bargaining and bargaining relationships, stark differences appear when responses are broken down by the type of bargaining procedure followed (see Table 1).

TABLE 1
Comparison of Responses by Procedure Type

	Percent Favorable	
Response Item	Positional	Collaborative
Tone of negotiations	45	86
Impact of negotiations on relations	33	70
Satisfaction with contract	61	83
Satisfaction with procedure	56	87

Where positional bargaining was used, less than half of the participants characterized the tone of the most recent negotiations as at least somewhat cooperative. Also, only one-third of positional bargainers viewed the last set of negotiations as having a positive impact on labor and management relations. On the other hand, where collaborative bargaining occurred, the vast majority of respondents felt that both the tone of negotiations was at least somewhat cooperative and that these negotiations at least somewhat enhanced overall labor and management relations. Moreover, collaborative bargainers were much more likely to express satisfaction with both the final contract and the negotiation procedure than were those who followed the traditional approach to bargaining.

It is generally accepted that collaborative bargaining is more likely to be used where a good labor-management relationship existed prior to negotiations. The survey findings are consistent with this view. The prenegotiation relationship was considered as at least somewhat cooperative by 63% of collaborative bargainers. Where positional bargaining occurred, just 50% of respondents felt a cooperative relationship between the administration and the association existed prior to entering contract negotiations.

However, a constructive relationship is not necessarily a prerequisite for utilizing a collaborative bargaining model. Rather, collaborative bargaining may actually help to improve confrontational relations. For instance, only 20% of positional bargainers who viewed prenegotiation relations as adversarial indicated that the tone of contract talks was at least somewhat cooperative. Where a collaborative procedure was used, 57% of those who considered prenegotiation relations to be strained felt bargaining took place in a cooperative manner.

While it is commonly accepted that collective bargaining outcomes are more favorable to the side that possesses greater power, the research also suggests that collaborative bargaining can reduce the influence of power. Among survey participants, only 39% of those involved in positional negotiations who perceived their side as weaker were satisfied with the quality of the collective bargaining agreement. Just 36% of these individuals felt that the final contract represented a mutual gain for both parties. On the other hand, 62% of collaborative negotiators who identified the other side as being more powerful were satisfied with the contract, and 58% indicated that a mutual gain was achieved.

While one might assume that it would take more time and effort to reach a consensus than it does to fashion a compromise, another benefit of collaborative bargaining is that it is often faster than the traditional method. Irrespective of procedure type, for the majority of negotiations the parties met between three and ten times. However, over a quarter (26%) of positional negotiations required more than ten bargaining sessions before reaching a final agreement. Where collaborative bargaining occurred, only 15% of negotiations took in excess of ten meetings. Additionally, 14% of collaborative negotiations were completed in less than three sessions. Only 7% of contract talks were finalized this quickly when the traditional procedure was followed.

Additionally, 27% of collaborative negotiations were finished in less than one month's time, and just 8% extended to six months or longer. Where positional bargaining was employed, only 10% of negotiations were completed in less than a month, while 26% took at least six months.

Though the research shows that collaborative bargaining appears to offer many advantages over the traditional approach, there are those who would question the results, arguing that the opinions of collaborative negotiators are influenced by their idealistic view of the process. Without delving into the merits of this argument, the research was designed in such a way so as to reduce the possibility of error associated with participant personal bias.

Each survey participant was asked to identify techniques, practices, or principles that were used during the most recent contract negotiations. Some of these characteristics are associated with positional bargaining and others are typical of collaborative negotiations. The following items were included on the survey: (1) exchange of initial proposals, (2) exchange of counterproposals, (3) identification of each side's interests or concerns regarding issues on the table, (4) packaging of items for resolution, (5) information sharing between the parties, (6) use of caucuses, (7) brainstorming at the table for ideas to resolve issues between the parties, (8) selection of a chief spokesperson for each side, (9) use of a neutral facilitator throughout negotiations, (10) compromise on initial positions to resolve issues, (11) agreement on options that met the interests of both parties, and (12) consensus between the parties in decision making.

Exchange of initial and counterproposals, packaging items, use of caucuses, selection of a spokesperson, and compromise are considered to be representative of positional or traditional bargaining. Identification of interests, information sharing, brainstorming, use of a neutral facilitator, agreement on options, and consensus in decision making are elements of a collaborative or interest-based style.

These characteristics can be used to demonstrate that bargaining rarely occurs in a "pure" procedural form. As Table 2 shows, many characteristics frequently cross bargaining model lines. Over half of the time that collaborative bargaining was said to have occurred, initial proposals were exchanged, caucuses were used, or compromises on initial positions were reached. Among positional negotiations, the following collaborative characteristics were found among the majority of survey responses: identification of interests, information sharing, and agreement on options that met the interests of both parties.

No collective bargaining procedure is likely to be either entirely collaborative or entirely positional. Rather, as the data show, each individual set of negotiations almost certainly contains elements of both, even where one style is predominant. Bargaining procedures are best viewed as falling on a continuum. At the extremes of the continuum are the theoretical "perfect"

TABLE 2

Frequency of Characteristic by Bargaining Procedure Used

Characteristic	Percent of Respondents: All Responses	Collaborative	Positional
Initial Proposals	80	53	96
Counterproposals	70	38	90
Identify Interests	75	92	65
Packaging Items	48	33	56
Information Sharing	78	91	71
Use of Caucuses	79	67	86
Brainstorming	55	83	37
Chief Spokesperson	53	37	64
Neutral Facilitator	8	23	0
Compromise	64	56	69
Agreement on Options	69	86	57
Concensus	54	83	37

bargaining models. Typically, the format of negotiations will lie somewhere between the two extremes.

By using the characteristics included in the survey, a scale was developed to measure the overall level of positional/collaborative bargaining that took place for each set of negotiations. A value of either negative one (-1) or positive one (+1) was assigned to each of the twelve items listed. If an item viewed as positional was indicated or where a collaborative measure was not used, then a (-1) was assigned. Conversely, a (+1) was assigned where a collaborative element was present or a traditional one absent. From this a cumulative score was calculated.

The range of scores falls between (-12) and (+12). The former represents a bargaining process where all positional elements were present and all collaborative characteristics were absent. The latter indicates the converse. Of course, the items included in the research are not an exhaustive list of bargaining characteristics. However, for the purposes of this study a cumulative value of (-12) is considered a “perfectly” positional procedure, while a total of (+12) is deemed to represent a “perfectly” collaborative bargaining process. See Figure 1 for a distribution of cumulative scores.

FIGURE 1

Cumulative Score	-12	-10	-8	-6	-4	-2	0	+2	+4	+6	+8	+10	+12
Total Responses	9	21	54	88	104	151	87	59	37	42	45	22	6

Twice as many scores are less than zero (423) than are greater than zero (211). This suggests that negotiations using predominantly positional techniques outnumber those utilizing a prevalence of collaborative characteristics by a margin of two-to-one. However, very few cumulative scores are found at either extreme. Only 2% of the negotiations fall under the category of either perfectly positional or perfectly collaborative. Where positional characteristics prevail, that is, a cumulative score of less than zero, 81% of negotiations have combined values falling between (-2) and (-6). Almost two-thirds of collaborative negotiations (cumulative score greater than zero) are found in the (+2) to (+6) range. Furthermore, about a quarter of the time where a certain bargaining procedure was identified as having been used, the associated characteristics were not predominant.

What this proves is that while a round of negotiations may be labeled as following a certain procedural model, these models can be and generally are altered to fit the dynamics of a particular bargaining environment. Collaborative bargainers will at times use positional tools that they are most familiar and comfortable with. And those involved in traditional negotiations may employ, as a matter of practicality and common sense, some collaborative characteristics.

The bargaining scale can be used to further compare the performance of positional and collaborative bargaining, while at the same time dealing with the issue of participant bias. This is done by looking at study results based on relative placement on the scale. That is, we can determine if perspectives with regard to labor and management relations, the quality of the contract, and the level of satisfaction with the bargaining procedure change as the continuum moves from perfectly positional to perfectly collaborative.

Table 3 clearly demonstrates that for each item there is a near linear relationship between the level of favorable responses and placement on the bargaining scale. Moreover, irrespective of the stated procedure, positive responses were much more prevalent when collaborative characteristics were predominant.

Summary and Conclusions

The research found that collaborative bargaining is widely used and is gaining in acceptance. This means additional training and increased awareness of the collaborative process will be necessary to accommodate the increased demand for its use. Although this process may not be useful in all circumstances, there is reason to believe that this model will continue to gain acceptance among labor practitioners.

The reason for this belief is that when compared to traditional bargaining, collaborative efforts result in contracts viewed as more favorable and

TABLE 3

Comparison of Responses by Location on Bargaining Procedure Scale

	Percent Favorable			
Location on Scale	Tone of Negotiations	Satisfaction with Contract	Satisfaction with Procedure	Impact of Negotiations on Relations
-12	0	33	22	0
-10	10	15	24	15
-8	30	48	35	22
-6	39	50	49	30
-4	53	69	62	39
-2	56	69	70	43
0	70	78	76	53
+2	84	92	93	64
+4	83	75	89	70
+6	86	83	83	62
+8	93	91	96	84
+10	100	95	95	86
+12	83	100	100	100

mutually beneficial by representatives of both labor and management. Moreover, when collaborative bargaining occurs, the following results: there is greater satisfaction with the procedure, the level of cooperation that takes place during negotiations is higher, and the impact of bargaining on overall labor-management relations is more constructive.

This study provides clear evidence that collaborative bargaining offers promise as an alternative to the traditional method of negotiating labor agreements. Only time will tell if this promise will be fulfilled. However, whether viewed as preliminary or conclusive, the evidence strongly suggests that collaborative bargaining warrants consideration by labor relations practitioners who represent public schools, other public sector jurisdictions, and private industry as well as a potential tool for achieving mutually beneficial bargaining outcomes through cooperative efforts.

The Longevity of Gainsharing Programs: A Survival Analysis

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Gainsharing programs, such as the Scanlon, Modified Scanlon, Rucker, and Improshare plans, have been adopted at an accelerating rate by American corporations in the last decade. Despite the increased usage of gainsharing, there has been very little empirical research on the survival of gainsharing.

The purpose of this study is to identify factors related to the retention/discontinuation of gainsharing. While previous studies using the same data set (Kim 1996; Kim and Voos 1997) examined the factors influencing the performance of gainsharing programs, the present study considered the mediating effect of program performance on program survival and primarily investigates determinants of program survival.

Theoretical Model

With the exception of the conceptual work by Goodman and Dean (1995), there are few theoretical frameworks for understanding the survival of gainsharing. Thus it is necessary to review theoretical literature dealing with other forms of organizational change efforts, such as the survival of employee participation (Drago 1988; Eaton 1994) and labor-management cooperation programs (Kochan and Dyer 1976) and the institutionalization of organizational development programs (Goodman, Bazerman, and Conlon 1980). Although these approaches used different classifications, all essentially dealt with similar sets of variables. One theoretical distinction among these studies is the different treatment of program performance in their frameworks.

First, a group of studies investigating the survival of employee involvement (EI) programs tend to consider program performance as a mediating variable (Drago 1988; Eaton 1994). It is explicitly and implicitly hypothesized that various factors predict the performance of a program, which in turn predicts program survival. Although these authors did not empirically

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test the mediating effect of program performance on program survival, they assumed that factors associated with program performance are also predictors of program survival, and program survival is ultimately a function of the performance of a program. According to these theorists, program performance is viewed as a mediating variable between program survival and its determining factors.

On the other hand, another group of scholars (Goodman, Bazerman, and Conlon 1980; Goodman and Dean 1995) considered program performance as one of the determining factors directly influencing program survival. These authors agreed that program institutionalization is a function of five processes: training, commitment, reward allocation, diffusion, and feedback. In their frameworks, program performance represents the reward allocation process, since successful programs can provide participants with adequate rewards. Notably, the mediating effect of program performance on program survival was not specified in these frameworks. Rather, all five processes (including program performance) are hypothesized to influence the institutionalization of a change program directly.

The distinction between the two approaches suggests that the clarification of the relationship between program performance and its survival is one conceptual task in formulating a theoretical framework of program survival. The present theoretical framework is composed of five sets of factors: initial commitment, diffusion and reinforcement, structure of gainsharing, situational contingencies, and performance of gainsharing. The model assumes that there are two mechanisms whereby the various factors influence program survival (the dependent variable): First, the five sets of factors directly influence program survival (direct effects). Second, variables associated with the performance of a program affect program survival via their influence on program performance (indirect effects).

Direct Effects

Initial commitment. A high degree of initial commitment in terms of time, efforts, and financial and human resources leads organizational members to resist attempts to change the selected behavior (i.e., gainsharing) and in turn increases the chances of program survival. Thus a high level of initial commitment is likely to ensure some stability of the gainsharing program. In the present study, the following three variables represent the degree of an organization's initial commitment to gainsharing: employee approval in a vote, developing a custom plan, and hiring outside consultants.[1]

Diffusion and reinforcement. Diffusion and reinforcement refer to the process of the extension and maintenance of behavioral patterns among organizational members. If organizational members incorporate the new behaviors into their value system, the behaviors should persist without any conscious reevaluation. In the context of gainsharing, training is the most important tool to diffuse and reinforce the new behavior. Organizational development literature suggests that the conduct of training, retraining, and training of new organizational members (e.g., Goodman and Dean 1995) can make various organizational development programs more persistent.

Structure of gainsharing. Gainsharing programs show wide variety in terms of bonus group size, employee involvement, and goals of gainsharing. Previous literature indicates that unique aspects of an organizational development program itself may contribute to its survival or discontinuation (Eaton 1994; Goodman, Bazerman, and Conlon 1980; Goodman and Dean 1995). Three structural factors were included in the model: bonus group size, extensiveness of EI component, and complementary goals.

Situational contingencies. Like other organizational development interventions, the persistence of gainsharing plans depends (at least partially) on contextual factors. While there are situational conditions that facilitate or inhibit the persistence of gainsharing from the beginning, changes in situations also affect the viability of gainsharing. Previous literature suggests various situational issues presumably associated with program survival. These include labor intensity, financial performance, capital investment, expanding market, and union status.

Performance of gainsharing. The decision to adopt a gainsharing program is based on expectations of certain outcomes. If those expectations are realized over time, the gainsharing program may continue even without conscious reconsideration. If there is a discrepancy between the outcomes expected prior to the adoption and the outcomes ultimately achieved, this inconsistency will increase the likelihood of revoking the implementation decision (Goodman, Bazerman, and Conlon 1980). In the present paper, program performance is hypothesized to have a positive relationship with program survival.

Compared to mature programs, however, the performance of gainsharing in young programs may be less associated with program survival for the following two reasons. First, for these young programs, available information on program performance may be considered tentative or less reliable because of the short history of the program. Second, even though the initial program performance of young programs turns out to be unsuccessful, organizations may still continue the program hoping for improved results in the future. These discussions indicate that program performance may be less important in predicting the survival of younger programs than of mature programs.

Indirect Effects

In addition to the above direct effects, the integrated model assumes that program performance serves as a mediating variable between program survival and its determinants. Because unsuccessful programs are eventually discontinued, factors influencing program performance are likely to affect program survival in an indirect way. While the above four sets of variables (e.g., initial commitment, diffusion and reinforcement, structure of gainsharing, and situational contingencies) are identified as determinants of program survival in the present study, gainsharing literature suggests that many of these variables are also associated with program performance. Because program performance and program survival are related constructs, it is not surprising that determinants of these two outcomes share similar sets of variables. Thus variables associated with the performance of a gainsharing program are expected to affect program survival via their influence on program performance.

Data and Analysis

To identify organizations with gainsharing experiences, gainsharing consultants, gainsharing researchers, unions, labor education institutions, and a publication of the U.S. Department of Labor (such as, *The New Work Systems Network* 1990) were contacted or examined. The informants were explicitly asked to provide an entire list of gainsharing programs (including both existing and discontinued ones) with which they were once involved or of which they were once aware.

The above sampling method provided a list of 622 organizations with gainsharing experience. The survey was mailed to an industrial relations or human resource manager. Out of 622 surveys mailed in June 1992, 334 (58.4%) were returned after three follow-up notices. Some observations had missing information for some of the variables and were removed, and the number of observations used in the regression analyses ranged from 211 to 205.

Approximately 20% of gainsharing programs (43 of 211 programs) in the present sample were discontinued. The mean age of both continuing and discontinued programs is 6.65 years. The mean age of continuing programs (6.69 years) is slightly greater than that of discontinued programs (6.48 years). As expected, most continuing programs are less than 15 years old, while some programs are as old as 41 years. Variable definitions and descriptive statistics are presented in Table 1.

In the present study, two types of analyses were performed: Weibull hazard analysis (Models 1-3) and ordered probit analysis (Model 4). First, I estimated a model of gainsharing survival using Weibull hazard regression,

TABLE 1

Variable Definitions

Variables	Mean	S.D.	Definitions
Employee approval in vote	.34	.48	Employees approved the introduction of a gainsharing program in a vote = 1; otherwise = 0.
Development of custom plan	.22	.42	A custom plan was developed according to specific needs and situations of individual organizations = 1; The gainsharing plan was one of the standard plans, e.g., Scanlon, Modified Scanlon, Rucker, or Improshare plans = 0.
Consultant involvement	.21	.39	An outside consultant was involved in design, start-up, and/or operation of the gainsharing program = 1; otherwise = 0.
Initial training	.90	.30	Employee training about gainsharing was provided at the beginning of the gainsharing program = 1; otherwise = 0.
Retraining	.67	.47	Existing employees were periodically trained during the operation of gainsharing = 1; otherwise = 0.
New employee training	.81	.39	New incoming employees were trained during the operation of gainsharing = 1; otherwise = 0.
Small bonus group	.32	.47	A gainsharing bonus group was composed of less than 100 employees = 1; otherwise = 0.
Extensiveness of EI	2.04	1.36	The number of EI systems accompanied with the bonus system at the organization. Examples of EI systems include employee suggestions, quality circles, quality of work life, employee teams, department-level labor-management committees, and organization-level labor-management committees.

TABLE 1 (*Continued*)
Variable Definitions

Variables	Mean	S.D.	Definitions
Complementary goals	.37	.48	Respondents chose one of three response categories (very important, important, and less important) to indicate the importance of the following four goals in implementing gainsharing: improving labor productivity, reducing nonlabor costs, improving quality, and improving employee compensation. If the respondents stated that any management goal (e.g., labor productivity, cost reduction, quality) *and* labor goal (e.g., compensation) are both very important, it was coded 1; otherwise = 0.
Labor intensity	.62	.49	The operation system is (heavily) labor intensive = 1; if (heavily) capital intensive = 0.
Financial performance	3.48	1.05	During the gainsharing program's operation, the company was very profitable = 5; was reasonably profitable = 4; had relatively low profits = 3; had neither profit nor loss = 2; had losses = 1.
Major capital investment	.09	.28	During the gainsharing program's operation, new types of major equipment investment and/or facilities were introduced = 1; otherwise = 0.
Expanding market	.29	.45	During the gainsharing program's operation, the product market was (greatly) expanded = 1; the product market was stable or contracted = 0.
Unionization	.54	.50	Unions represented production employees = 1; otherwise = 0.
Gainsharing performance	3.61	1.06	The gainsharing program turned out to be overall very successful = 5; successful = 4; neither successful nor unsuccessful = 3; unsuccessful = 2; very unsuccessful = 1.
Young programs	.27	.47	The gainsharing program is equal to or less than three years old = 1; otherwise = 0.
Manufacturing	.92	.27	The organization belonged to manufacturing = 1; otherwise = 0.

a type of log-hazard parameterization. Weibull hazard regression is used to estimate survival models in which the dependent variable is the hazard rate. The model estimates the influence of explanatory variables on a hazard—in this case, the likelihood of the discontinuation of a gainsharing program at a given time. Because the log hazard parametization was used in the present study, a positive (negative) coefficient on an independent variable means that gainsharing is less (more) likely to survive, the greater the value of the independent variable. Second, to examine the associations between the variables in the model and the performance of gainsharing, ordered probit analyses were conducted. Since the dependent variable, gainsharing performance, is an ordinal indicator, using ordinary least square analysis could be misleading. The ordered probit model avoids arbitrary assumptions about scale explicitly and recognizes the ordinality of categorical dependent variables.

Study Results

Overall, the results supported the integrated model of the present study, although there were some exceptions. Table 2 shows the regression results. The present study identified several structural and situational determinants of program survival (e.g., small bonus group, labor intensity, financial performance, and major capital investment) which can be useful to gainsharing practitioners.[2] One general trend in the results is that the effective utilization of the internal resources of an organization (e.g., enhancement of employee commitment to the program by an employee vote, retraining, new employee training, unions' participation in administration) can be more important in achieving the long-term success of the program than relying upon outside consultants' help.

The results showed that the performance of a gainsharing program will be positively related with program survival. These results indicate that program performance is one important criteria for determining program survival and confirm the conventional wisdom that successful programs are more likely to survive than unsuccessful ones. As expected, the performance of young programs was found to be less associated with program survival than is the case for old programs.

