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PREFACE

We were in New York again this year for the Annual Meeting, as we are every three years, but unlike a year ago the winter weather cooperated—mild temperatures and no snow or cancelled flights.

And again our program was broad and topical. The two principal speakers, IRRA President Phyllis A. Wallace, and our Distinguished Speaker, Lester C. Thurow, focused on factors that they considered critical to the functioning of the U.S. economy. Not only did Dr. Wallace analyze the role of employment and training if the United States is to maintain "its competitive edge in many global marketplaces," she issued a challenge to the Association "to take on the task of providing the intellectual and analytical foundations" for the debates over the structure and process of economic policymaking. Dr. Thurow argued persuasively that producer-based models of the firm are needed to supplement traditional consumer economics in explaining the practices and policies of today's and tomorrow's firms and workers.

New in this year's Proceedings are the titles and authors of papers presented in the very popular Poster Sessions as well as a summary of the discussion in the Doctoral Consortium. Both are to be regular features of the Proceedings in the future.

The IRRA Board and the membership as well had the opportunity to hear preliminary reports of the three Working Groups—Local Chapter Relations, Winter and Spring Meetings, and Research Publications. These groups are continuing their examination of IRRA activities, as recommended by the Comprehensive Review Committee, and will present their final reports later.

As always, the Association is grateful to the hosts—the New York chapter, which is called upon to serve that role more frequently than other local chapters. And we also express our appreciation to Marion Leifer and the National Office staff without whose cooperation and support the IRRA could not function.

Barbara D. Dennis
Editor

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I. PRESIDENTIAL ADDRESS

Training: Maintaining the Competitive Edge

PHYLLIS A. WALLACE
Massachusetts Institute of Technology

The report of the Comprehensive Review Committee of the IRRA, co-chaired in 1987–88 by Clark Kerr and John Dunlop, had as its objective an overall assessment of the IRRA in light of its original mission. The major findings of the Committee were focused on a future agenda for this now multidisciplinary organization of professionals who are researchers and practitioners in employment relations. The Committee recommended that three working groups be established to determine how the IRRA might best meet the challenges of the next decade.

If we want to be actively engaged as participants as the American economy adapts to pressures of the global marketplace, the introduction of new technology, and significant demographic shifts in the labor force, we as an organization must seek new relationships and develop more strategic analyses of the entire employment relationship. During the past ten months, about 40 individuals representing all segments of the IRRA (young members, local chapter presidents, academicians, labor unions, employers, government officials, and neutrals) have discussed a number of these concerns, at great length. The reports from the three working groups will be made to the membership and will deserve your consideration.

Thus, I have decided to depart from the usual format for presidential addresses in which one sums up a lifetime of professional work. Instead I have chosen to develop a theme which may be an important one in employment relations perhaps well into the next

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century. I hope to provide a challenge for the IRRA. I started my assignment by making a major literature search and talking to a number of experts. I also draw on my own experience.

Employment and training programs may serve as the critical factors in helping the U.S. economy maintain its competitive edge in many global marketplaces. The development and maintenance of human capital will be central in the emerging information technology era where boundaries between blue- and white-collar jobs may gradually disappear. One large manufacturing company with many innovative industrial practices recently stated that in less than 12 years its entire workforce would have to become even more technically proficient and more skilled at problem solving, and participation and team building.[1]

The U.S. Department of Labor has indicated that approximately 85 percent of the net additions to the civilian labor force between 1986 and the year 2000 will be women, minorities, and immigrants. This sharp increase in the heterogeneity of the labor force may have a short run negative impact on productivity as the system absorbs these workers. A key requirement in these future workplaces where women will account for almost half of the total labor force, is flexibility to allow accommodation of work and family roles. Since minority workers, as a group, have lagged behind other workers in terms of skills and education, large doses of training may be necessary. All workers of the future will have to be better educated and trained than workers of today and may have to accept life-long training and retraining as a norm.

However, the U.S. has never had a coherent training policy. Two major paradigms of training in U.S. workplaces would seem to be operational. During the past quarter of a century, training has been viewed by many researchers and practitioners as a series of remedial programs designed to bring the economically disadvantaged into mainstream labor markets. These programs were usually funded by the federal government, frequently poorly administered, and under a series of acronyms (MDTA, CETA, and JTPA) have neither improved employment opportunities for the disadvantaged and welfare target populations nor held much relevance for mainstream labor markets. The MDTA of 1962 initially provided for retraining of experienced workers dislocated by automation, but was later targeted to the

[1] "Toward the Year 2000: The Ford Direction," Statement before the Joint Economic Committee of the Congress, Ernest J. Savoie, Director, Employee Development Office, Ford Motor Company, April 12, 1988.

economically disadvantaged. The separation of these employment and training programs from private-sector jobs eventually undermined their viability. I would agree with Osterman's assessment of the limited effectiveness of what I will call the public-sector model of training.[2] This model has not delivered on its promise because it was never deemed worthy of sustained and first-rate development. Perhaps, inadvertently we established a two-tiered system of training.

At the same time an extensive and almost invisible system of training within the private sector prepared individuals already employed for internal promotions, upgraded their skills, allowed them to attain higher pay and greater employment security. Employers underwrote these investments presumably because the productivity payoffs were nontrivial.

Estimates of the annual expenditures by the U.S. employers on training range from $30 billion to over $200 billion including direct and indirect costs. Training in the private sector is provided in many formats: (1) Jointly administered union/employer programs for both active and separated workers where requisite skills to use new equipment or to find other employment are packaged. The Ford Motor Company/UAW program for its hourly workers cost $45 million in 1985. Only a few large corporations can allocate such significant funds from wage and benefit packages into training. (2) Internal universities sometimes labeled as Institutes or Learning Centers for firm-specific training. (3) External arrangements with community colleges and other educational institutions. (4) On-site instructional television. The Massachusetts Microelectronics Center (MMC) is a partnership of 40 electronic companies, ten universities, and the state government designed to improve technology education for engineers and managers by updating their knowledge of state-of-the-art microelectronics technologies.[3] This could develop into a model public/private way to coordinate the delivery of training.

The recently published three-year study of training by the Work in America Institute includes a number of case studies of private-sector training strategies such as expanding computer literacy, employee retraining, plant conversion, quality improvement, and user-vendor programs.[4] The 1980s were years of significant increases in training in

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[2] Paul Osterman, *Employment Futures* (New York: Oxford University Press, 1988).

[3] Massachusetts Microelectronic Center in Westborough, Mass., was selected by SEMATECH (a semiconductor industry consortium) to be a "Center of Excellence."

[4] Jerome M. Rosow and Robert Zager, *Training—the Competitive Edge* (San Francisco: Jossey-Bass Publishers, 1988) and Jill Casner Lotto and Associates, *Successful Training Strategies* (San Francisco: Jossey-Bass Publishers, 1988).

the private sector as companies have had to adjust to turbulent external environments of changes in markets, processes, technology. The clientele for these training programs have been the regular members of the workforce, those whom the labor market had served well throughout the postwar period.

In the future these two models for training in the public sector and the private sector may become more aligned. The enormous expansion of the labor force during the past two decades has ended. The large supply of young entrants to the labor market (in the 16- to 24-year age group) will decline, and employers will respond to the new demographic profile of more marginal entrants by increasing expenditures on education and training. Members of the Committee for Economic Development (CED) and the Business Roundtable, sensing that their own economic survival is threatened, have argued that the quality of education must be improved, especially at the pre-college level and in the poorest schools where minorities are concentrated. Thus, intervention in the educational process, provision of remedial education, stay-in-school incentives, career counseling, scholarship to college, adopt a school, or establish a partnership with a school have been undertaken in order to guarantee a quality workforce at a later period. The model of the Boston Compact, initiated in 1982 as a consortium of large employers, educational institutions, and labor unions, is being replicated in several other cities with federal funding from the Departments of Labor and Health and Human Services. Strangely enough, the compact is being considered as a model by Her Majesty's Government in the U.K.

A recent article in *The New York Times* (December 4, 1988) reported that "prompted by the desire and need to invest in the American workforce of tomorrow, leading corporations (American Express, IBM, Xerox, AT&T, General Motors, Metropolitan Life) are putting more of their philanthropic dollars into elementary and secondary education. For example, General Electric is pouring a million dollars a year into a poor, black, rural county in Alabama, partly to pay for Saturday morning tutoring sessions in secondary schools. The company has a $700 million dollar plastics plant in that county." Education and training that precedes full-time participation in the labor market may increase over time. It is cheaper in the long run than providing both basic education and on-the-job training to individuals with deficiencies in skills.

Better links between the public-sector and private-sector training modes may develop if, as Osterman suggests, the Private Industry

Councils (PICs) with strong representation from business, labor, and government can be strengthened under the JTPA programs. Looking abroad for insights on how to treat job training in relation to the changing characteristics of the workforce may not be helpful. Neither the apprentice nor vocational education programs of Sweden and Germany may be adequate for the complexities of structure and greater heterogeneity of American labor markets. These systems have not worked well for their minorities, the immigrants, guest workers. Nonwhite former colonials experience very high unemployment rates in the U.K. where budgets for training and education have been drastically reduced. At least Americans have not ignored those individuals who are on the periphery of the labor markets.

One thing we have learned from Germany and Sweden is that training policies do not stand alone in isolation from other internal labor market and industrial relations practices. Instead, they are embedded in a larger system of institutional practices and organizational policies. Thus, investments in training by U.S. firms must be complemented with reforms and innovations in rules governing job classifications, promotions, career ladders, compensation, and employment security. A flexible and adaptable workforce can only flourish in an equally flexible and open industrial relations system. It is no accident that firms (e.g., Ford, GM, Xerox, AT&T, and regional phone companies) and unions (e.g., UAW, CWA, and ACTWU) that are leading the way in new training initiatives are also leading the way in diffusing innovations in their industrial relations systems.

Perhaps the new welfare reform act may provide another chance to bring the disadvantaged into the mainstream labor markets. These training systems should be locally based and not isolated from the employment community, especially the small business world where many jobs are located. For smaller firms there is a need to develop training consortiums that can aggregate their training needs in collaboration with local training institutions such as community colleges and apprenticeship programs. Large firms, if they will, can afford to provide quality training. Small firms cannot.

We as the professionals in employment relations have followed reactive rather than proactive stances in the economic debates in which industrial relations strategies are implicit. America's future prosperity depends on the energy, flexibility, and creativity of a well-trained workforce—a new age of "smart" people. After some years of benign neglect we are returning to a debate over the importance of employment and training and associated labor market policies.

These debates on the future of American employment relations policies have generated a sizable number of proposals and studies. In 1988 alone we have the Secretary of Labor's "Commission on Workforce Quality" whose mission is to make recommendations for the Department of Labor and the nation to increase the excellence of the American workforce. One of its subgoals is to examine the rules and effectiveness of privately and publicly provided job training and education. The American Society of Training Directors (ASTD) is currently in the second year of a Department of Labor funded project on "Best Practices: What Works in Training and Development" and will examine among other things the economic impact of training on productivity and competitiveness. The Collective Bargaining Forum, a private group of leaders from labor and management, has recently recommended joint initiatives in training. The Business-Higher Education Forum of the American Council on Education recommended in its September 1988 report titled *American Potential—The Human Dimension:*

> "1) We must adequately prepare all of our young people to enter adult life with the basic education and skills essential in the modern world. 2) We must help American workers adapt to a changing world by making it possible for them to take advantage of continuous training and retraining opportunities and 3) We must nurture the American people's latent talent for inventiveness and creativity by encouraging the search for and use of new knowledge."

Kochan and McKersie have argued persuasively that the "appropriate human resource and labor policy counterpart for a productivity based economic strategy for enhancing the long term competitiveness of the [U.S.] and increasing the standard of living of American workers involves a restructuring of employment policies. Such a policy seeks to link a national economic strategy for improving productivity and competitiveness to firm level competitive strategies that seek comparative advantage through effective use and integration of technology and human resources."[5]

For such a policy to become a reality will require significant change in the structure and process of national economic policy-making. Labor and human resource considerations must be moved

[5] Thomas Kochan and Robert B. McKersie, "Future Directions for American Labor and Human Resources Policy," delivered at the First Congress of the Americas of the International Industrial Relations Association, Quebec City, August 1988.

from the status of "special interest politics" to become an integral part of national economic policymaking—a return to the way it was when former IRRA presidents John Dunlop, George Shultz, or Ray Marshall served as Secretary of Labor.

The IRRA should take on the task of providing the intellectual and analytical foundations for these debates. Such an undertaking would be consistent with the themes of the Comprehensive Review Committee and the working groups, on the organizational renewal of IRRA. Beginning on a limited scale, a center might be established that would serve as a clearinghouse for dissemination of information on some of the training issues discussed above. It might also become a research center where academics could take sabbaticals, evaluate ongoing jointly administered training programs in the private sector, or assess public/private partnerships.

Our researchers could develop a better theoretical and empirical understanding of the role and extent of private investment in training. Some preliminary findings from a recent survey of COMPUSTAT II business lines indicate that a majority of the 495 business lines do not have any formal training programs.[6] Companies responded to the following questions: Does your business have a formal employee training and development program? What was the approximate cost of these programs per employee and who makes the training decisions? Thus, more precise estimates should be available as researchers apply survey rather than case study techniques. Other high priority research issues might be: (1) How to improve training for what has been termed "The Forgotten Half: Non-College Youth." These are the new entrants to the labor market who need assistance in making a successful school-to-work transition. The Boston Private Industry Council's Career Service for youth placed about one third of the high school graduates of the class of 1986 (967 individuals) in full-time jobs at average wages of $5.43 an hour. Annual follow-up surveys indicated that nearly all had remained with the same firm—often with promotions—or returned to full-time education.[7] (2) How should the public/private collaborative training of youth and new entrants requiring basic skills best be funded and measured? (3) One evaluator of Ford's Employee Development and Training Program (EDTP)

[6] From survey data collected by Casey Ichniowski, John Thomas Delaney, and David Lewin at Graduate School of Business, Columbia University.

[7] William J. Spring, "A Public/Private Careers Service: Building a Network of Opportunity for the Majority of our Young People," in Council of Chief State School Officers, *School Success for Students at Risk* (New York: Harcourt, Brace, Jovanovich, 1988), pp. 248-73.

noted that the program was "one of a number of features that were crafted by the company and the union into a broad framework of interlocking arrangements designed to enhance job security, competitiveness, and mutual growth. The EDTP is complementary to and supplements a wide array of other programs and efforts."[8] We might seek to determine whether training opens up the question of the reorganization of work in an organization.

Such a center could represent a collaboration between the national office of IRRA and interested local chapters or a consortium of university industrial relations and human resources centers under the aegis of the national IRRA. Such a center could serve as a forum where all of the participants in employment relations could exchange ideas, critique approaches. While creating its own knowledge base, such a center would not duplicate the numerous private forums. In fact, such a think tank could make a special contribution in helping all parties understand the choices, economic, political, social, before us. We are the professionals who are supposed to be more knowledgeable than others about employment relations. This is my challenge to the IRRA.

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[8] Gary B. Hansen, "An Outsider's Appraisal," *Proceedings* of the Spring 1985 Meeting, Industrial Relations Research Association, p. 551.

II. DISTINGUISHED SPEAKER ADDRESS

Producer Economics[1]

LESTER C. THUROW
Massachusetts Institute of Technology

Economics is built on the proposition that human beings are rational utility maximizing animals where utility is generated by consumption (including leisure). Higher productivity at work is desired since it gives individuals higher incomes to buy more consumption goods and the ability to reduce work effort to obtain more leisure. Work is a disutility that is tolerated since it is a means to the desired ends of higher consumption.

The positive nonmonetary benefits of work have been recognized and are brought into the analysis under the cover of psychic income—an alternative income stream generating an alternative flow of consumption. These positive consumption benefits come linked with the negative costs of having to go to work and can only be purchased from one's employer, but their utility-generating power is no different than that of any other consumption good.

"Psychic income" is a useful term if one is examining situations where the benefits are very similar to those that flow from normal consumption goods. For many consumers the pleasures of shopping, the acquisition of consumption goods, and not just their use, is an intrinsic part of the total pleasure that is derived from consumption. Such pleasures are rightly thought of as psychic income. Work benefits such as coffee breaks (on-the-job leisure) are also usefully thought of as psychic income.

But there are classes of on-the-job characteristics that yield very different benefits and spring from different sets of human motives

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[1] Two books should be credited with the inspiration that led me to write this paper: J. L. Baxter, *Social and Psychological Foundations of Economic Analysis* (New York: Harvester Wheatsheaf, 1988) and Mark A. Lutz and Kenneth Lux, *Humanistic Economics* (New York: The Bootstrap Press, 19).

than those that lie behind our desires for consumption. To describe these benefits using the language of psychic income is not to misdescribe them, but to describe them in a language that is not useful. One can squeeze very hard and make these benefits fit into the consumption model, but doing so does not lead to a flow of rich insights. Precisely the opposite, doing so forces us to put a set of blinders on that prevents us from seeing the real factors that are at work. To use the language of psychic income is to generate models that are poorer in predictive power and less rich in insights than they should be.

Our reliance on a consumption-based model of human nature is not an accident of intellectual history. The formative years of economics are to be found in the last half of the 19th century. The general intellectual ideas of any time have power influences on how one looks at the world, but what is always true was particularly true then. Because of the then current developments in physics, economists were looking for ways to put their discipline on an analogous foundation. They were looking for the equivalent of gravity and the atom. It was an era dominated by mental models that were mechanical rather than biological in nature.

Out of this intellectual milieux came the view that man could be treated as an individual atom where pleasure seeking and pain avoidance were the equivalent of gravity and where man was a heedlessly self-interested maximizing machine. It is interesting to speculate what the founding fathers of economics would have built if they had had as their models today's modern physics and today's modern biology.

Over time sociology and psychology have abandoned the individual utility-maximizing view of human beings. Economists continued, it must be said very profitably, to mine that old vein of intellectual ore, but we have reached the point where the vein just does not yield additional rich insights. As a result, the time has come to build what I will call "producer's economics" to distinguish it from the current models that are what I will call "consumer economics." "Consumer economics" is not wrong; it merely explains only part of what needs to be explained. Man is not just a consumption maximizing machine.

The Initial Postulate

> Homo economicus is a social builder. He or she wants to build an empire to which they can belong and from which they can gain esteem.

Building, belonging, group solidarity, prestige, and conquest or power are not consumption goods. To describe them as if they were is to mis-describe them. Sometimes these other goals may have to be balanced against consumption-leisure goals, but they normally occur independently of them.

Power is not desired simply because it leads to more consumption goods. It may often in fact lead to less consumption goods as is the case with high income executives that have no time to enjoy consumption goods that their income would allow them to buy. Control over others, or over decisions, or over events is a goal in itself. It is not a substitute for other forms of consumption.

When one joins a firm one is looking for some of the same factors that one is seeking when one joins an army. In the end it is well to remember that all armies are essentially voluntary. No one can force people to fight when they do not want to fight, yet historically there seem to be no shortage of people willing to fight. Armies clearly fulfill some fundamental human needs.

Evidence for the empire-building desires can be found in any number of directions. Psychologists point toward it. In Maslow's hierarchy of needs, once the material needs (physiological and security) are met, humans move on toward a set of social needs (belongingness and the esteem of one's self or others), and then on toward needs such as self-actualization.[2] Psychologists differ as to whether Maslow's list is precisely right (many argue for two or three clusters of needs rather than five separate needs) and whether every human being has all of Maslow's needs, but they agree that there is a set of human drives that cannot be satisfied simply with more consumption goods or more leisure.

Psychologists tend to talk about levels of needs and describe them as if one moves on to the second level of needs when one has satiated the first level of needs. Historical analysis suggests the same variety of needs, but not the idea of satiating one before moving to the next. Humans were joining groups and building empires long before they were generating high individual standards of living. Many historical examples can be found of groups of individuals who engaged in empire-building activities that at the time could not have been expected to raise the individual net present value of consumption of those who participated in these activities. Neither Alexander nor Hitler

[2] A. H. Maslow, *Motivation and Personality* (New York: Harper and Row, 1970).

(nor more importantly those that followed them) were attempting to maximize the net present value of their individual consumption.

For reasons that are not at all clear, we tend to think of the motivations of those that build nations or empires as very different from those that build companies. It is time to realize that they are not. One joins a company for many of the same reasons that one joins a nation or empire. Both offer opportunities to use one's abilities and exercise powers that are not available to isolated income-maximizing individuals.

In Japan the ceremony that new employees participate in when joining their lifetime company is in fact very similar to that of baptism (joining the empire of God) or giving allegiance to a medieval lord. One becomes part of a group that has a bigger purpose than simply raising one's individual income.

In the United States even a casual analysis of the richest Americans reveals that they have accumulated too much wealth to ever enjoy it in the form of consumption, yet the wealthiest Americans almost always want to make "another score."[3] They want to build economic empires much as earlier tribal chiefs wanted to build geographic empires.

In the modern world it is only in the economic sphere where one can hope to build an empire. Making war on the neighboring clan is impossible, the days of colonial empires are over, expanding one's national borders by conquest is rare, and nuclear weapons make conquering the world a goal not worth pursuing. Other voluntary organizations (the church, affinity groups based on hobbies, charitable activities) exist, but they are less fertile fields for empire-building simply because they are too voluntary, too marginal, and therefore too easy to exit.

A Catholic bishop of the Middle Ages had real power because no one wanted to be deprived of his or her relationship with God. Today the same bishop has much less power. We either don't care that he can throw us out of the church or intellectually think that his banishment does not really deprive us of our relationship with God.

If you ask a modern individual who they are, they will usually not tell you about their religion, their hobbies, or the clubs to which they belong. They will first tell you where they work and their occupation. Work is the domain from which one gets esteem in the modern world. It is the place that provides the resources that allow us to test our abilities to build. Work is where we define ourselves.

[3] Lester C. Thurow, *Generating Inequality* (New York: Basic Books, 1975).

We are individual consumers in nuclear families, but we are social producers. Production is where we get to use our herd instincts and to belong to a herd that we can describe as the biggest or the best is to add to our individual stature.

One cannot really lead, exercise control over others, or organize activities where some real degree of personal self-sacrifice is both demanded and given unless there are real rewards and punishments. This requires an institution where exit is not easy. The modern industrial leader is not a dictator who can shoot deserters, but he is a leader who can hand out real punishments and rewards. Individuals can be fired (banished from the group), deprived of security, belongingness, and the esteem of others. Individuals can be promoted and demoted. Generals create colonels; top managers create middle managers. Together individuals can build something bigger than they could ever dream of building by themselves—a new chemical plant, a new car.

In the economic sphere men and women can conquer markets much as they used to conquer neighboring countries or clans.

If one wants to understand Japanese market share maximizing companies, one has more to learn from an analysis of empire builders than one has to learn from an understanding of the economics of income maximization. If one looks at the successes of those same Japanese companies, perhaps their secret is to be found in the fact that they have tapped a universal human desire to build an empire, to belong to an empire, to conquer neighboring empires, and to become the world's leading economic empire. Attempting to motivate individuals to work smarter or harder to produce higher incomes for themselves just isn't as successful a tool as enlisting individuals into a group destined to build a successful empire. People will work harder and smarter if they have goals other than money.

From this perspective one cannot look at the current mergers, takeovers, and leveraged buyouts followed by division sell-offs to reduce debt as simply tools to replace poor managers with better managers. Such activities tell the employees that they have joined an empire that cannot or will not take care of them, that they have joined an empire that cannot or will not protect itself, that they have joined an indebted empire where they cannot build, that they have joined an empire where they cannot rely on the current hierarchy of authority to insure their authority, that they cannot conquer but have been conquered, and that their division might be sold off much as ancient defeated armies used to be sold into slavery. If history is any guide, demoralized companies and workforces, not more efficient organizations, are apt to be the likely result.

Similarly, one cannot explain the ferocity with which incumbent managements fight to resist takeovers by looking at consumption privileges. With golden parachutes and alternative employment opportunities, most will have a higher lifetime income with an unfriendly takeover than without it. Certainly most incumbent managers could strike an even better consumption deal for themselves if they were willing to surrender without a fight. Why don't they do so? To do so is to surrender leadership and decision-making authority—not the diminution of the net present value of their stream of lifetime consumption.