The comparison among various models estimated in this study allows us to examine whether program performance serves as a mediating variable between program survival and its determinants. To test for mediating effect, one must show (1) significant relationships between the independent variables and the mediator, (2) significant relationships between the independent variables and the dependent variable that become nonsignificant when

TABLE 2
The Survival of Gainsharing Programs
(Standard Errors in Parentheses)

Variables	Weibull Hazard Analysis+ Model 1	Model 2	Model 3	Ordered Probit Analysis++ Model 4
Employee approval in vote	-1.267*** (.433)	-.921** (.462)	-.940** (.453)	.444** (.206)
Development of custom plan	-.209 (.605)	-.204 (.602)	-.427 (.602)	.348* (.258)
Consultant involvement	1.163** (.582)	.804* (.561)	.786* (.574)	.009 (.236)
Initial training	.432 (.667)	.391 (.680)	.785 (.674)	.177 (.324)
Retraining	-.605** (.361)	-.260 (.367)	-.321 (.364)	-.076 (.195)
New employee training	-.904** (.439)	-.587 (.461)	-.586* (.447)	.444** (.228)
Small bonus group	-.867** (.414)	-.231 (.459)	-.219 (.442)	.375** (.212)
Extensiveness of EI	-.040 (.141)	-.019 (.162)	-.045 (.170)	.102* (.075)
Complementary goals	.034 (.341)	.122 (.352)	.259 (.357)	-.012 (.185)
Labor intensity	-.673** (.339)	-.701** (.352)	-.771** (.366)	.168 (.196)
Financial performance	-.271** (.148)	.037 (.184)	.144 (.180)	.223*** (.082)
Major capital investment	-2.163** (1.029)	-2.238** (1.063)	-2.238** (1.079)	.524* (.351)
Expanding market	-.345 (.393)	-.280 (.401)	-.238 (.408)	.199 (.204)
Unionization	-.359 (.371)	-.248 (.391)	-.141 (.388)	.050 (.189)
Manufacturing	14.183 (481.506)	13.664 (472.506)	14.823 (938.461)	-.881** (.494)
Gainsharing performance		-.665*** (.152)	-.773*** (.150)	
Gainsharing performance * Young programs			.674*** (.144)	
MU(1)				.056 (.674)
MU(2)				.827 (.675)
Log likelihood	-90.192	-80.104	-73.783	-173.745
Chi-square	40.283***	60.355***	72.996***	36.790***
Pseudo R-square	.205	.215	.329	.096
Number of observations	208	205	205	211

+ The dependent variable is the hazard rate.
++ The dependent variable is gainsharing performance: If the gainsharing program turned out to be very successful or successful = 3; if neither successful not unsuccessful = 2; if unsuccessful or very unsuccessful = 1.
* Statistically significant at the .10 level; ** Statistically significant at the .05 level; *** Statistically significant at the .01 level (one-tailed tests).

the mediator is controlled for, and (3) a significant relationship between the mediator and the dependent variable (Baron and Kenny 1986:1177).

First, as shown in Model 4 (see Table 2), a number of variables were found to be significantly associated with program performance: development of a custom plan; consultant involvement in design, start-up, and operation; the use of an employee vote; new employee training; small bonus group; the extensiveness of EI; the occurrence of major capital investment; and financial performance of the organization. In other words, many of the determinants of program survival are also associated with program performance.

Second, several independent variables that were significantly associated with program survival in Model 1 lost their statistical significance in Models 2 and 3. These variables include retraining, new employee training, small bonus group, and financial performance.

Finally, the relationship between the mediator (i.e., the performance of gainsharing programs) and the consequent variable (i.e., program survival) was examined. Using the Weibull hazard analysis, I regressed the consequent variable (i.e., program survival) on the mediator (i.e., the performance of gainsharing programs). Although the result was not shown here, it was found that there is a significant and negative relationship between the two variables. The above three sets of analyses proposed by Baron and Kenny (1986) imply that the independent variables influence program survival via their influence on program performance.

Conclusion

Previous theories on the survival or institutionalization of workplace innovations showed a tendency not to distinguish program survival from program performance by simply treating program survival as one of the indicators of program performance. The direct and indirect effects of program performance on program survival and the contrasting impacts of outside consultants on program performance and program survival, however, clearly show that these should be treated as two different constructs. This finding illustrates the need for a theoretical framework which incorporates these two constructs into one framework but explicitly differentiates them.

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Endnotes

[1] Due to the space limitation, detailed hypotheses for these variables are not described**.**

[2] The variable "unionization" had insignificant signs in all equations. This result can be compared with that of Drago (1988), which found a mixed association between quality circle survival and unionization, and that of Cooke (1994), which found that gainsharing or profit-sharing programs contributed substantially more to performance in nonunion firms than in unionized firms.

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The Current Federal Labor Relations Climate

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Ever since the infamous PATCO strike of 1981, federal sector labor relations have appeared particularly adversarial. The inherently political and public nature of the federal government and its unions, together with the fact that now about 60% of the civilian federal workforce is unionized, ensure that federal sector labor relations receive considerable attention and scrutiny.

The overwhelming perception appears to be that acrimonious labor relations hinder federal agency performance in a variety of dimensions. This belief prompted Vice President Gore's National Performance Review to recommend that labor-management partnerships be established within the federal government for the expressed purpose of improving the labor relations climate. The implicit and somewhat simplistic model underlying the recommendation appears to be that labor-management partnerships improve the labor relations climate which then positively impacts agency performance variables such as productivity and product quality.

President Clinton made labor-management partnerships an executive branch goal when Executive Order 12871 was issued in October 1993. This paper reports the results of a 1997 survey that was conducted to determine the impact which labor-management partnerships have had in the federal government. The extent to which partnerships have been established and the issues being addressed by partnerships are explored. Measures of the labor relations climate in bargaining units that have established partnerships are compared to climate measures in units that have not established partnerships. Lastly, the correlation between the labor relations climate variables and a few selected agency performance variables are explored.

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Methodology

A survey was constructed by the author with extensive advice from the President's National Partnership Council, its staff, and an ad hoc labor-management group. The unit of analysis was the bargaining unit's union and management representatives. The 91-item survey included a number of partnership activity measures, a set of previously validated labor relations climate assessment scales (Dastmalchian, Blyton, and Adamson 1989) questions regarding perceptions of past and present performance measures (e.g., productivity, product quality, waste, etc.).

Sample

Labor and management representatives from a representative proportion of bargaining units in every major federal agency were selected as recipients of the survey. Union and management officials assisting in the study were instructed to distribute the surveys to respondents based on the size and representativeness of the bargaining units with which they were associated. The existence of partnership activity or the perceived favorableness/unfavorableness of the labor relations climate were purposefully ignored in the distribution method. A 44.6% response rate was achieved: 668 usable surveys were returned from a broad cross section of federal agencies.

Survey Results

Sample Characteristics

The 668-person sample includes federal labor relations representatives from a diverse set of government agencies and various levels (i.e., national, regional, and local) of bargaining unit activity. Union and management were almost evenly represented in the sample, with 51.5% of the respondents being union representatives and 48.5% of the respondents representing management.

The majority of the respondents represented either management or the employees at the local level (72.5% of the sample). A smaller number of the respondents reported they represented their party at either the regional (11.3%) or the national level (12.7%). A small percentage (3.6%) of the respondents reported they represented their party at multiple levels.

Partnership Councils and Agreements

Eighty percent of the respondents reported that a partnership council or a partnership agreement had been established for the bargaining unit for which they were responsible. Of the councils that had been established, the average length of their existence was slightly over three years. For those workplaces where a partnership agreement was in place, the average time it had been in existence was 2.56 years.

Labor-Management Cooperation and the Scope of Partnership Council Activity

We broke down responses on cooperativeness between union and management representatives. The data show that a sizable majority (60.2%) of union representatives described the relationship as previously uncooperative, while only 26% of management concurred. In contrast, 56.4% of the management side found their prior labor-management relations to be cooperative.

At the same time, however, most union representatives (nearly 60%) reported that their labor-management relationship had improved at least some since the partnership executive order. Only 23% and 19% of the management and union representatives, respectively, indicated that the relationship had deteriorated. An important issue, however, is why 20% of the overall sample experienced a deterioration in labor-management relations.

Relationship between Training and the Issues That the Partnership Council Handles

Representatives were asked to indicate whether or not they had received training on various process/substantive topics and the perceived usefulness of such training. Ten specific topics were mentioned, including general orientation/training about workplace partnership, interest-based bargaining, employee involvement, customer service, and quality issues. These responses were compared to the types of issues that partnership councils handled. The following significant differences were found with respect to general orientation/training and issues handled:

1. Representatives who reported receiving general orientation/training about workplace partnership were more likely to report their partnership council handling the following issues: family-friendly workplace policies, budget and staffing, reorganization, reengineering, quality, improving customer service/productivity, managing the partnership process, and providing guidance to lower committees.

2. Those who had received training on interest-based bargaining, alternative dispute resolution, customer service, rights and responsibilities under the federal labor statute, budget and appropriation matters, and quality issues were significantly more likely to have councils that dealt with several of the issues listed as possible topics for council discussion.

Hostile and Harmonious Climate Factors

A set of scales designed by Dastmalchian, Blyton, and Adamson (1989) is used to measure different aspects of the labor relations climate. Two scales in particular tap "hostility" and "harmony" in the survey. The hostility-cooperativeness scale consists of five items measured on a 5-point Likert scale (1 = strongly disagree . . . 5 = strongly agree); the harmony scale includes 11 items with the same Likert scale. Management and union representatives responses were summed and averaged across the various items in each scale. The data (which are available on request) show that the mean hostility response for union representatives was 2.72, compared to 2.35 for management. Conversely, managers were more likely to perceive the relationship as harmonious (3.33 mean response) than their union counterparts (3.06).

Past and Current Labor Relations Climate

Encouraging results were achieved when respondents were asked to describe the current labor relations climate in their organization and then asked to describe the climate that existed in the past. Descriptive responses ranged (on a five-point scale) from very hostile to very cooperative. The results reveal that almost half of the overall sample perceived the past climate as very to somewhat hostile, relative to about 24% who perceived the current climate as such.

Analysis

Respondents were asked to compare the period after their unit formed a labor-management partnership to the period before they formed a labor-management partnership and then indicate whether a number of performance variables had changed since the prepartnership period. A total of 20 variables were assessed using a five-point scale that ranged from much lower (1) to much higher (5). The top five variables that respondents indicated had moved to the higher end of the scale were:

Variable	*Mean*
Union input into organizational decisions	3.61
Sharing of information	3.60
Problem-solving relationship between union and management	3.60
Management understanding of union role, interests, and objectives	3.58
Union member understanding of management's organizational interests and problems	3.48

We conducted three sets of preliminary, exploratory regression analyses. The first examines the respondents' views as to whether or not their labor-management relationship has improved under the executive order (1 = has deteriorated very much . . . 5 = has improved very much). The independent variables in the analysis are (1) whether or not the agency in which the respondents work has downsized (hypothesized to be negatively correlated with the improvement measure), (2) the various types of training the respondents have received (hypothesized to be positively correlated with the dependent variable), (3) a union/management dummy variable (with an expectation that union respondents will be more critical in their assessment), (4) a dummy variable on whether or not the respondents reported having a partnership council in place (hypothesized to be positively correlated with the improvement measure), and (5) a control variable on the number of employees in the respondents' bargaining units.

The second set of analyses focus on the harmony climate measure of labor relations as the dependent variable. The same predictor variables and hypothesized signs explored in the first analysis apply there.

The third set of regression analyses have three measures of perceived performance change as the dependent variable: (1) the sum of responses to five-point Likert scale items on whether or not performance has improved on productivity of employees, (2) product or service quality, and (3) waste dimensions (i.e., 5 = much higher performance . . . 1 = much lower performance, comparing pre- to postpartnership period). The predictor variables are downsized (- hypothesized sign), training(+ hypothesized sign), union/management representative (+ hypothesized sign), harmony climate measure (+ hypothesized sign), and bargaining unit size as a control.

The results of these analyses are available on request. They show that the existence of a partnership program is positively correlated with improvement and harmony measures, as hypothesized. Union representatives are more positive in their assessment on whether the labor-management relationship has improved but more negative in their view as to the degree of harmony in the relationship. The downsizing variable is negatively correlated with both the improvement and harmony measures.

Conclusions

The survey results yield three important conclusions. First, both union and management representatives in the federal sector are generally positive in their assessment of partnership activity and improvement in the labor relations program and organizational performance. Partnership activity appears to affect positively the perception of the labor management relationship and the broader labor relations climate. Second, training can be a useful device to improve the labor relations climate. In this regard, training on interest-based negotiating might be quite useful. Last, the labor relations climate can positively influence key indicators of organizational performance. Thus to the extent partnerships improve harmony, they will also support improvements in performance.

Reference

Dastmalchian, Ali, Paul Blyton, and Raymond Adamson. 1989. "Industrial Relations Climate: Testing a Construct." *Journal of Occupational Psychology*, Vol. 62, pp. 21-32.

DISCUSSION

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The three papers presented in this session use original, micro-level data to provide new empirical evidence on topics relevant to contemporary labor-management relations. Given the time constraints, my comments will focus on identifying the key contributions of each paper and suggesting a few modifications or extensions of each paper.

The Fekete, Jewell, and McCafferty paper describes the development of an empirical measure describing the extent to which a bargaining process is positional versus collaborative. Developing measures that effectively characterize the bargaining process is an ambitious and worthwhile objective. In addition to facilitating more rigorous future research on the bargaining process, parties to bargaining relationships might use such measures to assess their own bargaining procedures.

By characterizing the bargaining process during a given contract negotiation as a continuum, with the endpoints represented by purely positional bargaining and purely collaborative bargaining, respectively, and with negotiations containing elements of both positional and collaborative bargaining falling between the endpoints, the authors imply that the unit of analysis is the negotiation of a single bargaining unit. It is not clear, however, whether their measure is based on the response of the union respondent, the management respondent, or some combination of their responses. This needs to be clarified. In addition, I encourage the authors to exploit the availability of assessments by both union and management representatives to assess the reliability of their measures. Finally, in future work, factor analysis could be used to examine whether, as the authors assume, positional and collaborative bargaining are elements of a single construct or two distinct constructs.

Masters and Albright examine the effect of establishing union-management partnership councils on the labor relations climate. Their findings suggest that partnership activity has a positive impact on the parties' perceptions of their relationship and the labor relations climate. More generally, their findings provide empirical support for the view that a public policy

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such as the executive order can increase collaborative activities with positive outcomes for both bargaining parties.

Because the dependent variables used in their analyses are not continuous, it would be beneficial to explore whether these findings are robust when a more appropriate estimation procedure (e.g., order logit or ordered probit) is used. In addition, including union and management respondents as separate observations in the same regressions violates the assumption of independent observations. Thus I would encourage the authors to estimate each model separately for union respondents and management respondents.

Both the Fekete, Jewell, and McCafferty paper and the Masters and Albright paper use data from surveys of union and management representatives of a sample of bargaining relationships in Ohio public schools and in the federal government, respectively. In both cases the authors have constructed very rich databases to look at interesting questions relating to how the procedures/styles used by the parties influence outcomes of interest to both labor and management. In future work it would be helpful if the authors provided more detailed information about their sampling and survey methodologies, reported separate response rates for the union and management respondents, and addressed in more detail the measurement and statistical implications of having two respondents for each bargaining pair in the sample.

Gainsharing is a form of incentive compensation whose use has grown in both unionized and nonunion organizations. While prior research on gainsharing has focused on the determinants of the adoption of and the performance of gainsharing programs, Kim's paper investigates the determinants of the longevity of gainsharing programs. This paper is generally well-written with carefully crafted empirical analyses. I do have a few minor suggestions for revision or extension. First, the author needs to define more precisely how the dependent variable in Models 1 through 3 is measured. Second, several of the explanatory variables are ordered categorical variables. Entering these variables in the regression in their present form is inappropriate. Instead, a dummy variable should be included for all but one of the categories. I would like to see if the author's major results are robust when the models are estimated using these dummy variables. Finally, the unionization dummy variable is consistently negative in the hazard models, but never significantly different from zero. If the union and nonunion subsamples are large enough to estimate separate equations, it would be interesting to see if the overall pattern of results varies between these two groups.

XI. THE DYNAMIC NATURE OF INNOVATIVE PRACTICES

Toyota and Volvo—The Dynamic Nature of Organizational Models

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Organizations actively seek models that they can work from in modifying and updating their organizations (Kimberly 1980). However, this requires "modeling organizations" (Dimaggio and Powell 1983) that serve as a template for those looking to undertake innovation or change. It is important to understand the modeled organizations and the evolution and change they undergo. In this article we explicitly analyze two such organizations and their associated models: Volvo and its reflective production system and Toyota and its Toyota (a.k.a. "lean") Production System. We draw on 11 days of interviews and plant visits at Volvo and 12 days of interviews and plant visits at Toyota that we undertook over the past five years. We will show that the production systems have undergone dramatic evolution in their implemented form at the companies in which they originated. In the past, Toyota and Volvo and their associated production systems were seen as anchoring the two extremes of the models companies in the automobile industry could follow (see Womack et al. 1990; Adler and Cole 1993; Sandberg 1995). However, the models as they are implemented in each company are dynamic in nature and have been converging over time.

This paper starts with a brief overview of the characteristics of Volvo's and Toyota's production systems as they are traditionally described, along

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with the key factors driving change in their production philosophies. From there we will describe the nature of line and team work at both Toyota and Volvo and discuss how they have evolved.

Review of Volvo's Reflective Production System

Volvo's efforts at work redesign date back to the 1970s, when CEO Per Gyllenhammar pushed the company to rethink the role of workers in the assembly process resulting in the creation of the holistic or "reflective" production model. The first efforts to develop the reflective production model were evident at the Kalmar assembly plant which opened in 1974 and culminated with the opening of the Uddevalla production facility in 1990 where teams of 8-12 production workers built up complete vehicles. The reflective production model has received significant attention, both by the academic literature as well as the business press (see Berggren 1993; Ellegard, Engstrom, and Nilsson 1992; Sandberg 1995). Volvo's reflective production model is characterized by the lack of an assembly line, professionalization of workers, multifunctional automation and tools, naturally grouped assembly work, ergonomically sound production tasks, and flexible production levels. These are supported by long cycle times, special-parts delivery and order systems, self-managed team-based activities, and extensive on-the-job training; yet there have been several challenges to the reflective production model as a result of:

- *Market demand:* In the late 1980s there was tremendous demand for Volvo products. Volvo's production increased from just over 350,000 vehicles per year in 1983 to 423,000 in 1987. This rapid increase was the impetus for opening the Uddevalla factory. However, by 1991 when Uddevalla opened, production had fallen to 273,500 vehicles. This resulted in a board decision in November 1992 to close Uddevalla and Kalmar. In 1994 when Kalmar finally closed, total Volvo production was at 257,000 vehicles per year—a record low for the decade.
- *Employment:* A driving factor for the creation of Uddevalla was a labor shortage in Sweden. This was coupled with extremely high unplanned absenteeism. By creating a work environment that provided conditions more amenable to individuals with diverse backgrounds and talents and opportunities for worker development and self-actualization, it was hoped that both hiring difficulties and absenteeism would be resolved. However, in the early 1990s, new legislation in Sweden resulted in a dramatic reduction in sick days. Furthermore, what was once a shortage of workers, with unemployment rates below 2% in 1988-1990, became an oversupply of labor with unemployment reaching a record 18.2% in 1993.

Thus the labor market conditions driving the creation of the reflective production model were no longer present in the 1990s.

- *Shifts in strategic priority:* In the early 1990s Volvo and Renault announced plans to merge their operations. These plans resulted in extensive discussions and information exchange between the management of both companies. One outcome was greater emphasis on productivity and less on the social equation. These discussions also made clear fundamental differences in production philosophies. It is believed by some that these drove Volvo management to reevaluate its policies, practices, and procedures and may have even been a driving force in the closure of Uddevalla and Kalmar (see Sandberg 1995).

The synopses of the activities at Uddevalla often read like a postmortem (see Sandberg 1995; Adler and Cole 1994), but there has also been extensive debate on Uddevalla's suitability as a model for future assembly designs (Berggren 1993; Ellegard et al. 1992; Adler and Cole 1993; Shimokawa et al. 1997). A clear way to assess the Volvo reflective production model is to look at Volvo's practices today and explore how they have evolved over time.[1]

Review of the Toyota Production System

The Toyota Production System, with its origins in the postwar history of the Japanese automobile producer (see Fujimoto 1994), consists of various intertwined elements that are believed to result in superior performance. These include just-in-time (JIT) delivery of parts; Jidoka, the practice of stopping the line when defects are uncovered; total quality control (TQC); and continuous improvement activities (Kaizen). An array of HR practices support the Toyota Production System and are considered an integral part of its success. These include stable employment of core workers, extensive training and development of workers, internal promotion to shopfloor supervisors, cooperative relationships with labor unions, pay for performance, and team-based work (Pil and MacDuffie 1999).

The basic system of Toyota's manufacturing capabilities had been established by the early 1980s. However, the environment has changed significantly since then, and Toyota's assembly system has been adjusted to meet the evolving demands from that environment:

- *Labor market*: Due to a combination of structural and cyclical changes in Japan's labor market, it became increasingly difficult to hire and keep the requisite workforce for automobile production. As the population structure changed, the average age of automobile workers increased and young workers were less willing to work in certain manufacturing factories which they recognized as "3-D" (dirty, demanding, and dangerous), including final assembly. One measure to alleviate this problem was to reduce work hours per year, but this meant a further decrease in labor supply. On the demand side, the expansion of domestic automobile production created additional labor demand for the automobile industry. As a result, the Japanese auto industry suffered from severe labor shortage problems in 1990 and 1991, which forced the automakers to emphasize employee satisfaction aspects of automobile manufacturing (assembly in particular). Although the subsequent recession and loss of competitiveness due to the high yen reduced the labor shortage issue, companies like Toyota still regard the lack of job attractiveness vis-à-vis the service sector as their long-term problem to be solved, and many of the changes we will discuss were aimed at preventing a labor shortage in the future.

- *Product market:* The "bubble economy" era in the late 1980s was the final stage of forty years of continuous growth in Japan's domestic automobile production, and domestic production declined from 13.5 million units (1990) to about 10 million (1995), with Toyota's sales dropping from 5.4 million units to 4.8 million units in the same time frame. This created financial difficulties for those companies that built new and highly automated assembly factories during the bubble era and has led companies like Toyota to rethink their production strategies.

New Production Concepts

In response to the new challenges from their environments, both Toyota and Volvo have modified their production systems since the early 1990s. Final assembly has been the area where the change is most visible and significant. In the case of Toyota, the evolution in thinking was first visible in its new Miyata Plant of Toyota Motor Kyushu Inc.[2] (henceforth, Kyushu Plant) established in late 1992. While we will focus primarily on Kyushu, the new assembly concepts have been transferred to other plants including the Motomachi RAV4 assembly line (renovated in 1994) and the Toyota Motor Manufacturing #2 line in Kentucky.

In the case of Volvo, innovations and modifications in thinking since the closure of Uddevalla are more diffuse. We will focus primarily on Volvo's two main automobile factories: Volvo Torslanda (in Gothenberg, Sweden) and Volvo Gent (in Belgium).

Line Work and Functionally Autonomous Processes

A primary hallmark of Volvo's reflective production system was its efforts to eliminate the assembly line. Instead, work is performed in docking stations where cycle times are long, and work content and process follows a holistic approach to vehicle assembly. Parts are grouped in relation to their function and position on the vehicle, and work is designed to give workers complete control over the production of a subsystem or functionally coherent portion of the vehicle. In contrast, the emphasis at Toyota in the 1970s and 1980s was on a Ford-style moving assembly line, divided into three main areas: trim, chassis, and final assembly. There were no buffer stocks in the line—the idea being that a taut system would encourage productivity, reduce inventory carrying costs, and force problems to the surface as they arose. Work tasks were broken down into elemental components and distributed across workers to optimize labor utilization and minimize non-value-added time in 1-2 minute cycle times. As a result, the meaningfulness of assembly tasks was sacrificed—many workers were assigned unrelated sets of tasks in efforts to optimize line balance and minimize non-value-added activities.

While Toyota plants still use an assembly line, there have been major changes in how that line is designed and utilized. Starting with the Toyota Kyushu plant and at all subsequent renovations at other plants, Toyota has subdivided the assembly line into segments (typically 10 or 12). Each segment contains 20 work stations, corresponding to a group of about 20 workers under one supervisor. Sets of functionally related assembly tasks are assigned to each segment (e.g., piping). Furthermore, segments are linked by a buffer zone where up to five bodies can be stored temporarily. This strengthens the role of the supervisor who is now in charge of semi-independent line segments and enjoys more discretion in managing his/her segment. To assist the supervisor, each segment has its own group area, training center, and Andon boards (which display the group's performance in relation to target goals).

Along with segmenting the line and redistributing assembly tasks along functionally or process-related criteria, Toyota redesigned work so the assembly of a given component is completed as one person's job. This "parts-complete" assembly represents a fundamental departure from the earlier focus on line balance and reduction in non-value-added time.

At Volvo in Torslanda, the assembly line is subdivided into 12 segments, each with two teams and one supervisor. The idea behind the segments, like at Toyota, is to create group cohesion—perhaps not within teams but at least within the supervisory group. While there are several cars between line segments, these are not actively used to enhance group effectiveness. While the involvement of team leaders and the ability to stop the line is present at Torslanda, it is a rare occurrence, and there are no Andon boards to show output in relation to targets for the day (at Gent, production workers cannot stop the line). As a result, workers have less of an ongoing sense of how their performance ties into the evolving performance of the plant. This results in less group autonomy and control. However, as we will see in the next section on team work, the de-emphasis of group autonomy is made up for by extensive efforts and incentives geared at teams and, in particular, individuals.

The typical cycle and working time on the vehicle for production workers on Torslanda's main line is two minutes. However, there has been a longstanding practice to make assembly tasks of individual workers coherent (to have workers install a whole component or do a complete and coherent activity on the vehicle). When a particular part or component cannot be installed in the two-minute cycle time, workers are assigned longer working times. This is accomplished by having some work assignments take more than the standard cycle time, although managers are looking to reduce the frequency with which this is done. As such, the main line of the Torslanda plant does not really follow the reflective production model but does retain the notions of work coherence originating from that model. However, the reflective production model is still present in its original form off the main line in many subassembly areas.

The initial rationale for setting up subassembly lines at Volvo Torslanda along the reflective production model was the improved ergonomic condition and concomitant quality improvements associated with building the subassemblies outside of the context of the vehicle, coupled with efforts to enhance worker commitment and satisfaction. The plant continues to have small subassemblies and larger assemblies like doors, bumpers, and dashboards produced following the traditional reflective production model, making use of older workers and workers that are limited in the operations they can perform on the main line (e.g., for physical reasons). There is a long waiting list to get a job in these areas, and seniority and/or physical restrictions play a big role in who gets a job. It is not clear, however, whether this vestige of the original reflective production concept will persist since Volvo is exploring the outsourcing of the door construction. Interestingly, the dashboards at Torslanda are produced along the reflective production model, but at Volvo's Gent plant in Belgium they have been outsourced. Likewise, in the late 1980s the Gent plant experimented with dock assembly of lift gates for station wagons but has since abandoned them because they were not efficient enough.

Team Work and Small Group Activities

One of the hallmarks of reflective production is its reliance on teamwork, along with extensive individual skill development. At Volvo's Uddevalla plant, teams consisted of 8 to 12 workers who collectively assembled whole vehicles. Various team roles were developed, including team representative, quality, responsibility for tools, and so forth. Team members rotated through these roles as they developed additional skills. The team structure at Torslanda is very similar to that used at Uddevalla in the early 1990s. Each team has between 10 and 15 members. There are seven specialist functions that can be taken on by team members: maintenance, line balancing, quality, product quality, development and training, personnel, and team leader. In conjunction with their supervisors, workers can request to become a specialist in a particular area. They receive a few weeks of training and perform their specialty for their team. Some workers learn more than one specialty but only perform one within the team. Team leaders have to be elected by the team. Many older workers choose not to develop a specialty.

Recently, Volvo Gent's annual employee survey suggested production workers sought a broader role, and as a result, the team concept there was redesigned. At Gent, specialties vary from team to team and depend on the team's tasks and roles. All workers have at least one specialty. Unlike Torslanda, where one person performs a specialty per team, the Gent plant is developing a pair of individuals in each team per specialty to ensure continuity in case of turnover or absenteeism. However, Gent will adopt Torslanda's competency management system to track skills in its workforce. Training is customized based on discussions between team leaders and team members. Support tasks such as safety, which were once independent units, are now integrated into the team structures, thus shifting indirect activities into the teams. The current idea (the shift to the customized specialties based on team needs was introduced six months ago) is that the specialties will be permanent—in the past, particularly at Uddevalla, there was quite a bit of rotation within teams as members took turns at different specialist functions. While overall team size is similar to those in Sweden, the teams are broken down into subgroups that have about five members who perform systematic rotation, in many ways resembling Toyota's team structure. Each team is overstaffed by one or two people. These provide relief so that each team member gets at least two hours every other week to work on their specialty.

At Toyota, teams generally consist of five members and a team leader. The team leaders (han-cho), appointed by management, are union members and function as relief workers, help resolve problems in the case of line stops, and take initiatives in quality improvement activities. Their role is similar to that of a team member at Volvo, but they have more "specialties" than a typical Volvo team member would. In some ways, teams at Toyota collectively take on tasks that would be undertaken by a "specialist" team member at Volvo. For example, teams at Toyota undertake line-balancing efforts as a group, while at Volvo line-balancing efforts are less of a team activity and more of a specialty for individual workers.

Although the team structure has not changed at Toyota, what is new are Toyota's efforts to evaluate and formally certify individual skill levels. The new skills system, implemented in the early 1990s, consists of four levels, each requiring progressively greater skill and seniority (see Shimizu 1995 for a detailed discussion). The goal of systematically tracking and codifying skill was to broaden worker skills, create systematic training programs, and to give workers goals to work towards. This is similar to Volvo's system of specialties that provides workers with a means to grow and broaden their skills and enables the company to track and evaluate where skills reside.

We have provided a brief overview of some of the ways in which both Volvo and Toyota have departed from the models that have traditionally been associated with them and in the case of Toyota even bears its name. While Toyota and Volvo used to be prototypes for two extremes in production choices, their operations no longer reflect those extremes. The practices and policies at the two companies converged on multiple fronts (additional detail on changes in the areas of HR practices and policies, ergonomics, and automation choices are available from the authors).[3] Differences do remain, however. Volvo continues to have some very long cycle operations and has more experience than Toyota with the concepts of natural learning and whole work. Toyota has more experience in fine-tuning individual tasks and in using group activities for that and other purposes. It has followed Volvo in its attempts to create skill certification, but Volvo continues to be the company that places more emphasis on the professionalization of the individual. Interestingly, the low unemployment and very high demand for cars that inspired Volvo to implement the reflective production model also inspired Toyota in the early 1990s to modify its production system. The reverse conditions for Volvo, dramatic reductions in demand and high unemployment, have driven it to move in the direction of Toyota's traditional production system.

Endnotes

[1] Interestingly enough, Uddevalla as a plant has reopened. In January 1995, Volvo and Tom Walkensaw Racing created a joint venture to produce a coupe and convertible based on the Volvo platform in the plant. The plant layout when we visited was still similar to what it had been at closure, but most teams no longer built up the whole vehicle. Instead, these were built up in quarters, with a fifth station for processes that were automated. Plans were underway to further break down the assembly process, resulting in shorter cycle times and easier attempts at standardization. There may even be a reintroduction of some line work. The plant has introduced standard work sheets and is working to improve productivity.

One thing that continues to be impressive about the plant is its ability to make use of a broad range of workers. The primary basis for hiring employees was the ability to work with others and passing a basic health test. Of the resulting employees, 38% were women, and all ages are represented in the plant.

[2] Like Saturn at GM, this plant was set up as an independent entity from Toyota Motors.

[3] It is not clear whether Toyota consciously imitated Volvo. According to some executives we have spoken with, that has not been the case. Volvo, on the other hand, has been learning from the Toyota Production Model, even if sometimes indirectly through participation in industry benchmarking activities, and via Mitsubishi. Volvo learned from its experience at its joint venture operation with Mitsubishi at NedCar.

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The Future of Work and Labor Organization on Telecommunications Networks

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Telecommunications services provide the basic network infrastructure for advanced information services, video, voice, and data. The digital network continues to develop as fiber optic backbones link together high-speed switches and routers and as SONET rings provide high-capacity and high-speed access to a multiservice network for large business customers and universities. As network technologies advance, employee skill sets evolve. Work formerly done in the field setting on network equipment increasingly is performed in an office by employees manipulating software commands. The office has become the central institution for postindustrial work in the telecommunications industry.

Telecommunications remains a relatively densely unionized industry. Nevertheless, union membership has been steadily declining within the industry during the last fifteen years. The decline has two major sources. First, the entry and growth of antiunion competitors, such as MCI-WorldCom and Sprint, has created a vertical barrier to further unionization. These firms are successful, determined opponents of their employees forming, joining, or assisting any independent labor organization. Second, when either incumbent unionized firms or nonunion firms deploy new digital network technologies, they often redistribute tasks and reclassify work away from skilled workers to managerial employees. These relatively skilled positions are often designed to exempt employees from the Fair Labor Standards Act's requirement for overtime compensation and the NLRA's organizational protections. This reclassification of skilled work into managerial titles is creating an ever-expanding horizontal barrier to union growth in the telecommunications industry.

This paper begins by exploring the impact and extent of this horizontal or occupational barrier to union growth within the telecommunications industry. It then addresses the legal framework under the National Labor

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Relations Act which enables the redistribution of tasks and the reclassification of work. Finally, this paper discusses whether the redistribution of skills represents the emergence of a new postindustrial work system based on normative controls and consensual employment arrangements, or rather a work organization, not driven by the needs of the new technology but motivated and designed to secure conformance by further individualizing employment and undermining the ability of employees to engage in collective action to shape their terms and conditions of employment.

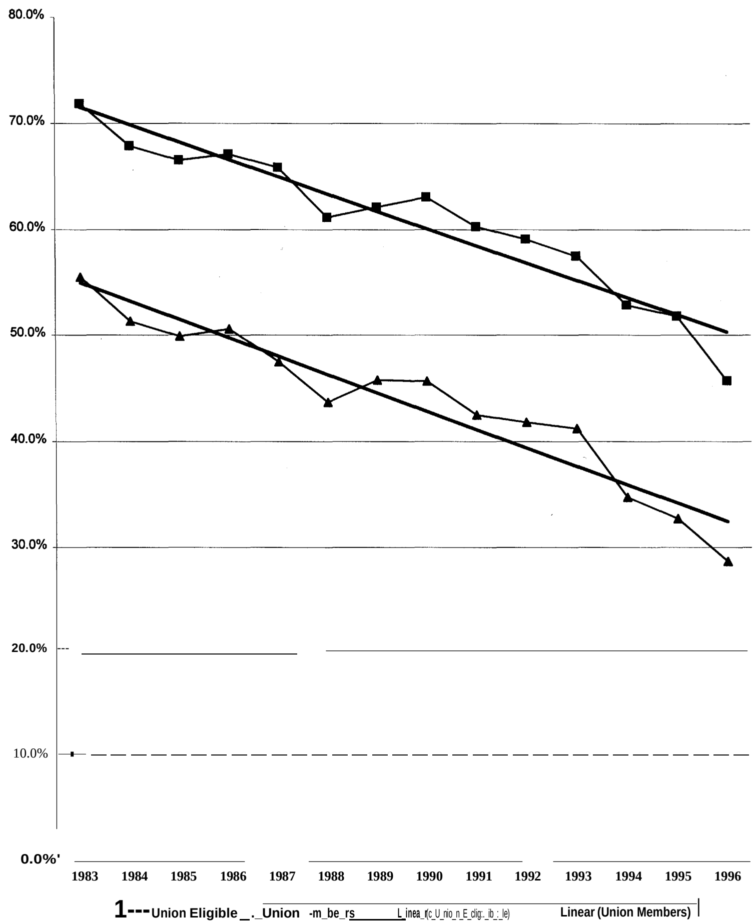
The Extent of the Horizontal Barrier in Telecommunications

Most large corporations in telecommunications construct a separate and distinct managerial human resource system. A wide range of job titles is often defined as managerial, including managers, supervisors, professionals, higher level administrators, and account executives who sell and service large accounts. Managerial and professional employees in the United States receive over 70% of corporate training and education resources (Carey 1985). Firms devote considerable organizational and cultural efforts to integrate and align managerial employees, making them the firm's "trusted employees" (Whalley 1991).

To measure how numerous managerial employees have become in the telecommunications industry, this study uses the Current Population Surveys from 1983 to 1996 collected by NBER. As a rough approximation, the estimation of managerial employees relies on the Current Population Survey's definitions of managers, administrators, executives, supervisors, and professionals to identify managerial employees, which is a more restricted definition than used by most corporations since it excludes account executives and sales agents. In prior research, internal records of the Bell System indicated that in 1950 only 13% of the workforce was managerial, but by 1980 the proportion had grown to 29% (Keefe and Boroff 1994:313). Using CPS data, Figure 1 indicates that in 1983 some 71% of employees were nonmanagerial, or conversely, 29% were managerial employees, which is consistent with internal Bell System data. By 1996, however, over one-half (more than 55%) of employees in this advanced technology industry could be classified as managerial. The proportion of nonmanagerial employment had declined by 25 percentage points in thirteen years. Accompanying the decline in the proportion of nonmanagerial employees is the decline in unionization, which dropped from 55% to 29%, or 26 percentage points. The declines of both nonmanagerial employment and unionization closely track each other at approximately 2 percentage points per year during this period, whereas overall employment remained relatively stable. This strong correlation suggests that the principal source of union decline in the

FIGURE 1

Percent of Employees Union Eligible and Union Members in Telecommunications 1983-1986 (Current Population Survey)



Sources: Managers and Supervisory Employees. *Employment and Earnings.* Bureau of Labor Statistics.

Managers and Professionals and Technicians. CPS Labor Extracts, 3rd ed. NBER 50 Variable Uniform Extract 1979-96.

Labor Productivity and Access Lines. Federal Communications Commission. Statistics of Communications Common Carriers.

telecommunications industry results from the redistribution of tasks and the reclassification of employment. Informal discussions with managers at AT&T and several regional Bell companies indicate that approximately half of all employees in these companies are now classified as either managerial or supervisory employees, further confirming the CPS estimates.

Continuous technological change and reorganization are an inherent feature of this rapidly changing industry as network technologies evolve and new market segments emerge. These recurring changes provide management with moments of opportunity to redistribute tasks and reclassify work. Since the 1960s with the introduction of Electronic Switching Systems and the development of T-Carrier, a digital network technology, and digital microwave, network work has evolved in some predictable ways. Each generation of switching and transport technology relies more heavily on programmable software controls than its predecessors. As network control is embedded in software, sensors are increasingly deployed to electronically monitor network functioning.

Network configuration, network services, and network repair activities are progressively performed remotely from offices known as network control centers. Relatively autonomous field forces (once needed to monitor, repair, and update network services) are steadily being replaced by office-based technicians. These technicians, dressed in Dockers and golf shirts, sit in modern office cubicles monitoring and manipulating computers that program new network services and features or repair network troubles and failures. In unionized settings the field forces often follow the work into the office, because the major impact of new network technologies is the steady reduction in demand for network technicians needed. Technical employment has declined from 300,000 employees to less than 230,000, an employment decline of 23% between 1984 and 1996. Even in unionized workplaces where incumbents follow work into the network control centers many newly recreated digital activities are nonetheless broken off and slotted into managerial titles.

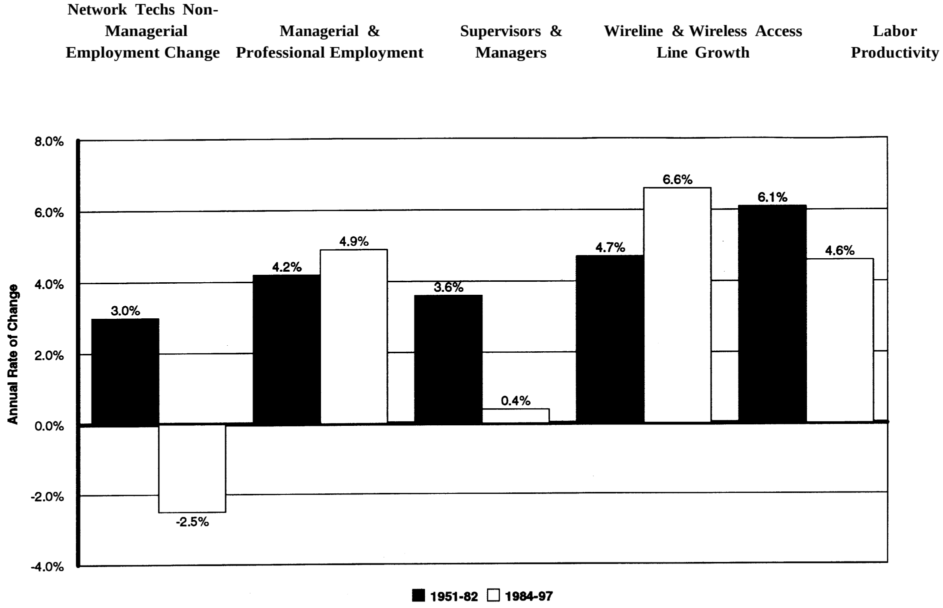
The new work setting, the office, is a strange and threatening place for many incumbents of this occupation that was as recently as 1970 all male. Historically, men in offices were supervisors, managers, or professionals, not workers. Office workers were all female. One suspected motivation for the expansion of managerial employee status may derive from an effort to integrate men without subordinates into office life, as the office becomes the central workplace institution of the postindustrial economy.

Network Work and Employment in Telecommunications

As Figure 2 indicates, the changes in work and employment in this industry are profound. The figure uses the predivestiture period 1951-82

FIGURE 2

Annual Rates of Change in Telecommunications Employment, Access Lines, and Productivity Before and After the AT&T Divestiture



Source: CPS Labor Extracts, 3rd ed. NBER 50 Variable Uniform Extract 1979-96.

to compare changes after the AT&T divestiture period 1984-97. Wireline and Wireless Access Line Growth is a measure of service demand which indicates that with the advent of wireless service in 1982 access line growth accelerated to 6.6% new access lines per year, exceeding the predivestiture annual average of 4.7%. Nevertheless, labor productivity growth fell from 6.1% annually to 4.6% in the postdivestiture period as increased resources flowed to marketing and sales activities in the deregulated markets. The employment of nonmanagerial network technicians has declined by 2.5% annually since the AT&T divestiture, even though the access line growth rate increased by 40% and the productivity growth rate declined by 25%. The employment of managers and supervisors responsible for directing employees stalled, declining from a 3.6% annual rate of growth prior to divestiture to 0.4% annually after divestiture. Yet the annual rate of growth of managerial and professional employees in this industry accelerated by 17% from 4.2% prior to divestiture to 4.9% after divestiture as an increasing proportion of work is classified as managerial work and managerial status is decoupled from directing other employees in their work.

What these data indicate is that the postindustrial workforce increasingly is composed of managerial employees. Nonmanagement employees are consigned to the periphery of advanced information technologies (Vallas 1993). As managerial status and culture pervades and defines organizational membership, nonmanagers are relegated to support and service roles. As Kunda (1992:157) observed, they become nonpersons, since their status consigns them to being present in body but otherwise irrelevant and invisible. Zuboff's informated work is redefined as managerial work. One issue for further research is whether the reclassification of work is in response to the demands of informating technologies that demand "empowerment, commitment, and involvement of a wide range of organizational members in self-managing activities" and organizational structures that are emergent and flexible, which support members' continual learning about how to organize themselves for learning about their business (Zuboff 1988:395).

Or does this technology, which as discussed above surfaces a range of status issues, also present an opportunity for management to promote cultural integration that individualizes problems and nullifies prospects of collective action by skilled employees who are enlisted as the trusted members of the organization. Prior research indicates that neither the information technology nor the associated technical work nor its office setting necessarily leads to the integration of network employees. Survey research revealed that unionized office-based network technicians were not significantly different from outside field forces on any dimension of class consciousness and shared with them "especially pronounced oppositional consciousness"

(Vallas 1993:164). These findings suggest that what may matter is not the technology, the work, or the locus of the work but the employees' managerial status for promoting organizational integration into the corporate culture.

The Role of Labor Law in Shaping the Postindustrial Work Organization

If it is the managerial status that defines membership in the postindustrial network organization, does labor law encourage such a broad-based and sweeping redefinition of employee status? The National Labor Relations Act's Section 7 confers upon employees the right to organize for the purposes of collective bargaining and other forms of mutual aid or protection. In 1946 the Supreme Court ruled in *Packard Motor Car* (19 LRRM 2397) that the first three levels of supervision in an automobile plant were employees who had the right to organize and engage in collective bargaining, much to the consternation of American business leaders. In 1947 when Congress amended the act, Section 14(a) specifically excluded supervisors from its protections, rapidly extinguishing private sector supervisory unions, such as the Foremen's Association of America, as corporate executives moved quickly to suppress all independent supervisory organizations. The amendment to the act, however, did specifically include professionals within the act's protections.