Ask yourself if you would like to join a country that had the characteristics of the companies that have been taken over, or if you would be willing to place the interest of such a country above your own personal narrow self-interests. If the answer is "no," why should there be any different reaction when one is asked to join or sacrifice to help a company that faces such prospects? Yet companies require some of the same willingness to join and the same willingness to self-sacrifice immediate personal goals to succeed. There are some sacrifices I won't make for money (join an army where there is some substantial probability of death, go on business trips where I am away from my family a lot) that I will make if I am attached to a group that I want to help build a successful empire.

Empires don't exist because there are great individuals who force their leadership upon resistant followers. Empires exist because individuals want to be part of a group, want to have the security that can only be had if one is part of a group, want to be held in esteem by those above and below them in the group pecking order, want a place to build and lead—even if they are not the supreme builder or leader that history will remember.

What this of course means is that labor is not just another factor of production that must be paid its marginal product. It is something fundamentally different.

To start with the disutility of work is to start from precisely the wrong perspective. Work does not deprive us of leisure—it offers us an opportunity to gain power, exercise leadership, have status, develop our creativity, and enjoy the security of belonging to a group with a common purpose. Motivation is not something necessary to overcome the fundamental disutility of work, but the presence or absence of the esprit de corps necessary for any army to tap all of the abilities and energies of its members.

Equity and feelings of relative deprivation are not perverse human desires, constraints that have to be surmounted, but the glue that has to be used creatively to generate group solidarity and a willingness to sacrifice for other members of the group. Without this solidarity or willingness to self-sacrifice, no army and no company can really expect to win.

The need for motivation and equity are not homo sapiens imperfections that would not exist in the ideal homo economics. They are the building blocks out of which one builds a successful firm. Tapping into these drives is the route to success as a firm and understanding these producer drives is the key to understanding how better organizational structures can be designed.

A Producer-Based Model of the Firm

In the consumption-based models of human behavior the firm is the provider of income earning opportunities. Security is seen only as economic security and is to be obtained through savings and insurance. When employees demand that their firm provide them with security in consumer-based models, that demand is seen as a factor that can only lower the firm's flexibility to tailor its labor force to its needs and thus reduce its efficiency. Security is also often seen as something that undercuts motivation. Individuals work hard because they fear being unemployed—losing consumption privileges. From the perspective of consumer-based models of human behavior it is difficult to make sense of the many firms that are now deliberately giving explicit employment guarantees as part of their efforts to create more productive labor forces.

Viewed from the perspective of social construction, security is an important attribute of the firm. Empires and nations attach citizens to them by offering external (freedom from conquest) and internal (law and order) security. If one looks at successful nations, the ability to insure security is more important than the ability to guarantee high average incomes.

Security is also more than economic security. It is stability and knowing how one's own immediate world functions. Changing jobs may not lower an employee's lifetime income and she or he may be well insured during the transition from one job to another, but the personal stability of one's environment has disappeared. Old friends and workmates disappear; new ones have to be made. To be fired or laid off is to be tossed out of one's group. Why should that be any less traumatic to one's feelings of belongingness than being exiled from one's village? Exactly what one does at work and how one gets to work all change when one's job changes. Despite what humans often say about themselves—"We like to change"—humans like stability and order. They hate to be forced to change. Stability is a desired characteristic that goes far beyond economic security.

An interest in equity is often seen as a perverse demand that interferes with the effective operations of a firm. Managers have to cope with such demands, but the world and their firms would be more efficient if they did not.

Equity should be seen as another dimension of security and its provision an important instrument in generating group solidarity. Interdependent preferences are not human failings that have somehow arisen because of unfortunate upbringings of the workforce. They are the interdependent preferences of herd animals and herds (production groups) can accomplish tasks far beyond those possible with a collection of individuals. The wise firm uses feelings of equity to generate strong production groups with internal and external solidarity.

Fair treatment in wages, promotions, and distinctions (esteem) is important to any person's position in their social group. Fair treatment by one's group is what leads to one's own self-esteem. Not surprisingly in this situation, the history of how the group's rewards have been distributed in the past have a very important impact on the perception of the fairness of today's distribution of rewards. Equity to a great extent is a product of stability and predictability. As a result, workers want to be paid fairly relative to their station in the group and feel as uneasy being overpaid as being underpaid (a widely observed reaction that is hard to understand if more consumption is the only goal).[4]

Firms that effectively provide security to generate group solidarity tap into the desires to belong to a group and obtain employees more directed in their focus, more willing to mobilize and prolong their effort to meet firm goals, more willing to bring group pressure to bear on the individual laggards, more willing to sacrifice immediate self-interests, more interested in achieving the goals of the firm.

The provision of security is one of the instruments for generating group solidarity. We get security by being part of a powerful group

[4] Edward E. Lawler, *Pay and Organizational Effectiveness* (New York: McGraw-Hill, 1971).

that can insure that our stability will not be disrupted from the outside by conquest or disrupted from the inside by disorder (inequity)—an unexpected change in the rules of the game.

To be effective, firms must tap into this desire to belong to an effective, powerful group. One might argue that to some extent it is this realization that has led to the success of Japanese business firms. They recognize that they are in the empire army-building business even if they are only very small firms. The central human problem of the firm is not individual motivation (the pay scale), but setting out to generate social groups that will become effective production groups that can win, that can conquer market share, that can become number one.

Here is where there is a direct clash between the academic idea that the sole goal of the firm should be shareholder wealth maximization and what is necessary to build a successful firm. The shareholder wealth-maximization view explicitly denies the legitimacy of the group. Only individual capitalists count. All others are simply rented factors of production. To the extent that a CEO subscribes to such a goal, he is announcing that he does not value group solidarity and that his employees are not on his team.

Can anyone imagine a general going into battle making similar announcements to his troops? They, the soldiers and officers, are merely mercenaries, not members of the team. Long ago we learned that soldiers who believe in what they are fighting for almost always beat soldiers who are simply paid to fight. Why should it be different in the business world? What general would announce that he reserves the right to surrender if some group that is not on the field of battle would enjoy more consumption privileges as the result of his surrender? Any such general would not be successful. He does not understand the nature of combat—economic or military.

Central to the reformulation of the theory of the firm is coming to grips with the issue of power and authority. Power and leadership are not just two other consumption goods. They are something that can only be had in a group. Since the degree of power or leadership is inversely related to the ease of exit, after the nation state the business firm is the next most fertile field for exercise of leadership. The business firm legitimates power. It has goals that all accept that require organization and control—coercion. Experts and the power that flows from being an expert are necessary to its activities. People obey because they wish to join. The firm can reward or punish. It makes soldiers into officers.

Opportunities to wield power outside of the business firm are very limited in our modern society. Even the family has become smaller with less opportunities to exercise leadership and power. The family is seldom the basic production unit as used to be the case when most families were farm families. Extended families are now uncommon (many of our families are one- or two-person units) and there are few troops to be led in the family. With multiple earners and little need for family labor, exit (divorce) is much easier than it used to be.

To use the term "power" is not to say that every leader wishes to be a dictator or that every follower wishes to be dictated to. But it is to say that both leaders and followers wish to fit into some pattern of authority. Some leaders may want authority simply for the sake of authority, but followers want authority only if it can be shown to be functionally connected to a goal to which both they and the leader can subscribe. I suspect that many leaders do not want to lead just for the sake of leading—they also want to have the feeling that they are building something bigger than themselves (self-actualization in Maslow's terminology). In addition to power, leadership offers the opportunity to achieve and to demonstrate competence, mastery, or creativity. The leader gains not just more consumption, but prestige, status, recognition, attention, importance, and appreciation if he is successful.

While the reasons for wishing for positions of leadership and power may be clear, what are the goals that persuade people to join hierarchical organizations? One does not simply trade freedom and independence for higher income. Workers take pride in belonging to an effective winning team. Taking orders is not slavery on a successful team. Belonging and hierarchy are not antithetical. Hierarchy is not a necessary evil, necessary to obtain consumption. It may be an intrinsic part of group behavior.

For those who are well down in the hierarchy, it may be the group's achievements and the group's status that lead to the same feelings for them as individuals as those gotten by the leaders in a more direct way. Leading and following may not be all that different when it comes to feelings of accomplishment. Workers may not be able to achieve these higher level goals as individuals, but they can achieve them as a member of a successful group. Members join groups for precisely the same reasons that other people wish to lead groups.

Let me suggest that an identically paid floor sweeper at IBM has more self-esteem and more external esteem than the floor sweeper at RJR Nabisco (a social group that has been conquered and is about to be dismembered) or at one of the savings and loans that is about to go broke (a social group that cannot cope with its environment). What we would like to know is: "Are the floors better swept at IBM" as a result?

Both leader and follower wish to build. A chief goal may in fact be the desire to build a successful group (clan).

I don't pretend to know whether the respect that we give to builders is internal to the desire to build or an external cultural phenomenon, but there is no doubt in our society that it is the builder and not the consumer who has prestige. A very rich person who inherits their fortune or who won the lottery may be envied for their standard of living, but they are not given respect. In contrast, a rich person who earned their wealth is treated with respect regardless of how poor their taste when it comes to spending their income (Donald Trump?). Some attempt to purchase esteem with conspicuous consumption, but it almost never works. Esteem is not bought. It is earned by being part (leader or follower) of a successful team.

What has to be explored is the nature of the hierarchical relationships that lead groups to be effective groups. In different cultures and with changes in education and the times, the authority relationships that are effective at one point can be ineffective at another.

Consider today's interest in participatory management. The group is to become more efficient by delegating decision-making power down the hierarchy. Does the resulting efficiency come from the extra motivation gained by sharing power? Is one better tapping local knowledge? Do desires to achieve flourish to a greater extent? Or is participatory management the modern social glue necessary to bind together a well-educated workforce into a productive team? Understanding the sources of the efficiency gains of participatory management makes a difference.

If by power we mean the power to reward and give orders, participatory management may have changed the fundamental distribution of power very little. It is just the nature of the orders that has changed. Middle- and lower-level employees are now ordered to make intelligent decisions and held responsible for those decisions rather than given more detailed orders and held responsible for following them. There may have been no change in the system of coercion or rewards at the top.

In contrast, middle management opposition to participatory management techniques cannot be understood without reference to the changes in power relationships that they involve in the middle of organizations. If one wants to tap the productivity gains that may be buried in participatory management, top managers have to understand how to preserve the power of middle-level managers or how to give them other forms of power that compensate them for what they see as losses of power.[5] Rejiggling the compensation system is not going to provide the right answer.

Teamwork is the central factor that has been left out of the standard theory of the firm. People consume as individuals, not teams, and therefore teams are seen as unimportant. But the right language is not individual consumption utility maximization; it is team construction, combat, and conquest.

Team construction requires trust and loyalty. Individual consumption requires neither. If one is going into economic combat, one wants to lead and be on a team of talented well-trained (drilled) players. If the goal is maximizing my individual income, the talents and training of my workmate are his or her business—we are each paid our individual marginal product. If teams beat collections of individuals, the division of the team marginal product may be an important component of my individual income, but even more importantly, I want to play on a winner (a conqueror) and will put more of my effort into a winner than I will a loser. Why should my reaction on the economic playing field be any different than it would be on the sporting fields?

The professional salaries may be identical, but we all know that our intellectual productivity is apt to be higher if we play on a better team at a better university. Even more importantly, our esteem will almost certainly be higher if we are professors at one of the world's best universities. Why should it be different for anyone else?

[5] Bill Saporito, "The Revolt Against Working Smarter," *Fortune* (July 21, 1986), p. 59.

III. NEW DEVELOPMENTS IN THE LABOR MARKET FOR OLDER WORKERS

Job Stopping: The Changing Employment Patterns of Older Workers

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In this paper we discuss several aspects of what we call the "job stopping" process. Job stopping generally occurs during the period after "career" employment ends and prior to permanent and complete retirement. This transition frequently includes post-career "bridge" employment, part-time work, partial retirement, and reverse retirement. It is somewhat symmetric to the "moratorium" or "job shopping" phase that most youth pass through in the sense that labor force attachments are relatively weak, jobs are frequently located outside the industry and occupation of career employment, and commitments to particular jobs are somewhat intermittent. We do not attempt to examine the determinants of declining labor force attachment among older workers, nor to provide a complete discussion of job stopping.[1] Instead we concentrate our remarks in three areas: (1) the declining importance of part-year employment for older workers; (2) the early end to career positions; and (3) the characteristics of bridge jobs.

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[1] See Mirkin (1987) or Ruhm (1988a) for literature reviews and Ruhm (1988b, 1988c) for more on job stopping.

Patterns of Labor Force Participation

The widely discussed secular decline in the labor force participation rates of older persons can mask important changes in the patterns of involvement. For example, a declining participation rate can occur as a consequence of a rising fraction of older persons with no attachment at any point in the year or from a rise in part-year employment among older workers. From a flows perspective, the annual average participation rate of any population subgroup will be determined by the share of the subgroup that participates in the labor force at some point during the year and the number of weeks that they actively participate in the labor force during that year (see Sum [1977] for further discussion).

We have used data from the Work Experience Supplement (WES) to the March Current Population Survey for the years 1968, 1974, 1980, and 1987 to generate estimates of employment to population ratios and weeks of labor force participation, conditional on some attachment during the previous survey year, for persons 55 and older.[2] These estimates indicate that the fraction of the older population with any attachment to the civilian labor force has declined continuously over the past 20 years (Table 1, rows 1 through 3). During 1967,

TABLE 1
Decomposition of Labor Force Participation of Persons 55 and Over

	1967	1973	1979	1986
Percent in labor force at some point in the year				
All	46.9	43.5	38.5	35.1
Male	64.5	60.3	52.4	46.9
Female	32.3	30.1	27.6	25.9
Estimated weeks in labor force of participants				
All	43.5	43.1	45.2	44.7
Male	45.5	44.4	46.3	45.0
Female	40.2	41.1	43.7	44.4
Percent working either 0 or 52 weeks of year				
All	85.9	86.5	88.2	89.2
Male	83.5	83.8	86.1	87.0
Female	88.1	88.7	89.9	91.2

Source: Work Experience Supplements to CPS.

[2] The format and content of the WES is described in U.S. Bureau of the Census (1987).

approximately 47 percent of the older population participated in the civilian labor force for one or more weeks. By 1986 the fraction of older persons with some labor force attachment had fallen to 35 percent. While declines in labor force attachment occurred among each age, sex, and educational attainment subgroup, the relative reductions were greater for those over 62, for men, and for older persons with no post-secondary schooling.

The Decline in Part-Year Employment

Surprisingly, our estimates reveal that mean weeks of participation were actually higher in 1979 and 1986 than they were in the full-employment environment of 1967 and 1973. In 1986 the average older person (55+) who was in the labor force at some part of the year participated for nearly 45 weeks. This is one to two weeks above the means for either 1967 and 1973 (rows 4 through 6). These results indicate a substantial degree of attachment to the labor force by those older persons with some active participation. Among older women, the estimated degree of attachment to the labor force increased most substantially over the 1967–1986 period, nearly matching that of men by 1986. These findings indicate that declining labor force participation among older workers over the past 20 years is *entirely attributable to the growth of the number of persons with no attachment to the labor force whatsoever.* Part-year employment among the older population appears to have *declined* rather than increased over the past 20 years.

Although part-year employment is somewhat more common for workers over 55 than among their younger counterparts, older persons are increasingly becoming all-or-nothing workers in the labor market. To illustrate this, we estimated the fraction of older persons who either reported zero weeks of employment or year-round employment (50–52 weeks) during a given calendar year for selected years over the past two decades. Over the 1967–1986 period the proportion of older persons (55+) reporting either no employment or year-round employment has risen gradually from 85.9 percent in 1967 to 89.2 percent in 1986 (rows 7 through 9). During the latter year, approximately nine of every ten older persons in the U.S. either did not work at all or worked year-round. This trend has occurred for all age subgroups (with the exception of those aged 60–62), for both men and women, and for members of each educational attainment subgroup. As was true for our earlier findings on labor force participation rates, these trends were more accentuated for the older subgroups (63+) and for those with the least formal schooling.

Some portion of the decline in part-year employment could be due to long unemployment durations or discouraged worker effects among older workers who are displaced from jobs. To examine whether this was important, we estimated the percent of nonemployed older persons who either reported 40 or more weeks of unemployment *or* indicated that they did not seek work due to discouragement factors. These estimates indicate a very slight increase in the fraction of the nonemployed older population reporting such problems—0.5 percent noted such a problem in 1973 and 1979 versus a slightly higher 0.7 percent in 1986. The rise in the fraction of the nonemployed older population reporting such problems was concentrated entirely among those 55–62. Among those over 65 only 0.1 percent mentioned such problems. Clearly, their lack of employment was not influenced by an inability to find work, but rather their lack of interest in seeking jobs under current conditions.

The Early End to Career Employment

Career employment is a prevalent feature of U.S. labor markets. Most workers hold at least one lengthy job during their prime working years and a substantial minority are employed in a single job for the majority of their working lives. For example, almost two-thirds of household heads work in career jobs lasting more than 15 years and a fifth are employed by the same firm for more than 30 years.[3]

Near lifetime employment is especially common for males, whites, and the college-educated. Almost a quarter of men hold career jobs lasting at least three decades and only one in six works fewer than 10 years on all jobs. Whites are 1.6 times as likely as nonwhites to hold a 30-year job, while nonwhites are almost 50 percent more probable to work less than 10 years in all jobs. Among college-educated workers, 52.7 percent hold career jobs exceeding 20 years and only 16.3 percent have completed durations of less than 10 years. Corresponding percentages for persons with fewer than nine years of education are 44.5 and 25.1 percent.

Although most workers are employed with a single firm for a significant portion of their worklives, *career jobs are not synonymous with lifetime employment*. To the contrary, a third of household heads leave career positions prior to age 55 and almost half before 60 (Table

[3] We define the career job as the longest position with a single employer held during the individual's working life. The figures in the remainder of this paper are obtained from analysis of the Social Security Administration, *Retirement History Longitudinal Survey* (RHLS).

TABLE 2
Years in Labor Force After Career Job Ends

Age Career Job Ends	Number of Years: 0	1–4	5–9	≥ 10	All Workers
< 50	1.3%	3.0%	3.4%	92.4%	22.6%
50–54	6.7	10.7	12.8	69.9	11.6
55–59	11.6	27.7	34.9	25.8	17.3
60–64	59.7	23.5	11.3	5.5	30.5
65–69	76.4	18.0	5.7	—	13.2
All workers	35.9	16.5	12.5	35.1	

Source: Retirement History Longitudinal Survey.

2, column 5). Two-thirds remain in the labor force after their career ends, almost half (45.7 percent) for five or more years, and over a third for a decade or more. For these individuals, traditional models stressing near lifetime employment appear particularly inappropriate.

Early departures from career jobs are associated with relatively lengthy post-career labor force participation. Even so, the rarity with which young career job-leavers quickly retire is striking. Over 90 percent of respondents exiting career positions prior to age 50 remain in the labor force for at least a decade and fewer than one in 60 promptly retires (Table 2, row 1). Similarly, almost 70 percent of household heads departing career jobs between ages 50 and 55 wait 10 or more years before retiring and only one in 15 retires immediately (row 2). Although direct movement into retirement becomes more probable for workers terminating career jobs at later ages, a significant proportion continue to participate in the labor force for some time. For example, 40 percent of those leaving career employment between the ages of 60 and 64 remain in the labor force, two-fifths of them for five years or more (row 4).

Among white males working outside the construction, agricultural, or private household sectors, 33.0 percent end career jobs prior to age 55 and 49.8 percent before 60. Just 40.9 percent retire from career positions and 31.6 percent remain at work for 10 or more years after the employment ends. Even among workers holding career positions lasting 20 years or more, 46 percent remain in the labor force after the job ends and more than a sixth continue to participate for a decade or more.

Career jobs covered by pension plans last longer than noncovered positions. As a result, pension-covered workers rarely work at post-career jobs for extended periods. For instance, only one out of 20 remains in the labor force for more than 20 years following the termination of the career position and fewer than one in five participates for more than 10 years. By contrast, 20 percent of noncovered individuals remain at work for over two decades and 44 percent for over 10 years. Nonetheless, the end of the career job is not synonymous with retirement, even for covered workers. Forty-seven percent remain in the labor force after the position ends, three-fifths of them for at least five additional years. As a result, over a fifth (21.8 percent) of workers covered by pension plans work for less than five years at their final pre-retirement position and more than a third (34.2 percent) hold it for 10 years or less.

Bridge Jobs

Post-career labor force participation differs from career employment in several important respects. Bridge jobs are generally located in different industries or occupations from career positions and frequently imply reduced or intermittent attachment to the labor force. For example, approximately half of all heads of households define themselves as partially retired at some point in their working lives and a fourth reenter the labor force after initially retiring.

Despite the high personal costs of changing employment sectors, bridge jobs are rarely located in the same one-digit industry and occupation as career positions.[4] Fewer than a quarter (23.9 percent) of respondents remained in their career industry *and* occupation in their first subsequent employment and barely half (51.6 percent) stayed in *either* the same one-digit industry or occupation (Table 3, row 1).

Interestingly, women maintain attachment to the career industry more often than do men (40.5 vs. 35.9 percent) and are especially likely to remain in the same occupation (49.3 vs. 36.4 percent). The gender disparities could result because females are crowded into a relatively small number of employment sectors or from unobserved differences in labor force attachment or reemployment success.

Partial retirement almost always involves a change in the sector of employment. Fewer than a third of respondents moving from career employment to partial retirement remain in either the same industry *or* occupation as their career job and less than one in 10 works in the same

[4] Annual earnings losses exceeding 25 percent are experienced by 61.1 percent of household heads terminating career positions before age 60 and changing *both* one-digit industry and occupation. Of those changing *either* industry or occupation, 29.8 percent suffer similar reductions, as do only 15.5 percent of those remaining in the same industry and occupation.

TABLE 3
Probability of Remaining in Career Job Sector in First Post-Career Employment

	Industry	Occupation	Industry or Occupation	Industry & Occupation
All workers	36.8%	38.8%	51.6%	23.9%
Retirement status				
Not retired	41.2	43.1	56.7	27.6
Partially retired	20.0	22.4	32.4	9.9
Age career job ends				
< 55	38.8	39.9	54.4	24.2
55-59	46.0	49.9	61.7	34.2
≥ 60	21.3	24.0	33.8	11.6
Sex				
Male	35.9	36.4	49.7	27.2
Female	40.5	49.3	59.8	29.8

Source: Retirement History Longitudinal Survey.

industry *and* occupation. Partial retirement is also both more prevalent and longer lasting than generally believed. We estimate that at least half of all workers partially retire at some point in their lifetimes and that the average period between the beginning of partial retirement and full retirement exceeds five years.

Labor force reentry, after the initial decision to retire, also occurs fairly frequently. Roughly a quarter of household heads reenter the labor force following retirement.[5] Over two-thirds of the reversals lead to partial retirement rather than full labor force participation, and more than three-quarters occur within four years of the initial retirement. Similarly, slightly over one in four partial retirees reverses this status, almost 80 percent of these within four years of entering it.

Conclusions

Greater attention should be paid to strategies for encouraging part-year as well as part-time employment among the older worker population. We also need to better understand why career jobs end early and what determines the structure and characteristics of the subsequent bridge employment. The frequency with which individuals change sectors suggests losses of sector-specific skills, which may imply lower wages and earlier retirement. Similarly, the

[5] See Diamond and Hausman (1984) for further evidence of reverse retirement.

inability of most workers to partially retire while maintaining attachment to their career jobs could indirectly reduce labor force participation to the extent that working conditions or compensation are less favorable in partial retirement jobs.

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Human Resource Flexibility and Older Workers: Management and Labor Views

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In the 1980s many American employers have used various methods to increase the flexibility of their human resource systems. The bottom line is that labor markets are less rigid than they were in the 1970s. Labor markets are now behaving more like commodity and capital markets than at any time in the postwar era.