In the *NLRB v. Bell Aerospace* (1974, 416 US 267) the Supreme Court majority, relying on the supervisory exclusion, held that all managerial employees were excluded from the coverage of the NLRA. Critics of *Bell Aerospace* and its derivative decision *Yeshiva* (1980, 444 US 672), which applied the managerial employee exclusion to professionals, argue that *Bell Aerospace* "is noteworthy because it contains the seeds for the exclusion of virtually all professional and white-collar employees through expansive definitions and application" (Angel 1982:434) and "the Court's exclusion of workers who share authority with management can extend to all areas of employment" (Bixler 1985:451). The mere "exercise of discretion or judgment in the performance of one's duties makes the decision to act collectively unprotected" (Feldman 1995:554). Other commentators, however, believe that the critics are wrong, that the Court was only excluding those employees who possessed bureaucratic authority (Rabban 1989:1833). Nevertheless, the managerial exclusion is nebulous—there is no bright line nor even a blurry line across the private corporate organization. The definition of the managerial employee is based upon status and the degree of authority rather than any specific functional responsibilities performed by the employee or the employee's access to particular information (Mukamil and Grenig 1983:48). The NLRB has been inconsistent in its applications and definitions of managerial employees (Rabban 1989). In practice this nebulous case-by-case construction has created ample opportunity for mischief by corporations that are determined to remain either free of unions or seek to contain an incumbent union.

Field interviews with managerial employees in telecommunications about their Section 7 rights clearly reflect the confusion inherent in the *Bell Aerospace* standard. Only a small number of these employees possess the appropriate nuanced understanding that while they may possess no Section 7 rights, there is nothing in the law which would prohibit them from organizing. All managerial employees, however, know that their employer is opposed to them forming unions, and several individuals reported having rumored knowledge that people would be fired if they tried to form a union. Another small group of managerial employees believed, possibly correctly, that they do possess the right to freely associate with other employees and that the law would protect that right. However, who would protect that right is something of a mystery—perhaps the "labor board." How would they learn whether they are protected? They did not know. In fact, they would learn either through an unfair labor practice charge after they were discharged for organizing or from a bargaining unit determination after a sufficient showing of interest. A showing of interest, however, is highly unlikely since most managerial employees interviewed believed that their participation in organizing a union is prohibited by law. "Unions are for blue-collar workers—the knuckle-draggers, not for people like us." Combining both employee concerns about their ambiguous status and membership in the organization with disinformation about their rights is a very clever suppression technique. It is also the logical result of a standard as nebulous as the *Bell Aerospace* managerial employee definition. Yet, if the consensual postindustrial organization has triumphed, as many analysts believe, why should corporate management fear self-organization by their managerial employees?

In a number of states, public sector statutes have more restricted definitions of managerial employee status than represented in *Bell Aerospace*. These public sector settings have created a quasi-experiment in managerial employee organization. In these states, public sector professionals, managers, and supervisory employees form and join labor organizations. Some of these organizations are independent, such as the Professional Employee Federation in New York or the National Educational Association, while others are affiliated with more traditional unions such as AFSCME, AFT, CWA, SEIU, and Teamsters. In states, such as New York and New Jersey, close to 100% of these managerial employees opt for union representation that often combines collective bargaining with professional development and enhancement. These public sector organizations represent an alternative trajectory for the postindustrial workplace, but maybe the private sector is different, possibly better managed, less bureaucratic, and more able to meet employee expectations.

Nevertheless, full membership status in the postindustrial work organization is now often contingent upon being classified as a managerial employee. And even though managerial status may effectively suppress the demand for unionization in the private sector, does it effectively integrate employees and eliminate oppositional consciousness through a more consensual system of employment? The proliferation of Dilbert cartoons in these workplaces suggests that there is something less than complete integration and alignment of the postindustrial managerial employee. In telecommunications, managerial employees identify a variety of issues that distress them; however, the one issue that bothers most of those interviewed is the lack of control over their “flexible” work schedules and uncompensated overtime—an issue that they want addressed.

The status ambiguity of the postindustrial employment at work and before the law, however, makes the workplace treacherous terrain to resolve collective disputes for private sector managerial employees. Possibly, independent organization for public policy reform may be a more tractable route for employee advocacy, now that a majority of the workforce has been promoted to management.

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Changing Internal Labor Markets in Service and Sales Occupations

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In this paper, I address the question of how deregulation in the telecommunications industry has altered the internal labor market structure of clerical and sales jobs—that is, the traditionally female-dominated operator, service, and sales jobs in the industry. This question is important for several reasons. First, from the perspective of the internal labor market literature, the Bell System represented a classic example of a highly developed and stable system. Given growing conventional wisdom that internal labor markets are disintegrating, the telecommunications industry provides a useful case for examining the extent to which corporate responses to deregulation have led to an erosion of the prior system. Second, from the perspective of women and the labor market, the highly unionized telecommunications industry was one of the few service industries in which women found high-skilled, high-pay jobs, with long career ladders. Do these jobs continue to be high-skilled and to provide women with opportunities for career development and income growth? Compared to other service industries, for example, wage levels and union density among women in telecommunications were over twice as high as the average in all other service industries (Batt and Strausser 1998). Third, from a management perspective, the importance of these jobs has increased dramatically since deregulation. Customer service and sales occupations represent the face of the corporation to the customer, and with dramatic increases in competition, companies have come to view these operations much more strategically than in the past (Batt and Keefe 1999). They have also shifted the workforce from service into sales to compete in deregulated markets. Between 1983 and 1996, for example, employment in low-skilled clerical positions fell by 38%, due largely to the increased use of information technology and process reengineering; employment in sales, however, increased by 105% (CPS merged annual earnings files).

To examine the changing nature of jobs and careers in this occupational group, I first briefly summarize what we know about the internal labor

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market for service and sales workers in the regulated period based on prior research (e.g., Batt 1995). I define internal labor markets to include the design of jobs, mobility patterns, pay, and employment security (Osterman 1987). I then draw on a survey of a nationally representative sample of 254 customer service establishments to describe the system in the deregulated era. The survey was administered in the fall of 1998 to a random sample of customer service and sales establishments drawn from the Dun and Bradstreet listing.

Internal Labor Markets in the Regulated Era

The year 1984 usually is viewed as the dividing line between the old and new era of the U.S. telecommunications industry. Prior to that date, the AT&T Bell System was the regulated monopoly provider. AT&T provided virtually all long distance domestic service, supplied 92% of local service, and employed over 90% of the industry's 1.1 million employees. The Bell System provided reliable voice transmission through a highly efficient and centralized operating system. In the 1984 court-ordered divestiture of AT&T, the long distance and equipment manufacturing businesses were allocated to AT&T under deregulated market conditions. Local service was consolidated from 22 local companies into 7 regional Bell operating companies (RBOCs), which retained their monopoly status. The U.S. Congress passed legislation in 1996 to deregulate local markets, but actual local competition has been slow to materialize.

A standardized national system of internal labor markets, supported by national pattern bargaining, established common human resource practices for virtually all union-eligible employees across the system. A national system of internal labor markets also covered managerial employees (Howard and Bray 1988; Batt 1996). For women in clerical occupations, there were two ports of entry: operator services and low-level clerical positions. Most entry-level jobs required a high-school education; entrance examinations were highly standardized and selection procedures, highly selective. Jobs in operator services were routinized and Taylorized from an early date, but business office (customer service and accounting) jobs were relatively highly skilled, semiautonomous, and problem-solving in orientation. In both departments, the nonmanagement jobs were relatively undifferentiated: there were usually two job rungs—an entry-level position and a more advanced position. For customer service staff, for example, the overwhelming portion served the general public by placing orders or transfers, and handling billing, repair, or other inquiries. A much smaller group handled nonroutine problems or was dedicated to very large business customers. The jobs were relatively undifferentiated because the product (basic telephone service) and the customer base were undifferentiated. A typical career involved beginning in operator services and moving up to firstline supervisor, or beginning in operator services, shifting to customer service work, and then moving up to handling nonroutine problems, large customers, or becoming a firstline supervisor. From there, workers could attend college through company-paid tuition if they wanted to advance to middle-management positions. Lifetime security was an implicit part of the social contract (Batt and Keefe 1999).

Internal Labor Markets under Deregulation

Under deregulation, service and sales jobs have increased in importance as companies have faced stiffer competition. Firms have sought to compete by developing the most cost-effective ways to provide customized packages of information services to targeted customer markets. To do so, they have adopted a business strategy referred to as “strategic segmentation” (Keltner 1998): segmented marketing strategies differentiate customers by value added, ranging from high value-added corporate clients to various business segments, to lower value-added individual consumers as well. Most major players also have used advanced information systems and process reengineering to support their market segmentation strategies while also reducing costs. Advanced information systems have allowed companies to consolidate operations into large remote service centers, each dedicated to a particular clientele. Most large telecommunications companies now have dedicated service centers for residential, small business, and large corporate or institutional clients.

Process reengineering automates many service functions so that telephone service may be turned on remotely without the help of field technicians on the ground. Overhead and direct labor costs fall while customer response time improves. After reengineering at GTE, for example, the percent of residential phone orders that are automatically established doubled, from 33% in the past to 61%. The most dramatic examples of consolidation occurred at AT&T and GTE—both of which faced an early challenge of creating standardized customer service and network organizations to serve national markets. By the early 1990s, for example, AT&T had consolidated hundreds of customer service bureaus into six national megacenters. Similarly, GTE consolidated 258 local worksites into 58 regionally based service centers (Batt and Keefe 1999).

Ideally, office workers should be able to construct careers as “customer service professionals” by moving from a lower value-added segment to a higher one. In reality, however, this type of internal mobility is made difficult by two factors. First, centers serving different customer segments are often located in different cities, necessitating relocation to pursue a career. Second, unlike the past, and as indicated in the data below, college education is increasingly a requirement for entry into the lucrative jobs serving large business customers.

In order to examine the extent to which these changes in business strategy and structure have affected the characteristics of internal labor markets for office workers, I conducted a survey of a nationally representative sample of customer service establishments in 1998. The telephone survey asked general managers a series of questions about the content of work, skills, pay, and promotion patterns of the core workforce in the establishment. The "core workforce" was defined as the group serving the establishment's largest segment of customers. Typically, establishments focus on one segment—residential consumers, small business customers, or large business and institutions.

Tables 1 and 2 present the mean characteristics of internal labor markets by customer segment served. These characteristics include the content of jobs, pay, promotion, and employment security. Notably, as shown in Table 1, the jobs vary significantly by the customer segment served. This variation in job content occurs along a continuum from very "transactional" to highly "relational" in content (Gutek 1995). On the one hand, service jobs that are "transactional" usually involve short and simple interactions with customers and relatively low discretion for workers. These jobs may be conceptualized as the functional equivalent of mass production jobs in services. On the other hand, jobs that are "relational" in content provide workers with the opportunity to spend more time with customers and offer considerably more discretion for workers to respond to customer demands. This transactional-relational content of jobs may be viewed along three dimensions: in the way that workers interact with customers, in the way that they use technology, and in the extent to which they exercise discretion at work.

The way that customer segment is reflected in the content of jobs is illustrated by the data provided in Table 1. For example, workers serving residential customers spend less than 20% of their time in face-to-face interactions, while those serving large business clients spend twice as much time in personal interactions. Workers serving residential customers spend about five-and-a-half minutes for each customer interaction and serve on average 99 customers per day; those serving large business customers spend almost twice as much time per customer and serve about 40 customers per day. In almost all of the dimensions surveyed, the workers serving small business represent an intermediate case between those in residential mass markets and those serving large business.

TABLE 1

Work Organization by Customer Segment Served

Variable	All	Residential	Sm.Bus.	Lg.Bus.	Sig: p < .05
Customer interaction					
% face-to-face interactions	27.32	19.47	27.55	40.40	a,b,c
Ave. time with customer (min.)	6.92	5.50	7.01	9.53	
# of customers per day	74.48	99.18	69.35	39.91	
Use of scripted texts*	1.94	2.22	1.89	1.52	a,b,c
Technology mediation					
Software (ave. # used by wkrs.)	4.22	3.45	3.60	6.34	a,c
Emails (number per day)	10.05	8.98	6.40	17.03	a,b,c
% electronically monitored	39.49	50.30	38.82	22.06	a,b,c
% time on-line	65.54	74.85	63.95	51.47	a,b,c
% completes on-line	62.48	72.23	65.16	41.55	a,c
Work organization					
Discretion over:					
Daily tasks & assignments*	3.23	2.92	3.28	3.68	a,b,c
Tools & procedures*	2.89	2.66	2.86	3.31	a,c
Pace & speed at work*	3.23	2.91	3.31	3.66	a,b,c
Setting work objectives*	2.49	2.43	2.36	2.76	a,c
Revising work methods*	2.89	2.87	2.76	3.10	c
Setting lunch & rest breaks*	3.05	2.32	3.20	4.06	a,b,c
Setting vacation schedules*	3.65	3.46	3.66	3.95	a,c
Design & use of technology*	2.15	1.98	2.11	2.51	a,c
Types of customers served*	1.97	1.74	1.93	2.41	a,c
Handling additional requests*	3.72	3.73	3.75	3.67	
Settling customer complaints*	3.69	3.93	3.54	3.48	a,b
# of customers served/day*	2.67	2.35	2.51	3.52	a,c
Discretion scale*	2.83	2.57	2.80	3.29	a,b,c

* 1-5 scale where 1 is none and 5 is to a very great extent or completely.
a = residential and large business are significantly different at $p < .05$.
b = residential and small business are significantly different at $p < .05$.
c = small and large business are significantly different at $p < .05$.

The variation in the use of technology is also striking. In the mass market, workers regularly use about 3.5 different software packages and receive nine emails per day; they spend 75% of their work day “on-line” (tied to computers and telephone lines) and complete over 70% of their calls while the customer is on the line. They are electronically monitored over 50% of their working day. In the corporate market, by contrast, workers use almost twice as many software packages, receive twice as many emails, spend significantly less time on-line, and complete far fewer transactions while the customer is on the phone. They are electronically monitored on average only 22% of their workday.

TABLE 2

Pay, Promotion, and Employment Security by Customer Segment Served

Variable	All	Residential	Sm.Bus.	Lg.Bus.	Sig: $p < .05$
Pay, promotion, and employment security					
% promoted from within	38.61	38.49	35.15	43.37	
% with < 1 year of tenure	29.71	30.10	30.91	27.40	
% with >10 years of tenure	70.28	68.10	75.14	67.43	
% of fulltime permanent wkforce	91.35	91.20	88.83	95.04	a
Average annual base pay	37,137	26,755	33,940	60,491	a,b,c
Average annual benefits costs	9,906	6,744	9,017	16,413	a,b,c
% pay that is variable	17.58	10.05	20.58	26.52	a,b
Workforce characteristics					
Total employees	294.00	466.00	195.00	136.00	
% female	61.59	71.37	60.88	45.63	a,b,c
% unionized	14.57	22.64	11.76	4.76	a,b
% exempt from labor laws	31.58	11.65	24.10	75.41	a,b,c
Ave. education (in years)	13.67	12.94	13.56	15.07	a,b,c

* 1-5 scale where 1 is none and 5 is to a very great extent or completely.
a = residential and large business are significantly different at $p < .05$.
b = residential and small business are significantly different at $p < .05$.
c = small and large business are significantly different at $p < .05$.

How much discretion workers have in their jobs also varies significantly by customer segment. In this study I asked managers to estimate how much discretion employees had over a series of activities ranging from daily task assignments and tools at work to setting work schedules and settling customer complaints. Managers answered on a scale of 1 to 5 where 1 is no discretion and 5 is complete discretion. Table 1 reports the means of these variables. In all but two of the items, those in large business scored significantly higher on discretion at work than did those in small business; and small business representatives, in turn, scored significantly higher than those in residential markets.

Reflecting this variation in the content of jobs, average pay also varies by customer segment served, as reported in Table 2. Those serving the residential mass market receive an annual average wage of $26,755, plus benefits worth $6,744; workers serving small business customers receive $33,940, plus benefits of $9,017; and those working for large clients average $60,491, plus $16,413 in benefits. Similarly, pay-for-performance, or the percent of pay that is variable, increases from an average of 10% for workers at the low end to over 26% for those serving corporate clients.

Mobility patterns and employment security are the two areas where there is little variation across customer segments. On average, managers reported that about 38% of their current workforce had been promoted from within, and about 70% had at least ten years of seniority. In addition, roughly 90% of the workforce across the segments are full-time and permanent, an indicator of the company's commitment to employment security.

Finally, workforce characteristics vary considerably across segments. The average size of the establishment ranges from 136 for those serving large customers to 446 for those in the mass market. Average education ranges from 13 years for residential service agents to 15 years for corporate account managers; and whereas over 70% of the residential representatives are female, that figure drops to 45% among large account agents.

In sum, unlike the past when customer service jobs were relatively undifferentiated, and workers offered "universal service" to the public, the range of within-occupational variation has increased markedly under deregulation. This has occurred because companies have competed through "strategic segmentation"—customizing products to meet the demand characteristics of distinct market segments and matching the jobs and workforce characteristics to those customer segments. A particularly strong indicator of this variation is the extent to which workers serving business clientele are defined as professional/managerial and exempt from labor laws. Whereas only 11% of the residential workforce are defined as exempt from labor laws and 22% are represented by unions; 45% of large business agents are exempt and less than 5% are represented by unions. In the past, sales and service workers serving large business clients were considered part of the bargaining unit, and these positions were filled by the most experienced and senior workers in the union. Today, 75% of those serving large business have at least a two-year college degree, and 62% have a four-year degree. This trend towards hiring college graduates for the higher-paid jobs makes it much more difficult for workers to pursue a career as a customer service professional by moving up the customer ladder from residential to small business to large business customers, as they did in the past.

Conclusions

In summary, recent research demonstrates that the as yet partial deregulation of telecommunications service markets in the United States has led to significant changes in corporate structure, work organization, and internal labor markets for service and sales workers in the industry. Union institutions have had relatively little influence over the course of restructuring, despite the prior existence of an industrywide collective bargaining system and despite various attempts at labor-management pacts to jointly reorganize work.

Business strategy, process reengineering, and the availability of advanced information systems have been the primary drivers of change in work organization and internal labor markets. Companies have shifted their orientation from public service to strategic segmentation of markets. The prior system of national internal labor markets has been transformed into a much more fragmented structure. Core jobs in customer services and sales have become much more specialized, and within-occupational variation has increased with respect to skills and training, use of technology, work design, and pay.

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XII. ANNUAL STUDENT WRITING COMPETITION

Representatives of Their Own Choosing? Certification, Elections, and Employer Free Speech, 1935-1959

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> The skilled practitioner, from the very first union leaflet or rumor of organization, knows that every move that is made by or on the behalf of the employer must lead inexorably to the right and opportunity to electioneer. (Rothenberg and Silverman 1973:210)

"The certification election," wrote John Lawler in 1993, "remains by and large the ultimate moment of truth in relation to the ability of unions to build membership" (Lawler 1933:137). Trade unions' declining success rate in National Labor Relations Board (NLRB) elections has contributed significantly to the fall in private sector union membership in the United States.[1] In the late 1930s, unions won over 80% of NLRB elections. Union victory rates have fallen continuously since the mid-1940s, however, dropping to 63% by the late 1950s. By the mid-1970s, union victory rates had fallen below 50% and by 1997 unions were winning only 48% of NLRB elections.[2]

Previous studies by industrial relations and legal scholars have scrutinized NLRB decisions and court rulings governing the conduct of certification elections. This paper analyzes instead several crucial issues scarcely discussed in the existing literature: why the NLRB "voluntarily" abandoned card certifications, how employers influenced and responded to developments in

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certification policy, and how changes in labor policy and employer electioneering affected the outcome of organizing campaigns. In particular, the paper focuses on the critical two decades following the NLRB's 1939 decision to abandon authorization card certifications, during which employers played an increasingly active role in opposing unionization. When the NLRB first held secret ballot elections in the 1930s, it intended the elections to function as "nothing but an investigation, a factual determination of who are the representatives of employees."[3] Within two decades, however, a number of landmark NLRB decisions and court rulings—and a subsequent increase in employer electioneering—had transformed representation campaigns into fiercely contested struggles between unions and management for workers' allegiance.

Why Did the NLRB Abandon Card Certifications?

Section 9(c) of the 1935 National Labor Relations Act (NLRA) provided that the new labor board could determine a union's majority status by ordering a secret ballot election or by utilizing "any other appropriate method." Between 1935-39, the NLRB certified many unions on the basis of signed authorization cards or other documentary evidence of majority support.[4] Employers' organizations and their congressional allies attacked card certifications and accused the board of "forcing unionism through labor policy rather than selling it to the American workingman."[5] Until the late 1930s, however, NLRB officials vigorously defended card certifications. When questioned whether he believed authorization cards constituted "sufficient evidence" of majority support, NLRB General Counsel Charles Fahy responded, "I think they are. . . . We consider signed cards very strong evidence of the desire of those who signed the cards to have the union representation" (Stone 1937:15).

Despite his public enthusiasm for card certification, Fahy recognized that employers' steadfast opposition to this practice was creating serious administrative problems for the board. In February 1938, Fahy asked regional NLRB attorneys to report on cases where employers had refused to recognize unions claiming majority support on the basis of authorization cards. The regional attorneys replied that employers challenged unions' claims of majority support "in practically all such cases . . . [and] argued that the employees were coerced and threatened by union officials or members in connection with the procuring of the applications for membership." Several NLRB officials believed that the questionable tactics of some union organizers had indeed contributed to problems over card certifications. Overzealous union organizers, reported one NLRB attorney, "will themselves sign application cards in the name of the employees without permission." Another board official believed that "unions have not exercised great care in this matter. . . . In every case, I have found duplications in the membership cards, and frequently there are signed cards from persons who have never worked for the employer." All the regional attorneys agreed that cases involving employers' refusal to recognize documentary evidence of unions' majority status "have been bad cases to try. . . . The board has had many problems to face which would not be present" if it were to require secret ballot election prior to certification.[6]

In the late 1930s, several high-profile disputes, in which competing American Federation of Labor (AFL) and Congress of Industrial Organizations (CIO) unions claimed the support of the same group of workers, further undermined the legitimacy of card certifications.[7] Although NLRB Chairman J. Warren Madden dismissed these cases as "almost wholly hypothetical and imaginary," by 1939 he supported new board member William Leiserson's demand for elections in cases where employers or rival labor unions contested unions' claims of majority support.[8] In the midst of intense conservative attacks on the Wagner Act and the NLRB, Madden believed that secret ballot elections would legitimize the embattled labor board's certification procedures.[9] Thus in "a radical departure from past practice,"[10] the board ordered elections in four 1939 representation cases in which regional labor boards had certified unions without secret ballot elections.[11] Although it continued to certify unions on the basis of authorization cards in certain circumstances, with these four decisions, the NLRB "voluntarily" abandoned authorization cards as a regular method of certification. When the 1947 Taft-Hartley Act wrote mandatory elections into law, Madden argued, it "was just confirming what we were already doing."[12] Even in the late 1930s, however, some NLRB officials feared that mandatory elections may "furnish to employers . . . a means of sabotaging the bargaining process through dilatory tactics" (Rosenfarb 1940:314).