There are many ways employer-employee relations can be made more flexible. However, in the 1980s employers have used three basic types of methods to increase human resource flexibility:

1. Employers have altered compensation systems to make them more flexible. Wages and benefits have been tied to more corporate realities and less customs and traditions.

2. Employers have made the employment relationship more flexible and contingent upon corporate economic factors. For example, temporary workers may have no long-term relationship with only one employer.

3. Where employers have retained long-term relationships with employees, they have tried to make these relationships more flexible and based on corporate conditions. Included in these shifts are changes in job ladders, more redeployment, and so forth.

Older Workers and Employers

How do older workers stand in this new environment of increased corporate human resource flexibility? In the process of conducting National Planning Association case studies on human resource

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* The union views section is based on work Professor Appelbaum did with Judith Gregory.

flexibility, employers were asked their views on the above question. It was interesting to find very strong agreement by numerous senior human resource business executives—who worked for companies in many different industries and parts of the country—on several key points:

1. Employers believe that the employment opportunities for older workers will show significant increases due to increased human resource flexibility.

2. Stronger interest in wage flexibility and contingent workers means that employers will turn to older workers for a greater part of their human resource needs.

3. Employers believe that older workers—more often than many other types of workers—will want to be part-timers, temporary workers, and so forth.

4. Employers believe that older workers, on average, have the key characteristics employers are looking for in terms of contingent workers. For example, employers believe that older workers will often have a strong work ethic and other cultural values that will make them good employees. Also, older workers often will have a very strong track record in the world of work. As one senior human resource executive put it: "Older workers represent a gold mine to us. They are just what we want."

5. Employers believe that they can provide a real service to older Americans beyond a source of income. An active and productive worklife can be a real emotional boost for older Americans, employers believe.

The Reality of Flexible Employment for Older Workers

Given the above employer views, one would expect that increased human resource flexibility would improve the standing and options of older workers. However, while employers seem to want to include more older workers in their human resource flexibility systems, there is evidence that the reality may be different. For example, Bureau of Labor Statistics data show that people who are 55 years and older represent a smaller portion of the part-time workforce compared to the full-time labor force. While people who are 55 years and older represent 7.0 percent of all part-timers, they represent 8.1 percent of full-timers. Also, while people 55 years and older represent 9.7 percent of the temporary workforce, they represent 12.5 percent of the combined temporary and permanent workforce (Plewes, 1987). Thus, based on the above estimates, people who are 55 years and older represent a *smaller* portion of various segments of the contingent workforce than they represent in the more traditional workforce.

The case studies of various employers showed that only when faced with serious labor shortages were employers willing to go out of their way to hire older workers.

Short-Run vs. Long-Run

The conclusions based on the case studies were as follows:

1. Many employers are in the process of boosting the flexibility of their human resource systems.
2. Employers seem to have very positive views toward hiring older workers.
3. In the long run, the shift toward more flexible human resource systems could expand the employment opportunities of older workers, and older workers may be one of the "winners" in this new labor-management environment.
4. However, there seem to be numerous roadblocks in the short run between employer interest and actual benefits for older workers. Technological fears, recruitment problems, and so forth seem to be key roadblocks for older workers.
5. Employer behavior seems to be driven by a type of cost-benefit analysis. If employers can meet their labor demands by hiring non-elderly workers, then employers will not make the added effort to redesign their employment programs to hire more older people. However, if employers cannot meet their labor demands by hiring non-elderly workers, then employers will have a real incentive to redesign their programs to favor older workers.

Older Workers and Contingent Employment: The Union View

As observed above, increased flexibility in employer-employee relations and the increase in contingent employment have occurred largely at the discretion of management. The proportion of workers employed part-time voluntarily, for example, peaked in 1979. Involuntary part-time employment increased from 1.8 million in 1967 to 3.2 million in 1977 and 5.5 million in 1987, edging down slightly in the current tight labor market. Nearly the entire growth in part-time employment since 1979 has been involuntary (Appelbaum, 1987).

While women with children at home have traditionally accepted marginal employment at low wages, the rise in involuntary part-time work challenges the view that these jobs meet their needs. Changing demographics also contribute to a relative decline in the availability of workers seeking low-wage, part-time work. The Bureau of Labor Statistics projects a total of 7.4 million workers between the ages of 16 and 19 in the labor force in 1992 compared with 9.4 million in 1980. Operation of the laws of supply and demand means that the compensation of low-paid workers in these jobs is bound to rise. Unless, of course, a new source of supply for these jobs can be found.

To this end, the search for alternative labor pools is already under way in industries that rely on a low-wage labor force—including retail trade, restaurants, motels, day care/early childhood education, and nursing homes. Older people are an important candidate population for these and other part-time or contingent jobs, especially older workers who retired early, whose retirement income is inadequate, and who prefer partial to full retirement. Not only is this group growing in numbers, but, as management points out, many in its ranks are experienced workers.

An increasing number of older people may, in fact, be available for such jobs. Surprisingly, this is not because rising longevity has increased the proportion of older Americans. While the number of people in the U.S., including those above 55, has increased steadily, the proportion of the population aged 55 to 64 has remained virtually unchanged since 1950, and only a small increase has been registered in the proportion aged 65 to 74. Not until 2010, when the baby boom cohort begins to pass the 55-year mark, will the proportion of older Americans rise sharply (9 to 5, 1987).

Instead, it is the decline in labor force participation rates of older men and the leveling off of participation rates of older women since 1970, resulting in a rapid increase in the proportion of people over the age of 55 outside the labor force, that marks this age group for recruitment to contingent work. One reason older workers have left the labor force is that they have been laid off and are discouraged about finding other jobs. Among all workers who lost their jobs because of plant closing or employment cutbacks over the January 1981 to January 1988 period, approximately 14 percent left the labor force; but among workers over 55 years of age, more than 33 percent left (Horvath, 1987). Early retirement is the other reason for declining labor force participation in the over-55 age group. Since 1974 many of the private pension plans at large companies have reduced the normal retirement age. Nearly all allow early retirement and many have reduced the penalties associated with retiring at age 55 (Bell and Marclay, 1987). The percentage of the population aged 60 to 64 electing early retirement under Social Security pension provisions also increased from 14.1 percent in 1970 to 23.2 percent in 1984 (Mirkin, 1987).

The result is that by 1983, 50 percent of the women aged 55 to 59 and 20 percent of the men were outside the labor force; among those 60 to 64 years of age, 87 percent of the women and 44 percent of the men were outside the labor force (Mirkin, 1987). Combined with the expressed desire of a large majority of older workers for partial, as opposed to complete, retirement (Kahne, 1985, pp. 65–66), the sharp decline in median household income after age 55 (Kahne, 1985, p. 87), and the fact that most firms make no provision for older workers to reduce their hours (Kahne, 1985, pp. 36, 133; Gustman and Steinmeier, 1983), the over-55 age group is potentially a significant source of new recruits for part-time and contingent work schedules.

Evidence from a Survey of Union Retirees

A recent national survey of 6,543 retired union workers provides important insights into older workers and contingent jobs (all data in this section are from Charner et al., 1988). There are two important differences between union retirees and older Americans generally. First, union retirees have higher average total incomes. Only 23 percent had incomes of less than $10,000 in 1985, compared with almost two-thirds of all retired workers. Second, in comparison with the general population of older Americans, union retirees are more likely to be male. This reflects the composition of the workforce and the unions when these retirees were employed. Nevertheless, one-quarter of the sample of union retirees is female. The survey found very few differences among male and female retirees with respect to paid employment.

The survey results support the idea that older workers want part-time or temporary jobs. The survey found that 2 percent of all union retirees work full time, 5 percent work part time, and 6 percent hold temporary jobs. Among workers 64 years of age or younger, the percentages of workers in each category are much higher: 6 percent work full time, 8 percent work part time, and 10 percent work in temporary jobs. An additional 15 percent of retirees in this age group would like to work. As to the preferred work schedule of retirees who work or would like to work, only 13 percent prefer a full-time work schedule. With respect to part-time schedules, 61 percent prefer to work less than eight hours a day, 76 percent prefer to work less than five days a week, and 38 percent prefer to work less than 12 months a year.

Retirees report a variety of reasons for working or wanting to work. The need for money for necessary expenses is important for those with incomes under $10,000—77 percent gave this as a reason compared with 68 percent of those with incomes $10,000-14,999 and 51 percent of those with incomes of $15,000 or more. Female retirees report a desire to increase Social Security benefits as an important economic reason for working, with 48 percent of women vs. 37 percent of men giving this reason. Nonfinancial motives for working are also important to union retirees. More than three-quarters of retirees report that they work or want to work in order to make a contribution or feel useful and as a way to spend time and keep busy, and nearly 70 percent want the enjoyment of being with others and the stimulation or pleasure of the work.

However, older workers face many obstacles. More than half seeking a paid job report that low pay is an obstacle and a similar percentage report lack of suitable opportunities is an obstacle. One-third report unsuitable hours and one-third report lack of suitable skills as obstacles; 20 percent report unsuitable working conditions. Forty percent report facing age discrimination.

Union Concerns

Unions are sometimes seen as a barrier to the employment of older workers (Paul, 1988). However, recommendations adopted by the AFL-CIO (August 1988) call on unions to "[w]ork with employers to develop flexible schedules for retirees who wish to continue working in workplaces where flexible schedules are appropriate" and also suggest that unions should "maintain job banks for members interested in post-retirement work." What unions, and retirees, are concerned about is not the employment of older workers on flexible schedules, but their economic marginalization through consignment to low-wage jobs. The union concern is two-fold: to prevent the economic exploitation of easily stigmatized groups that lack economic clout, and to keep the growth of part-time and contingent jobs from undermining the wages and working conditions of full-time workers. Legitimate requirements by firms for flexible work schedules, to meet scheduling needs, for example, do not depend on "wage flexibility"—i.e., on low wages and no benefits.

Human resource administrators value the stability that older workers, as an experienced workforce, bring to contingent jobs. But the very fact of their previous experience may make them an easier group for unions to organize. Experienced older workers view poverty wages and exploitative and arbitrary behavior by managers as an insult, and they are old enough to remember the difference a union can make. Their attitudes toward unions appear to be more positive than those of young workers or women, who may never have belonged to a union or worked in a union shop. Given the difficulty which unions have had reaching contingent workers, increased employment of older workers in these jobs may provide unions with new opportunities for organizing them.

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Jobs for Older Workers: Is the Nonbureaucratic Firm the Answer?

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The labor market for older workers has been traditionally studied from the perspective of labor supply in a choice-theoretic framework where workers weigh the benefits of retirement options against those of a given structure of employment opportunities (Ruhm, 1988; Lazear, 1986; Fields and Mitchell, 1984; Burkhauser, 1979; Boskin and Hurd, 1984; Pellechio, 1979; Rosen, 1980). In contrast, this paper focuses on the structure of labor demand for older workers, and on those situations where business necessity may alter the structure of job opportunities for older workers.

Structural change that expands jobs for older workers is most likely to come in sectors that are coming under increased labor market pressure—in "retirement bulge" industries (where a large fraction of the current workforce is reaching the customary retirement age and will need to be replaced during the next decade) and in industries facing a "youth squeeze" because they depend heavily on a contracting supply of younger workers. Firms with a "retirement bulge" may be encouraged to adopt more flexible retirement practices and to redesign jobs so that their experienced workers can be retained rather than retired. Firms experiencing a youth squeeze may seek older workers as an alternate source of labor to replace younger workers.

In general, youth squeeze industries are concentrated in the service sector of the economy, while retirement bulge industries are more heavily represented in older manufacturing industries (see Table 1). Identifying those industries that are likely to experience substantial

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TABLE 1
Retirement Bulge and Youth Squeeze Industries in the U.S., 1987

Industry	Percent of Workforce
Retirement Bulge	
	55 and Over
Fabricated metals	16.1
Nonelectrical machinery	16.2
Primary metals	16.5
Aircraft manufacturing	19.2
Transportation equipment (except motor vehicle and aircraft)	15.4
Apparel	15.1
Petroleum	22.7
Leather	23.0
Utilities and sanitation	15.7
Insurance and real estate	16.5
Household services	26.8
Personal services (barbers, shoe repair, etc.)	15.2
Social services	16.1
Public administration	15.8
National average	13.8
Youth Squeeze	
	16-24
Entertainment and recreation	38.8
Repair services	22.2
Household services	35.3
Retail	38.5
Furniture and fixtures	22.0
National average	20.0

Source: U.S. Department of Commerce, Current Population Survey, Public Use Sample, March 1987.

replacement labor needs in the near future, however, does not necessarily indicate anything about the extent to which workplace practices are changing so as to accommodate the increased employment of older workers. To explore how business staffing practices are likely to affect the future employment opportunities for older workers, we turned to a case study of firms in retirement bulge and youth squeeze industries.

The Employer Case Study

Our sample of employers is drawn from the Montachusett region of central Massachusetts, a relatively self-contained labor market area about 50 miles northwest of Boston with a population of almost 190,000 and a labor force of about 75,000. Montachusett was selected as a research site because its population and labor force characteristics roughly parallel those of the United States in terms of age, education, labor force participation, and income. It also has a large concentration of manufacturing industries facing retirement bulge pressures and a growing service sector encountering youth squeeze pressures.

We surveyed 50 firms during the summer of 1986—all of the area's manufacturing firms with 80 or more employees, a sample of small manufacturing firms, and a sample of firms in the retail and service sectors. The interviews were open-ended to allow us to probe the perceptions and practices of these firms as they affected older workers.

Retirement Bulge Industries

The Montachusett industries most likely to be suffering from retirement bulge pressures are in manufacturing—furniture, fabricated metals, nonelectric machinery industries (such as engines and turbines and metalworking), paper, and apparel—utilities, and household and personal services. Except for furniture and paper, all these industries were also retirement bulge industries nationally.

The firms in these industries are diverse. Many have had declining employment over the last 15 years, but some have seen considerable employment growth. While some have highly skilled workforces and generous pay scales and benefits, others offer minimal benefits and poor wages. Some have largely male workforces, while others have more of a mix of male and female workers, and still others are made up predominately of women. Some offer only full-time work options, while others have many part-time and part-year workers.

Youth Squeeze Industries

The industries facing the problem of a youth squeeze include parts of retail trade—eating and drinking establishments, grocery, clothing, lumber outlets and hardware stores, and department and variety stores—and several manufacturing industries—miscellaneous plastics, miscellaneous pulp and paper products, office and accounting machinery, and furniture. Furniture is particularly interesting because it is also classified as a retirement bulge industry.

The manufacturing industries facing youth squeeze pressures offer below-average wages and employ a largely unskilled workforce. With the exception of the furniture industry, very few offer much part-time employment. In contrast, the retail establishments offer many part-time jobs. Retail sector wages are often close to the minimum wage and there is little room for advancement.

A Glimpse Into Workplace Employment Practices

Although many firms were cognizant of the retirement bulge in their labor forces, only some had experienced critical labor scarcities associated with mass retirements. For many firms in mature industries, the combination of long-term and cyclical economic decline had substantially reduced their replacement labor needs.

Firms with retirement bulge problems had begun to insulate themselves from the consequences of the retirement bulge by using older workers to train and upgrade the younger employees who would be needed to replace them. Some of these firms were also seeking to secure greater flexibility to internally deploy their workers to alleviate replacement problems in job classifications or departments where pending retirements happened to be concentrated. In some cases, the use of older workers as trainers, and greater flexibility in job assignments, required negotiating work rule concessions with unions.

Other firms solved their retirement bulge problems by bidding away experienced workers from other industries. These labor flows were generally towards higher-wage firms in nonelectric machinery, paper, and fabricated metal industries that were able to draw labor from low-wage furniture firms and plastic fabricating firms. The latter firms regularly served as labor supply reservoirs for these higher paying companies.

Lower wage firms facing a retirement bulge (furniture, apparel, and the retail establishments) were most likely to encourage older employees to remain at work. This practice was facilitated by the fact that these firms typically offered their employees relatively few pensions or other incentives for retirement. The clearest example of the continued employment of retirement-age workers in low-wage companies was the furniture industry which had the highest concentration of workers over 65 among manufacturing industries.

In youth squeeze industries there were frequent complaints about the difficulty in finding labor for entry-level jobs, and many employers expressed dissatisfaction with the work habits and skill levels of young workers. Older workers were the labor pool choice for these firms. Most had a highly favorable impression of older workers, explaining that their older workers had better attendance records and were more conscientious on the job than their younger workers. Wages in most of these firms were near the minimum wage, and only firms linked to national chains offered retirement benefits.

Of all the youth squeeze firms interviewed, retail establishments had most readily accommodated to youth squeeze pressures. They had taken steps to develop a fluid labor reserve maintained through newspaper advertisements and signs in their store windows. Most were already employing some older workers and indicated they would like to hire more older workers, but were uncertain as to how to target recruitment on this group.

The only youth squeeze firms that did not seek to recruit from the older worker labor pool were those that had failed to appreciate the demographic changes affecting their youth labor supply. This was partly because these employers attributed the shortage of younger workers to the very low unemployment rate in Massachusetts. Because these employers were often not conscious of the demographic influence on their labor pool, they perceived their labor shortages as a short-run problem and had not anticipated a need to refocus recruitment. They continued to draw upon their traditional sources of labor—recent immigrants residing in the region, women who were entering the labor market for the first time—and sometimes tried glamorizing existing jobs in order to make them more attractive to young workers.

Bureaucratic vs. Flexible Employment Practices

The most significant finding for policy uncovered by this study is the difference in workplace employment practices between bureaucratic and flexible firms. "Bureaucratic" firms tend to be large. They have internal labor markets that protect older workers up to retirement age. They have a set of workplace staffing practices—entry-jobs limited to the least skilled positions, on-the-job training and promotion from within, and seniority-based job assignments and layoffs—that tend to award the most skilled, highest paying, and most secure jobs to older workers already employed within the firm.

These rules of seniority and promotion from within that tend to place older workers into the more secure and better-paying jobs in the economy also tend to act as barriers to the employment of older workers from outside the firm. These internal labor market practices mean that new employees, whether experienced or not, are confined to the least-skilled and lowest paying jobs, and there are strong organizational barriers to lateral transfers of skilled labor from employer to employer.

When questioned about policies toward retirement and strategies for retaining older workers beyond the standard retirement age, none of the large firms reported having formal programs designed to encourage or discourage retirement. However, the combination of relatively rigid internal labor markets and retirement policies that encouraged permanent (and sometimes early) retirement in effect worked against the retention of older workers. Because these practices often have an important business rationale, are beneficial to employees as a group, and are sometimes codified in collective bargaining agreements, they are difficult to change. This helps to explain why the national experience with formal programs of flexible retention or reemployment of older workers in large firms have tended to arise in a nonunion environment, why they are often motivated by social concerns of the CEO, and why they are usually seen as "experimental" (Paul, 1983).

In contrast, among small and medium-sized firms we found a far greater flexibility in accommodating the work and retirement preferences of older workers—a flexibility that was principally motivated by business necessity rather than social concern. These small and medium-sized firms had *informal* arrangements for "customized" work/retirement transitions that balanced the employment preferences of individual employees with the labor needs of the company.

Reliance upon such "customized" arrangements was not unique to retirement bulge firms in the area, or to certain industries. Rather, it was prevalent in almost all the small and medium-sized firms interviewed. Several convinced their retirees to return to work on particular short-term projects; others allowed for on-going part-time or part-year employment relationships.

Corroborating evidence of flexible employment of older workers has been found in small firms outside the Montachusett region (Gibbons and Perotta, 1981). It is further supported by the finding that small firms tend to employ a disproportionate number of older workers. Nationally, workers age 65 and over account for more than 3 percent of the total employment of firms with less than 100 employees, compared to only 1 percent of employment in firms with 500 or more workers.

Conclusion

Large firms in Montachusett have bureaucratic employment and retirement practices that encourage retirement and inhibit the retention or reemployment of older workers. In contrast, small and medium-sized firms provide a relatively flexible labor market for employing older workers.

Our interviews indicate that employees of small and medium-sized firms who wish to remain in the workforce are able to stay in their current jobs and that options for part-time work are quite widespread. The flexibility of these firms in accommodating older workers cuts across a wide range of industries, technologies, and occupations.

The factors that promote employment of older workers seem to be (1) a business necessity to recruit or retain older workers in the face of either youth squeeze or retirement bulge pressures; (2) the absence of bureaucratic rules that inhibit flexibility; and (3) the absence of strong retirement incentives through pension plans or pressures to preserve shrinking employment opportunities for younger workers. Both low-wage and high-wage firms appear capable of providing the requisite flexibility, and older workers appear to be the labor reserve of choice for most firms. However, as in other labor markets, high-wage firms have a competitive edge in recruiting from this pool.

The breadth of this experience suggests that the lessons about older workers' employment in Montachusett will have more general applicability. The study suggests some potentially fruitful policy directions briefly outlined below.

- Efforts to encourage the more flexible use of older workers in large companies are likely to be costly and unproductive, except when they are accompanied by some increase in the business necessity to do so.
- Older worker employment policies should focus much more on small and medium-sized firms in fashioning remedial programs and in trying to learn about informal "best practice" arrangements that can be extended to other companies.
- More efforts should be made to organize older workers into temporary help pools to meet the growing need for high quality, experienced, short-term workers.
- Older worker employment programs are likely to have the greatest success in placing workers in jobs that routinely employ younger workers—retail trade and low-wage manufacturing. In addition, greater efforts need to be made to convince these firms that the declining youth labor pool is a long-term demographic phenomenon that

requires a shift in hiring emphasis toward the older worker labor pool.

- Problems of age discrimination and age stereotypes were rare in our case study community. This suggests that less effort should be devoted to changing negative perceptions of older workers and more effort devoted to influencing the structure of workplace employment practices in order to expand older worker employment opportunities.

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Flexible Employment Arrangements: The Older Worker Perspective

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Both demographic and economic forces are converging to create what appears to be a positive climate for the employment of older Americans. As our population increasingly ages, the older cohort of our society, those 55 years and older, expands, while the younger cohort, those under 21 years, shrinks. These changing demographics have forced firms in some American industries, such as fast food and child care, to turn to older Americans to fill the jobs which in the past were held by younger workers (Kingson, 1988). Individual firms in other industries, such as The Travelers Corp., Xerox, Polaroid, and Levi Strauss, have introduced a variety of flexible work arrangements, including temporary pools for returning retirees, job redesign, rehearsal retirement, and job sharing, as ways to maintain the involvement of their own skilled and productive older workers who approach or reach retirement (Lasden, 1984; *Management Review*, 1986). At the federal level, the National Commission for Employment Policy (NCEP) in a 1985 report called for more flexible work arrangements for today's older workers.

These demographic, economic, and political forces indicate that the labor market has opened up for older workers. But many questions remain. How do those on the supply side see the job situation? Do older Americans feel that the marketplace provides enough of the employment opportunities they want? What have been their experiences in obtaining and keeping jobs? And what are they looking for in paid employment?

This paper looks specifically at the experience and attitudes of older workers (55 years and over) towards work, especially flexible work arrangements. The meaning of flexibility to older workers varies widely. For some, flexibility comes in the form of reliable, dependable

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part-time employment with flexible hours; for others, it has resulted in their marginalization in the workforce as self-employed, temporary, or off-the-books workers who have no job security and limited income reliability. This paper examines both forms of job flexibility to depict the day-to-day realities faced by older working Americans.

Methodology

The issues raised in this paper are based on findings from focused interviews conducted with 36 older workers in the New York City metropolitan areas in the fall of 1987. The interviews examined the following aspects of the older workers' experiences and attitudes:

- individual work histories
- satisfaction with current job
- meaning of a job
- meaning of not having a job
- satisfaction with range of job opportunities
- the virtues older workers bring to the workplace

The participants in the study were all between 55 and 80, although most fell between 65 and 75 years of age; none lived in households whose annual incomes exceeded $25,000. There were two groups of older people in the study: 19 self-employed workers; 17 part-time and temporary workers.

Issues

As a result of the interviews, it is possible to identify a number of issues that older workers felt quite strongly about. While the employed individuals by and large liked their jobs, they often reported an intense dissatisfaction with how the marketplace treats them.

Treatment of Older Workers in the Marketplace

Older workers feel that they have a unique work ethic that was forged during the Depression. It is an ethic that values reliability, punctuality, pride in one's work, and giving a full day's work for a day's pay. The notion of career choice is an enigma to most, since most were forced to take whatever jobs were available in order to pay the rent and put food on the table. Now that they are in their sixties and seventies, they want to be appreciated for their life-time of hard work and the knowledge and experience bred by it.

Many express disappointment and frustration that the marketplace does not sufficiently value the work ethic, skills, and knowledge they are capable of bringing to a job. Although post-retirement jobs are available, they are generally inferior in status and pay to what they had prior to retirement. For example, a retired district sanitation supervisor switched to driving a car for a car service two to three days a week. A machinist with 20 years of experience with the railroad now supervises the installation of storm windows. A retired assistant office manager currently provides home care for an elderly woman and her disabled daughter. A woman with 30 years of experience in retail sales—but no pension—presently stocks shelves in a local pharmacy. The only people who were able to continue in their life-long work were in fact those who phased into retirement, gradually reducing the hours worked, and those who went into business for themselves.

For many of the focus group participants, the recent McDonald's advertising campaign employing older workers illustrates the situation in which most find themselves: as productive members of the workforce, they must now take jobs below their skill and experience level. Although most are grateful to the ads because they provide an important public service by showing older workers to be valuable, productive, and congenial members of the labor force, no one expressed any interest in such a job unless they were desperate.

Fast food employment was unappealing because of the perceived status of the work and the fact that it was assumed to pay minimum wage. Minimum wage work upsets those unionized and nonunionized workers who spent their lives trying to raise their standard of living. As one 67-year-old unemployed woman who worked in quality control in the pharmaceutical industry for 35 years said, "a lot [of employers] want to pay you only $3.35; you know that knocks senior citizens down. They've been used to making good money. They've worked all their lives for it. They've come up, come up, come up, and now they've got their status. Do you realize how it affects your brain when you got to come back down to $3 an hour?"

The issue of pay is tied to a number of concerns that older workers have. Obviously, they want to be fairly compensated for a life-time of work skills, but the pay scale is also symbolic of status and appreciation. At minimum wage, they feel they have little status and are not being treated with the respect and appreciation they deserve.

Meaning of a Job and Targeted Earnings.

A job has a variety of meanings for older workers. As they say, "A job's your life; it's your life." "It's security." "I need it to pay the bills."

"It keeps older people alive." "Without a job there's nothing to look forward to." "I didn't realize I liked my job so damn much until I left it." "I looked forward to it every morning. It was a routine."

In essence, a job generates needed income and a way to organize the day. Yet, as noted earlier, the older workers want a job in which they feel they are appreciated and are accorded status and respect. Some feel that they are taken advantage of because employers see senior citizens as a cheap pool of labor that is relatively disposable.

Many of the older workers indicated that they are very targeted in their earnings. They set very precise figures as to the amount they either need or want to earn on a monthly basis. In some cases, the figure represents what it will take to cover their expenses; in other cases it represents discretionary income.

Attitude Toward Unreported Income

A surprisingly large percentage of my sample have part-time and self-employed jobs that are off-the-books; that is, that they do not report their income to the federal or state government. Most do it simply to earn extra money; they see the job as providing some extra pocket money to supplement their Social Security or pension checks. Most also do not want to report the income and run the risk of losing any of their Social Security payments. Yet, interestingly enough, most would not be in any jeopardy because they typically earn less than $5,000 off-the-books—well below the earnings test set by the Social Security system.

There appear to be several other factors underlying their belief that it is all right to cheat the system. Most feel that they are in marginal jobs and claim that if they were being paid enough money then they would report it. Others are angry at the Social Security system which they feel penalizes them for having been born during the "notch years" or having been widowed. During the Carter administration those Americans born between 1917 and 1921 incurred reductions in their Social Security earnings, and many feel that they have been unfairly penalized as a result. The people in the focus groups who are affected by this policy estimate that they lose between $100 and $150 a month. Several widows were angry that they are not allowed to collect Social Security monies from both their deceased spouses' accounts as well as their own. They feel that the prohibition against "double dipping" unfairly robs them of money that both of them had contributed to their own individual accounts.

Interestingly enough, no one seemed to experience any dissonance between the work ethic that they so highly value and taking money off the books. Most just accept this as the norm.

Conclusions and Recommendations

Based on the older workers' attitudes and experiences, there are several preliminary conclusions and recommendations to be drawn.

Employer Policies Toward Older Workers

Government and business should be cautious about treating older workers as synonymous with teen-aged workers. Although the fast food as well as child care industries have turned to older workers to offset the severe labor shortages they face due to the shrinking cohort of younger workers, any large-scale effort to substitute older workers for teen-aged ones should not be promoted unless several conditions are met. Older workers want respect, dignity, and appreciation for a life-time of work. They do not want to be seen as just a body. While a teenager may take a job to fill time, an older worker uses a job to organize time. They want to be appreciated for the time they spend. The extent to which older workers might trade off earnings for appreciation is not entirely clear. At least in this sample, however, there was little interest in volunteer work, largely because most needed additional income to supplement Social Security or pension checks.

If one aim is to respond to the needs and desires of older workers, employers should provide jobs that provide continuity with pre-retirement employment. Ideally, these jobs would promote autonomy and challenge, and there are a number of alternatives that employers might consider in more detail:

1. Part-time jobs that are consonant with career experiences.
2. Job sharing which takes one full-time position and divides it into two jobs.
3. Temporary pools within individual firms that would provide options for permanent employment.
4. Redesign of jobs to match physical skills or health limitations.

How realistic are these options? In the short term, the climate is less than entirely positive for a restructuring of jobs to meet the needs of older workers. This less than responsive climate is due to several reasons: the recent large-scale workforce reductions in many firms; the ready availability of a workforce for most jobs (Belous, 1988); and the reticence of unions, until recently, to push for these options (Appelbaum and Gregory, 1988). But these conditions may change. If the U.S. Department of Labor projections are correct, then shortages of skilled labor may prompt employers to look for pools of currently untapped labor. Clearly, the fast-food and child care industries illustrate this trend. In addition, firms such as The Travelers, which operate in relatively tight labor markets, also have turned to creative approaches regarding returnees. But as noted earlier, if these industries or firms see older workers as simply fungible with the shrinking cohort of teen workers, then they are likely to face serious difficulties in recruitment.

Today many older Americans are financially secure and unlikely to be motivated to return to the labor force unless the conditions are right. They are more likely to take casual short-term jobs, or work off-the-books in order to earn a little extra money and not to jeopardize their Social Security payments. They may also turn to self-employment in order to maintain continuity with their career work. Ironically, it appears that today's employer policies are pushing older Americans away from employment rather than enticing them towards it. Yet, there remains certain older groups such as women with intermittent work histories, members of minority groups, or those with health problems, who continue to want work, but find neither the opportunities nor right conditions.

Federal Policy

There are a number of proposals regarding Social Security and pensions that respondents mentioned. One was the repeal of the "double dipping" penalty faced by widows or widowers who cannot "double dip," i.e., receive a Social Security payment from their own account as well as the account of their deceased spouse. Another was the increase in the earnings test. And a third was the encouragement of portable pensions.

Public Awareness

A number of older workers argued for a strong public service campaign to highlight the virtues of older workers. They believe one major obstacle to overcome is employers' attitudes toward the appropriateness of older workers for certain types of jobs that are high profile or high status. It is unclear if the prejudices some older workers have encountered by employers will be offset by the changing demographic structure of the workforce.

Although all 36 of the people interviewed for this study were motivated to work, it is important to stress that the majority still wanted choice: whether or not to work and what types of jobs to take. Their desire for choice may be compounded by the fact that this Depression-era generation feels they have had little choice all their lives.

In summary, since this has been a study of only those older Americans who work or want to work, it is not representative of the majority of older Americans who neither work nor seek to work. Yet, I think that the findings do raise provocative questions regarding what would motivate nonworking older Americans back into the workforce. Are there certain conditions under which they would want to work? Are these conditions tied to tangible arrangements such as scheduling alternatives, payment arrangements, or compensation incentives, or to the intangibles of status and appreciation? What are the tradeoffs that might be made?

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IV. EDUCATION REFORM AND TEACHER BARGAINING

The Education Reform Movement and the Realities of Collective Bargaining

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The Crisis in Education

Americans are worrying about how well our children are being educated. One source of that worry is that we have over the past several years been losing our competitive edge, and that loss, many believe, is connected to the declining educational achievement of American workers, as measured by SAT scores and other indices of student achievement. "We hear so much about positioning America to compete," Education Secretary Lauro Cavazos said recently. "How can we achieve what we want to achieve if our citizens are not educated to their highest potential?" (Tolchin, 1982).

Still another source of worry is the troubling fact that over 20 million American adults, most of whom are products of our public school system, are functionally illiterate. Beyond what this grim statistic may imply in respect to economic growth is the fear that our system of democratic government is imperiled by a badly educated and ill-informed citizenry.

The response to what many believe to be a serious decline in educational achievement and standards has been, so far, a spate of studies, commissions, and reports, all aiming toward reform of the education system. Most of the recommendations that have been

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implemented to date have come about through state-level legislation and mandates (Darling-Hammond and Berry, 1988). Education reformers disagree on the role of teacher bargaining in achieving their objectives. One wing of the reform movement believes collective bargaining is an obstacle to change and maintains collective bargaining is one reason the schools are in bad shape. But another wing holds that collective bargaining can and must be used as the vehicle of change in our schools.

Although the recommendations contained in these reports are wide-ranging, covering everything from school finance to curriculum to educational technology, in this paper our emphasis will be on proposals dealing with such matters as how teachers are to be recruited, retained, compensated, and deployed. And just as the so-called reform movement is a reaction to the process of education, the reform movement has engendered a reaction among teacher organizations. As we shall see, although that reaction has been anything but wholeheartedly accepting, neither has it been uniformly hostile.

What can be learned from the identifiable characteristics of public school teachers, and how might those characteristics contribute to the current difficulty? First, to the extent SAT scores are a reasonably good indication of teacher quality, one cannot be reassured. According to the Carnegie study, *A Nation Prepared: Teachers for the 21st Century*, the combined average SAT score of high school seniors planning to become teachers in 1985 was about 60 points lower than that of all college-bound students (Carnegie Forum on Education and the Economy, 1986). Moreover, the most talented teachers, at least as measured by the National Teachers Examination, tend to leave the profession much sooner than those demonstrating the least talent.[1]

Attrition has always been a problem in the teaching profession, whether among the most or the least talented. For example, for elementary teachers in the age cohort 22–30 the attrition rate is 21 percent, substantially higher than the 13 percent rate for grade school teachers age 61–65. Junior and senior high school teachers average about 12 percent for the 22–30 age range. It is particularly troubling, given the importance of at least a modicum of scientific training for new entrants into the workforce, that 11.5 percent of math and science teachers leave teaching before reaching the age of 30 (Grissmer and Kirby, 1987).

[1] A North Carolina study showed that 62.5 percent of those scoring in the top 10 percent on the NTE left teaching within seven years whereas only 37.3 percent of those scoring in the bottom 10 percent left during that period (Schlechty and Vance, 1981).

It is no less troubling to hear that less than two-thirds of college graduates qualified to teach math and science actually go into teaching (Rumberger, 1984). And that could be because college graduates trained in those disciplines can, in New York State at least, command salaries upward of $5,000 more in industry than they would get if they went into teaching (State Education Department, 1987).

Surely it is difficult to build a profession out of an occupation characterized by such a high turnover rate, particularly when turnover is the highest during the early years of employment. Indeed, it is probable that many teachers don't stick round long enough to master their craft.

There may have been a slight decline in attrition in recent years. (In New York State, for example, attrition fell from 12.8 percent in 1974 to 9.2 in 1984 [Grossmer and Kirby, 1987]). And there has been a small increase in the number of college freshmen indicating an interest in teaching. The figure was 8 percent in 1987, compared to 5 percent in 1983. But the 1987 figure must be compared to the figures of the late 1960s when the proportion was almost 25 percent (*Education Week*, 1988). We might also possibly draw some comfort from the fact that a growing number of men and women are leaving other occupations to train to become teachers. But the information on this new source of recruits is, at best, anecdotal (Berger, 1988); it would take a movement of extraordinary proportions to bring the teaching force up to the level needed. The authors of *A Nation Prepared* estimate that we will need 1.3 million new teachers between the present and 1992. That report also suggests that if we were to rely on newly minted college graduates alone to man the classrooms, 25 percent would have to go into teaching (Carnegie Forum on Education and the Economy, 1986).

Equally troubling are the statistics contained in a recent report prepared by the Metropolitan Life Insurance Company. According to the Metropolitan survey, 34 percent of public school teachers with less than five years experience say that they are likely to leave the profession within five years. Nor are the figures for those with five to nine years experience—30 percent—more encouraging (Daniels, 1988).

What all these figures seem to demonstrate is that we have an unstable, or potentially unstable, and not entirely happy teacher workforce. Nor does the quality of those remaining appear to be quite the calibre students and parents have a right to expect.[2]

[2] Levin (1988) has pointed out the strong correlation between teacher verbal ability and student achievement.

The Reform Movement

It would not be possible in this short space to summarize the several reports that come under the general rubric of educational reform. The single thread running through them is that we are in trouble and something dramatic needs to be done. The two reports that have received the widest attention are *A Nation at Risk*, essentially a product of the Reagan administration, and *A Nation Prepared*, the product of the Carnegie Forum on Education and the Economy. If it is possible to so characterize, *A Nation at Risk* is the more conservative of the two documents; the emphasis is on lengthening the school day and year, more use of standardized tests, beefing up student discipline, etc. Little attention was paid to involving teachers in school policy decisions on a systematic basis. As for teacher compensation, the report advocated abandoning the traditional teacher salary schedule in favor of a system of merit or performance-based pay, as well as the development of career ladders and master teacher plans.

The Carnegie study, on the other hand, is more far-reaching and, we believe, has a greater likelihood of success. Although it contains many recommendations similar to those contained in *A Nation at Risk*, the Carnegie report differs in that it would provide a greater role for teachers and their organizations, and is less sanguine about merit schemes. Rather, *A Nation Prepared* recommends that "salary increments must be associated with different levels of responsibility" (Carnegie Forum on Education and the Economy, 1986). The report sees four categories of teachers (licensed, certified, advanced, and lead teacher) differentiated only by experience, functions, and competence. The experiment currently under way in the Rochester, New York, public schools is based in part on these recommendations. We shall have more to say about the Rochester experiment later.

The Realities of Collective Bargaining

As we pointed out earlier, teacher unions have not embraced these recommendations with open arms. Former Secretary Bennett complained: "In recent years, the Nation's largest teacher union—the National Education Association—has shown itself to be the most entrenched and aggressive opponent of education reform" (Bennett, 1987).

That observation could be but another example of the former Secretary's penchant for hyperbole, but NEA President Mary Futrell's comments on the Carnegie recommendations suggest that Bennett's criticism did not miss the mark entirely. "I have deep reservations about some of the report's conclusions and recommendations," she wrote. The proposal to provide different pay scales for different levels of responsibility, she thought, "suggests that some teachers are more equal than others. And it is not adequately differentiated from the flawed and failed merit pay and job ladder plans" (Carnegie Forum on Education and the Economy, 1986).

American Federation of Teachers (AFT) President Albert Shanker's comments were far more friendly. Although he would have liked to have had more of his "ideas and differences withstand the Task Force process," Shanker concluded, "This report deserves full support. It promises to turn teaching into a full profession, make major structural changes in schools and take giant steps in the improvement of learning" (Carnegie Forum on Education and the Economy, 1986).

In a sense, the different response by the two union leaders is not surprising. The AFT's strength tends to be in the larger cities, and that seems to be where the greatest problems are, in discipline, achievement, dropout rate, and in just about any other measure one can think of. Many participants in the urban school districts—teachers, administrators, board members, and union leaders alike—believe the situation has become so desperate they are willing to try just about anything no matter how initially unsettling a significant change might be.

We do not mean to suggest that merely because a few AFT locals have begun to implement some of the reform proposals that the movement is well under way. Indeed, we see a great deal of hesitancy on the part of teachers, unions, and administrators. The reasons for this "foot-dragging" are understandable. First, the prevalent system of compensation that rewards teachers solely on the basis of experience and graduate training is an arrangement both teachers and administrators find comfortable. It makes no invidious comparisons among teachers, and it is simple to administer. Second, distinctions as to individual worth or competence are not all that easy to make. Nor do we know for certain that monetary incentives based on teacher performance reap the desired results. Does the possibility of grabbing the cash carrot cause teachers with lackluster records to improve their performance? Evidence on the effect such incentives have on performance in the nonteacher area is mixed at best. Third, earlier attempts to break out from the so-called lock-step system of compensation have not been successful. And most failed even in the absence of any collective resistance from organized teachers (Bacharach, Lipsky, and Shedd, 1984).

Still, we are in trouble. We don't recruit the most able of our own college graduates into teaching. We don't even get them from the top half. The attrition rate is far too high, and those most likely to leave early are among the most gifted. The most widespread system of compensation which treats all teachers as fungible is insensitive to market forces. We pointed out earlier the problems schools have recruiting and retaining math and science teachers.

We can take some encouragement, however, from the experiments now being conducted in several large districts. They provide evidence that at least some union leaders and administrators recognize the severity of the problem and are willing to risk new approaches. The Rochester experiment is a case in point.

Rochester is a large city school district that suffers from almost all of the ills of other urban districts. In August 1987 the Rochester City School District and the Rochester Teachers Association signed a three-year collective bargaining agreement that incorporates many of the recommendations contained in the Carnegie report, as well as other reports. First, the agreement will increase teacher salaries by over 40 percent by 1990. But teachers will be required to work 190, rather than 185, days a year and will relinquish some of their seniority rights. The pact also abolishes the traditional salary schedule, establishing instead four categories teachers can move through: interns, that is, first-year teachers without prior experience; residents, who have been interns but do not yet have permanent certification; professionals, or fully licensed teachers; and lead teachers, a position obtained through competition and reserved for teachers who have at least 10 years of experience and meet high standards of performance.[3]

Lead teachers can eventually earn up to $70,000 a year. But they will work more hours and days and will waive seniority rights in assignments and transfers. Lead teachers will also spend at least half their time serving as mentors to other teachers.

The Rochester agreement assigns all teachers responsibility for personally overseeing a group of students, directs teachers to make home visits, and provides for other forms of student counseling. It also incorporates a pilot project called the Peer Assistance and Review (PAR) program that substantially revamps the traditional teacher evaluation system. PAR places primary responsibility for the

[3] Rochester Teachers Association and Rochester City School District, *Agreement*, August 1987; Rochester Teachers Association and Rochester City School District, "Career in Teaching Plan: Joint Statement on Interns," May 1988. See also "Big Raises . . .," (1987).

evaluation of new teachers (or interns) in the hands of experienced teachers (or mentors). The Rochester agreement also establishes a school-based planning process that shifts major decision-making responsibilities from the district level to building-level "teams" of teachers and administration representatives.[4]

It is, of course, too early to assess the effects of this major experiment in reform on the quality of education provided in Rochester's schools. Indeed, one of the dangers Rochester faces is pressure to produce quick and demonstrable results. For our purposes, the lesson of the Rochester experiment is that collective bargaining is not necessarily the obstacle to reform that some critics claim it is. Instead, given the fact that 75 percent of the teacher workforce is organized, we think it likely that genuine reform can only be achieved through collective bargaining.

The willingness on the part of the Rochester teachers to participate in a scheme that departs so significantly from previous arrangements suggests that when a teacher union has reached maturity, experimentation is possible. When teacher unions are no longer threatened by school boards, legislatures, or by mass defection, we believe they will begin to be more accepting of compensation schemes that recognize differences in talent and responsibility.

The advantage of such schemes as we see in Rochester and elsewhere is not only that there is a real difference between the salary of a rank-and-file teacher and a "lead" teacher (as against the token difference characteristic of most merit plans), but more importantly, the differential is based as much on assuming additional responsibilities as it is on classroom performance. That alone should make this arrangement more palatable to teachers who have long been skeptical of plans grounded on performance-based distinctions. We also believe it possible that by establishing a hierarchy, competent and dedicated teachers may become even more competent and dedicated as they vie for the more responsible—and more highly paid—positions. As we pointed out earlier, we are not so sanguine about the effect this opportunity would have on the lackluster. Another possible result of Rochester-like experiments—and this could be the most important—would be a decline in the exodus of the most talented teachers from our public schools. Under the Rochester plan, for example, at least a few teachers can earn annual salaries of as much as $70,000. We doubt

[4] See note 3. See also Rochester City School District, *Peer Assistance and Review Program: 1986-87 Local Evaluation Report*, January 1988, and Gillett and Halkett (1988).

that many teachers so amply rewarded would look so longingly for employment in industry. It is not necessary for every teacher in a school to be excellent, but it is important that there be a few to set the tone and provide the proper example, thus encouraging others to perform just a little better. The Rochester plan seems to us to make that possible.

It will take some time (probably several years) before we know whether these experiments are successful, i.e., will there be greater student achievement under these more flexible systems than there has been (and is) under more rigid compensation arrangements? Improving student achievement, after all, is the primary goal; changing the way in which we deploy and compensate teachers is merely a means toward that end. There is a risk, however, that a public that often seeks instant panaceas will lack the patience to wait several years for a program to produce meaningful results.

We are, however, optimistic. The source of that optimism is the way in which some local teacher unions, with some encouragement at national levels, have embraced the reform movement. Several cherished union beliefs and practices that seem to frustrate reform proposals are giving way to more professional concerns. We believe that to be an important first step.

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School Management and Teacher Unions: The Capacity for Cooperation in an Age of Reform

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An increasing number of policymakers, practitioners, and scholars are suggesting that a new form of collective bargaining is emerging in American public education. That new form of bargaining, they argue, will be characterized by the inclusion of teachers, collectively and individually, in the formulation of the educational policies of their schools and school districts (Kerchner and Mitchell, 1988; Johnson, 1987). The authors of this paper agree with this line of speculation, but maintain that the new system of bargaining that is emerging in public education is likely to look more like the "old" system than some observers expect.

Much of the speculation about what "new" teacher unions will be like seems to be based on the conviction that they will *not* be like the "old" ones. Rather than being adversarial and concerned with preserving its own power, the new teacher union will be cooperative and nonconfrontational. Rather than opposing efforts to improve the quality of teaching, the new union will assume responsibility for the quality and quantity of its members' efforts. Rather than negotiating rules that restrict flexibility, it will look for ways of relaxing restrictions on teachers and administrators alike. Rather than insisting that teachers' rights and benefits be allocated equally or else on the basis of seniority, it will insist that they be based on differential responsibilities and/or indicators of professional competence.

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Some of these contrasts will prove to be accurate simply because people expect them to be. No doubt many policymakers, school board members, administrators, teachers, and their leaders *believe* that traditional unions are necessarily adversarial, that they are invariably opposed to efforts to improve their members' performance, and so forth. As active metaphors or "institutional myths" (Dowling and Pfeffer, 1975; Meyer and Rowan, 1977), such convictions have played an important role in shaping the behavior of unions and employers in public education, even if the evidence to support them has been ambiguous. There is no reason why a new set of myths should not have similar influence.

It is also likely, as Kerchner and Mitchell (1988) and others have argued, that the level of conflict in education bargaining will diminish once a new system of bargaining takes hold. It is well documented that the most serious conflicts in labor-management relations tend to occur when one or the other party attempts to change the structures and processes of bargaining itself (Weber, 1964; Chamberlain and Kuhn, 1965). It is altogether likely that at least some of the acrimony of education bargaining is not so much characteristic of "traditional" bargaining as it is characteristic of the transition between two approaches, as one party struggles to reconstruct a relationship along lines that the other still refuses to accept. If and when the parties agree on the ground rules of a reconstructed relationship, conflict is bound to diminish.

But these arguments would apply to bargaining and changing relationships in any setting or sector of the economy. To go further, and to suggest that labor-management relations in public education will be especially cooperative and nonconfrontational is, in our judgment, misleading. To the extent that it may generate expectations of labor-management harmony that are impossible to satisfy, the suggestion may even discourage the gutsy experimentation and tolerance for disagreement that are necessary for reconstruction to occur.