"A Twilight Zone of Uncertainty": Employers and Certification Elections, 1939-1947

> A twilight zone of uncertainty seems to exist as to how far employers may carry through general propaganda to deter their workers from associating themselves with an outside union. (Douglas 1937)

After the board decided to certify bargaining representatives largely on the basis of secret ballot elections, a vital question remained to be settled: What role should employers play in the election process? During the early years of NLRB-conducted elections, the labor board insisted that employers maintain strict neutrality during representation campaigns. If the employer became involved in the election process in any way, argued David Saposs, head of the NLRB's Division of Economic Research, he was "injecting himself into matters that are supposed to be the sole concern of the workers."[13]

Predictably, management organizations insisted that the NLRB's policy of strict neutrality deprived employers of their constitutional right of free speech.[14] As part of a campaign in the late 1930s targeting both Congress and the general public, the National Association of Manufacturers, the Chamber of Commerce, and various congressional conservatives proposed free speech amendments to the NLRA (Rosenfarb 1940:176). Employers' organizations protested that since the passage of the Wagner Act, "the Labor Board has steadily whittled down the right of management to express its opinion." The board, they maintained, believed that "the position of management was so much more powerful than labor's that intimidation necessarily followed *the mere expression of an opinion* by an employer."[15]

NLRB officials repeatedly denied that their regulation of campaign electioneering interfered with employers' constitutional right of free speech. At the 1939 National Conference on Civil Liberties, Paul Herzog, chairman of the New York State Labor Relations Board, argued that none "of the decisions so far issued . . . raise any such constitutional question. Once the constitutional issue is eliminated, the question becomes, as the lawyers say, a legislative one."[16] In the early 1940s, however, the Supreme Court decided that NLRB orders restricting employer speech was indeed a constitutional question, and in two landmark cases the Court ruled that employers could discuss union issues with their employees so long as their speech was not "coercive." In its 1941 ruling, *N.L.R.B. v. Virginia Electric & Power Co.*, the Court upheld the board's right to restrict employers' election speech in certain circumstances, but not by the doctrine of employer neutrality.[17] In the 1943 *American Tube Bending* ruling, the circuit court affirmed employers' right to distribute antiunion letters to the homes of their employees during representation campaigns, and the Supreme Court agreed.[18] Although the *Tube Bending* decision also restated the limits of permissible management communication, many employers interpreted the ruling as an open invitation to engage in aggressive electioneering.[19]

Employers' organizations immediately recognized the significance of these rulings expanding the boundaries of legal electioneering. The International Statistical Bureau (ISB) argued that the *Virginia Electric & Power* and *American Tube Bending* decisions "permit employers to deviate from complete neutrality to allow free expression so long as their actions do not coerce their employees." The ISB also recognized the legal limits of managerial participation in representation campaigns, however, and cautioned that the employer had overstepped the bounds of permissible conduct "*where* [he] *took the attitude that the election was a contest between himself and the union*."[20] Other employers' publications openly advocated vigorous electioneering. "The entire process of setting up machinery for determining whether a union really represents a majority of the company's workers," wrote *The Labor Trend*, "is *a bargaining tool par excellence* for industry." The journal lamented, however, that "through ignorance, most employers neglect to use this tool; they thereby forgo a splendid opportunity for themselves."[21]

Contrary to *The Labor Trend's* conclusion, an extensive 1946 NLRB survey investigating the impact of the Court's *Tube Bending* ruling on management behavior revealed that many employers were already participating aggressively in representation elections. In December 1946, Director of Field Division Oscar Smith asked NLRB regional directors to report on the effect of employers' "Tube Bending activity" (i.e., letters and speeches expressing employers' opposition to unionization during NLRB elections) on the outcome of representation campaigns. Almost without exception, the regional directors reported that employers frequently used these tactics and that antiunion electioneering influenced significantly the outcome of representation elections.[22] One regional director wrote that employers engaged in "Tube Bending electioneering" in approximately half of the NLRB elections in his region, which "often turns the scale against the union."[23] Another NLRB examiner reported that "employers are indicating their views to employees prior to elections with increasing frequency. . . . It is obvious that [employer electioneering] is having *a substantial effect* in combating union organization."[24]

Employers' resistance to organizing campaigns had its greatest impact in those regions of the country where unionization was weak. Most regional directors agreed that where "a plant has not been previously organized, an American Tube Bending letter probably will carry greater weight with the employees and be more likely to influence their decision."[25] Unions frequently encountered previously unorganized workplaces in the South, and many southern employers engaged in virulent antiunion electioneering. Because of the aggressive content of southern employers' antiunion propaganda, one NLRB official advised: "The board must consider these letters and speeches with the eyes and minds of the worker who is on the receiving end, rather than with those of a lawyer sitting in Washington."[26] Expressing the sentiments of most regional directors, another official concluded:

> No one would deny that employers engage in this conduct primarily to bring about the defeat of the union. . . . If this activity is permissible under the First Amendment to the Constitution,

> then certainly no additional legislation specifically allowing such conduct is necessary or desirable.[27]

Whether or not it was "necessary or desirable," six months after the board's detailed report on Tube Bending activity, with the enactment of the Taft-Hartley Act, Congress passed "additional legislation" specifically allowing for" antiunion electioneering during representation campaigns.

Court rulings were not the sole source of the deregulation of employers' speech, however. In the immediate postwar period, a number of NLRB decisions allowed employers a greater voice in the election process than that provided for by the courts' ruling in *Virginia Electric & Power* and *American Tube Bending*.[28] In the anticommunist political climate of the postwar years, the labor board increasingly avoided rulings which its opponents could attack as undemocratic restrictions on employers' constitutional right of free speech. As a result of these decisions, the Bureau of National Affairs concluded that several months prior to the enactment of Taft-Hartley, the NLRB "has apparently abandoned one of its fundamental theories . . . the idea of management's fictional unconcern about the agent with whom it may have to deal on wages, hours, and working conditions" (BNA 1948:26-7).

By the mid-1940s, court decisions and NLRB rulings providing employers greater electioneering rights had already contributed to the defeat of many contested organizing drives, especially in the South and Southwest where employers frequently conducted aggressive antiunion campaigns.[29] Even before the enactment of Taft-Hartley, unions were winning significantly fewer elections than they had won in the late 1930s. In industries such as textiles, furniture, leather, and mining, which were largely concentrated in the South and Southwest, unions won only about 60% of NLRB elections.[30] In response to postwar board decisions and court rulings expanding management electioneering rights—as many who opposed these new management freedoms had predicted—employers "began to push their new opportunity to defeat unionism to the limit" (Gregory 1961:357).

Taft-Hartley: "A New Bill of Rights for Management"

Employers' organizations and their conservative congressional allies had campaigned vigorously for a free speech amendment to the NLRA since the late 1930s. With the enactment of the Labor-Management Relations [Taft-Hartley] Act in June 1947, they finally succeeded. Section 8(c) of the Taft-Hartley Act states:

> The expressing of any views, arguments, or opinion, or the dissemination thereof, whether in written, printed, graphic, or visual form, shall not constitute or be evidence of an unfair labor practice

> under any provisions of this act, if such expression contains no threat of reprisal or force or promise of benefit.[31]

Most conservatives lauded Section 8(c) as a necessary corrective to NLRB's "one-sided" policy on employer speech.[32] Supporters of collective bargaining, in contrast, considered the free speech provision one of Taft-Hartley's most objectionable features.[33] As a result of the free speech provision, former NLRB member William Leiserson argued, "No one who really believes in the original Wagner Act has any business staying on administering the new law."[34]

After the enactment of Taft-Hartley, the NLRB immediately expanded the scope of permissible employer electioneering. In several 1948 decisions, the labor board reversed its 1946 *Clark Brothers* "captive audience" doctrine and ruled that employers could compel workers to listen to antiunion speeches on company time and property so long as the speeches contained no "threat of reprisal or force or promise of benefit." The board stressed that this reversal in policy was a direct result of Taft-Hartley's free speech provision. "The language of Section 8(c) and its legislative history," the board argued in dismissing a complaint against the *Babcock & Wilcox* company, "make it clear that the doctrine of the Clark Brothers case no longer exists" as a basis for unfair labor practices.[35] In the *Mylan-Sparta* case, also in 1948, the board ruled that management statements which prophesied that the employer might have to close down the plant for economic reasons if the union won the representation election were not coercive under Taft-Hartley.[36] Indicating the full extent of the transformation in NLRB policy, the labor board overturned the results of several certification elections because of "coercive" statements made by *union organizers* during preelection campaigning.[37] The employers' pamphlet, *Executive's Labor Letter*, reported that "these decisions make it clear that the NLRB will uphold the employer's right to conduct an anti-union campaign."[38]

In the late 1940s, however, the moderately "prolabor" Herzog NLRB still sought to balance the protection of workers' free choice with the protection of employers' free speech. In the April 1948 *General Shoe Corporation* case, the board ruled that the employer's intensive electioneering created an oppressive environment in which the intimidation of workers was inevitable, even though the campaign itself did not violate the terms of the new law. Even in its *General Shoe* decision, the NLRB emphasized the limited nature of state intrusion in election campaigns and argued that it would set aside elections "only in the rare 'extreme case' where an employer's activities so far exceeded an appeal to his employees' reasoning faculties" that a free election would be impossible.[39]

Employers immediately attacked the *General Shoe* decision. One management journal wrote:

> The green light the Taft-Hartley Act gave to free speech for employers has changed colors. Caution is now the watchword for management when discussing unions and unionization. . . . [The board] has uncorked a controversy on an old subject: 'How far can an employer go in trying to influence a union election?'[40]

Despite these vociferous complaints, most employers acknowledged that in the late 1940s, the "evolution" of board policy was, in the words of Paul Herzog, "in one direction"—management's.[41] Employers' publications openly celebrated the sea change in the conduct of representation elections under Taft-Hartley. *The Labor Trend* commented that "the most important single achievement of the Taft-Hartley law . . . has been the restoration to employers of the right to address their employees. . . . Compared with the tongue-tying restraints which used to prevail," the journal argued, "the present law amounts to *a new bill of rights for management.*"[42] Other management journals published extensive lists of what employers could and could not say under Taft-Hartley's free-speech provision and encouraged employers to familiarize themselves with and take full advantage of their expanded rights of participation in representation elections.[43]

More important than Section 8(c)'s impact on NLRB policy was its role in stimulating aggressive antiunion electioneering. The House sponsor of the new labor law, Rep. Fred Hartley of New Jersey, forecast in 1948 that 8(c) would have important long-term consequences for employers' behavior during representation campaigns:

> The original NLRB had distorted the intent of Congress in regard to what an employer could do or say to such an extent that the simplest expression of opinion had come to be considered evidence of coercion by the employer. Most employers so far have proceeded cautiously under the new law, with a vivid recollection of what had happened in previous years, *but I predict that this particular provision will prove increasingly beneficial in time to come.*[44]

Other commentators believed that many employers were already exercising their new freedoms to considerable advantage. *The Labor Trend* argued that "during the first year of the Taft-Hartley law, employers have been making wide use of their newly restored rights," and it pointed to "dozens of cases in which management has openly fought against unions in representation elections."[45] Edwin Witte, a leading authority on labor policy, claimed that while Section 8(c) had made only slight changes, if any, in the legal rights of employers, "the spelling out of their rights in the Taft-Hartley Act has had the effect of making many employers much bolder" in resisting unionization.[46] As Witte indicated, antiunion employers considered 8(c) a powerful ally in the fight against unionization.

Unquestionably, Section 8(c)'s greatest impact was on employers' behavior in the South. By the late 1940s, Operation Dixie, the CIO's ill-fated "holy crusade" to extend industrial unionism to the South, had stalled, largely because of employers' aggressive opposition to unionization during NLRB elections. Southern employers defeated dozens of NLRB elections in the late 1940s and early 1950s through aggressive campaigning during the preelection period.[47] "Most important in the South," argued labor economist Emily Brown, "has been the increased use of 'the right of free speech' by employers to intervene frankly in elections."[48] Southern employers' aggressive electioneering established the South as a nonunion hinterland for antilabor employees in the postwar decades[49] and served as a model for nationwide antiunion electioneering in the 1970s and 1980s.

National statistical evidence on unions' declining success rates in representation elections corroborated reports on the effectiveness of employers' antiunion electioneering in the South. During the first year of Taft-Hartley's operation, unions won 72.5% of NLRB-supervised elections, fewer than in any year under the Wagner Act. In the first twelve years of NLRB certification under the Wagner Act, unions had won over 81% of NLRB elections.[50] Union election victories fell by over 10% between 1946 and 1949, and by 1950 unions "testified almost universally" that organizing had become more difficult as a direct result of Taft-Hartley's free speech provision.[51]

In the years immediately following the enactment of Taft-Hartley, however, the full impact of the new rules governing representation elections was not yet apparent. "Prolabor" members constituted a majority on the NLRB, and full employment ensured that trade unions continued to make overall gains in membership. Nonetheless, Ed Witte warned that "there are reasons to believe that [Taft-Hartley] will prove more restrictive and injurious in the not very distant future." These reasons, Witte believed, included a "proemployer" majority on the NLRB and drastic downturn in the prosperous postwar economy.[52] Although the profound change in economic conditions did not occur until the 1970s, the "proemployer" majority on the NLRB arrived shortly after Dwight Eisenhower's 1952 election victory.

"The Jig Is Up": The Farmer NLRB and Employers' Electioneering Rights

> If the Board is going to be pro-employer [on employer electioneering], the jig is up.[53]

In late 1952 Robert Taft complained that the Herzog NLRB was "distinctly prolabor." But, Taft explained, the newly elected Republican administration would remedy that situation: "We are going to . . . [select] two additional members who are not completely prolabor."[54] In fact, the early retirement of Chairman Herzog in summer 1953 allowed Eisenhower to appoint three new members to the labor board—Albert Beeson, Philip Rodgers, and new Chairman Guy Farmer—the first Republican appointments to the NLRB.[55] During the Roosevelt and Truman administrations, the courts and Congress assumed the leading role in deregulating employer speech during representation campaigns; in the Eisenhower years the NLRB usurped this role. By the mid-1950s the reconstituted labor board had overturned many of the Herzog NLRB's policies on employer electioneering and in the process transformed Taft-Hartley's free speech provision into a powerful weapon for employers intent on defeating union organizing campaigns. In the landmark 1954 *Blue Flash* decision, for example, the board reversed a long-established NLRB policy and ruled that an employer could "interrogate" his workers about their union activities if no implication of reprisal or benefit were involved. Under intense criticism from the labor movement and its academic allies,[56] Chairman Farmer responded that although the term "interrogation" had "sinister implications, seeming to suggest a sort of rigorous third degree," this questioning was, in many cases, "no more than a casual friendly inquiry by a minor supervisor directed to one of his personal friends."[57]

The Farmer NLRB reversed the Herzog board's policy on permissible employer electioneering on several other crucial issues. In the 1953 *Livingston Shirt Corp*. case, the labor board rejected the Bonwit Teller doctrine" (in which the Herzog NLRB had ruled that an employer who made a "captive audience" speech must give the union the right to respond) and ruled that "an employer does not commit an unfair labor practice if he makes a preelection speech on company time and premises and denies the union's request for an opportunity to reply."[58] According to Farmer, the *Livingston Shirt* decision was "the result of a natural and inevitable evolution of the law relating to employer speeches. . . . The ruling simply brought [the board's] decisional doctrine in line with the First Amendment and Section 8(c) of the [Taft Hartley] Statute."[59] As a result of the Livingston Shirt decision, however, employers gained exclusive access to "*the single most effective preelection forum.*"[60]

In contrast with Farmer, supporters of unionization argued that the evidence of employer intimidation in the *Livingston Shirt* case was overwhelming, and they believed that the new NLRB had seized upon the case simply to overturn the "Bonwit Teller doctrine" at the first available opportunity.[61]

Significantly, in common with several of the Farmer labor board's landmark decisions on employer speech, *Livingston Shirt* involved a southern company whose employees had not previously been unionized. Employers and their congressional allies frequently justified the new policy on employer electioneering by pointing out that the labor movement was significantly stronger in the 1950s than it had been when Congress passed the Wagner Act and argued that the NLRB should adapt labor policy to accommodate this transformation.[62] Many of the important free speech disputes during the Truman and Eisenhower years, however, involved southern companies that had operated nonunion since the enactment of the Wagner Act and that conducted aggressive campaigns to defeat union organizing efforts in the late 1940s and 1950s.[63]

The Farmer NLRB's decisions allowed employers a freedom to electioneer greater than ever envisaged by the authors of the Wagner Act.[64] The cumulative effect of the new board's reinterpretation of Section 8(c)'s intent was, according to one labor expert, "that the law has become, in this area, a matter of relatively little significance and that economic power has reemerged as the decisive factor in determining the result of representation elections."[65] During the 1950s, the labor board recognized employers' electioneering as a "legitimate" weapon with which to fight unionization, albeit one subject to state regulation, and thus the transformation of NLRB certification from "factual determination" to electoral contest was more or less complete. Union victories in certification elections, moreover, had slumped to an all-time low. In 1959 unions won only 63% of NLRB-supervised elections, lower than any year on record since the passage of the Wagner Act.[66]

Conclusion

> The possibilities for communicating *forcefully* and *legally* [during election campaigns] are almost endless. (Dougherty 1980:118)

In his 1939 congressional testimony opposing amendments to the Wagner Act, NLRB Chairman J. Warren Madden stressed the need for employer impartiality during the organizing and certification processes. Madden argued that the major provisions of the NLRA "establish a plain and precise standard of conduct which an employer must maintain in his relations with employees." "Broadly speaking," Madden continued, "they require that the employer shall adopt an attitude of strict neutrality toward the efforts of his employees to organize for collective bargaining." Madden emphasized this critical point: "*Upon this fundamental principle—that an employer shall keep his hands off the self-organization of employees—the entire structure of the act rests.* Any compromise or weakening of that principle strikes at the roots of the law."[67] In the years after Madden's 1939 testimony, in the context of tremendous employer and congressional hostility toward the NLRB, the courts and the embattled labor board increasingly protected employers' right of free speech rather than workers' right to select bargaining representatives free from employer interference. In doing so, as Chairman Madden had predicted, they undermined the "entire structure" upon which the NLRA was constructed. Today, many labor scholars and activists believe that certification elections, rather than facilitating workers' free choice of bargaining representatives, actually inhibit that choice (see, for example, Block, Beck, and Kruger 1996:79). In the political climate of the late 1990s, however, the "substantial reform" of NLRB certification procedures called for by certain labor experts seems less likely than ever.

Acknowledgments

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Endnotes

[1] On this point see, for example, Marcus Sandver and Herbert Heneman, "Union Growth through the Election Process," *Industrial Relations*, Vol. 20, no. 1 (Winter 1981), p. 109. Employer antiunion campaigns have played a critical role in unions' declining success in NLRB elections. See, for example, William Dickens, "The Effect of Company Campaigns on Certification Elections: Law and Reality Once Again," *Industrial and Labor Relations Review*, Vol. 36, no. 4 (July 1983), p. 560; Richard Freeman, "What Does the Future Hold for U.S. Unionism?" *Relations Industrielles*, Vol. 44, no. 1 (1989), p. 30.

[2] *Annual Reports of the National Labor Relations Board, 1937-40, 1960, 1976, 1997*; Ronald Seeber and William Cooke, "The Decline in Union Success in NLRB Representation Elections," *Industrial Relations*, Vol. 22, no. 1 (Winter 1983), p. 137.

[3] Statement of Robert F. Wagner. Hearings on S. 2926: Hearings before the Senate Committee on Education and Labor, Seventy-Third Congress, Second Session, *Legislative History of the National Labor Relations Act, 1935, Volume 1*, p. 1473-74.

[4] Approximately one-third of all NLRB certifications between 1935-39 were issued without secret ballot elections. *Annual Reports of the National Labor Relations Board, 1936-40*.

[5] "Report of the Special Conference Committee, 1935," February 13, 1936. Special Conference Committee Folder, Hagley Museum and Library. The National Association of Manufacturers (NAM) demanded that "no certification should be made by the NLRB as to the representatives of employees except as the result of a secret election." "Proposed Amendments to the Wagner Act," as approved by the NAM Employment Relations Committee, November 30, 1938. NAM papers, Industrial Relations Department, Box 21, Hagley Museum and Library.

[6] Samuel G. Zack, 4th region, letter to Charles Fahy, February 18, 1938; Edward Schneider, 1st region, letter to Charles Fahy, March 1, 1938; Christopher W. Hoey, letter to David A. Moscovitz, Feb. 18, 1938. Record Group (RG) 25 (Records of the

NLRB), Records of the Legal Division, 1935-39. Assistant General Counsel Witt's Records, Box No. 1, National Archives (NA). In 1948, former NLRB Chairman Harry Millis wrote: "Coercion by unions in the signing of cards undoubtedly occurred, though how extensive it was no one knows." Millis and Emily Brown, *From the Wagner Act to Taft Hartley* (New York, 1948), p. 257. According to former board chairman Lloyd Garrison, the NLRB's election procedures were "partly worked out by Regional Attorneys, based on their experience." Oral history interview with Lloyd Garrison, p. 5, Columbia University Oral History Collection.

[7] On June 21, 1938, in the *Shipowners' Association of the Pacific Coast* case, for example, the labor board certified Harry Bridge's CIO-affiliated International Longshoremen's and Warehousemen's Union as the bargaining representative for the entire Pacific Coast shipping industry on the basis of the submission of signed authorization cards. The AFL and its affiliate, the International Longshoremen's Association, had demanded secret ballot elections on a port-by-port basis. 7 NLRB 1002 (1938).