We suggest in this paper that education bargaining in the future is not likely to be marked by the absence of conflict or by the declining use of power tactics, as some observers expect, but by an increased *capacity* for cooperation and a more sophisticated use of power that is inherent in the structure of educational systems.

Conflict and Cooperation in "Traditional" Bargaining

Perhaps the most frequent charge levelled at collective bargaining in education is that it has generated an adversarial relationship between school boards, administrators, and teachers: an adversarial relationship that undermines the effective administration of public education and prevents cooperative efforts to improve the system's performance. Advocates of bargaining have tended to accept the "adversarial" label, although they argue that bargaining more often serves to reveal, rather than generate, sources of conflict in the employment relationship.

As appropriate as that label may sometimes seem, other evidence suggests that it is misleading. One of the most distinctive features of collective bargaining is that it *combines* elements of conflict and cooperation, providing incentives for the parties to cooperate by posing conflict as an alternative (Bacharach and Lawler, 1981). It is a mistake, even in "traditional" private-sector settings, to assume that threats of strikes or similar coercive tactics are the basic source of leverage in collective bargaining. In fact, the tradeoff—the offer to accommodate another party's interests in one area in return for accommodation of one's own interests in another—is usually a much more effective source of power in bargaining.

Much of what appears (to outsiders) to be senseless maneuvering and bargaining ritual often represents the careful search for just such sources of bargaining leverage. The process is not reassuring to those who equate cooperation with orderly discourse or a willingness to sacrifice personal interest for the common good. But those who are prepared to look beyond the messiness of the process can hardly dismiss the fundamentally cooperative nature of an arrangement that encourages self-interested parties to search for ways of accommodating each other's concerns. As several scholars of American collective bargaining have pointed out, the argument that structural arrangements can turn potentially divisive interests into sources of cooperation is not unique to industrial relations. It is essentially the same as the argument on which our constitutional system of government is based (Commons et al., 1910).

The "catch" in this argument is that it assumes that each party has something the other party wants (Bacharach and Lawler, 1981). Until recently, we would argue, that has been the real source of weakness in the system of collective bargaining employed in public education: structural arrangements and legal principles that have served the interests of both labor and management in the private sector, by providing each with "something the other party wants," have undermined opportunities for tradeoffs in education bargaining. With little to offer each other, it is not surprising that education bargainers would so often find themselves using threats of conflict, rather than offers of accommodation, as their principal source of leverage.

Except for restrictions on the right to strike and the substitution of various third-party impasse procedures, most of the features of collective bargaining in public education were borrowed from the private sector: district-wide bargaining units, the periodic negotiation of comprehensive agreements that last for fixed periods of time, legal restrictions that limit bargaining to so-called "bread and butter" issues and that require the parties to negotiate "in good faith," multistep grievance procedures for the resolution of disagreements that may arise during the life of an agreement, and the use of binding arbitration to resolve such mid-contract disputes, if the parties are unable to resolve them on their own.

These features are so common in the private sector today that it is easy to forget that most of them are products of bargaining in the *industrial* sector of the economy. Bargaining in *craft* and *transportation* settings was (and to some extent still is) considerably different. Craft unionism, which was the "traditional" form of unionism before industrial unions won their organizing victories in the 1930s, was based on four principles: (1) that workers had to be members of a union before they could be hired; (2) that it was the union's responsibility to train workers and to certify when they were ready to be employed; (3) that foremen or immediate supervisors had to be members of the union and subject to union discipline; and (4) that the union would control the work process through its unilateral specification of work rules.

All of these features were logical reflections of the strategic relationship that craft unions occupied vis-à-vis employers. Craft unions, for the most part, dealt with employers who had no permanent workforces. In fact, they *provided* employers with their workers, using hiring halls, restrictions on membership, and apprenticeship programs to guarantee that those workers would be qualified to perform the work for which they were temporarily hired. In their dealings with an employer, craft unions exercised the power of a seller of labor; their basic "deal" was an exchange of skilled labor for money.

But the unions that represented factory workers never occupied such a position. Industrial workers were permanently employed, were given any necessary training after they were hired, and were usually employees before they were union members. Because the employer's products were standardized, produced in enormous quantities, and required relatively little decision-making by the workers who produced them, the employer could afford to separate the planning of work from its execution, giving managers and technical staffs the responsibility for planning the work and giving each line employee a relatively fixed set of duties to perform. The seller of labor, in such a setting, is the individual employee. The control of labor is a management function. The craft union's two sources of leverage were never accessible to the industrial union.

What a unified industrial union could control (or could prevent the employer from securing) was the authority to make the whole elaborate system work. As Chester Barnard, one of the seminal theorists on the functions of the executive, noted in the mid-1930s, *authority is always delegated upward* (Barnard, 1938). The right to direct workers, to give orders, and to insist on obedience, must be acknowledged and respected by those workers or else it is an empty fiction. Managers, of course, prefer to speak of authority being delegated *downward.* When they give credence to Barnard's assertion at all, they assert that individual employees "gave" management the authority to direct them when they accepted employment; if workers want to revoke that authority, they can quit.

Industrial unions proved that workers need not accept that assertion. They took advantage of the fact that the effective operation of factory systems depended upon the willingness of workers to voluntarily accept directions from their supervisors. The systems were simply too complex, and their dependence upon large numbers of workers was too great, to pretend that obedience could be *coerced* from each individual, particularly if workers were prepared to act collectively in the face of coercion. The benefits and guarantees which soon began to fill industrial union contracts were the price an employer had to pay to secure that obedience.

The union's formal acknowledgement of management authority was embodied in several provisions of the parties' negotiated contract. Discipline procedures established the principle that a worker's basic obligation to his or her employer was obedience: insubordination (not incompetence) was the primary grounds for discipline and/or dismissal. Grievance procedures provided top management with information about shop-floor problems and first-line supervisory behavior that top managers would never have gotten through their own management hierarchies.

The key to these arrangements, however, was contained in the arbitration and no-strike provisions of the parties' negotiated agreements, and in the often overlooked provision that specified that the terms of their agreement would remain in place for a fixed period of time. Together, these provisions helped establish the central principle of labor-management relations in the industrial setting, namely, that it is "management's right to manage" and that any rights an employer has not given up, either by express contract language or by mutually acknowledged past practice, remain rights which the employer is free to exercise unilaterally for the duration of the agreement (Elkouri and Elkouri, 1973).

For purposes of our argument here, what was important about those arrangements was that they provided industrial unions with opportunities to "tap" sources of bargaining leverage that were inherent in the labor and product markets, work processes, and management hierarchies of the employment settings in which their members worked.

The Changing Logic of Education Bargaining

It is not surprising that education unions embraced industrial union principles when they first won recognition in the 1960s. The prevailing logic of education management was itself patterned on the top-down industrial model (Cole, 1969; Callahan, 1962). Nor is it surprising that boards of education and central administrators found that logic attractive: until recently, it offered the only coherent explanation of how school systems might coordinate the extraordinary volume of activity and movement of people and resources that occur in the typical school system.

But two sets of features undermine the same logic: one that has always made for a less-than-perfect fit between industrial unionism and public education, and another that is now rendering the two thoroughly incompatible.

The first set of features concerns the nature of teaching. American teachers, for the most part, are expected to be decision-makers (Mosston, 1972; Conley, 1988). They are individually responsible for making most of the decisions concerning what work they and their students will perform, how that work will be carried out, and how the results of their students' day-to-day efforts will be evaluated (Shedd and Malanowski, 1985). Often they are expected to make those judgments and exercise their responsibilities with little direction, support, or supervision from their administrative superiors (Lortie, 1975). Teachers are responsible for translating general policies and overall goals into particular objectives; planning, supervising, and adjusting work activities; securing needed resources; and evaluating both individual performance and the overall success of their work plans. In functional (if not technical or legal) terms, *teachers are managers*, even if their superiors and their unions have been reluctant to acknowledge that fact.

There is nothing incongruous about a union of managers bargaining with an employer, particularly if their "subordinates" are not employees but students and the decisions they make are not, strictly speaking, "personnel policies." But there *is* something incongruous about such a union patterning its policies (and an employer *its* policies) after those of the industrial sector, where a sharp distinction is assumed between employee and management interests and where no distinction is drawn at all between management and employer interests.

Industrial unionism, by private-sector tradition and law, dictates that "working conditions" are negotiable, while decisions concerning "the nature of the employer's product" and "the design of the work process" are employer prerogatives. Such a distinction, altogether reasonable in most production settings, is virtually impossible to draw in service settings like public education, where (1) the system's clients are physically present, (2) the most important "working conditions" are those (like class size or adequacy of resources) that affect a person's ability to do his or her job effectively, and (3) the work of employees *is* the product the organization provides. Yet, hemmed in by industrial sector precedent and by court decisions declaring educational policies to be outside the mandatory scope of bargaining, teacher unions have often found themselves unable to address those school and district decisions that have the greatest impact on their members' work lives.

The principle that the employer "retains" the right to exercise any management rights that are not specifically ceded by contract or past practice, and the related principle that what employees owe their employer is blind obedience, also fit imperfectly in public education. Although most teachers have little to say over management policy decisions made at the school or district levels, their control over their individual classrooms actually makes them responsible for most of the day-to-day management of a school system. What their employer needs from them is not blind obedience, but active cooperation in translating general policies into specific objectives, plans, and activities.

Boards of education and school administrators are thoroughly dependent upon teachers to cooperate in this respect. That dependence gives teachers collectively a potential source of enormous leverage in the employment relationship: leverage that resembles that of industrial unions in some respects, that of craft unions in others. Yet adherence to industrial sector principles has, until recently, prevented either school districts or teacher unions from acting on that dependence—the employer by using bargaining to secure more active teacher cooperation, or the union by offering it in return for other concessions.

There has always been an imperfect fit, therefore, between collective bargaining and the more fundamental structures and processes of public education itself. There was always some logic to patterning teacher union strategies after those of industrial unions, however, so long as school managers continued to assert, even haphazardly, the prerogatives of industrial managers. But a second set of more recent developments seems to be undermining even this justification for "traditional" bargaining. New and more complicated public expectations, articulated in a tidal wave of blue ribbon reports and "reform" legislation, are forcing educators to reassess how schools should be managed (Bacharach, 1988). Not only are state policymakers, boards of education, and administrators showing increasing respect for the roles played by individual teachers in their separate classrooms, they are also more willing to include teachers collectively in school and district decision-making.

The notion that teachers should be at least somewhat "involved" in school and district decision-making is not new, but the rationale for such involvement has changed (Conley, Schmidle, and Shedd, 1988). For many years "involvement" was considered something that boards and administrators gave or allowed teachers to have, to improve their morale or to win their support for management initiatives. The most recent wave of reform reports has turned that reasoning on its head, arguing that school systems *need* the advice and information that their teachers can offer concerning client needs and the educational process. Rather than something that boards and administrators *give to* teachers, involvement in educational policymaking is now being redefined as something that they *get from* teachers.

That redefinition, we would argue, represents a crucial turning point in the evolution of collective bargaining and unionism in public education. So long as teachers were the only ones with a reason to want involvement, boards and administrators were in a position to dictate the form and scope of their involvement (assuming, that is, that they were prepared to allow any involvement at all). With employers now having reasons of their own to seek teachers' "genuine" involvement, teachers and their representatives are no longer placed in the role of suppliants.

The Capacity for Cooperation

All members of our educational systems now face the challenge of increasing their capacity for cooperation with each other. The fact that boards of education, administrators, and teachers all have reasons to seek greater teacher involvement in educational policymaking does not mean, however, that an era of permanent harmony is in the offing. Teachers, we expect, will always be more sensitive to their own needs for flexibility and resource support, while system managers will continue to be more sensitive to the need for coordination of programs and to the flow of students through the system. The parties will continue, in other words, to have different perspectives on what their clients need as well as different interests and priorities in their dealings with each other on educational issues. Indeed, to the extent that dealing openly on such issues will expose differences of interest and opinion that have hitherto been concealed behind assertions of union indifference and management prerogative, the "normal" level of conflict may even increase in some school systems in the coming years.

If boards and administrators were thought to be the sole guardians of the interests of the public and children (as industrial managers were once thought to represent the interests of the consumer at the bargaining table), such developments would raise serious questions about the extent to which private deals might compromise public interests. Our own conviction is that the interests of the public and of children in particular are represented equally well, perhaps better, but certainly *differently* by the perspectives, expertise, and information that teachers can bring to educational decision-making.

Different perspectives, interests, and priorities are not necessarily incompatible or even antagonistic, either one with another or with the public's overriding interest in providing students with a high quality education. Indeed, as we have argued here, such differences are often the source of interdependence and accommodation in bargaining relationships. But different perspectives, interests, and priorities *do* require constant reconciliation, and different *configurations* of interests require the development of new structures, ground rules, and processes. The fact that collective bargaining is well suited to such tasks is one reason it is likely to assume increasing prominence in the overall management of school systems.

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National Union Competition and the School Reform Movement: Will the NEA and AFT Merge?

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The unionization of public school teachers is a recent development in the United States (since the mid-1960s) and raises again key questions concerning the structure of unions in democratic societies (see Kerchner and Mitchell, 1988; Cooper, 1982; Cresswell, Murphy, and Kerchner, 1981). Currently, teachers are represented by two national unions—the National Education Association (NEA) with 1.9 million members and the American Federation of Teachers (AFT) of the AFL-CIO with .8 million members—though some observers have argued, as does Maurice Berube in *Teacher Politics*, that "teacher unions may only become initiators of sweeping change when they become unified into one organization" (Berube, 1988, p. 2). The fierce competition between the AFT led by Albert Shanker and the NEA under Mary H. Futrell has, according to Berube and others, weakened teachers' hand in influencing Congress and the U.S. Department of Education, and has led to bitter battles and fruitless "raiding" of local unions for affiliates, rather than unity and power. These developments raise several key questions.

Would America's school teachers in particular and education in general be better served by a single, unified national teachers' union (perhaps affiliated with the AFL-CIO) or two competing unions? What are the countervailing pressures for and against merger? And what might be the effect of a single national teachers' association versus two competing unions on union behavior and efforts to improve school quality?

The debate over the merger of AFT and NEA, and possible affiliation with the AFL-CIO, focuses attention on a rarely discussed

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issue of union mergers—whether members and society are better served by choice and competition among unions, or by one large, more monopolistic organization. In this context, union leaders face an interesting dilemma. On one hand, a single national union would command more attention and political authority, thus assuring leaders more support for their agendas. On the other hand, single monopolies may become complacent and risk-averse, encouraging leaders to view new ideas and approaches as threatening to their oligarchic control. Regarding the latter situation, what good is power through merger if it is harnessed to the status quo?

To date, most research on union mergers has examined the "event" of merger (Brooks and Gramm, 1974; Chaison, 1981), the process of merger itself (Kochan, 1980, p. 35; Chaison, 1986), or the "empirical" reasons (Janus, 1978; Adams, 1984; Freeman and Brittain, 1977; Windmuller, 1981). It has paid little attention to the broader questions of how mergers affect union democracy, member involvement, and union effectiveness in promoting particular social and economic agendas for members. Gary Chaison, in *When Unions Merge* (1986), notes the shortcoming of such union merger research when he wrote: "The narrow and rather simplistic view of mergers is ironic in light of the high expectations we have for mergers in the restructuring and revitalization of the labor movement" (p. 1). This paper looks at the reasons for and against a teacher union merger, as well as some of the factors mitigating for and against its ever happening.

One Union, One Voice

Ever larger, more unified unions are argued for in much the same way as corporate conglomeration is supported: mergers will lead to more efficient operations and greater productivity. That is, a single, strong union may offer better bargaining and lobbying power, higher financial benefits, better contracts, and an enhanced opportunity to get pro-labor candidates elected to public office. Interviews with leaders and members from both the NEA and the AFT reinforce this contention: that both associations expend (waste) enormous time, energy, and money "raiding" one another's locals; yet after nearly two decades the net effect has been negligible. Leaders recognize the precedents of history, as labor in the United States and other Western nations has tended to unite: for example, the 1955 merger of the AFL and the CIO.

As education competes with other sectors for ever-scarcer public funding in Congress, the state legislatures, and local councils, the power of a single national teachers' union becomes more desirable. Teachers are the nation's largest employment category; are distributed across the nation in proportion roughly equivalent to local populations; are college educated; and vote in large numbers. According to merger advocates, one large teachers' union would become a potent force for education change and improvement. Berube concludes his book with this call to arms: "Still, one must conclude that the future of the NEA and the AFT as powerful political and educational institutions resides with merger. Perhaps, only then will the teacher unions fully realize their potential and become the engine for educational reform that they must be in order to fulfill their destiny" (Berube, 1988, p. 159).

The issue of merger was hot in the mid-1970s (e.g., newspapers were forecasting its likelihood), since the national financial crises encouraged teachers to seek strength in numbers. Many, but not all, the issues that historically divided the NEA and the AFT had been resolved. The NEA, which had traditionally seen itself as a "professional association," had by 1974 become a union, calling strikes, negotiating contracts, and actively supporting candidates for public office—all actions once thought unbefitting a professional group. The AFT, which had always seen itself as an urban, left-socialist "workers union" within the AFL-CIO, used similar tactics and if anything had become slightly more moderate.

But the merger was not to be. The NEA feared joining the AFL-CIO; the AFT worried about being "absorbed" into the larger NEA organization. And personalities entered in, as NEA leadership tended to be small-town, middle-America, while its AFT counterpart was clearly urban, ethnic, and hard-hitting. Yet the issue of teacher union merger has never died—and emerges again in the late 1980s.

Division, Competition, and Member Choice

A divided voice for teachers (and, by implication, for other employee groups) has certain advantages. For members it provides them with choice among representative unions; for union leaders, it forces them to stay current and be responsive to changing "markets" and conditions. In fact, many of the same arguments that are made for competitive corporate markets may be applied to union organizations. Furthermore, as Robert Michels, in *Political Parties*, observed in 1915, union "bureaucracies" tend to undermine worker democracy, to thwart change which affects workers, and to provide poor services to members. Thus, mega-unions appear to suffer from many of the same inefficiencies as large monopolistic corporations. As Seymour Martin

Lipset, in his introduction to Michels's book, explained: "Political parties, trade unions, and all other large organizations tend to develop a bureaucratic structure, that is, a system of rational (predictable) organization hierarchically organized. . . . But the price of increased bureaucracy is the concentration of power at the top and the lessening of influence by rank and file members who try to change unions" (Lipset, 1962, p. 16).

Certainly the recent "reform movement" in education has been fueled by the competition between the two national unions. As one NEA informant recently explained, many high-level strategy sessions were devoted to "dealing with AFT positions, and the pronouncements of Albert Shanker."[1] While a single union might be less willing (or feel less need) to take strong positions on key education and social issues, two unions must sharpen their platforms and test their positions vis-à-vis each other.

Data from the school reform effort of the 1980s indicate just how critical this mutual competition is. Ironically, the NEA, which started out as a "management union" dominated by superintendents and even university presidents, has become more "left-liberal," standing for "equity" and education for the disadvantaged. The AFT, with its roots in the socialist labor movement, has now been typified as "center right" in cautiously supporting aspects of the "choice and excellence" movement of President Reagan and his Secretary of Education, William Bennett, initiated by the often-cited *A Nation at Risk* report on the deterioration of American schools (National Commission on Excellence in Education, 1982).

The differences between AFT and NEA on national school reform are informative. Take, for example, the whole issue of how well our schools are doing. While the NEA tended to downplay the problems, the AFT attacked the system full force, advocating new and dramatic steps (career ladders, changes in the workplace) for schools and teachers. The NEA, on the other hand, attacked Reagan and Bennett. On other issues, too, there was strong disagreement. While the NEA worked hard for the creation of a cabinet-level U.S. Department of Education during the election and term of President Jimmy Carter, the AFT and the AFL-CIO strongly opposed it. On issues of bilingual education, the NEA backed the notion of teaching subjects in the student's first language and then weaning them away to English. Shanker and the AFT preferred a total immersion in English—as did Secretary of Education Bennett.

[1] Interviews with National Education Association.

Or, as Berube explains, "In summary, the ideological differences between the two teacher unions have been considerable. The aims of the unions in education, on matters of race and social policy, and on foreign policy, were pursued in the political arena, sometimes with great controversy. One could characterize the NEA as having been to the political left of center for the past two decades, whereas the AFT has moved from the political left to right of center" (Berube, 1988, p. 122).

Furthermore, the two organizations have very different cultures, reflecting their roots and histories. NEA is huge and heavily "democratic," with assemblies, committees, delegates, and meetings, and it has a highly diversified constituency—as different as Newark, New Jersey, and Athens, Georgia; the AFT centers more power in the hands of its leaders and tends to represent teachers from the nation's largest urban centers. Thus, while it takes years for NEA leadership to "read" the diverse membership and promulgate a new policy, the AFT's president, Albert Shanker, often can respond quickly and dramatically on behalf of its more homogeneous membership. These differences are critical when considering the possibility of a union merger and the form it may take.

Future Merger Possibilities

Merger is likely in the future, given the history of unions in the Western world and the increased need for a powerful, central voice for teachers at federal, state, and local levels. While a merger could destroy much of the dynamism of recent school reform efforts that arose out of interunion competition, and may be unlikely to produce the range of school reforms currently being tried (teacher empowerment, teacher career development, national teacher certification, master/mentor teacher arrangements, the Holmes Report, and so on), it seems inevitable over the next decade given teachers' need for political power and resources.

What form will this merger actually take? Five possible merger models come to mind, although some of these may be used in combination. Each has certain advantages and disadvantages, as delineated below.

1. NEA and AFT Merge Under AFL-CIO

The real "power play" would be for the teacher unions to come together under the AFL-CIO as a single union. The political advantages would be enormous, and as Albert Shanker explained, the move "would do much to bolster organized labor in the U.S." In fact, he believes that unless large groups such as teachers are brought into the fold of organized labor, the labor movement in the nation is vulnerable.

In 1974, during NEA/AFT negotiations, the status of the AFL-CIO in the process was a stumbling block. As Shanker wrote, when the merger talks broke down, "The NEA's stated reason for terminating the discussions was its non-negotiable demand that a merged organization be entirely unaffiliated with the AFL-CIO" (Shanker, 1974). Many teachers in rural and small towns may view "unionism" as undermining their view of themselves as professionals. Yet, national NEA leadership also recognizes the need to be part of the national labor movement; since the 1960s, they have changed their basic view of the teachers' role in bargaining, striking, grieving, and lobbying. It may not be a giant leap for the NEA to see itself as a member of the AFL-CIO.

2. *AFT and NEA Merge with Optional AFL-CIO Affiliation*

This approach has many of the advantages of total merger, yet it would give "conscientious objectors" a chance to join a teachers' union without themselves joining the AFL-CIO. Simply, a member could specify that none of his/her dues would go to the AFL-CIO. Or the AFT branch of the new merged union could continue its AFL-CIO links while the NEA branch might not.

The problem with this new "divided" arrangement lies in its divisiveness. How could part of the members join the labor movement and some not? Certainly, this shortcoming would make governing and policymaking difficult, particularly if the AFL-CIO takes a stand on an issue—against the U.S. Department of Education, for example—while the NEA-wing vehemently supports it. Also, this half-solution might still offend some NEA teachers who want nothing to do with the AFL-CIO.

3. *NEA and AFT Form a Third National Union*

An interesting option would be for the two national associations to form a third, "umbrella" group called, say, the United Teachers of America (UTA). Each NEA and AFT member would then pay dues to the UTA of, say, $1.00 per member per year to support a national agenda, lobbying, and organizing, with an understanding that all interunion "raiding" of locals would stop. The UTA would be governed by a representational council for NEA and AFT; states, too, would be urged to form state UTA chapters to lobby the state government and to take stands on local issues and candidates. Thus, NEA and AFT could cooperate through UTA while still maintaining their positions as separate organizations. Affiliation with the AFL-CIO would then be finessed.