[8] J. Warren Madden, memo to Franklin D. Roosevelt, November 2, 1938. Franklin Roosevelt papers, Official Papers 716 (NLRB), Box No. 3, Roosevelt Library. Madden claimed that these cases were, in most instances, "the invention of hostile newspapers and politicians." The AFL supported mandatory elections in cases where craft unions requested separate bargaining units or employers requested elections when faced with the claims of rival unions. Michael J. Eisner, *William Morris Leiserson*: *A Biography* (Madison, Wisc., 1962), p. 70. In 1939 the board also allowed employers a limited right to petition for an election when faced with the conflicting claims of two or more unions. *NLRB Rules and Regulations* (1939), p. 1-3. After leaving the board, Madden stated: "We started out . . . in rather informal ways, signature cards, and so on. But . . . very shortly we got down to the right basis, namely, a secret ballot." According to Madden, the NLRB "recognized that you can go out to a man and say, 'Will you sign this card for the union?' And he'll sign it to get rid of the person who is asking him to do it. . . . It doesn't mean very much." Oral history with J. Warren Madden, Labor-Management Documentation Center, Cornell University, pp. 130-31.

[9] J. Warren Madden, memo to Franklin D. Roosevelt, October 2, 1939. Franklin Roosevelt papers, Official Papers 716 (NLRB), Box No. 3, Roosevelt Library. This remains a powerful argument in the debate over labor law reform. Paul Weiler, the leading scholar of contemporary North American labor law, writes: "In the abstract, it is terribly compelling. It is hard to argue against the democratic procedure of a secret ballot." Paul Weiler, *Reconcilable Differences: New Directions in Canadian Labor Law* (Toronto, 1980), p. 38.

[10] *New York Times*, July 14, 1939, p. 5. Leiserson had supported mandatory certification elections while chairman of the National Mediation Board. The *Times* labor correspondent, Louis Stark, a close associate of Leiserson's, wrote that Leiserson "is believed to have been responsible" for the change in certification policy. By 1939, however, many NLRB officials questioned the wisdom of authorization card certifications.

[11] *Cudhay Packing Co.*, 13 NLRB 526 (1939); *Amour & Co.*, 13 NLRB 567 (1939); *Alpena Garment Co.*, 13 NLRB 720 (1939); *Armour & Co. of Delaware*, 13 NLRB 1143 (1939). In all four cases board member Edwin Smith dissented, arguing that the NLRB should continue to certify unions on the basis of documentary evidence.

[12] Oral history with J. Warren Madden, p. 131. Section 9(c) (1) of the Taft-Hartley Act stated that the board could certify unions only after conducting secret ballot elections.

[13] David Saposs, March 12, 1937. RG 25, Records of the NLRB, Records of the Assistant General Counsel. Records Relating to the Preparation of the Board's Case, 1939-1940, Box No. 2, NA.

[14] In the late 1930s, employers' strategy on NLRB elections changed from one of arguing that employers should have the right to advise their workers on questions of unionization to one of lobbying in defense of employers' constitutional right of free speech. J. C. Argetsinger, president and general counsel, Youngstown Sheet and Tube Company, letter to H. A. Moore, May 8, 1939; Tower, secretary, American Iron and Steel Institute, letter to Hoyt Moore, May 8, 1939. American Iron and Steel Institute papers, Files of Hoyt A. Moore and Chester A. McLean, Box 92 (Re: Proposed Amendments to the NLRA), Hagley Museum and Library.

[15] International Statistical Bureau, *Protecting Management's Rights in Labor Relations* (Washington, D.C., 1945), p. 7, emphasis added.

[16] Herzog stressed that the labor board had found employers guilty of unfair labor practices, *only* in those cases where antiunion statements were accompanied by tangible acts that "everyone would agree were coercive in character." Paul Herzog, Address at the National Conference on Civil Liberties, New York City, October 14, 1939. Paul Herzog papers, Box 3 (Speeches and Articles, 1937-1940), Truman Library.

[17] 314 U.S. 469 (1941). NLRB attorney Mozart Ratner argued that the Virginia Electric & Power ruling "left the board in a hole." Ratner recounted that "employer free speech was one of the bitterest experiences at the board. . . . The courts ran with employer free speech from the beginning." Oral history interview with Mozart Ratner, pp. 38-39, 41. Labor-Management Documentation Center, Cornell University.

[18] 320 U.S. 768 (1943). After the Tube Bending decision, Paul Freund, Assistant Solicitor General, prevented the NLRB taking free speech cases to the Supreme Court, "and that was the kiss of death." Oral history interview with Mozart Ratner, p. 38.

[19] The American Tube Bending case "disrupted . . . the comparative quiet that had pervaded this section of the legal front since the Virginia Power decision." *Business Week*, July 1, 1944.

[20] International Statistical Bureau, *Protecting Management's Rights in Labor Relations*, p. 20, emphasis added.

[21] *The Labor Trend*, "The Election," July 9, 1946, emphasis added.

[22] James Shields, Director, 18th Region, Memo to Oscar Smith, January 17, 1947. RG 25, Records of the Assistant General Counsel. Records Relating to the Preparation of the Board's Case, 1939-1940, Box No. 2, NA. Letters cited in notes 29-33 are also from this box.

[23] George J. Bott, Director, 13th Region, Memo to Oscar Smith, January 8, 1947.

[24] Stanley Liebling, Examiner, Memo to John J. Carmody, Acting Regional Director, January 8, 1947, emphasis added.

[25] Thomas P. Graham, Director, 19th Region, Memo to Oscar S. Smith, January 7, 1947.

[26] Paul Styles, Director, 10th Region, Memo to Oscar Smith, January 13, 1947. Styles reported that he found evidence of employer participation in election campaigns "in most cases in Georgia. South Carolina always has interference."

[27] Hugh E. Sperry, Director of 21st Region, Memo to Oscar S. Smith, January 14, 1947.

[28] In a number of representation disputes in the mid-1940s, the board ruled that employers' antiunion speeches, letters, and pamphlets were not in themselves unlawful interference with workers' rights of self-organization where the employer had otherwise not engaged in unfair practices. See, for example, *M.T. Stevens & Sons Co.*, 68 NLRB 229 (1946); *Arkansas-Missouri Power Co.*, 68 NLRB 805 (1946); *Fisher Governor Co.*, 71 NLRB 1145 (1946); and *Baush & Lomb Optical Co.*, 72 NLRB No. 21 (1947). The board justified this new policy by arguing that the labor relations climate of the late 1940s was very different from that of the mid-1930s. In the 1947 *Detroit Edison Co.* case, for example, the board argued: "This is 1947, not 1935; in the interim employees have learned much about protecting their own rights and making their own choices with the full fact before them." 74 NLRB 279 (1947).

[29] One cannot, of course, attribute unions' declining success rates in NLRB elections in the 1940s and 1950s exclusively to employers' vigorous antiunion electioneering. Unionization campaigns in the South and Southwest, in particular, encountered serious obstacles for a complex variety of political, economic, and cultural reasons. However, NLRB officials, academics, and labor leaders believed that employers' electioneering influenced the outcome of representation elections. Employers' organizations apparently agreed: they devoted significant resources in the 1940s and 1950s to educating their membership on management electioneering rights.

[30] From April-June 1944, outside unions won only 12 out of 20 elections in the furniture industry, 14 out of 22 elections in the leather industry, 17 out of 38 elections in the mining industry, and 29 out of 46 elections in the textile industry. "NLRB Elections Hit a Peak," *Business Week,* September 30, 1944.

[31] Labor-Management Relations (Taft-Hartley) Act, Section 8(c).

[32] The joint Senate-House conference on Taft-Hartley (which had a "proemployer" majority) reported that Section 8(c) deprived the NLRB of "a lot of latitude and is desirable because, in the past, the board has effectively prevented employers expressing their opinions even in the face of provocative and unfair union propaganda." "Analysis of H.R. 3020," As amended and approved by Senate-House Conference, May 29, 1947. Clark Clifford papers, Box 7 (Labor–H.R. 3020–Taft Hartley Bill–Analysis), Truman Library.

[33] See, for example, National Committee on Labor Law, National Lawyers Guild, "An Analysis of the Taft-Hartley Bill," June 10, 1947. Clark Clifford papers, Box 8 (Taft Hartley Bill - President's Correspondence); "Statement of Philip Murray Urging Veto of H.R. 3020," June 9, 1947. Papers of John W. Gibson, Assistant Secretary of Labor, Box 9 (Taft-Hartley); American Federation of Labor, "How the Taft-Hartley Bill Would Destroy Industrial Peace: Summary of the Most Destructive Provisions," June 1947. Papers of John W. Snyder, Box 9 (Taft-Hartley Bill, 1947), Truman Library.

[34] William Leiserson, letter to William Isaacson, June 26, 1948. William Leiserson papers, Box 40 (Taft-Hartley), Box 28 (NLRB), State Historical Society of Wisconsin.

[35] Quoted in "Employer Upheld in Antiunion Talk," *New York Times*, May 18, 1948. In the *Babcock & Wilcox* case, the employer held four "captive audience" antiunion meetings immediately prior to a representation election which the union lost.

[36] 78 NLRB 161 (1948). Distinguishing between a "threat" and a "prediction," the board argued that the employer's statements did not include threats to use his economic power to fulfill the prophecy.

[37] In the 1949 *G.H. Hess Inc.* case, for example, the International Ladies' Garment Workers' Union (ILGWU) won the election by a two-to-one margin, but the NLRB refused to certify the union after the company complained that an ILGWU organizer had threatened a worker with loss of her job if she voted against the union. The NLRB ruled that the organizer's statements were a "threat of economic reprisal" and thus the election did not "reflect the employees' free and uncoerced choice of bargaining representatives." National Labor Relations Board, "N.L.R.B. Sets Aside Election Because of Union Organizer's Preelection Threats," April 1, 1949. Clark Clifford papers, Box 10 (National Labor Relations Board), Truman Library.

[38] *Executive's Labor Letter,* May 25, 1948.

[39] During the General Shoe dispute, the employer had called workers into his office in small groups and read them an intemperate antiunion address, while plant supervisors visited workers at their homes to further distribute antiunion propaganda. Paul Herzog, "The National Labor Relations Board Today," Address before the Commonwealth Club of California, April 23, 1948. Paul Herzog papers, Box No. 5 (Speeches and Statements, 1947-1950), Truman Library.

[40] *Employee Relations and Collective Bargaining,* May 10, 1948, p. 1.

[41] Quoted in Julius and Lillian Cohen, "The National Labor Relations Board in Retrospect," *Industrial and Labor Relations Review,* Vol. 1, No. 4, July 1948, p. 655.

[42] *The Labor Trend: Management Rights*, October 12, 1948, emphasis added.

[43] See, for example, *Employee Relations and Collective Bargaining,* Report 149, May 31, 1948.

[44] Fred A. Hartley, Jr., *Our New National Labor Policy: The Taft-Hartley Act and the Next Steps* (New York, 1948), p. 121, emphasis added.

[45] *The Labor Trend: Management Rights*, October 12, 1948.

[46] Edwin Witte, "Taft-Hartley: Five Years Old," *The Reporter,* June 10, 1952, p. 11.

[47] For a full account of employer electioneering from a union's perspective, see Isadore Katz, *Taft-Hartleyism in Southern Textiles: Feudalism with a New Face* (New York, TWUA Publications, 1950).

[48] Regarding southern employers' militant antiunion electioneering, Brown posed the question, "Where should a line be drawn to prevent the antiunion employer from using his position of influence to interfere with the right of the employees to decide for themselves as to organization?" The board and the courts grappled with this thorny question throughout the 1940s and 1950s. Emily Clark Brown, *National Labor Policy: Taft-Hartley after Three Year, and the Next Steps* (Public Affairs Institute, Washington, DC, 1950), pp. 33-34, 49.

[49] In the postwar years, textile companies and major corporations such as DuPont and General Electric started to relocate plants from the unionized North to the nonunion South. See James T. Patterson, *Mr. Republican: A Biography of Robert A. Taft* (Boston, 1972), 363; Sanford Jacoby, "American Exceptionalism Revisited: The Importance of Management," in Jacoby, ed., *Masters to Managers: Historical and Comparative Perspectives*.

[50] "Taft Act Saw Cut in Union Victories," *New York Times*, February 7, 1949.

[51] Emily Brown, *National Labor Policy*, p. 49.

[52] Edwin Witte, "Industrial Relations and the Taft-Hartley Act," address at the Institute on Labor Legislation for Attorneys, Detroit, April 30, 1948. Clark Clifford papers, Box 8 (Labor Developments under Taft-Hartley, 1947-49), Truman Library.

[53] NLRB Legal Division, Analysis of the 1935 Wagner Labor Bill. RG 25, Records Relating to the Legal Division, 1935-39, Correspondence File, NA.

[54] Robert A. Taft, letter to C .E. Stevenson, President, Youngstown Steel Tank Company, December 18, 1952. Robert A. Taft, Snr. papers, Box 1236 (Labor), Library of Congress.

[55] Starting on March 2, 1954, the reconstituted NLRB had a 3-2 "proemployer" majority.

[56] At its 1954 convention, the AFL denounced employer interrogation as "an obvious attempt at intimidation and an unfair labor practice." Quoted in "Eisenhower Is Blamed by A.F.L. For N.L.R.B. 'Anti-Labor Policy,'" *New York Times*, August 11, 1954.

[57] Guy Farmer, "Free Speech in Labor Relations," Conference on Current Problems in Labor Relations and Arbitration, Cornell University, April 13, 1955, emphasis added. RG 25, Speeches of NLRB Chairmen, Other Board Members, and of the General Counsel, 1934-1962, Box No. 2, NA. In subsequent decisions, the Farmer labor board elaborated its policy in support of employers' interrogation of workers. In the 1955 *Mall Tool Company* case, for example, the board ruled that under Taft-Hartley both employers and unions were free to use "*legitimate methods of electioneering*" and that discussing unionization with workers on an individual basis "did not exceed the bounds of permissible campaigning." 112 NLRB 171 (1955), emphasis added.

[58] 107 NLRB 400, 409 (1953).

[59] Guy Farmer, "Free Speech in Labor Relations," Conference on Current Problems in Labor Relations and Arbitration, Cornell University, April 13, 1955. RG 25, Speeches of NLRB Chairmen, Other Board Members, and of the General Counsel, 1934-1962, Box No. 2, NA.

[60] W. Willard Wirtz, "Board Policy and Labor-Management Relations: 'Employer Persuasion'," in *Proceedings of the New York University Seventh Annual Conference on Labor*, May 5-7, 1954, p. 97, emphasis added.

[61] Willard Wirtz reported "an extraordinary combination of employer and community pressures upon the employees." Wirtz, "Employer Persuasion," p. 107.

[62] Between 1935 and 1953, union membership had grown from 3,659,300 to 17,010,033. See Irving Berstein, "The Growth of American Unions," *American Economic Review* (June 1954).

[63] Other Farmer NLRB decisions expanding the boundaries of employer speech included the 1954 *Chicopee Manufacturing* decision which established the "prophecy doctrine" allowing employers to state that a vote to unionize might result in relocation of the plant; the *Esquire* decision, also in 1954, establishing employers' right to say that he would refuse to bargain with the union even if it won the upcoming election, because this statement was "merely an expression of the employer's legal position"; and the *Southwestern Company* decision upholding employers' right to tell alien workers they might be deported if they voted for a communist union. *Chicopee Mfg.*, 107 NLRB 31 (1954); *Esquire Inc.*, 107 NLRB 1,238, 1,239 (1954); and *Southwestern Co.*, 111 NLRB 805 (1955).

[64] For a comprehensive account of labor policy under the Farmer NLRB, see James A. Gross, *Broken Promise: The Subversion of U.S. Labor Relations Policy, 1947-1994* (Temple University Press, Philadelphia, 1995), pp. 92-121. Predictably, employers' publications openly welcomed this transformation in NLRB policy and devoted considerable space to educating their members about new "Legitimate Ways to Resist a Union Drive." See *Personnel*, January-February 1958.

[65] Wirtz, "Employer Persuasion," p. 103. Throughout the Eisenhower years, the courts exercised an additional conservative influence on the board's interpretation of Section 8(c). In the 1954 case *N.L.R.B. v. F.W. Woolworth Co.*, for example, the Court of Appeals overturned an NLRB ruling against an employer who held a captive audience speech in violation of his own no-solicitation rule and subsequently refused the union's requests to address workers on company premises during working hours. The court ruled that ordering an employer who exercised his right of free speech to provide an equal opportunity to the union would "limit the application of the right of free speech and nullify the purpose of that provision as found in the act's legislative history." Quoted in *Monthly Labor Review*, August 1954, pp. 899-900.

[66] "Unions At a Low in Poll Victories," *New York Times*, May 5, 1959. By 1961, union victories had fallen to 56%. Just seven years earlier, unions had won 73% of NLRB elections. NLRB Statistics.

[67] J. Warren Madden, Statement before the Committee on Labor of the United States House of Representatives considering bills H.R. 2761, H.R. 4376, H.R. 4400, H.R. 4594, H.R. 4749, H.R. 4990, and H.R. 5231, to amend the National Labor Relations Act, emphasis added. RG 25, Records Relating to the Smith Committee Investigation. Records of the Assistant General Counsel, Excerpts from speeches and articles, 1935-39. Box No. 1, NA.

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XIII. POSTER SESSION I

An Analysis of Union Success in Multiple-Union Certification Elections

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I investigate different explanations, including union competition and selection of favorable organizing targets by multiple unions. The independent effect of multiple unionism on election outcomes is identified from a justifiable proposition—that the reaffiliation of the IBT and AFL-CIO in 1987 only influenced election outcomes through a reduction in the frequency of multiple-union elections.

Empirical evidence, derived from supplemented NLRB election data, suggests that competition substantially increases the unionization probability. This finding contrasts with the long held viewpoint that multiple unionism must induce wasteful duplications of organizing expenditures.

Union Membership or Free-Rider Status: The Paradox Revisited

CHRISTINA CREGAN
University of Melbourne

This paper attempts to solve the free-rider paradox by developing an earlier work (Cregan and Johnston 1990) and investigating it in a situation of voluntary unionism. First, theories of union membership are critically appraised. In summary, the conventional model of union membership rested on a consumer services basis where density was considered to be wholly the result of a demand for union services. This approach, however, is weakened because it takes no account of the constraints imposed by a lack of union presence. Thus more recent work attempted to remedy this limitation by introducing a dual framework, including both propensity or inclination and opportunity to unionize.

Second, a new model is constructed which abandons the assumption of homogeneity and asserts that some members of a union join the movement via different sources of motivation than others or acquire those characteristics once they have joined. The model is tested by investigations carried out in a situation of voluntary unionism.

Perceived Overqualification Scale: Conceptualization and Validation

GLORIA JONES JOHNSON, PAULA C. MORROW, AND W. ROY JOHNSON
Iowa State University

Drawing upon the person-environment (P-E) fit literature, this study presented a scale of perceived overqualification. Data from three independent samples were used for the assessment of measurement properties of the scale. The results of confirmatory factor analyses supported two dimensions and indicated that the measurement model parameters partially generalized across samples. Correlational and additional confirmatory factor analytic results rendered empirical support for most of the postulated relationships of the two overqualification dimensions with somatization, job satisfaction, and organizational commitment variables. The findings indicate that the scale of perceived overqualification needs to be further developed and validated in different samples. The implications of the findings for person-job fit are discussed.

Ports of Entry in the Youth Labor Market: A Mutual Dependency Analysis of Closure

CHRISTINA CREGAN
University of Melbourne

This paper investigates internalization in the youth labor market by integrating sociological and economic theories of closure. It challenges the universality of Osterman's dualist model and the typologies which depict youth workplace participation in simple terms of secondary work and attitudes. It suggests that in a context where there is an heterogeneity of job types available to a range of young people, internalization processes can operate even in the short term. As a consequence, it contends that young people are not necessarily feckless by nature of their age.

A theory of mutual dependency is developed to explain the existence of short-term promotion/training opportunities. Models are tested by several

investigations of a large panel data set of British early school-leavers which took place at the start of the Thatcher era in a situation of some job heterogeneity for young people.

The results suggest that short-term internal promotion and enterprise training opportunities were available which provided both a "practice pitch" and a record of responsible work attitudes. Wages in such jobs were higher than those in unskilled work. These findings are discussed in light of recent developments in the youth labor market, and it is concluded that lack of job opportunity is likely to have an impact on the strength of internalization processes and, thereby, wage levels.

Free Riders and Dues Payers: Determinants to Dues-paying Membership in an Existing Bargaining Unit

JOHN MCCLENDON
Temple University

This study examines determinants to joining the Temple Association of University Professionals (TAUP), a longstanding AFT affiliate that is the exclusive representative of 922 faculty members at Temple University, 52% of whom are dues-paying members. Results indicate that attitudes about unions in general, the costs of union dues, and beliefs about the appropriateness of unionization for professional employees were related to joining behavior. In contrast, job attitudes, attitudes about the employer, perceived bargaining unit effectiveness, political ideology, and perception of faculty governance effectiveness were not related to membership status.

Union Participation: A Labor Education Perspective

DAVID M. KAPLAN AND EDWARD J. HERTENSTEIN
University of Illinois at Champaign-Urbana

Conceptualizations of union participation need to be expanded to include attendance at labor education programs. These educational programs represent both a viable independent form of participation as well as being integrally connected to other union activities. For example, a course in grievance handling may be required for an individual to hold a position of steward within a local, whereas attendance at a multiday residential program may represent a reward for past union participation. However, these programs also serve to bring active members from diverse locals together, which facilitates sharing information and building connections and solidarity within the labor movement. Finally, this paper also considers the personal growth component of participation in labor programs.

Exploring Preferences for Procedural and Distributive Justice

KAREN E. BOROFF
Seton Hall University

The author bridges two research streams to investigate whether individuals have a taste for procedural or distributive justice. Using two unique sets of unionized employees drawn both from the private and public sectors, the author finds that women express a higher preference for process fairness compared to men and that minorities (compared to nonminorities) have a higher preference for outcome fairness. Given the stability of the findings across the two data sets, the author concludes that a preference for one form of justice over the other may be a personal trait that is slow to change and one that may be generalized across groups of employees.

Skill-based Tools as an Expression of Managerial Discretion

ALAIN KLARSFELD
ESSEC-IAE d'Aix Provence

This paper focuses on pay systems in six French pharmaceutical firms. Owing to an industry-level agreement, all firms had to set up internal classifications using both notions of job and skill. More analytical work and more worker or union participation were used to describe and evaluate jobs than to describe and appraise individuals' skills. In all firms, skills do not give way to detailed observation of work or interviews as do jobs. Decisions regarding skill description and appraisal are unilateral. This supports the hypothesis that in this particular sector, skill-based tools are an expression of managerial discretion, not tools aimed at achieving greater "objectivity."