The problems involved with introducing a "third voice" into the cacophony of national school politics are many. What if AFT and AFL-CIO took one position, NEA a second, and the new UTA a third? Yet the idea of having a third party, a kind of "united nations" of the teacher union movement, is an interesting one, as teachers need more clout at the national and state levels.

4. NEA Joins AFL-CIO Directly and Separately

It would be intriguing for the National Education Association to petition to join the AFL-CIO directly, as a "fellow union" of the AFT but not by merging first. This move would eliminate much of the rivalry, raiding, and competition between the NEA and AFT, while bringing the 1.9 million teachers into the home of the labor movement. It would strengthen the hand of teachers in organizing other teachers, since 1.5 million are still not affiliated with NEA or AFT. And it would build the power base of the labor movement in a way not seen in years.

The trouble with this scheme is the attitude and history of the NEA. While NEA may be "liberal," its organization prides itself on being far more "democratic" and "representative" than the AFL-CIO unions like AFT, which tend to have the same leadership in power for lifetimes. While the head of NEA turns over every six years, and must be a "minority" so many times every so many years, the AFT leadership tends to stay on for entire careers and to be renominated and reelected fairly routinely. AFT leadership contends that the turnover of NEA presidents simply hands power over to the permanent bureaucracy, the Executive Director's office, which may be less "democratic" than an elected (if eternal) AFT president. These differences in internal structure pose difficulties for any kind of real merger, though they would not be a problem with the "umbrella" UTA proposal, or the NEA's joining the AFL-CIO on its own without merging with the AFT.

5. State-by-State AFT/NEA Mergers

A final suggestion might be a state-by-state approach, having various states try this arrangement where less is at stake and incremental change is possible. Since each state is different, this approach is attractive for its flexibility and closeness to the political situation in that state. Perhaps, here again, those NEA members who object to a relationship with labor might hold back their AFL-CIO dues; or perhaps some states might create umbrella groups rather than trying to form one big unit.

This scheme was tried with mixed results in New York with the creation of a merged NEA/AFT unit called N.Y. State United Teachers (with recruitment of teachers into bargaining units rising considerably), though the NEA has since started up its own state affiliate. Some states where AFT is weak might pose a problem, since there would be little incentive to form a merged union if AFT had few or no locals. And since some states still have no collective bargaining for public employees at all, the idea of merging teacher unions in that state is unlikely to work.

Conclusion

Whatever the outcome, we see an interesting case of the tradeoff between the power of a united organization versus the advantages of competition and choice. While raiding, defending, and fighting are tiresome and costly for union organizations, this competition does have certain advantages. It stimulates new ideas, keeps union leaders on their toes, and allows employees to change organizations if local services (bargaining contracts, support during grievances and strikes, lobbying legislators) fall short.

The past 20 years has been indicative of what happens when unions compete, as the NEA and AFT vied with one another to stay current, took divergent stands, and were active advocates for teachers; it is unlikely, for example, if the nation had had only one national teachers' union that it would have been so creative during the Reagan era. Thus, union efforts to differentiate themselves from one another have led to some new and interesting proposals.

While the NEA and AFT both supported Democratic presidential candidates and fought hard against vouchers and other efforts to aid private schools, the two unions were very different on issues of school site staff differentiation, career ladders, and a U.S. Department of Education, leading to greater varieties of ideas and programs for school improvement coming from the teacher unions. In public education in particular, unions must look out not only for member needs, but also for the entire education enterprise. Better education not only helps teachers—making their schools more exciting places to work—but it also benefits the children who attend those schools, their families, and society as a whole. Hence, competition for ideas about education reform takes on monumental and long-term social importance—and should not be trusted to a single oligarchic institution.

Thus, at present, the nation's teacher associations are speaking with two voices—with all the limitations of division and conflict and all the creativity of two competing organizations. But a union merger of some kind—whether total or partial, state-by-state or national, part of the AFL-CIO or not—seems almost inevitable. For one of the dilemmas of modern life is how organizations like teacher unions can remain separated and competing in a tough political environment. The AFT and NEA will probably go the way of other large unions—merge, wield power, with less concern for innovation and change, diversity and choice, and become a larger, less responsive bureaucracy. For it was Selznick who easily transferred the concept of Michels's "iron law of oligarchy" to an "iron law of bureaucracy" applicable to unions, as Lipset explained: "The student of organization begins, according to Selznick, with the assumption derived from Michels that there will be deviations from avowed goals, and that such seeming betrayals of institutional commitments, like the violations of democratic norms by social-democratic or trade union leaders can be explained by references to the assumption that bureaucrats are officials who concentrate power in their own hands, and function according to their own interests" (Lipset, 1962, p. 24).

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The Educational Policy Trust Agreement and the Process of Educational Reform

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Four years ago a California Commission on the Teaching Professions member steered me into a private conversation intended to correct errors in my thinking. "You don't understand," he said, "the last thing we want to do is *increase* the interactions with unions."

The corporate executive was reacting to a proposal to create a labor-management compact parallel to the conventional contract, called an Educational Policy Trust Agreement. These agreements were to address issues not normally bargained, such as the quality of educational outcomes, the substance of teacher evaluation, the management of schools, and other questions of educational policy. In the executive's words, we had violated the norm that "the shortest contract is the best, and the very best is none at all."

Indeed we had. We had asserted that fundamental reform in teaching was impossible within organizational and union structures that were essentially industrial. We argued for a form of unionism constructed around the unique problems of developing workplaces for employed professionals.[1] Creating professional unionism required renouncing some old ideas and behaviors, particularly the unnatural demarcation between the bargainable conditions of work and the nonbargainable work content. This constraint perpetuated a view of teaching as a bundle of managerially developed techniques rather than an occupation distinguished by engagement, on-the-spot experiments, and mid-course corrections. The old scope-of-bargaining argument is turned on its head by asserting not only the right, but the *duty* of

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[1] The professional unionism argument is developed in Kerchner and Mitchell (1986), which is a revised version of our proposal to the California Commission on the Teaching Professions.

organized teachers to address educational policy questions. However, we also argued that if relationships were to expand, a new form of labor agreement would be needed to incorporate them: the Educational Policy Trust Agreement.

Weakness in Conventional Contracts

We argued that the Trust Agreement was necessary because of inherent weakness in conventional collective contracts.[2] Collective bargaining contracts are intended to govern behavior, not to express the concepts, plans, or intentions of those who negotiate them. They are formulated with the express intent of reducing flexibility and uncertainty so that there will be fewer opportunities for mistreatment or abuse of workers. From the standpoint of organizational policy and planning, labor contracts are viewed as restrictions on the practices that can be used. They specify the conditions under which workers are expected to toil, but they do not define the goals or programmatic frameworks for organizing their efforts. And there are good reasons why this is so.

The rights established by a labor contract must apply to all of the individual cases to which they refer. Thus, contracts must be framed and written in ways that clearly establish the obligations of each party to the other, removing whenever possible elements of uncertainty and questions of individual intent. Good contracts cannot define the goals of work or the purposes of the employing organization, and they are not well suited to expressing the wishes or desires of either party. Organizational policies, not labor contracts, are the appropriate vehicles for establishing collective goals and plans. Because policies do not create individual property rights or managerial prerogatives, policies can be more expansive expressions of collective beliefs and desires. Policies guide, but do not explicitly specify work activities. Even if a policy is followed only 90 percent of the time, it is probably doing a powerful job of shaping the performance of an organization and the people in it. In contrast, if a labor contract is followed only 90 percent of the time, it is likely to cause enormous tension and disruption. One would be ill-advised to include in a labor contract any clause which makes work obligations dependent on contingencies that are difficult to describe explicitly.

[2] The following section is taken, in part, from chapter 11 of Kerchner and Mitchell (1988).

Labor contracts do not, of course, fully express the working agreements that are reached in most organizations. Even in industrial settings, collective bargaining agreements have always been an incomplete relationship between employers and employees. Contracts are what Selznick (1980) calls "an incomplete law of association." They embody only a part of the diffuse and complex relationship that has evolved, legally and socially, from the relationship between masters and servants.

As we reflected on our experience in public schools, we realized that in virtually every case in which management and labor had explicitly and intentionally tried to solve educational problems, they did so outside of the contract. When asked, the parties often said that they chose not to use the labor contract because the problems that they were trying to solve were ambiguous. Both parties understood that there was a problem, both were sure that they wanted to work toward a solution, but neither party was confident of the exact dimensions of the solution. Sidebar agreements, memoranda, or unwritten understandings provided them the flexibility they wanted.

The Concept of a Trust Agreement

We wanted the Educational Policy Trust Agreement to capture this instinct for working on problems and to elevate it to a normal, expected behavior between teachers unions and school districts. The underlying metaphor is that of *trust.* Preparing a will (establishing a testamentary trust) or depositing one's assets while still alive (an inter vivos trust) allows one to express one's goals, transfer resources, and authorize others to make certain decisions.

Crafting a good trust requires managing ambiguity: allocating authority so basic goals can be pursued under circumstances unimagined by the document's creators. This is a primary problem in education reform, where it is seldom possible to predetermine details of successful reform. Knowledge about "what works" is nearly always heuristic, and, thus, agreements about educational policy need to work within an inherently uncertain environment.

To work within ambiguity, Educational Policy Trust Agreements specify educational *problems* on which unions and management wish to work rather than solutions. They specify resources (time, money, and authority) that the parties will set aside to work on the problem. Trust agreements have strong parallels to conventional labor contracts and some equally strong differences. Contracts contain compensation and work-rule clauses that both define and structure teaching tasks.

These clauses convey property rights to individual teachers (the right to be classified at a particular pay grade) and organizational rights (released time for officers) to the union. Trust agreements establish intentions, goals that specify the purposes for pursuing a particular program or project about which the union and management are negotiating. Trust agreements also contain resource statements specifying the sources of time, money, and allocation of authority to be used in support of the agreed-upon goals. For example, if the parties agreed to develop a new literature-based writing program, they might specify that part of the district's training funds would be used for the effort, that inservice education days would be devoted to the program, and that teachers would devote time to meet, plan, and test the new program.

In addition to substantive rules, contracts contain procedural requirements for their administration. It is usually assumed that management is the active party in contract administration in that it will run the schools in such a way as to observe its contractual obligations. Labor's responsibility is to be vigilant and to grieve contract violations of a teacher's substantive and procedural due process rights. In conversational shorthand: management acts; labor grieves. Trust agreements do not automatically assume that management will implement the agreement. A trust agreement may well empower a group of teachers to plan an outdoor education project and assign responsibility for evaluation to a joint union-management board. They have the facility to create organizational structures which match newly articulated joint goals.

As is the case with contracts, trust agreements need a means of resolving disagreements. But the issues in a dispute would be quite different. The question is not whether an individual did or did not live up to the letter of the agreement, but whether the collective implementers of the Trust Agreement were making progress toward the agreed-upon goals. It is assumed that the beneficiaries of the agreement are the clients and the community, not the individuals involved, and thus the remedy is to fix the program rather than indemnify the staff.

Trust agreements are amenable to a wide variety of dispute-resolution techniques. At the informal level, labor and management could meet either on a case-by-case basis or periodically to consider policy deviations before they reach crisis proportions. Third-party conciliation or adjudication can also be used.

From Concept to Reality

Moving from academic concept to school-based reality has proven easier and more exciting than we anticipated. Shortly after the California Commission on the Teaching Professions recommended experimentation with Trust Agreements, Miles Myers, the president of the California Federation of Teachers (CFT), expressed interest in pilot projects. He provided useful introductions to districts and travel money to allow the initial seeds to take root in two districts.

The San Francisco-based Stuart Foundations agreed to finance a project co-sponsored by the CFT and the California School Boards Association and operated through Policy Analysis for California Education (PACE). In 1988-1989 the project involves 12 school districts ranging in enrollment from 2,500 to more than 60,000. The California Teachers Association, and districts represented by its affiliates, have become active participants in the project. Operationally, the project involves introducing the concept to unions, school boards, and administrations, supporting negotiations of initial agreements, and recording process and its effects. Of the six districts in the first year's project, three had signed written Trust Agreements by the end of the 1987-1988 school year.

A Summary of the Projects

Trust Agreements have no inherent subject matter; the project has urged districts to diagnose local problems rather than engage in imitation. Initial negotiations considered evaluation, school restructuring, and staff development, and each negotiation is changing the character of labor relations in the district.

The first negotiated agreement in the Petaluma City Schools reorganized that district's staff development efforts. Petaluma, some 40 miles north of San Francisco, is a jointly managed elementary-high school district with a combined enrollment of approximately 8,500. Previously, staff development in Petaluma was run by a central office administrator with little or no teacher involvement. Teachers and administrators chose staff development as an important area because it seemed noncontroversial and relatively straightforward—safe ground on which they could start. The agreement resulted in a restructuring of district staff development with a teacher-administrator team planning and executing the event and a new emphasis on nurturing and developing teacher expertise in the district rather than speeches by outsiders. (The author sat with decidedly mixed emotions as the teachers voted not to hire any more professors to run in-service programs.)

On the surface, the Petaluma agreement is simple, almost trivial, but it has unfrozen teacher expectations of themselves and of their school district. Teachers now expect to be involved in school-level decisions, an expectation that has been greeted with nervousness on the part of school principals, but also with determination to negotiate a second Trust Agreement on decentralized decision-making.

Three districts are developing teacher evaluation agreements. The Poway Unified School District in suburban San Diego County hired more than 125 teachers last year and faced serious problems in socializing and evaluating probationary teachers. Based in part on the peer review system in Toledo, Ohio (Waters and Wyatt, 1985), the Poway union and administration devised an assistance and evaluation project for first-year teachers and put it into operation during 1987–1988. The agreement relocates both money and authority:

- The union agreed to allocate $100,000 over which it had contractually negotiated authority to the project.
- The district agreed to release three senior teachers, jointly selected by the union and the district, to act as supervising teachers providing assistance as well as evaluation for new teachers.
- Both agreed to form a joint governing board that oversees the project and recommends rehiring or dismissal of first-year teachers.

The Poway evaluation program is redefining both the authority of teachers and the concept of solidarity among unionized teachers. In addition to defending teachers, which it does vigorously, a new norm is emerging: that the union's job is to define and defend the art and craft of teaching. As was the case in Toledo, supervising teachers found themselves recommending dismissal of other teachers, but more importantly the district and union have signaled that new teachers are important and worth a substantial investment in first-year assistance.

Two other evaluation agreements are in process. Santa Cruz, a jointly managed elementary-high school district of some 9,000 students, is working on an agreement that develops qualitatively different systems for new teachers, experienced teachers with severe problems, and experienced teachers seeking avenues of personal and career growth. Part of their motivation was to move beyond a pattern of protracted and mutually unsatisfactory labor negotiations. As one participant put it: "We always settle, but everyone always ends up mad at each other." In Lompoc, a district of some 8,900 students in Santa Barbara county, the motivation has been to prepare for the next generation of teachers. A decade-long enrollment decline is ending, and the district anticipates hiring a large number of teachers over the next few years.

In San Francisco, union and administration developed a career mobility plan that facilitates paraprofessionals' entry into teaching by coordinating their work assignments and opportunities for bachelor degree and teacher certificate completion. The program is seen as a potential answer to the challenge of recruiting minority teachers. Paraprofessionals, mostly women and mostly minority, stand as a ready pool of persons experienced and already interested in education, and teaching positions would represent substantial career advancement for them.

The union and district agreed to provide and finance such a program, including a guarantee to hire as teachers those individuals who successfully completed it. An experienced teacher was selected by the union and the district to coordinate the project; eight paraprofessionals were selected as the first group of participants from among more than 75 applicants to receive scholarships and tuition waivers from two cooperating universities. Each teacher-to-be took university courses and student-taught in the district under the supervision of a master teacher. In addition, paraprofessionals attended workshops on classroom management and first-year survival skills taught by experienced district teachers.

A New Generation of Unionism

These trust agreement experiments—still tentative in their conclusions and still incomplete in their execution—are significant in part because of their context. There is a revolution of thought and action in teacher labor relations (Shanker, 1985). Although the American Federation of Teachers has been more conspicuous in embracing reform, the National Education Association is also fostering pockets of reform. In Rochester, Miami, Jefferson County, Kentucky, Pittsburgh, and a score of smaller places, a new generation of labor relations is emerging, one in which unions are actively engaged in directing resources and redefining teaching. What they create will not be perfect, but is likely to be better.

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DISCUSSION

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This commentary presents two "discussions" on the following papers: "National Union Competition and the School Reform Movement: Recent Developments in the NEA and AFT," by Bruce S. Cooper; "School Management and Teacher Unions: The Capacity for Cooperation in an Age of Reform," by Samuel B. Bacharach, Joseph B. Shedd, and Sharon Conley; "The Educational Policy Trust Agreement and the Process of Education Reform," by Charles T. Kerchner; and "The Education Reform Movement and the Realities of Collective Bargaining," by Robert E. Doherty and David B. Lipsky. In the first part, I will address some common perspectives and concerns; in the second, I will note specific points in each paper.

The April 11, 1962, New York City teachers' strike is noted as a turning point in relationships between teacher unions and school management (Kerchner and Mitchell, 1988). No clear epiphanic event is apparent relative to the latest redirection of teacher-employer interaction. Evidence of change is widespread in large urban districts (Rochester, Pittsburgh, Toledo, Miami) and in smaller districts (Lompoc, CA; Midland, MI; Mounds View, MN). During the 1980s several reports have focused public awareness on school issues. The 1983 document *A Nation at Risk* had minimal impact on union-management relations and, to date, has done little to change school climate or to improve student achievement. The 1986 Carnegie Forum product, *A Nation Prepared: Teachers for the 21st Century*, along with other reform documents—*Tomorrow's Teachers* (1987), *Time for Results* (1986)—seems to be more influential in suggesting new roles for teachers and their unions in restructuring both the teaching profession and schools.

Among these four papers is the common perception that a different approach to bargaining has occurred in some school systems across the United States and is likely to be adapted by more and more districts as the need for education reform becomes clearer, especially in suburban

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and rural communities. Different structures and methods for bargaining are necessary because the objectives of the process are changing. Unions and management recognize the desirability of shared decision-making, of accommodating differentiated staffing designs, of linking policy development and problem-solving to contract language, of opening a dialogue about nonmandatory bargaining issues.

As two of the papers indicate, it will take time to accomplish improvements in collective bargaining procedures and to translate these changes into improved student achievement. Other than time, the ingredient that seems to be essential is leadership. In many of the situations cited, union and district leadership have worked to design changes with great promise and considerable creativity and courage: Adam Urbanski and Peter McWalters in Rochester; Pat Tornillo and Joseph Fernandez in Dade County; Tom Mooney and Lynn Goodwin in Cincinnati. As accounts of other innovative approaches emerge, it is clear that leadership and a sense of mission cannot be disregarded as key elements in education reform. The willingness to take risks to create new structures, especially in these early stages, separates these leaders from their peers.

"National Union Competition and the School Reform Movement: Recent Developments in the NEA and AFT," by Bruce S. Cooper

In the context of the national education reform movement, one question is most pertinent: Does the NEA-AFT "competition" enhance or hinder the reform agenda? Cooper's paper treats the backgrounds of these two organizations, their current agendas, and the prospect for merger in the next decade, and he makes the good argument for increased political influence, especially at the national level, as a result of the merger. He also notes the benefits of two strong unions competing for members: responsiveness, willingness to take risks in developing new policies, choice in representation. The central question, again, should be: Does a single national teacher union offer better prospects for education reform? It may be that this question goes largely unaddressed here and nationally because neither the NEA nor the AFT has determined the political advantages of an organizational endorsement of all the reform agendas.

Currently, reform experiments are under way across the United States in locals affiliated with both national unions. Locals are strongly supported by the national and state affiliates in every case. However, locals seem to be pursuing reform measures almost solely on their own initiative. In the early stages of school restructuring, this "from-the-bottom-up" development is consistent with other "revolutionary" institutional realignments. One could argue that both national unions have an organizational interest in retaining traditional school relationships and structures. Some school reform suggestions require waivers from contract provisions and board policies. Hesitancy to embrace such local features might be expected from state and national affiliates. Just as local unions are redefining relationships with district managers, one likely outcome of school reform is the need for the two national unions to adjust policy and practice to accommodate local initiatives. Because both AFT and NEA locals are involved in similar reform activities without regard for the national's ideology, this adjustment on that level may create a climate more conducive to the merger Cooper predicts.

"School Management and Teacher Unions: The Capacity for Cooperation in the Age of Reform," by Samuel B. Bacharach, Joseph B. Shedd, and Sharon Conley

As a teacher union leader, I thought this paper extended greatly the industrial union-teacher union comparison. One could argue that the authors' discussion of bargaining by workers in other sectors, and especially by craft unionists, provides an introduction to a perspective that may be shared as teacher unions evolve during the education reform process. The characteristics of craft unions described here parallel the "new" unions of teachers.

As a classroom teacher, I was astonished by the "logical" arrival that "teachers are managers." Education reform literature often speaks to the need to involve teachers in *real* decision-making (as a managerial function) especially at the school level, but the same documents discuss "managers" according to the traditional hierarchy: superintendents, directors, principals (National Governors Association, 1986). Especially in urban areas, despite the catalogue of "managerial symptoms" mentioned in this paper, teachers share few characteristics with managers: they often lack a permanent work station; they have little access to communication with colleagues or "the outside world"; they have no control over the resources necessary to accomplish their tasks; and they perceive little or no control over the content of their courses (Carnegie Foundation, 1988).

There is, I believe, a rather telling passage in this paper: "Not only are state policymakers, boards of education, and administrators showing increasing respect for the roles played *by individual teachers in their separate classrooms*, they are also more willing to include teachers in school and district decision-making" (my emphasis). The current wave of education reform suggests that "individual teachers in their separate classrooms" should not be perpetuated; and, in fact, school restructuring is aimed at changing that fundamental school component. Just as school organization and professional roles are expected to change, so will "structures, ground rules, and processes" related to collective bargaining.

School reform should not be viewed as a new, better way to do the same old thing. Basic to the current initiatives is the belief that traditional methods not only are not working, but they *cannot* work for today's youth. The crisis in urban education has created a greater capacity for cooperation. Union-management cooperation—in the form of dramatic departures from traditional bargaining—is most evident in the cities.

The framework provided by collective bargaining, as this paper points out, is a substantial foundation for developing education reform measures. As shared decision-making is embraced, and as other successful reform features are added, the emergence of a reshaped union of professionals seems certain.

"The Education Reform Movement and the Realities of Collective Bargaining," by Robert E. Doherty and David B. Lipsky

One loud argument that continues (especially in New York State, but in other states as well) pits collective bargaining advocates against opponents of the process. "Must reform measures be bargained?" "Is it 'better' if they're not?" "What might we lose if these features become contractual?"

It would make for an easier analysis if these questions were all posed by school board members or teachers, but they seem to be voiced by both sides. Is collective bargaining "an obstacle to change" and "one reason schools are in bad shape"? Or is collective bargaining the essential "vehicle of change in our schools"? It is possible that neither perception is a true one. Education reform is occurring despite collective bargaining in some areas and because of collective bargaining in others.

Doherty and Lipsky focus on reform initiatives relating to "how teachers are recruited, retained, compensated, and deployed." The discussion of who enters teaching, how soon teachers exit the profession, how many teaching candidates are currently in colleges, and how beginning teachers are compensated provides a clear rationale for change. As is further shown, the union track record of using collective bargaining to address this and related concerns has not been good.

Implicit in this paper is the belief that traditional teacher unions have been reluctant to confront these issues because of an interest in maintaining the existing institution—of which they are very much a part. To initiate radical changes in teacher assignment, for example, would threaten to make hamburger of a sacred union cow: seniority. As the authors indicate, recognition of the severity of the problems, especially in urban districts, probably has induced union leaders and district management to risk new bargaining approaches.

Doherty and Lipsky carry the collective bargaining-education reform discussion to a point that deserves emphasis. The goal of reform is not developing more effective labor relations processes, nor is it creating new opportunities for teachers. Student achievement must improve. It is important to revisit that goal often in considering subordinate issues.

"The Educational Policy Trust Agreement and the Process of Educational Reform," by Charles Taylor Kerchner

The development of a "policy trust agreement" in California or Rochester, New York's similar "agreement to agree" marks a departure sign from the industrial model used in analyzing teacher union-district management relations. Because of the recognition by management that teacher participation in problem-solving is essential and the acknowledgement by unionists that the traditional postures do not lead to that participation, labor and management have been quick to identify possible advantages of a wider scope for talks through this innovative bargaining form.

Kerchner points out several characteristics to recommend this process, but two deserve comment and expansion. At a time when every community is demanding "accountability" from its educational institution, the trust agreement approach offers clear advantages for both parties. Reform measures are directed ultimately at improving student outcomes. Under "normal" conditions, that goal would be excluded from negotiations, probably by the teacher union. Now, unions are more willing to consider such "problems" through this process because the concerns can be addressed and professional motives affirmed. Assessment measures, timing, resources, and management of efforts can all be agreed upon within a cooperative framework. If a "solution" does not work, the parties can agree to alternatives—as often as it takes to solve a problem. A contract, on the other hand, usually remains in force whether it works or not.

One wonders how the "trust agreement" process will evolve when schools and relationships become restructured to the extent that site-based budgeting is a reality, that teachers act in various expanded roles recognizing different levels and areas of expertise, that school management by a principal is no longer the rule, that "classes" and "periods" do not define the structure of student interaction, that "learning how to learn" is more important than learning the presidents in order. Kerchner suggests that this reform in teacher labor relations offers the best hope for adjusting to other, sweeping changes. His case is convincing.

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V. EMPLOYEE HEALTH CARE BENEFITS; MANAGING COSTS AND BROADENING COVERAGE

New Approaches to Managing Employee Health Care Costs

SEAN SULLIVAN
New Directions for Policy

Employers have been energetically pursuing a broad range of initiatives aimed at gaining some control over the costs of providing health care benefits to their workers. Yet, despite more active involvement in health care by most major companies and some smaller ones as well, costs—after a brief respite—are again spiralling upward at double the rate of inflation, just as they did in the late 1970s and early 1980s. This renewal of surging health care costs is causing great frustration among employers, and is finally leading a few of them to take the more radical kinds of steps that will be needed to get at the fundamental forces driving these cost increases.

Employers have two basic courses they can take when faced with rising health care costs: (1) they can try to reduce their employees' demand for health care services; or (2) they can try to induce some competition among the suppliers of those services. Most employers to date have chosen the first approach, of trying to reduce demand for and utilization of services; this has produced some individual successes in reducing the rate of cost increases, but has had little overall impact on system-wide costs.

There are also two basic ways to reduce employees' demand for or use of health care services. The first is to shift to them some of the costs of these services, which they have been largely unaware of so long as

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they have not had to bear them. The other way is to control the use of services more directly through a managed care approach—screening hospital admissions in advance, reviewing utilization during a hospital stay, and encouraging provision of services in less costly outpatient settings.

Cost Sharing

The first approach—requiring employees to share more of the cost—has been pursued vigorously by most employers. First-dollar coverage of health care expenses has declined sharply: seven of ten large companies now impose deductibles on their workers, while only three of ten companies did so just five years ago. Imposition of co-payment requirements has also become widespread, with most of them set at 20 percent of the cost of a hospital stay under major medical provisions of employee health insurance plans. Half of all workers now pay a share of the premium for individual coverage under employer-provided plans, and two-thirds pay part of the cost of family coverage.

Per capita out-of-pocket expenditures for health care have risen nearly 10 percent annually since 1980, but this seems to have done little to slow the rise of health care costs. Some degree of cost-sharing is desirable, to make employees aware that health care services are costly, but as a device for controlling costs in the larger health care system it is of limited value by itself—since individuals acting alone have little ability to squeeze overutilization of services out of the system. This approach of shifting costs to employees has probably been taken about as far as most employers are willing to go without alienating their workers.

Cost-sharing is of greater potential significance, though, when used as an incentive to get employees to choose less costly insurance plans featuring basic coverage with some level of deductibles and co-payments. Many companies' traditional practice has been to pay the full premium—or some proportion of the premium—for whatever plan an employee chooses. If employers made "level" contributions to all plans, employees would then have to pay the differential themselves if they selected a plan with a higher premium; this would give them an incentive to choose a less costly plan, which in turn should promote price competition among insurers. Premium-sharing differs from raising deductibles or co-payments in that it operates at the point of purchase of insurance, rather than at the point of service—when an employee must decide whether or not to see a doctor or enter a hospital. As such, it is preferable as a way of sharing costs.

One major company does make level premium contributions, setting an 80/20 target for sharing total plan costs with employees and then adjusting the plan options annually based on its claims experience in order to maintain the same relative share of costs. As more companies move to a similar policy of making level contributions rather than paying whatever the cost of the benefit package selected by the employee, HMOs in particular will gain fresh incentives to price below traditional fee-for-service insurance plans—potentially introducing a new wave of price competition into the insurance marketplace. Thus, a policy aimed at the demand side of the market could end up having its ultimate desired effect on the supply side—which is the way a properly functioning market should work.

Utilization Controls

Although HMOs have been experiencing a new burst of growth recently, the majority of health care services is still delivered under traditional fee-for-service plans, which are trying to manage care much like the prepaid plans do by controlling utilization of services (but, of course, without the ultimate financial control of fixed prepayment for those services). The utilization controls generally recognized as most effective are mandatory—not voluntary—second medical opinions before undergoing surgery, pre-admission certification of all hospitalization, concurrent review of hospital stays in accord with some established norms, and incentives to have specified procedures performed on an outpatient basis rather than in a hospital.

Nearly half of large employers now have third-parties review their employees' utilization of health care services, and some require their insurers to approve payment for specified procedures and length-of-stay before hospitalization in nonemergency situations. Deere & Company, a leader in managing employee health care costs, contracted for concurrent stay review and implemented a selective pre-admission certification procedure after discovering that hospital admission rates and length-of-stay were well above average for the states in which it operated. Three years later, it had experienced big drops of 25 percent in inpatient days, 15 percent in hospital admissions, and more than half a day in the average length of hospital stays.

A majority of large companies now use financial incentives to encourage ambulatory settings for tests and minor surgical procedures, i.e., they pay all or a larger share of the bill if their employees have the tests or procedures performed outside the hospital. One Midwestern employer that has chosen to emphasize substitution of ambulatory for inpatient care worked with its state medical foundation to develop a list of procedures that *must* be performed in an outpatient setting or the employee pays the entire cost; some of these must even be performed in physicians' offices instead of hospital outpatient departments. This is a leading example of some employers' greater willingness to become involved in making decisions on medical issues—in this case, backed up by respected medical opinion.

This last point is a vital one. Many medical practitioners agree that much medical care is of marginal or even no demonstrable value to its recipients, and some can even be harmful. Such unnecessary or even inappropriate care involves both "big-ticket" items—expensive operations and procedures that are performed when they are of little known value—and smaller ones such as lab tests and X-rays that are performed without any medically valid indications. Studies by Dr. John Wennberg and others have revealed large variations in the frequency with which certain operations are performed, both among and even within close geographic areas; these studies raise obvious questions about the necessity or even the desirability of many such procedures. Similar variations show up in rates of hospitalization.

Another part of the managed care approach to controlling utilization of services is case management of potentially costly episodes of care. The first step is to identify cases in which medical costs are likely to be high; a good example is AIDS cases, which are becoming a serious concern of many employers. Once these cases have been selected for special attention, case managers are assigned to work with the patients, their physicians, and family members to find ways to minimize hospital stays and utilize alternative modes of treatment such as outpatient or home care. One California company estimates savings of more than a million dollars from an expenditure of $150,000 to apply case management to its employees with AIDS. The concept of case management has a much wider applicability, of course; for example, it can be particularly cost-effective in rehabilitating disabled employees to return them to work.

Lacking adequate data on their employees' utilization of health care services and the costs of those services, many companies are still groping in the dark. The availability of such data is, thus, a crucial requirement of any effort to control utilization through a managed care approach. More employers are now insisting that their insurers provide them with such data or, if they are self-funded, are generating the data themselves. Still, only a relatively few employers yet have the sophisticated data systems to provide the kinds of information needed for effective management of health care costs. Moreover, even fewer have shown the will to use this information to deal directly with providers of health care services—the same way they do with providers of all the other services that they purchase. Still, the few companies that *have* shown the will are leading private purchasers into an entirely changed relationship with providers, in which they seek to make these suppliers of services *compete* for their business.

Preferred Providers

If HMOs were the "fad" of a decade ago—at least in some parts of the U.S.—then PPOs, or preferred provider organizations, are claiming that distinction today. They have been much heralded as the latest way out of the health care cost trap for employers who have grown disenchanted with HMOs. There are several hundred of them nationwide now (a third of these in California), with perhaps 10 percent or more of physicians and hospitals involved in one or more of them—all this just since 1983 when the first PPOs appeared on the scene. While some of their fans may be suffering from the same exaggerated expectations that once greeted HMOs, preferred provider arrangements may have the potential to make the marketplace competitive enough to actually have an effect on systemwide costs—if employers are willing to use them energetically.

The popular line about them is that, "If you have seen one PPO, then you have seen one PPO." Many who are not familiar with one tend to think of them all as merely discount pricing arrangements with providers. While this characterizes perhaps most of the early PPOs, the key to their staying power will be the ability to evolve rapidly beyond discounters into networks of efficient providers able to deliver cost-effective—and high quality—care to increasingly sophisticated corporate purchasers. This, in turn, will depend on their success in implementing controls on utilization that enable them to *manage* rather than just deliver services.

PPOs can be characterized as a kind of "halfway house" between the old system of free choice, with no incentives to choose cost-conscious providers, and the tight centralized controls of the staff HMO model like Kaiser, which requires patients to use specified providers. The carrot-and-stick approach of the PPO still allows freedom of choice, but attaches increasingly large economic consequences to the exercise of that choice; those who choose to use a provider not on the preferred list pay a larger share of the costs out-of-pocket. Allied-Signal recently shifted its entire national workforce of 67,000 employees into a PPO run by Cigna, after years of offering them a variety of HMOs and free-choice indemnity plans. Now employees select from a network of physicians designated by Cigna and pay a flat fee of $10 per visit; all hospital costs are paid, making the plan a kind of throwback to the old first-dollar coverage plans discussed earlier. But if employees choose their own doctors who are not in the network, they pay much higher shares of the cost, based on their income. A married worker with kids who earns $50,000, for example, would pay 3 percent of his salary, or $1,500 of medical bills, before any insurance coverage became applicable.

Few employers have yet given their workers these kinds of financial incentives to use selected providers. Indeed, few employers have yet compiled lists of selected providers to which to steer their workers. To implement such an arrangement, it is clearly necessary to have the data to develop profiles of providers in order to find the efficient ones. Most employers are not yet very far along this curve, and so are more apt to be responding to provider-organized PPOs rather than going to providers that they have already identified as cost-effective. These PPOs are more likely to discount rates than control utilization tightly, and so will do little or nothing to get at the deeper roots of rising health care costs.

But more employers are developing the data capacity to find the effective providers, and the trend toward preferred arrangements with accompanying financial incentives is becoming evident. In effect, to get at those roots of the cost problem, employers must be willing to take some of the decision-making power in the health care system away from the providers. This is not to argue that they should be making minute decisions about clinical questions, but that they should be exercising overall control over how they want health care services provided to their employees. One company that is ahead of the pack in this regard is Honeywell.

Instead of shopping among available HMOs and PPOs in the marketplace, Honeywell is designing its own specifications for the kinds of plans it wants providers to offer its employees. By then seeking bids from provider groups to win its business at the various locations where it has large numbers of workers, the company figures that it will spur competition among them even while tailoring health care services to the particular needs of its own workforce. To help accomplish this, Honeywell is increasing the sophistication of its data collection and analysis and is trying to define basic concepts such as medical necessity and appropriate care. In doing this, the company is working closely with utilization review physicians to measure its own experience against acceptable norms, and then to weed out providers whose practice patterns deviate too widely from those norms.

Honeywell is also forcing the issue of data with its insurance carriers. As of the first of the year, it will require them to provide information that will enable it to evaluate the performance—on the basis of both costs and medical outcomes—of the physicians and hospitals that are serving its employees. The company's aim is to determine which providers are performing too many tests or procedures—or charging too much for them. It would then ask these providers to change their habits, or drop them from the health care system that its employees will be encouraged to use.

A simpler approach to using data on individual providers is seen in the Medfacts program instituted by the Ryder System in Miami. Medfacts is a computerized listing of area physicians, showing their medical education and the fees they charge for various services. It gives Ryder's employees basic information they can use in choosing a physician, allowing them to do some "comparison shopping." While this idea may offend some notions of the physician-patient relationship, the truth is that much of the mystique that used to envelop this relationship has been removed in recent years by the growing commercialization of the health care enterprise and the increasing knowledge derived from analyses of comparative medical practice by physicians like John Wennberg.

To the extent that more employers prove willing to follow the lead of the Honeywells and other pioneers in redefining the relationships between purchasers and providers in our health care system, putting them on the basis of a shared responsibility for overall decision-making, we may start to get at one of the principal causes of rising health care costs—the almost complete control of the system by the suppliers. As the purchasers gain greater power, which they will certainly do as they become armed with enough information and determination, the dynamics will change, and a healthier balance will be established between considerations of cost and effectiveness.

Mandating Health Care Benefits In an Environment of Escalating Costs

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Mandating employer-sponsored health insurance coverage and benefits as proposed in the 1988 Congress by Senator Kennedy and Congressman Waxman, or as enacted in Hawaii and Massachusetts, would alleviate a major gap in health coverage in our country. It would attack, at least to some degree, cost shifting by certain employers, dumping by some hospitals, and improve access to health care for millions (Networker, 1988).

However, the only approach which will adequately address the total problem of health care in our country is a universal national health program. A national health program and policy are essential if we are to control health care costs and enable U.S. industry to be competitive in the world market. The program should provide access for all to comprehensive quality care and address financing, reimbursement to providers, delivery, and effective use of resources.

Except for South Africa, we are the only developed nation in the world that does not have a national program for universal access to health care (Woolhandler, 1988). Our approach to health care, the mounting costs, the reduced access, concerns about quality has been to resort to various programs that address this or that problem, or this or that sector of the population. We duplicate costs for administration, data gathering, and payment to providers. We build redundant bureaucracies and fail to use our physical and human resources efficiently. We siphon off dollars to provide profits for health industry entrepreneurs, ranging from hospital and nursing home operators, to venture capitalists, to health care experts and consultants. Advertising

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and marketing is an increasing budget item for hospitals, health plans, medical groups, and other purveyors of health-related services and commodities.

We spend more of our Gross National Product (GNP) on health care than any other country in the world. However, there is no indication that we get more for our expenditures. A recent *Wall Street Journal* article noted that the Canadian system, which spends considerably less than the U.S., was "as good as it is in the U.S." and that Canada ranked as good or better than the U.S. in infant mortality and longevity. Although there are problems in Canada, the *Wall Street Journal* article noted that "it is clear the system has also succeeded to a remarkable degree in providing high-grade medical care to rich and poor alike, everywhere" (Mallory, April 22, 1988).

In 1987 we spent 11.2 percent of our GNP on health care goods and services, compared to 5.9 percent of a much smaller GNP in 1965. In 1975 we spent 8.3 percent and in 1985 10.6 percent (HIAA, 1986–87). In 1987 we spent nearly $500 billion, over one and one-third billion per day, or about $2,080 for every man, woman, and child in the U.S. In 1965 our per capita expenditure was $176, in 1975 it was $521, and in 1985 we spent $1,504 per person. Informed forecasts suggest that by the year 2000 we will spend 12 percent of our GNP on health care (Health Care Financing Review, 1987).

We have a non-system of delivery that is becoming more expensive, while access to care is becoming more difficult for an increasing number of our population. Senator Kennedy, speaking on the floor of the Senate, as reported in the Congressional Record (May 23, 1987), presented telling statistics about access to care. Thirty-seven million have no health insurance at all. Another 17 million have coverage that even the Reagan administration considered inadequate. Of the uninsured, about 70 percent are from working families.

Those without insurance or with inadequate coverage are increasingly being forced to use public hospitals to obtain care because the private facilities are more prone to refuse access and treatment. Many public hospitals, financially strained by the increased burden, have closed their doors or sold out to private corporations, paradoxically decreasing the places where the poor can get care (Ansberry, November 29, 1988; French, December 4, 1988).

However, in other developed nations the experience is quite different. In 1985 West Germany and Canada spent between 8 and 9 percent of their GNP. Japan spent about 6½ percent and the United Kingdom 6 percent. Their increase over 20 years was about 3 percent compared to almost 5 percent for the U.S. (Reinhardt, 1987; Schieber, 1987).

The significance of this variation in expenditures should not be lost when evaluating the competitiveness of U.S. companies who must fold those health care costs into the price of their commodities and services. Employers who operate in the U.S. and in other countries with national health programs will attest to the fact that the health care components of labor costs are considerably lower outside the U.S. This generates a cost edge to foreign competitors.

Medicare costs have also increased. The 1989 Medicare premium of $31.90 has risen from $9.30 in 1980 and further increases have been established or projected. Out-of-pocket expenditures have jumped from $237 in 1965 to $1,700 in 1988.

The aggregate data and general information is informative, but it does not explain how the costs are generated. Let us focus on the delivery programs. The community, through government, federal, state, county, municipal and other entities, employer and employer-union sponsored group programs, has access to the following programs: Medicare, Veterans Medical Care, Military Personnel and Dependent Coverage. Federal Civilian Employee Coverage, Indian Health Service, Medicaid, local-government-sponsored facilities and services, Workers Compensation, and employer and employer-union sponsored group coverage. In addition, various "interest groups" make group coverage available to members. There are also various individual coverages that provide benefits for illness and injury ranging from personal injury insurance to individual health care policies. Some states mandate no-fault automobile medical-accident insurance.

Each of these programs has its own structure, bureaucracy, protocols, cost containment features, eligibility requirements and verification procedures, data gathering, data evaluation, systems for projection of future costs, fee reimbursement mechanisms, advertising, procedure for dissemination of information to participants, consultants, auditing, etc. But almost all of these programs, with the exception of the military, draw upon services of most of the providers in the various communities. These programs use the same providers either through fee-for-service or prepaid arrangements. However, the providers are often paid different fees by the different programs for the same services, and they must contend with the myriad of forms and various requirements of each program.

In the final analysis, the financing for all these programs comes from the same source, the individual-consumer-taxpayer. The "contribution" is funneled through payroll taxes, general taxes, and individual compensation or income, either directly out-of-pocket or by employer contribution for health care coverage. Ultimately it appears in the price of all our goods and services.

However, because benefits are received as services, or reimbursement from indemnity insurance, and because payments are through taxes or employment benefit plans, the real individual costs have been masked and are not fully appreciated by those who indeed pay the bill. This is not the case for the government officials and employers who are responsible for funding the coverages. The politician understands the politics of increasing taxes. The corporation understands how health costs impact the bottom line. Unions understand how health care costs affect the compensation package, and the impact on its constituency's standard of living. Recently, employees have become aware of costs as increased premiums stimulated major revisions of benefit programs.

To further complicate the cost containment debate is the unique character of the health care market. Unlike most commodities and services, demand, at least after an initial encounter, is provider driven. Doctors, not patients, determine tests, procedures, treatment plans, hospitalization and approprite medication. Patient or consumer choice about following "doctor's orders" is limited by a lack of ability to diagnose and prescribe as well as the fear of the consequences of not following professional advice. On the other hand, the physician's bottom line is determined by price multiplied by volume, not unlike the marketplace in general. This contradiction precludes any help from the supply and demand theory.

In the late 1970s and early 1980s the impact of health care inflation generated concern and discussion which led to major redesign and changes of health care programs and insurance. These changes reflected different approaches, social philosophies, and attitudes about community and individual responsibility for access to care and quality of care. They also stimulated new for-profit interests in the health care field by many whose concerns were not directly tied to the delivery of care, but rather to monitoring and administering it (Enthoven, 1986, 1988).

The cost containment discussions and programs that developed during this period focused on the problem from a very narrow point of view. The aggregate expenditure or needs of the nation or community as a whole were not addressed. Each sponsor of a program, government, individual employer, or employer-union group, zeroed in on saving the dollars that it expended. Many looked to shift or share the costs rather than to contain or reduce the costs.

This cost shifting and cost sharing were manifested by employer premium-sharing with employees, increasing deductibles and copayments for services, reducing coverages and benefits, or limiting the amount of payment to providers for certain coverages. Steps to require providers to accept limited payments were not taken and direct balance billing of patients by providers is not uncommon. Savings for a sponsor added costs for the recipient of care, or another group sponsor.

A variation of this approach was the "buy right" or "prudent purchase" which encourages HMOs, EPOs, PPOs, and other programs which may incorporate some level of managed care, to compete for a given group or market. Often different carriers using the same providers bid for the same business. This competition theory, encouraged by the Reagan administration, opened the door for profit-oriented plans and consultants to proliferate. The benefit packages were often so varied and confusing that at times marketing representatives of some plans were hard-pressed to explain what was being offered and how it compared to others.

Many providers, however, participated in several plans. This duplication of marketing, advertising, and administration added to the costs rather than reducing them. In addition, the profit factor further increased costs.

Another phenomenon of the 1980s struggle against mounting costs is the emergence of a new industry of data collectors, plan analysts, plan designers, consultants, and monitors of utilization. Some sophisticated employers have engaged, at considerable expense, various consultants and experts to evaluate their plans and identify inappropriate utilization and expenditures. The long-term savings (or costs) which these consultants have generated have yet to be assessed.

Another attempt at cost containment has been efforts to eliminate unnecessary procedures and avoid inappropriate in-patient care. This often involves second surgical opinion and precertification of hospital admissions. These approaches have impacted on practice patterns, not only for individual sponsors, but for communities as a whole, by reducing hospital admissions and lengths of stay. Unlike the other approaches, these do not directly shift costs. Generally, they are structured to monitor and enhance the quality of care, and they have been successful in reducing hospital utilization and individual plan costs. However, as hospital utilization decreased, we have witnessed increases in out-patient utilization and costs, and a surplus of hospital beds.

Empty beds are an overhead cost that must be met and affects the price of those hospitals' out-patient facilities. This issue has yet to be adequately addressed.

To sum up the experience of the 1980s, the various theories and approaches have failed to hold the line on costs. Some sponsors may have had limited success, but anyone who has been in major labor-management negotiations will testify to the frustration of both employers and unions at holding down health care costs.

The various sponsors, government and private sector, continue to focus on their own situation. If they can cut costs for themselves, that assuages their concerns. However, cost-shifting and cost-sharing and other methods used by given sponsors for themselves have failed to stop inflation. The 1987–1988 data, and the premium increases announced in 1989, attest most forcefully to that reality.

The control of health care costs has been elusive when individual sponsors do not consider the total picture. When one pressure point is pushed, another pops out. No one sponsor has enough fingers to hold all the pressure points. Perhaps an all-community approach should be considered. It may give us enough fingers to touch all the points.

If all of the current health programs, government and private (that we have outlined earlier) were merged into one program with enhanced coverage to provide universal comprehensive coverage, considerable financial savings could be achieved. Costs of administration, advertising and marketing, duplication of resources, profit-taking, data collection, quality and utilization review are areas in which cost savings could be realized as access is enhanced.

One estimate of savings that would be generated by a national health plan on just administrative costs and hospital and nursing home profit is 10.8 percent. This does not include the costs of consultants and duplication of monitoring and data collection (Woolhandler, 1988).

Integration of current programs, with enhancements, into a single national plan could be fashioned to basically draw on current total expenditure of financial resources. The integration of the various delivery systems and consolidation of resources could be administered nationally, statewide, or regionally. The key element is assessment and matching of a community's needs and resources—simply stated, efficient utilization and management of resources.

Administration of eligibility for coverage, scope and level of benefits, and insurance forms would be simplified or would disappear, generating considerable savings. Quality review and monitoring of appropriate delivery of care could be standardized. Regional planning to provide adequate access to care and appropriate facility capacity to meet community needs would also generate savings. A reasonable and responsible reimbursement mechanism for providers could be fashioned as part of a "social compact" to provide health care.