Virtual Labor Education

Edward J. Hertenstein
University of Illinois at Champaign-Urbana

This article examines the reactions of participants to distance-learning technology as used in a labor education setting. Participants in both distance and traditional labor education classes were asked for their opinions about the course structure and content after completing the course. The results are somewhat surprising in the light of the communications theories of media richness and social presence, finding that the participants in the distance classes were more satisfied than those in the traditional classes.

A Comparative Analysis of McDonald's Labor Relations in Europe

Tony Royle
Nottingham Tent University

This paper examines McDonald's labor relations in a number of different European countries. How has McDonald's operated within the constraints of different legislative industrial relations systems? In particular, the paper focuses on collective bargaining, union membership, and works councils. The findings suggest that McDonald's has to some extent been able to operate independently of national systems. Where adaptations have been made it is where legislation is very stringent and/or where the corporation's public image is threatened. This raises a number of questions about the adequacy of legislative systems in protecting workers rights, especially where these rights are challenged by powerful MNEs.

XIV. POSTER SESSION II

Flexible Work Practices: Transforming Bargaining Unit Employees?

Terry H. Wagar
Saint Mary's University

Clive H. J. Gilson
University of Waikato

This study builds on previous research addressing "workplace transformation" and the adoption of flexible work practices. The results are based on 926 responses from Australian and New Zealand workplaces. Less than 10% of bargaining units had five or more of the seven practices examined in the study (at 50% level of penetration). The presence of flexible work practices was positively related to investment in training, percentage of the workforce unionized, and a more positive labor climate. Smaller organizations, multiestablishment employers, and employers in the manufacturing sector were more likely to report having flexible work practices.

A New Method to Assess Employer Responses to Employment Discrimination Laws Affecting Women

Mary E. Graham
George Washington University

Julie Hotchkiss
Georgia State University

This paper proposes a new method for the Equal Employment Opportunity Commission to assess employer responses to federal antidiscrimination statutes. A new approach is needed because federal antidiscrimination efforts have not remedied persistent gender-related pay differences. We propose a new emphasis on monitoring gender-related outcomes in the form of a comprehensive "gender-in-employment" index. The index recognizes the related roles of employers' compensation, recruitment, and selection activities; corresponding pay, job placement, and hiring discrimination; and the interplay of race, gender, and disability employment discrimination. Using several theories of firm behavior, we argue that a gender-in-employment index will motivate employers to explore and implement policies to reduce the earnings gap between women and men.

"Japanization" of a Performance Appraisal System

KOSHI ENDO
Meiji University

The Japanese performance appraisal system was initially introduced in the 1920s, modeled after a system that was gaining wider use in the U.S. But after undergoing different histories of development, the two systems in their present form cut a stark contrast. The system now in use in Japan is characterized above all else by the fact that it has kept intact as its cornerstone what used to be the defining features of the American system until the early 1930s and has incorporated minor additions of Japanese origin, while it has refused to emulate most of the significant changes in the American system since the 1930s.

Impact of Contingent Employment on Workers' Compensation Insurance Costs

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University of Minnesota

BRIAN ZAIDMAN
Minnesota Department of Labor and Industry

This study analyzes the effect of contingent employment on workers' compensation costs. It is hypothesized that contingent employee workers' compensation costs will be higher than that of comparable noncontingent employees, even if they have the same demographic profile and work in the same job because of a "true safety" effect or because of a "claims-reporting" effect. Workers' compensation claims for 21,749 workers in the state of Minnesota during the 1991 and 1996 time period have been analyzed.

Maximum likelihood methods using Weibull distribution and logit estimation have been used to test the effects of contingent work on nonwork spells due to the injury ("true safety effect") and probability of denial of liability ("claims-reporting" effect), respectively. The results show that workers' compensation costs for leased workers (per worker) were three times greater than full-time and almost nine times greater than part-time workers. Also, being a leased employee was associated with longer claim duration and more claim denials.

What Determines the Duration of Wage Bargaining in Korea?

YOUNG-MYON LEE
Dongguk University

The wage bargaining parties in Korea are busy in contract negotiation because until 1997, all bargaining in Korea had a duration of one year. The average duration, however, increased from five weeks in 1990 to seven weeks in 1993. There is no higher settlement rate just before and after the old contract expiration. Neither firm's financial performance nor information-related variables show a strong pattern on duration. But the settled wage rate is negatively related and strike occurrence positively related to wage bargaining duration. The union needs to do something to stop the sharp decrease of union membership.

The Ramifications of the *Gilmer* Decision for Firm Profitability

STEVE ABRAHAM
SUNY-Oswego

PAULA B. VOOS
Rutgers University

The impact of *Gilmer v. Interstate/Johnson Lane Corp*. was assessed by examining the effect of the decision on shareholder returns in two samples of firms. Shareholder returns of securities firms rose between 5% and 6% in response to the decision, indicating that firms in the securities industry benefited substantially from being able to require that their employees arbitrate all employment-related disputes. The results were less clear in a sample of firms in other financial service industries. This indicates that the effects of *Gilmer* on the nonunion sector in general are more ambiguous.

What Happens after Job Placement? On-the-Job Discrimination and Employees with Disabilities

DEBORAH B. BALSER
University of Missouri-St. Louis

ROBERT N. STERN
Cornell University

This study examines perceptions of discrimination by employees with disabilities, considering factors associated with these perceptions and employees' responses to suspected discrimination. Individual-level variables (human capital) are combined with organizational-level variables (structural) in a single model of perceived inequality. Data come from surveys administered to employees with disabilities and their employers. Individual and organizational variables together provide a better understanding of perceived discrimination than either set alone. Employees experience discrimination over most terms and conditions of employment. Employees frequently use informal conflict resolution mechanisms and infrequently use formal mechanisms in dealing with discrimination.

Paradoxes and Boll Weevils: Economic Theory and the Challenge of Innovative Work Practices

MORRIS ALTMAN
University of Saskatchewan

A fundamental finding of the current empirical industrial relations and human resource management research is that similar types of firms producing similar types of products adopt different sets of work practices or cultures. However, only a small minority of firms have adopted the superior work cultures. This is a paradox for neoclassical theory which predicts the dominance of the more efficient work cultures. In sharp contrast, a behavioral model of the firm reveals that even under conditions of competitive product markets, rational utility maximizing individuals will produce competitively using traditional work cultures. More efficient work cultures need not dominate. Moreover, the fact that market forces do not displace the traditional work cultures in no way demonstrates their economic efficiency.

Working Time and Work-Family Balancing: A Canadian Perspective

DIANE-GABRIELLE TREMBLAY AND DANIEL VILLENEUVE,
Télé-université, Université du Québec

In view of the increasing difficulty confronting workers who wish to balance work and family in different ways throughout their career and their life course, it appears that private and public policies have not, to date, been able to face this challenge. Our article presents data which aim at a better understanding of the causes and implications of the difficulties of work-family balancing throughout the life course and investigates some concrete means designed to alleviate the difficulties. The data presented come from different surveys on working time and family issues. It is argued that if working time is addressed with the objective of restructuring or reducing it, it is possible to significantly lessen the tension between the sphere of work and that of family and individual life. This does not necessarily solve the problem completely, since it does not ensure a better gendered division of labor between men and women within the home and within paid employment but offers some elements which alleviate the difficulties. Our paper will conclude with a few principles which appear essential in work-family balancing programs. It should be noted, however, that we feel the majority of these programs are only partial solutions to a more equal-gendered division of labor, since to a certain extent they often contribute in segmenting work and family and support the further concentration of women in family roles, while men are not forced to increase their family responsibilities.

XV. ANNUAL REPORTS

IRRA EXECUTIVE BOARD MEETING

Monday, June 1, 1998

Omni Shoreham Hotel, Washington, DC

The meeting was called to order at 11:10 a.m. by President F. Donal O'Brien. Present were: President-elect Thomas A. Kochan and Board members Eileen Appelbaum, Bonnie P. Castrey, Janet Conti (also Chapter Advisory Committee Chair), Dorothy Sue Cobble, Robert E. Dahl, Mary M. Mauro, Craig Olson, Paul Osterman, John Serumgard, Jan Sunoo, and Gregory Woodhead. Also present were Paula Voos, Editor-in-Chief; Kay Hutchison, Administrator and Managing Editor; and Lynn Case, national office. Absent were Past President Francine D. Blau and Board members Bruce E. Kaufman, David B. Lipsky, Robert Pleasure, and Beth Shulman. Also absent was Secretary-Treasurer David Zimmerman.

Guests at the meeting were former President Hoyt N. Wheeler and President-elect-elect nominee Sheldon Friedman.

Minutes of the January 2, 1998, Executive Board meeting in Chicago and April 6, 1998, strategic planning session in Chicago were approved as distributed.

Report of the Administrator. Administrator Kay Hutchison reported on national finances, membership statistics, and publications. She indicated that 1997 was basically a break-even year for the Association. In addition to regular operating revenue, approximately $40,000 was raised from individual and organizational contributions to fund the Association's 50th anniversary magazine, *Perspectives on Work,* and anniversary video. Dues revenue are somewhat down through the first half of 1998, largely attributable to the half-price ($30) new-member offer available to IRRA chapter members. The absence of a 1998 Spring Meeting and the proximity of the annual meeting in Chicago to the national office will keep meeting expenditures to a minimum.

Report on Strategic Planning. President-elect Tom Kochan reported on the renewal activities underway. He indicated they will take some time to generate results and suggested we need to dig more deeply to get to targeted audiences and objectives—chapters, academic disciplines, and grant money.

Kochan reported that the Sloan Foundation had approved the IRRA's funding proposal for the HR Network. Several members expressed concern over what IRRA will be committed to after the money from Sloan is gone. Kochan stated that the network is one way to target academics to become members. The network is overseen by a governing board and plans are in place to add a labor educator to the board. The Sloan funds provide some overhead which can be used to support the national office. Board member Sue Cobble said the Sloan funding appears to be a positive development but that the name of the network seems to convey old HRM. The network needs to define itself more broadly. An article about the network is currently being drafted for *Perspectives on Work*, and it was suggested that perhaps the article could rearticulate the broad goal of the Network.

Members discussed alternative approaches to recruiting academic members. Kochan proposed a membership recruitment initiative in addition to specially designed sessions at the IRRA annual meeting. He suggested we approach sociologists, political scientists, and others through letters signed by individuals from their professional organization telling them about the benefits of IRRA membership. Another avenue would be for the IRRA to hold a joint session (caucus) at the Academy of Management meeting in San Diego. Board member Paul Osterman responded that current publications are not going to attract sociologists. They might be interested in the program, but we would have to offer more sessions and change the nature of meeting. Sheldon Friedman said we need to learn why these groups, which are involved in work relationships, are not members. He suggested a questionnaire be sent to the target audiences. Another suggestion was to approach Dan Cornfield, editor of *Work and Occupations*, proposing a letter cosigned by him and colleagues Jeff Pfeffer and Ruth Milkman to invite sociologists to become IRRA members. Sociologists could be invited to submit a session for Boston or to hold a premeeting session. Editor-in-Chief Paula Voos remarked that labor historians and sociologists have indicated to her that IRRA meetings don't draw people they want to rub elbows with. We need to concentrate on our primary constituencies—younger labor economists; we won't ever draw enough sociologists to be a critical mass. Kochan suggested that a point person in each academic area be appointed to coordinate recruitment activity.

Board member Roger Dahl said the problem is not just finding the right mailing list but our product line. HRM practitioners are not interested in what we are doing. We need to focus on rebuilding organizations for the next century. The question is how can we get management people interested in the work we do. If we could only convey our message more effectively, management practitioners would enthusiastically sit down and talk to us. While the network is targeted to academics, board members asked what we can do to appeal to management. Board member Craig Olson asked whether practitioners wanted to listen to academics or to their own. Focus groups were suggested as a possibility. Board member Paul Osterman suggested we offer to organize more practitioner sessions at the annual meeting and preconference day and that the IRRA display more of a presence at other professional meetings, i.e., rent booth space. Board member John Serumgard remarked that every academic has some relationship with practitioners. The product is what management and union will hire academics to study. What are the interests of union and management?

Kochan circulated an IRRA proposal submitted to the Ford Foundation. He has talked to contacts about arranging a series of regional meetings that would involve IRRA chapters. Individuals and groups in several areas have already expressed interest in the idea. He envisions a membership campaign in advance of such meetings; perhaps a registration and dues combination. Board member Eileen Appelbaum said Ford is giving active support to strengthening organizations like ours. We should build in funding for national office to support these activities and to support building chapter relations. Several members offered to help with the proposal or to solicit letters of support from local labor and management. Board member and NCAC chair Janet Conti indicated that she sees a positive slant here for national and chapter relations—one that offers dialogue. Board members Jan Sunoo, Roger Dahl, Jan Conti, and Eileen Appelbaum volunteered to help with the proposal and to garner support for it. Board member Beth Shulman will also be asked to assist.

Members discussed the possibility of applying for an FMCS grant and whether the IRRA would have to constitute a labor-management committee to be eligible. Friedman said we are too late for this year as grants are awarded in May. Typically, proposals are funded up to $100,000, but only once. The next opportunity would be for funding in 2000. Al Bilik could supply a proposal sample, and Peter Regner at the FMCS could send a proposal application. It was noted that the Southern California IRRA Chapter has been awarded a $100,000 FMCS grant to develop high school curricula to teach students about collective bargaining and dispute resolution. Friedman said he would like the national to work on format similar to the LA project. Board members Bonnie Castrey and Jan Sunoo expressed interest in working on the project. Sunoo thought the national IRRA would be given effective consideration as a labor-management committee. Voos thought this was an area we could overlap with the Ford project. Board member Greg Woodhead stated it would be a good opportunity to teach young people negotiating and dispute resolution skills. Dahl said the prospect was interesting but that the curriculum would not be universally acceptable. Friedman will pursue the idea, and Castrey and Sunoo will assist.

The Board adjourned for lunch and informally discussed the June 1999 policy meeting and unitary dues.

Old Business: 1999 Dues. Board member and Membership and Finance Chair Greg Woodhead reviewed the recommendation of the Membership and Finance Committee that regular dues for 1999 be raised from $60 to $75. He indicated that the committee's recommendation was premised on the Board's commitment to the strategic planning process and associated changes within the Association and the IRRA's financial condition. Members acknowledged that dues increases are never popular but that the Association cannot sustain deep losses and continue to exist. If we are successful in reestablishing the membership, we may be able to lower dues over time. Motion was made and seconded to raise regular dues for 1999 to $75. Motion carried on voice vote.

Members noted the need to strengthen meeting income and conference donations. It was the consensus of the Board that copies of the 50th anniversary video be distributed to IRRA chapters without charge to increase the viewing audience. Educational copies of the video will be available through the national office for classroom and other uses at a nominal charge.

New Business: Resolution in Beverly Enterprises, Inc. v. Kate Bronfenbrenner. The following resolution was presented for consideration to the Board in response to a lawsuit filed by Beverly Enterprises, Inc., a national operator of nursing homes, against Kate Bronfenbrenner, Cornell University, over her testimony at a town hall meeting attended by members of Congress:

> The Industrial Relations Research Association (IRRA) is the nation's pre-eminent association of professionals from the academic, business, labor, and neutral communities that is committed to the analysis of the full range of labor, employment, and workplace issues. While the IRRA takes no position on partisan public policy matters, it encourages members to speak freely about the results of their research, experience, and professional

> opinions to public policymakers and others involved in these issues.
>
> Dr. Kate Bronfenbrenner is a labor relations scholar who presented to a public forum findings and interpretations from her research on whether Beverly Enterprises, Inc., had complied with the National Labor Relations Act. Beverly Enterprises subsequently sued Dr. Brofenbrenner for defamation. The trial court dismissed the lawsuit.
>
> Consistent with its nonpartisan principles, the IRRA takes no position on Beverly Enterprises' labor relations practices or the views expressed of those practices by Dr. Bronfenbrenner, or her recommendations for changes in national policy. The IRRA is, however, deeply concerned that this suit infringes on the right of free speech and, if pursued, would dissuade other members of the IRRA from addressing controversial issues in our field. For these reasons we urge Beverly Enterprises to pursue no further appeal. If it does, we hope the Court of Appeals will sustain the dismissal.
>
> A lawsuit such as this is not an appropriate way to address the substantive merits of the issues involved. Instead, we invite the parties to discuss the labor relations and public policy issues in question at a future meeting of the IRRA.

After lengthy discussion, it was moved and seconded to adopt the resolution. Upon voice vote, President O'Brien announced the motion carried, and the resolution was adopted. It was the consensus of the Board that adoption of the resolution be conveyed to the parties (Kate Bronfenbrenner, representatives of Beverly Enterprises, and the court of record) via mail and to the IRRA membership via IRRA newsletter and listserver.

New Business: Nominating Committee for 1999 Slate of Candidates. President O'Brien announced his selections for the Nominating Committee, including John Neil Raudabaugh as chair. Members discussed the need for gender and racial diversity on the Nominating Committee and authorized the president to appoint members to the 1999 committee to reflect the same.

The meeting adjourned at 4:00 p.m.

IRRA EXECUTIVE BOARD MEETING

Saturday, January 2, 1999

Hyatt Regency Hotel, New York City

The meeting was called to order at 6:37 p.m. by IRRA President F. Donal O'Brien. Present were President-elect Thomas Kochan (also Program Committee Chair), and Board members Eileen Appelbaum, Dorothy Sue Cobble, Roger Dahl, Bruce Kaufman, David Lipsky, Mary Mauro, Craig Olson, Paul Osterman, Robert Pleasure, John Serumgard, Beth Shulman, Jan Sunoo, Gregory Woodhead (also Finance Committee Chair), and incoming Board members Ken McLennan, Lavonne Ritter, Stephen Sleigh, and Daphne Taras. Also present were David Zimmerman, Secretary-Treasurer; Paula Voos, Editor-in-Chief; Kay Hutchison, Administrator and Managing Editor; Janet Conti, Chapter Advisory Committee Chair; and Lynn Case of the national office. Absent were Past-President Francine Blau, Board member Bonnie Castrey, and incoming Board member Cheryl Maranto.

Guests at the meeting were Sheldon Friedman, IRRA President-elect in 1999; John F. Burton Jr., Policy Meeting Committee Chair; and Hoyt Wheeler, Coeditor of *Perspectives on Work.*

President O'Brien thanked retiring Board members Appelbaum, Dahl, Kaufman, Olson, and Pleasure and presented them with certificates of appreciation. O'Brien welcomed incoming Board members Maranto, McLennan, Ritter, Sleigh, and Taras. President-elect Tom Kochan presented a recognition plaque to retiring President O'Brien.

Minutes of the June 1, 1998, Executive Board meeting in Washington, DC, were approved as distributed.

Report of the Nominating Committee: Chair John Raudabaugh was not in attendance so Secretary-Treasurer Zimmerman gave the report in his absence. Nominating Committee members for 1998 were Fran Blau, Herta Suarez, Sergio Delgado, Trude Elliott, Sanford Jacoby, and Tim Leahy, in addition to Chair Raudabaugh. The committee met via a conference phone call on December 1. Zimmerman reported the committee's unanimous selection of Maggie Jacobsen for 2000 IRRA President-elect and announced the committee's selection of candidates for the Executive Board for terms beginning in 2000. Motion was made to accept the committee's recommendations in compliance with the requirements of the constitution and bylaws. The motion was seconded and approved. President-elect Kochan asked members to be proactive in the process of identifying names for future nominations for officers and Board members.

Report of the Strategic Planning Committee: Kochan reported that the committee continues to address issues concerning the future of the association. The committee identified two main goals: (1) ensuring that the Association is the pre-eminent organization in industrial relations and (2) achieving substantial membership growth.

Kochan challenged each member to make increased membership a personal goal. He reported on the association's efforts to address the needs of our individual constituencies. Kochan said the Sloan Foundation grant to the IRRA supports the HR Network which seeks to broaden the association's academic base. The network focuses on issues of work practices, labor-market inequality, and technology and their impact on work and workers. He announced that Craig Olson will host an HR Network conference at the University of Wisconsin-Madison in March. Kochan reported that 35 Ph.D. students attended a workshop at the annual meeting as part of the HR Network. The Sloan Foundation grant will continue for another two years. Kochan announced the formation of a scholarship fund in honor of former IRRA President Robert McKersie. Kochan asked UCIRHRP Directors for their assistance in promoting the IRRA to students and in bringing in new Masters students.

To meet the needs of our practitioner constituency, Kochan said the association is providing more services to chapters and will host 4-5 regional forums during 1999.These meetings will receive support from grants from the Department of Labor and the Edna McConnell Clark Foundation. The meetings will engage chapter and individual members in discussions about the social contract at work. The first meeting is scheduled for Boston on March 22 on the theme of building a family-centered labor market policy. The conference will be held at Northeastern University and is cosponsored by the Boston IRRA Chapter and the Labor Guild. Additional regional meetings will be scheduled for Minneapolis, Chicago, Southern California, Seattle, and Atlanta and possibly other sites. The association continues publication of *Perspectives on Work* to meet the needs of practitioners. Kochan reported that the National Policy Meeting in Washington, DC, in June will bring practitioners, professional leaders, and policymakers together to discuss employment policy. He announced that the theme of the next annual meeting in Boston will be "How to Reconstruct the Changing Social Contract at Work." Kochan said the IRRA video is still available through the national office for chapter and educational use. Kochan asked that members work to increase the organizational memberships of the association.

The Board discussed ways to increase membership within fields other than industrial relations or human resources. Administrator Hutchison said the website has increased IRRA visibility to persons outside the association. Osterman asked whether the association could assist with travel grants to bring key people, young academics, or students to the meetings. Hutchison said the HR Network did provide $100 travel grants to students to attend this meeting. Kochan said the association should recruit center directors to appoint a local liaison with the association to create interest in our meetings and membership in the association. Allied fields suggested include sociology, labor studies, and labor history. Secretary-Treasurer Zimmerman agreed on the importance of reaching out to other areas but said we need to rely on the IR/HR base we have on campuses and to ask them to contribute to what we are already doing. Woodhead said each member of the association should commit to finding at least one new member during 1999. Taras said that IRRA has worked to incorporate other fields of interest into IRRA meetings through planned sessions but asked if our members have reached out and gone to other association meetings. Perhaps we should look to sponsor sessions away from our meeting rather than expecting other disciplines to come to us. Kochan agreed, saying we should find funding to do that and urged Board members to take up the initiative.

Burton said that IRRA publications are viewed as second rate by most universities when reviewing candidates for tenure. He said it is a reality we need to face. He said IRRA should consider moving to a refereed journal like the AEA, Academy of Management, and the *Industrial Relations Review*. If we are going to appeal to young academics we need to have a product that appeals to them. Lipsky said there were already too many industrial relations journals, that circulation was declining, and asked if we could compete with already established journals.

Report of the Editorial Committee: Editor Voos reported that the committee discussed possibilities for the 2001 research volume and that a decision would be made and reported at the National Policy Meeting in Washington in June. She announced John Logan as the winner of the Student Writing Award with a paper titled “Certification, Elections, and Employer Free Speech.” The committee voted to present two young scholar awards for 1998: John Budd, University of Minnesota, and Kate Bronfenbrenner, Cornell University. Voos and Kochan urged members and UCIRHRP directors to encourage publicity and submission of candidates for these awards.

Report on Perspectives on Work: Coeditor Hoyt Wheeler reported that the December 1998 issue of *Perspectives* (Vol. 2, issue 2) contained articles from the new law forum on employment law and its administration. President-elect Kochan and Wheeler serve as current coeditors of the magazine.

They have asked that consideration be given to editorial arrangements over the longer term. A motion was made, seconded, and approved that subject to the Board's approval, the President appoint an editorial board to review works submitted for *Perspectives* and to encourage greater opportunities for publication, particularly among practitioners. Kaufman suggested that as a practitioner magazine, *Perspectives* need a practitioner as coeditor.

Report of the Chapter Advisory Committee: Chair Conti announced that for the first time in many years the committee has full representation of the four constituent groups as well as geographical diversity. She reported on a committee conference call regarding a survey of chapter presidents on unitary national and chapter membership dues and national/chapter relations. Conti said 23 responses had been received to date. NCAC members felt there was insufficient information on which to base a recommendation at this time. Acting on the recommendation of several chapters, the committee decided to rework the questionnaire and to poll individual chapter members. The questionnaire will be distributed in late February, and the committee anticipates having a recommendation at the June meeting in Washington. Conti said initial survey responses indicate support in two areas: the *Perspectives on Work* magazine and regional meetings. Other NCAC recommendations include putting the *Proceedings* on CD-Rom and the directory on the website and sharing chapter/national news in a combined newsletter. Conti announced that five Chapter Merit awards for 1998 would be presented at the Chapter Representatives meeting. Conti said NCAC members whose terms were expiring had agreed to serve another three-year term bringing the committee to its full twelve-member complement. Conti has also agreed to continue to chair the committee. President O'Brien said survey responses indicate strong member loyalty to the association, and that despite some differences, discussions continue about how best to strengthen the organization.

Report of the Program Committee: President-elect Kochan, Chair of the Program Committee, reported that the deadline for program submissions for the 52nd Annual Meeting in Boston, January 7-9, 2000, had been extended to January 15, 1999, and that the selections would be made after that date. The theme for the Boston meeting is "Reconstructing the Social Contract at Work." Kochan said the meeting will be a capstone to the regional forums held throughout the country during 1999. The meeting will highlight expanded special sessions that appeal to a variety of constituencies. Kochan said there were approximately 325 participants on the January program and he wanted that trend of full involvement to continue. Kochan would like to see the meetings used in new ways to present material published in *Perspectives* as a session, the development of a refereed journal, and the *Proceedings* put on CD-Rom. Kochan announced that Paul Osterman will replace Morley Gunderson as an academic representative on the Program Committee.

Report of the National Policy Meeting Committee: Chair Burton reported on the new format for a national policy forum in lieu of the traditional IRRA Spring Meeting. Planning will be handled by a national planning committee rather than a committee from the local chapter. The meeting will be held in Washington, DC, every year or every other year and will emphasize policy issues with greater practitioner involvement. The success of the 1999 meeting will determine how future meetings are planned and conducted. Critical to the success of this meeting is the active involvement of practitioners. Burton announced the dates of June 17-19, 1999, at the Hyatt Regency Washington on Capitol Hill. He said the Department of Labor has provided a grant of $25,000 in support of the national and regional meetings. A general announcement about the meeting will be mailed to the membership, followed by more complete program information later.

The Board discussed ways to publicize the Washington meeting through C-Span, CNN, and other media and the need to involve congressional staffers. Shulman said that since there are many policy meetings in Washington, the association needs to publicize itself as a unique and diverse organization that offers a cross-section of constituencies and that the meetings should have some controversy in discussions and topics on various issues. Kaufman said that the association needs to ensure a balance of speakers and to uphold its nonpartisan policy on issues. Serumgard said cosponsors representing all the various constituencies within the association should be recruited.

Report of the Finance and Membership Committee: Chair Woodhead reviewed current financial data and membership statistics. He reported the association had a modest surplus for the year. He said new members increased by 68 or 2%. Organizational dues were raised in 1998 from $200 to $250 per year in the annual category. The 1999 budget includes additional grant funds ($235,000) but also increases the activities and commitments of the association. The Finance and Membership Committee recommended and the Board approved the following actions: (1) continuation of the half-price introductory offer to chapter members who join the national association for the first time (25% of the 205 introductory offer new members had renewed at the full price for 1999 by the end of 1998), (2) bonuses for staff who worked on *Perspectives on Work*, (3) appointment of a committee to review the dues structure of the association, and (4) no dues increase for 2000 (dues will remain at $75.00).

New Business: O'Brien reported that Administrator Hutchison has announced her desire to move on to other areas professionally and that the location and staffing of the association should be reviewed. The association has been located at the University of Wisconsin-Madison since the 1950s and prior to that briefly at the University of Illinois-Champaign-Urbana. Secretary-Treasurer Zimmerman noted that at various times other institutions have expressed an interest in hosting the IRRA office and have participated in the work of the association, particularly through publication of the newsletter and *Perspectives* and editorial duties. Zimmerman said 1999 would be a transitional year for the IRRA and that Hutchison will continue to serve as administrator and managing editor until the issues of location and staffing were resolved. Hutchison was directed to put together information on site requirements and association functions and to solicit expressions of interest from potential host sites. It was moved, seconded, and approved that a committee comprised of O'Brien, Kochan, Friedman, Conti, Zimmerman, and Hutchison (ex officio) be formed to review proposals from institutions interested in hosting the association and to make recommendations to the Executive Board at its meeting in Washington in June.

Announcements: The Executive Board will meet at 7:30 a.m., January 3, 1999, in the Booth Room of the Grand Hyatt Hotel for a strategic planning session.

Motion to adjourn at 9:40 p.m.

IRRA GENERAL MEMBERSHIP MEETING
Sunday, January 3, 1999
Grand Hyatt Hotel, New York City

IRRA President F. Donal O'Brien called the meeting to order at 4:45 p.m.

Report on the 2000 Annual Meeting: President-elect Tom Kochan announced that the next annual meeting will be held January 6-9, 2000, in Boston. The theme of the meeting will be "Reconstructing the Social Contact at Work," and Kochan encouraged members to contribute session proposals around that theme. The deadline for submission of proposals has been extended to January 15, 1999. The Program Committee is interested in innovative ideas for the preconference and regular sessions. As evidence of the Association's successful efforts to increase participation and representation on the program, Kochan noted there were 325 participants listed on the 1999 January meeting program. He said the Boston meeting would be a capstone to the 1999 regional meetings to be held around the country on restructuring the social contract. The first regional meeting will be March 22 in Boston on “Family-centered Labor Policies.” Other meetings are being planned for the Midwest, West Coast, and southern regions. The purpose of these meetings is to engage the membership in a broad discussion of current issues and to heighten IRRA visibility within the labor-management community. The regional meetings are partially funded by grants from the Edna McConnell Clark Foundation, the Sloan Foundation, and the Department of Labor.

Report of the Strategic Planning Committee: Kochan reported that the committee has devised a strategic plan to renew the IRRA, to deepen its contributions to the profession, to stimulate discussions of issues in employment relations, and to broaden the membership. One focus for 1999 will be the development of regional meetings to provide meaningful interaction with IRRA chapters, practitioners, and the local community. A second focus will be to encourage increased involvement of the IR/HR academic programs through the UCIRHRP Directors. Kochan has appealed to the program directors to encourage their students to participate in IRRA activities through the Ph.D. Network and writing competition and for the institutes and programs to become organizational members of the IRRA. Kochan said the Association needs to reach out to other disciplines, such as sociology, history, law, economics, political science, psychology, and labor economics, to bring them into the fold of the Association.

On the practitioner side, Kochan said the committee has debated the idea of unitary chapter/national dues for some time and that progress is being made despite the controversy of the issue. Both Kochan and O’Brien have spoken to many chapters in recent months about the need to strengthen chapter/national relations. National membership will be built into conference registration for regional meetings as a beginning step. Kochan encouraged everyone to engage in one-on-one organizing with each current member working to bring in one to three new members over the next year. He said it is the obligation of every member to do so. If the Association is going to continue to make a significant contribution to the field of industrial relations and human resources and to grow as an organization, it is our collective responsibility to ensure its survival; otherwise the Association will die. Kochan said the Association hopes to continue publication of *Perspectives on Work* and to include more practitioner writing contributions.

Report of the National Policy Meeting: John Burton reported that the meeting (which replaces the traditional spring meeting hosted by IRRA chapters) will be held June 17-19, 1999, in Washington, DC, at the Hyatt Regency Hotel-Capitol Hill. It is hoped that the new policy meeting will become a regular national IRRA event held every year or every other year. The purpose of the meeting will be to engage practitioners and policymakers in a discussion of the critical issues affecting today's workplace.

Report of the Editorial Committee: Editor-in-Chief Paula Voos reported that the 1998 research volume, "New Approaches to Disability in the Workplace," will be mailed to members soon. The 1999 volume is "Employment Dispute Resolution and Worker Rights in the Changing Workplace," edited by Adrienne Eaton and Jeffrey Keefe. The 2000 volume is on nonstandard or contingent employment relationships. Voos announced that although there were no young scholar awards made in 1997, the Association made two awards for 1998. The recipients are John Budd, University of Minnesota, and Kate Bronfenbrenner, Cornell University.

Report of the Chapter Advisory Committee: President O'Brien reported that Janet Conti has agreed to continue as chair of the committee for another three-year term. Conti indicated that the NCAC had surveyed chapter leadership during 1998 on the issue of unitary chapter/national dues and chapter/national relations. Several chapter representatives expressed a desire to also poll chapter membership. NCAC has made a revised questionnaire available to chapters willing to survey their membership on relations between the national and local chapters. The surveys will be tabulated, and NCAC will use the data to make a recommendation concerning national services and/or unitary dues at the time of the next Board meeting in Washington. Initial questionnaire feedback indicates that *Perspectives on Work* is highly valued by chapter members and that the proposed regional meetings will also be a valued service.

Conti reported on the five chapter awards made at the Chapter Representatives meeting as follows: Alabama Chapter (consistent chapter excellence), Long Island Chapter (chapter communications-newsletter), Southern California Chapter (community involvement recipient of a $100,000 FMCS grant to support teaching about collective bargaining in area high schools), Boise Chapter and TERRA (TN) Chapter (new chapter/chapter startup).

Report of the Nominating Committee: President O'Brien reported that Maggie Jacobsen was the unanimous recommendation of the Nominating Committee for IRRA president-elect in 2000. The Executive Board approved the recommendation for president-elect and approved the slate of candidates for the year 2000 Executive Board.

Report of the Finance and Membership Committee: Chair Greg Woodhead reported on membership and financial developments over the course of 1998. Membership grew by 68 new members, although the five-year trend was still down by 700 members. He urged members present to each bring one new member into the Association during the upcoming year and for more organizations to become organizational members of the Association. A review of the Association's 1998 income and expenses disclosed a surplus ($12,780) for the year due, in part, to the receipt of the grant from the Sloan Foundation and cost savings associated with not holding a 1998 spring meeting. A review of the 1999 IRRA budget shows increased income due to grants in the amount of $235,000 which will result in increased expenditures for the spring policy meeting in Washington in June and support for other regional meetings. Committee recommendations approved by the Executive Board were (1) adoption of a 1999 budget, (2) continuation of regular member dues for year 2000 at $75.00, (2) continuation of a half-price introductory membership offer for chapter members not currently national members, (3) bonuses for IRRA and *Perspectives on Work* staff, and (4) presidential appointment of an ad hoc committee to examine the future location of the IRRA national office.

President O'Brien reported that Administrator Kay Hutchison has advised the Executive Board of her intention to resign over the course of the next year. The Board has directed that a description of the operational requirements of the national office be prepared and disseminated to appropriate institutions and organizations and that expressions of interest from potential host sites be solicited. A committee appointed by the president will review proposals received and make a recommendation to the Executive Board at its next meeting.

Report of the Administrator: Kay Hutchison recognized the work of members of IRRA standing committees. She thanked President O'Brien and President-elect Kochan for visiting a record number of chapters and for their active involvement in strategic planning and member recruitment. She reported on three grants awarded the Association through the efforts of Tom Kochan and indicated that the funding will enable the IRRA to reach out to new audiences through the regional meetings. Hutchison noted that two issues of *Perspective on Work* were published in 1998 and that the IRRA website has been moved from Cornell to the national office. She reported that copies of the IRRA 50th Anniversary video have been sent to all chapters and that several have used it for a meeting discussion. An educational version of the videotape is also available through the national office.

President O'Brien introduced 1999 President Tom Kochan and turned the gavel over to him.

The meeting adjourned at 5:30 p.m.

AUDITED FINANCIAL STATEMENTS
December 31, 1998

We have audited the accompanying statements of financial position of Industrial Relations Research Association (a nonprofit organization) as of December 31, 1998, and 1997, and the related statements of activities, functional expenses, and cash flows for the years then ended. These financial statements are the responsibility of the organization's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Industrial Relations Research Association as of December 31, 1998, and 1997, and the changes in its net assets and its cash flows for the years then ended in conformity with generally accepted accounting principles..

Stotlar & Stotlar, S.C.

March 17, 1999

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Statement of Financial Position
December 31,

	1998	*1997*
ASSETS		
Current assets:		
Cash and certificate of deposit	$531,588	$239,293
Mutual funds		58,189
Accounts receivable, net	10,496	14,499
Accrued interest, receivable		501
Grants receivable	149,200	
Prepaid expenses	24,063	4,845
Inventory	54,681	33,300
Total current assets	770,028	350,627
Property and equipment	45,004	36,007
Less: Accumulated depreciation	(33,780)	(30,734)
Total Assets	$781,252	$355,900
LIABILITIES AND NET ASSETS		
Current liabilities:		
Accounts payable	$101,991	$ 75,178
Accrued liabilities	859	869
Dues collected in advance	130,948	84,998
Subscriptions collected in advance	17,513	15,023
Deferred income	329,676	15,000
Total current liabilities	580,987	191,068
Net Assets		
Unrestricted	126,971	114,191
Permanently restricted	73,294	50,641
Total net assets	200,265	164,832
Total Liabilities and Net Assets	$781,252	$355,900

The accompanying notes are an integral part of these financial statements.

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

STATEMENT OF ACTIVITIES
Year Ended December 31,

	1998	*1997*
UNRESTRICTED NET ASSETS		
Revenue, gains and other support		
Membership dues	$ 154,904	$ 150,942
Subscriptions	20,688	18,774
Chapter fees	9,197	10,418
Book, video sales, net	11,582	21,320
Newsletter advertising	3,670	3,456
Mailing list rental	8,062	7,018
Royalties	1,168	1,536
Meeting registrations	6,510	29,777
Investment return	11,653	8,018
ASSA refund	5,976	7,609
Grant income		21,000
Contributions	5,000	
Perspectives	6,035	6,836
Miscellaneous	142	552
Anniversary Fund	25	18,872
Net assets released from restrictions	49,744	
Total revenues, gains and other support	$ 294,356	$ 306,128
Expenses and losses		
Program services		
General	$ 108,461	$ 108,203
Meetings	15,079	46,401
Sloan Grant	49,744	
Publications	68,545	100,076
Supporting services		
Management and general	29,346	32,761
Membership development	10,401	8,178
Total expenses and losses	281,576	295,619
Increase (Decrease) in unrestricted net assets	$ 12,780	$ 10,509

The accompanying notes are an integral part of these financial statements.

STATEMENT OF ACTIVITIES
TEMPORARILY RESTRICTED NET ASSETS
Year Ended December 31,

	1998	*1997*
Sloan Grant	$ 49,744	
Net assets released from donor restrictions	(49,744)	
Increase (decrease) in Temporarily Restricted Net Assets	0	

PERMANENTLY RESTRICTED NET ASSETS

	1998	*1997*
McKersie Scholarship Fund	$ 18,795	
Education fund	1,461	$ 845
Investment return	2,397	1,429
Increase in Permanently Restricted net assets	22,653	2,274
Total increase in net assets	35,433	12,783
Net assets at beginning of year	$164,832	$ 152,049
Net assets at end of year	$200,265	$ 164,832

The accompanying notes are an integral part of these financial statements

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION

STATEMENT OF FUNCTIONAL EXPENSES
Year Ended December 31, 1998

	Program Services									Supporting Services		
	General	Annual Meeting	Spring Meeting	Sloan Grant	Winter Proceedings	Spring Proceedings	Research Volume	Directory & Newsletter	Video	Management & General	Membership Development	Totals
Compensation & Related Expenses:												
Compensation	$ 81,019			$ 5,669								$ 86,688
Payroll taxes & fringes	22,579			2,686								25,265
Contract services				9,695						$ 3,380		13,075
Depreciation										3,046		3,046
Taxes										1,054		1,054
Insurance–liability										1,620		1,620
Insurance–other										604		604
Donations										80		80
Bank charges										2,768		2,768
Promotion											$ 8,234	8,234
Equipment lease										3,888		3,888
Postage and freight										4,832		4,832
UPS books	726											726
Accounting/Auditing				332						2,983		3,315
Printing, production				11,059	$15,731		$11,406	$10,657	$2,660			51,513
Postage				5,219	4,166	$1,506	4,074	7,172				22,137
Other publication costs				4,327		72	9,349	1,669	83			15,500
Meals		$ 6,114										6,114
Travel		529										529
Other meeting expenses		536										536
Education										17		17
National travel		529	$ 584									1,113
National Hospitality		2,668										2,668
National Executive Board		2,433	1,509									3,942
National Copying		177										177
Supplies												
Computer & label	2,300			1,281								3,581
Office supplies				750						4,556		5,306
Fund raising										639		639
Student awards	500											500
Telephone				110						1,207		1,317
Chapter expenses											2,167	2,167
Dues										895		895
Duplicating				587						1,861		2,448
Other committee expenses	1,337											1,337
Miscellaneous				1,911						1,728		3,639
Indirect				6,118						(6,118)		
Refunds										306		306
	$108,461	$12,986	$2,093	$49,744	$19,897	$1,578	$24,829	$19,498	$2,743	$29,346	$10,401	$281,576

The accompanying notes are an integral part of these financial statements.

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

STATEMENT OF CASH FLOWS
Year Ended December 31,

	1998	*1997*
Cash flows from operating activities		
Change in net assets	$ 35,433	$ 12,783
Adjustments to reconcile change in net assets to net cash from operating activities:		
Depreciation	3,046	3,055
(Increase) or decrease in operating assets:		
Accounts receivable	4,003	(8,716)
Grants receivable	(149,200)	
Accrued interest receivable	501	(24)
Prepaid expenses	(19,218)	10,912
Inventory	(21,381)	(6,081)
Increase or (decrease) in operating liabilities:		
Accounts payable	26,813	424
Accrued liabilities	(10)	742
Dues collected in advance	45,950	(10,862)
Subscriptions collected in advance	2,490	(990)
Deferred income	314,676	(28,755)
Net cash provided from operating activities	$ 243,103	$ (27,512)
Payments for property & equipment	(8,997)	
Net increase in cash and short term investments	234,106	(27,512)
Cash and short term investments:		
Beginning of year	297,482	324,994
End of year	$531,588	$297,482

The accompanying notes are an integral part of these financial statements.

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

NOTES TO FINANCIAL STATEMENTS

Note 1—Summary of Significant Accounting Policies

Nature of Organization

The Association is a not-for-profit organization. Its purpose is to provide publications and services to its members in the professional field of industrial relations.

The Association is exempt from income tax under Section 501(c)(3) of the Internal Revenue Code. However, net income from the sale of membership mailing lists and newsletter advertising is unrelated business income, and is taxable as such.

Basis of Accounting

The financial statements of the Association have been prepared utilizing the accrual basis of accounting.

Financial statement presentation

The Association adopted Statement of Financial Accounting Standards (SFAS) No. 117, “Financial Statements of Not-for-Profit Organizations.” Under SFAS No. 117, the Association is required to report information regarding its financial position and activities according to three classes of net assets: unrestricted, temporarily restricted, and permanently restricted. In addition, the Association is required to present a statement of cash flows.

Contributions

The Association also adopted SFAS No. 116, “Accounting for Contributions Received and Contributions Made,” whereby contributions received are recorded as unrestricted, temporarily restricted, or permanently restricted support depending on the existence and/or nature of any donor restrictions. Restricted net assets are reclassified to unrestricted net assets upon satisfaction of the time or purpose restrictions.

Inventory

The Association’s inventory of directories, research volumes, proceedings, and prior newsletters is carried at the lower of cost or market value.

Property, Plant, and Equipment

Property, plant, and equipment are carried at cost. Depreciation is provided using the straight line method over an estimated five- to seven-year useful life.

Membership Dues—Advance Subscriptions Collected

Membership dues and subscriptions are assessed on a calendar-year basis and are recognized on an accrual basis. Funds received for the upcoming 1999 and 1998 calendar years are reflected as deferred income on the statement of financial position.

Functional Allocation of Expenses

The costs of providing the various programs and other activities have been summarized on a functional basis in the statement of activities. Accordingly, certain costs have been allocated among the programs and supporting services benefited.

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Income Taxes

Industrial Relations Research Association is exempt from federal income taxes under section 501(c)(3) of the Internal Revenue Code and therefore has made no provision for federal income taxes in the accompanying financial statements. In addition, Industrial Relations Research Association has been determined by the Internal Revenue Service not to be a “private foundation” within the meaning of Section 509(a) of the Internal Revenue Code. There was unrelated business income for 1998 and 1997.

ALPHABETICAL LIST OF AUTHORS