Many of our industrial giants have learned from the industrial experience of Japan. Perhaps, reviewing the health care lessons of other nations, combining them with the lessons of our recent experience, and exploring a new "social compact" in health care will give us insights into what needs to be done to make our health care delivery comprehensive, cost effective, and accessible to all.

Until we are ready to break away from our prejudices, we live with our fear of a national health program. The literature, the leading political analysts, and the health care policymakers all indicate that this country is not emotionally, psychologically, or politically ready to accept a national health program (NEJM, 1984). There is nothing to contradict that conclusion. Nevertheless, the current health care system's voracious appetite for economic resources may force change. Most Americans are not prepared to receive less care for more and more costs. American industry can ill afford the competitive disadvantage which is being compounded by unbridled health costs.

In conclusion, mandating benefits for working Americans through national or state legislation is a necessity mandated by our failure to come to grips with the national issue in its entirety. If such legislation is enacted, cost-shifting, the economic drain on the states, and the moral concerns about access will continue to be with us, but with a little less pain. However, the cure, a universal national health program, will remain elusive until economic reality pushes an obsolete mind-set aside.

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Mandated Health Benefits: Nice Work If You Can Get It

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Providing health insurance to everyone who doesn't have it is a laudable objective. So is providing food and clothing for those who don't have enough; so is providing money for those who don't have enough. The issue in each case is who gains and who pays—and how much. Here I want to focus on who pays for mandated employer-sponsored health insurance.

I want to consider a Kennedy-type proposal that essentially requires all employers to provide a health insurance benefit to all full-time and part-time workers employed more than 17½ hours per week. It has provisions for individual and family coverage and has premium-sharing such that "employers pay" 80 percent and "employees pay" 20 percent of the premium.

My concerns with the proposal are three-fold. First, the proposal is an example of political dishonesty. Second, the proposal seems to wholly misunderstand the employment contract. Third, the proposal effectively puts the cost of the program on part-time and low-wage workers. My approach will be to largely ignore issue one, to briefly discuss the economic rationale, such as it is, for intervening in the employment contract, and finally, to try to identify the consequences of the proposal, should it be enacted.

Political Dishonesty

My first objection is the funding mechanism. If health insurance for employed, uninsured individuals is a socially worthy goal, then it is a proposal that should be passed and paid for from broad based taxes. Given the mood of the country, such passage seems unlikely to me—and to its advocates or this mechanism would not be proposed. Indeed, if Bob Blendon's (1988) reading of the literature is correct,

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folks think the idea has such merit that they are willing to pay $50 per year in new taxes to support it, certainly not enough to cover the costs.

The political dishonesty is in looking for an off-budget mechanism to bury those costs. The view seems to be that employers have deep pockets and most provide insurance anyway. The problem, among others, is that the costs will be largely borne by those whom the program is supposed to help. The beauty—and the devil—in the mandated benefits plan is that the burden of the program costs is not immediately obvious. The costs will ultimately be seen as higher teenage unemployment and higher product prices. The public displeasure tends not to be pointed at the legislature but at higher prices and higher unemployment. If the burden were more clearly shown, the present grumbling over the 1988 Medicare expansions suggest that the beneficiaries may not see themselves as net gainers.

The Employment Contract

Economists tend to argue that buyers and sellers freely coming together are in the best position to make wise choices. Intrusion in the market generally cannot make the parties better off. There are, of course, rationales for intervention: market power, buyer or seller ignorance, and externalities.

Market power seems an unlikely problem as those without health insurance tend to be employed by small firms (Monheit and Short, 1988), and union membership, market power on the seller's side, is associated with larger, not smaller, fringe benefits (Brown et al., 1982).

Consumer ignorance also seems to be a nonissue. In 1987, 86.5 percent of those employed had some form of insurance (Monheit and Short, 1988). There is little evidence that workers would not choose to have health benefits if wages and other benefits and working conditions were unchanged. Indeed, it is easy to show that, in general, employers face lower compensation costs with a combination of wages and fringes than with wages alone (Wills, 1978). If employee ignorance were a problem, firms would invest in showing them the benefits of insurance. (It is true that smaller employers face higher underwriting costs than do large firms due to small group size and particular adverse selection problems [Chollet, 1988], but these problems suggest policy initiatives to subsidize the underwriting costs, not to mandate the benefits.)

Externalities sometimes are argued to justify the proposal. It is said that providers cost-shift nonpaying patient costs to the insured. As a matter of theory this is difficult to demonstrate, although Dranove

(1988) has devloped a model. As a matter of empirical investigation, Hadley and Feder (1985) found no evidence that hospital charity care was in any way related to mark-ups to commercial payers. More recently Scheffler et al. (1988) found that Blue Cross inpatient costs *fell* as a result of Medicare prospective payment. This evidence hardly supports the externality argument. Indeed, there does not appear to be market failure and, as a consequence, little reason other than the hidden tax motive, to intercede in the employment contract. Interceding, however, does have significant effects on workers and the employment contract.

Consequences

A basic tenet of labor economics is that the value of the compensation bundle received by a worker is equal to the value of his or her marginal product. In the economist's simple world, workers would take their wages and buy health insurance—and, perhaps, other things. In the real world, differential tax policy, economies of group purchasing, and favorable selection of risk (via the fact of employment) generally serve to make health insurance much less expensive when purchased through an employer. Sloan and Adamache (1986) estimate, for example, that every 1 percent increase in the marginal tax rate leads to a 1.7 percent increase in life and health insurance payments per hour.

Yet, for all this, many employees do not have health insurance purchased with pre-tax dollars through their employer. Data for 1987 from the National Medical Expenditures survey (Monheit and Short, 1988) indicate that almost 18 million employed persons are in such a situation and another 11 million are uninsured spouses or dependents of employed persons.

Why are they uninsured? Some, presumably small, fraction choose to self-insure. Others either don't earn enough in pre-tax wages to pay for the coverage or find the price of employer-sponsored health insurance to be still too high. Some may prefer health insurance, but existing minimum wage laws prevent them from seeking out an employer willing to offer insurance but very low wages. (An interesting policy option, short of eliminating the minimum wage, would be to allow any form of compensation equaling the minimum in value.)

Given the economics of fringe benefits, the fundamental problem is that many workers don't produce enough of value to warrant compensation sufficient to pay for the insurance plan and the other things they value more highly—like food and clothing.

The mandated health benefits proposals "solve" this problem, not by making workers more productive, but by raising the compensation that the worker is to be paid. As is the case in all markets, a price set above the market clearing price will result in less of the good being traded. In the case of a minimum wage law, some employees lose their jobs. Firms produce less; their products sell at a higher price. Consumers, of course, ultimately pay for the higher compensation enjoyed by those who did keep their jobs.

With mandated health insurance the burden of the program is more complex than the simple minimum wage model because there are more opportunities for substitution. First, some will undoubtedly lose their jobs. Second, however, those earning sufficiently above the minimum wage are likely to see a shift in compensation out of wages and into health insurance. Ironically, many of the uninsured under this plan will (1) lose their job—and the employer-sponsored coverage they never had, or (2) end up with a wage-insurance package that they chose not to buy; that is, they will perceive themselves as worse off than they are now. Some, of course, are made better off. The key issue for the policy analyst is how many fall into each group.

Let's consider some numbers. The *Washington Post* (Gladwell, 1988) estimated that the Kennedy mandated health benefits proposal would cost $1,800 to $3,000 per year for family coverage and $700 to $1,400 for individual coverage. For sake of argument, assume $2,000 and $1,050, respectively, for family and individual coverage. The "employer pays" 80 percent, the employee 20 percent of the premium. (This "who pays" distinction is ironic as well. The plan could lower the burden on the employee by at least letting him or her pay for the whole benefit package with pre-tax dollars; that is, by letting "the employer pay" the entire premium!) All those working 17½ or more hours a week are to be covered.

Consider someone working 20 hours per week for the minimum wage; these are often teenagers. Individual coverage would imply an increase of $840 in his or her compensation package, a 25.1 percent increase. The literature on the teenage wage-employment relationship puts the minimum wage-employment elasticity in the neighborhood of −.1 to −.3 (Brown et al., 1982). This implies that 7.5 percent of teenagers employed part time now will lose their jobs. Full-time employed teenagers could expect a 3.7 percent decline in employment.

If we take a conservative 5.6 percent decline in employment as the mid-point of these estimates and apply it to the number of persons employed at near minimum wages, it implies that some 480,000 persons, mostly teenagers employed part time, will lose their jobs.[1] That's just slightly less than the population of Seattle, Washington.

Now it turns out that teenage unemployment stood at 15.2 percent in mid-1988. White male teens had unemployment of 14.6 percent; black teenage male unemployment stood at 30.4 percent (BLS, 1988). Which group is likely to be disproportionately represented among those fired? To put it another way: which group of teenagers, on average, had poorer educational opportunities and fewer employed role models? Not coincidentally, this group has less insurance coverage currently. One has to ask why it is sound social policy to fund health insurance by denying jobs to black teenagers?

Some non-teenagers will also lose their jobs. Here the simulation gets more complex and some effects cancel out. First, the literature suggests that those aged 20–24 are less likely to lose their jobs when the minimum wage increases. The elasticity is in the neighborhood of $-.1$ or less. However, these persons are also much more likely to want family coverage. Consider someone making $3.50 to $5.00 per hour. Adding individual benefits implies a compensation increase of almost 10 percent; family coverage implies an increase of about 23 percent. This, in turn, implies an additional 15 to 17 thousand unemployed. Again one should expect those on the lower end of the wage range to be disproportionately affected, and one should expect the market to find some way to disproportionately fire those likely to choose family coverage.

Thus, my estimates suggest losses of some 500,000 jobs. This estimate is much higher than the 100,000 to 300,000 job loss reported in the *Washington Post*. This probably reflects the part-time losses in my numbers. On a full-time-equivalent basis, my estimate is within this range.

In addition to job losses, mandated health insurance has the second effect of leading to a substitution of new mandated health insurance for wages. I noted earlier the estimates of the effects of the tax laws in shifting the mix of compensation toward non-tax health and other

[1] Employment data from Monheit and Short (1988). Near minimum wages are those of less than $3.50 per hour.

benefits. One should expect that employers and employees will find that one way to avoid the job losses associated with the mandate program is to cut wages to pay for the mandated insurance. It turns out that anyone working full time and earning roughly $3.75 an hour is able to, or has to, consider this alternative.

The extent to which this substitution is likely to happen is difficult to estimate. To my knowledge only one study has explicitly modeled the wage-benefit tradeoff. Woodbury (1983) estimates the willingness of workers to trade one form of compensation for another. He finds that the elasticity of substitution is approximately 1.6 for wages and life-health insurance. This indicates that the two forms of compensation are, indeed, reasonably good substitutes one for another. Unfortunately, such values do not lend themselves to neat calculations of the effects of a mandate. My guess—and it is only a guess—is that as many persons are likely to be affected by compensating wage adjustments as are affected by job loss.

A different set of employees are affected, however. Those affected by compensating wages earn more than the minimum wage and probably work full time. They will generally be older (i.e., beyond their teens) and are likely to be employed by firms in highly competitive industries. If the industries are less competitive, demand curves will be less elastic and the cost of mandated benefits can be more easily passed on to consumers. Thus, employees in industries facing strong foreign competition (textiles and electronics assembly, for example) are likely to be disproportionately affected.

It is again ironic that these workers find that the least onerous solution to the benefits of mandated health insurance is to trade off wages for insurance. This is precisely the tradeoff that they are unwilling to make currently, presumably because they value the things they can buy (even with post-tax wages) more than the insurance they would be induced to accept under the mandated plan.

Summary

In short, mandating health insurance is a bad idea. The desire to provide health insurance to the uninsured is noble, but the mechanism is faulty.

There are three problems. First, if such insurance coverage is a social good, it should be funded by broad-based taxes, not by off-budget taxes concentrated among a few. Second, there is no compelling reason to distort the functioning of the labor market. The fundamental problem is that many workers don't produce enough to pay for health benefits. We should find ways to improve their productivity, not reduce their ability to find a job and feed their families. Finally, the burden of the proposal is likely to fall most heavily on those it is designed to help. Teenage employment is likely to fall, perhaps by 480,000 jobs. Those with modest wages will find them reduced to pay for the health benefits they currently do not choose to buy. On balance, I don't see that this approach has much going for it other than the good hearts of its proponents.

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VI. THE ROLE GENDER PLAYS IN STRUCTURING LABOR MARKETS: RECENT RESEARCH APPROACHES AND RESULTS*

The Changing Structure of the Female Labor Market, 1976–1984**

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Despite recent improvements, women's wages are well below those earned by apparently comparable men. Relatively little of this difference can be attributed to pay disparity on the same job within a single establishment. Instead, the differential is almost entirely due to the fact that women work in establishments and occupations that pay relatively low wages (Groshen, 1988). This suggests that studying labor market segmentation may provide a fruitful approach to understanding wage differentials between male and female workers.

In this paper we use the "unknown switching regime" approach to measuring labor market segmentation developed in Dickens and Lang

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(1985a) to study the impact of labor market segmentation and its evolution on women workers. Using data from the May Current Population Surveys, we find that the dual labor market typology, which has been successful in describing the labor market structure for men, does not seem to provide a good characterization of that structure for women. Instead, the overwhelming majority of women are in what we call the "women's sector," one with virtually no returns to work experience, but significant returns to education. Some changes in the within-sector differences between men and women have taken place for the few younger women in the primary sector, but the most striking result is that the return to education has been rising dramatically in the women's sector.

Dual Labor Markets

Dual labor market theory (Doeringer and Piore, 1971) describes a two-sector labor market with distinct wage-setting mechanisms. The primary sector is composed of "good jobs at good wages." Jobs in this sector are characterized by long-term, stable employment relations. Education and work experience both earn returns in terms of higher wages. There is opportunity for advancement and working conditions are good. In contrast, the secondary labor market consists of low-paying, low-skill, dead-end jobs. Workers in the secondary sector are fairly interchangeable: someone who's been on the job for 10 years does the same work and earns the same wage as someone who just started. Education also does not earn returns. In addition, proponents of dual labor market theory maintain that there are nonprice barriers to primary sector employment for certain groups (i.e., primary sector jobs are rationed).

Early work on dual labor markets sorted industries or occupations into primary and secondary groups and tested for differences in the wage equations governing the two sectors. Results were mixed in their support of the dual labor market theory. The reliance on a priori judgment about which industries or occupations should be in which sector resulted in strikingly different classification schemes which, in turn, appears to account for the differing results (Dickens and Lang, 1985b). In addition, all of these studies failed to correct for the sample selection bias that arises from the use of classification schemes. It is not surprising that the return to education is low in low-wage jobs. At the extreme, the return to education in jobs which pay exactly the minimum wage is zero.

To overcome these problems, Dickens and Lang (1985a) introduced a method called endogenous switching with unknown regimes. For intuition about how this technique works, consider how we might proceed if people's earnings potential could be summarized by a single observable trait—for example, schooling—and an unobserved trait which was uncorrelated with education. In that case we could plot a scatter diagram of log wages and schooling. The standard human capital model would suggest a wage/schooling scatter plot with wages increasing with education. Dual labor market theory, on the other hand, would suggest a scenario with returns to education in the primary sector, but not in the secondary sector. Given data on wages and schooling, how could we distinguish between these competing hypotheses? In essence, we ask: Do two lines fit the data better than one and if so, are they consistent with the predictions of dual labor market theory, i.e., is there an upward sloping primary line and a flat secondary line? In addition, for most workers, wages would be predicted to be higher in the primary than in the secondary sector.

More formally, we specify two equations describing wage determination in the primary and secondary sectors

(1) $\ln w_i = X_i B_p + e_{pi}$

(2) $\ln w_i = X_i B_s + e_{si}$

where the wage is a function of personal characteristics including race, sex, years of schooling, work experience, whether the person has ever been married, and if he lives in a large city.

In addition we specify a "switching" equation which determines whether the individual is employed in the primary or secondary sector.

(3) $y_i = X_i B_w + e_{wi}$

where y is a "latent" variable measuring tendency to be employed in the primary sector. Dickens and Lang (1985a) derive the likelihood function for this model under the assumption that the error terms, denoted by e, are jointly distributed.

This technique involves two kinds of estimates concerning the probability that a worker is in the primary sector. The first is the ex ante probability that a worker will wind up in that sector given his nonwage characteristics. A positive B_w coefficient implies that a variable increases the probability that an individual will obtain a job in the primary sector. However, while employed, a worker is in either one sector or the other. We can compute a measure of how certain we are about which sector a particular worker is in. A number like 99 percent means we can be very sure that a worker is primary; 50 percent means we are very uncertain about sector of employment.

The main results of Dickens and Lang's studies were to confirm the existence of two distinct sectors, a low-wage sector with a roughly flat wage equation with respect to human capital variables, and a high-wage sector with returns to education and experience. Workers in retail sales and services tended to be in the secondary sector; most manufacturing workers (excluding textiles and apparel) were in the primary sector. Evidence was found supporting the idea that at least some minority workers are involuntarily confined to the secondary sector.

Women and the Dual Labor Market

The data used are from the May Current Population Surveys for the years 1976-1984. We include all employed people who are not self-employed or government workers and who are 75 years old or younger. The number of observations per year ranges from 11,204 to 38,807 with the sample being smaller in later years due to reductions in the CPS sample size.

We estimated the model separately for each year. Because the model is sometimes difficult to converge, we started estimation with the parameters from a proximate year. Since the likelihood may have local maxima, it is possible that this process biased our results towards a finding of greater continuity than in fact exists. To the extent that we experimented with different starting values, we found no evidence of such a bias.

The model was estimated jointly for men and women. However, the coefficients on schooling, experience, and experience squared as well as the constant term were allowed to differ for men and women. Unfortunately, the nature of the data oblige us to use age minus schooling minus six as our proxy for experience. The problems with this proxy, particularly for women, are well known. Moreover, the sharp differences we find between men and women suggest that in future work, the model should be estimated entirely separately for men and women.

The first finding from this study is that the sectoral distribution of employment is very different for men and women. Women have an average ex post probability of being in the primary sector of somewhat over 20 percent, while this figure is almost 90 percent for men. There is no apparent trend in these numbers over the nine years of our study. These figures do not tell us about the spread of this distribution.

Table 1 gives the breakdown of probability primary for women in their twenties and women over 30. Here a very clear pattern emerges. Probably the most striking finding of this paper is that the switching regression sorts practically all women over 30 (and most younger women as well) into the "secondary" sector. Rather than interpreting this as evidence that virtually all women are secondary workers, the evidence seems to suggest that for these women there is essentially a single labor market which is distinct from either the primary or secondary sectors. We suspect that it is most properly understood as an amalgam of pink and certain blue collar jobs.

TABLE 1
Probability Primary for Women by Age

	Women in Their 20s		Women 30 and Over	
	90-100%	0-10%	90-100%	0-10%
1976	13.8	38.1	2.1	95.0
1977	15.0	34.1	2.2	94.7
1978	15.7	42.2	2.0	95.7
1979	22.4	50.0	3.5	95.0
1980	24.6	51.5	3.5	95.8
1981	33.3	43.8	5.7	92.5
1982	15.5	34.7	2.4	91.3
1983	8.3	43.9	0.9	97.7
1984	13.9	24.8	1.0	95.2

The reasons for this conclusion are given in Table 2 which reports the returns to education and experience in the "women's sector." Looking at the effect of job experience on wages (for the "secondary" sector overall plus the interaction term with female in that sector) we find it is practically zero throughout the period. This is characteristic of the secondary sector. Returns to education, however, are significant and clearly rising. This makes the women's sector look more like a primary sector, and increasingly so.

A significant literature exists on the question of why women are found in jobs with low returns to human capital. Mincer and Polachek (1974) and Polachek (1975) argue that women expect to have only intermittent labor force attachment. Employers are therefore reluctant to invest in specific training for women, and women will limit their investment in human capital as well as enter occupations in which

TABLE 2

Coefficients in the Women's Sector

	Education	Experience	Experience Squared/100
1976	.049	.008	−.013
1977	.046	.008	−.014
1978	.046	.008	−.015
1979	.048	.010	−.014
1980	.049	.011	−.019
1981	.051	.014	−.026
1982	.057	.005	−.010
1983	.059	.011	−.018
1984	.068	.006	−.011

TABLE 3

Coefficients for Women in the Primary Sector

	Education	Experience	Experience Squared/100
1976	.086	.042	−.065
1977	.083	.045	−.068
1978	.087	.039	−.054
1979	.072	.026	−.033
1980	.079	.022	−.028
1981	.072	.033	−.060
1982	.098	.076	−.129
1983	.095	.103	−.152
1984	.101	.118	−.150

depreciation of human capital skills is relatively low. England (1982) challenges this view, arguing that depreciation of skills is no less in women's jobs than in jobs that are predominantly male and that women with relatively continuous labor force experience are no less likely to be in women's jobs than are women with discontinuous labor force participation.

Moreover, unless education is highly productive in home production, we would expect women to invest less in education as well as in training and to enter jobs in which the return to education is relatively low. Our finding that the return to education in the women's sector is substantial and growing suggests that women should also be investing in more training.

How can we explain the increased returns to education but the negligible changes in the return to experience? We suspect that the absence of a significant return to experience in the data is the artifact of using cross-section data. If women are becoming increasingly attached to the labor force, their investments in both observable capital (years of education) and unobservable (at least to the econometrician) capital should increase. In this case the estimated return to experience in the cross-section would confound the increasing quality of women entering the labor force with the effect of experience on quality, biasing the experience effect towards zero. If this explanation is correct, we would expect the estimated return to experience to increase as the effects of increased labor force participation work themselves out.

There is some evidence that the returns to experience are increasing for young women.[1] Although most women in their twenties, who comprise one-third of the women in the sample, are fairly clearly in the women's sector, a substantial minority are estimated to be in the male primary sector. This suggests that some young women have early career patterns similar to those of young men. While the fraction in this sector fluctuates over time, there does not appear to be any clear pattern with respect to either the fraction in the primary sector or the degree of precision with which we can assign young women to sectors.

The uniform assignment of females over 30 to the women's sector means that younger women are the only workers determining the female coefficients in the primary sector. The experience effect for primary females rises sharply in the last years of our sample. This is consistent with the view that the effects of changing labor force attachment across cohorts are beginning to diminish although the magnitude of the estimated change is too large to be credible. In addition, returns to education seem to be moving up in the last years of the sample as well. Both of these trends point in the direction of women moving into jobs with better returns to human capital.

Conclusions

We thus conclude that the dual labor market model is not really appropriate as a characterization of the structure of the labor market for women, and that it can be adequately described as a one sector model. Women over 30 are overwhelmingly in the "women's sector," as are most of the women in their twenties. In the women's sector,

[1] Women 20 and under usually make up less than 10 percent of all women in the sample. Their sector of employment tends to be very unclear, falling in the gray area of 40 to 70 percent probability of being primary. We therefore restrict discussion of younger women to women in their twenties.

there are essentially no returns to experience, but the returns to education are significant and rising, making it look more and more primary. While the measured returns to experience in this sector remain low, it is likely that this is a statistical artifact and that the true return is positive. Indeed, for younger women we find evidence that returns to experience have increased recently. In sum, while characterizing women as being in the primary or secondary sector has never been accurate for the years we study, more recently the wage determination process for women has come to look increasingly primary. This bodes well for the future.

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Race and Labor Market Segmentation Among Women Workers

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New evidence is emerging on labor market segmentation in the United States. Research on male household heads using unknown regimes models shows that black men are much more likely to remain mired in low-wage secondary markets than are white men, as the original proponents of the labor market segmentation thesis contended.[1] In order to evaluate the overall position of minorities in the labor market, it is important to determine to what extent race plays a similar role among women. In this paper we utilize 1983 Current Population Survey data to explore precisely that question.

Methodologically, we propose an alternative to the unknown regimes model used in much recent research. Essentially, we use information on earnings to split observations into a "primary" and a "secondary" sector. Then we estimate wage equations for each sector using standard selection bias correction techniques to obtain unbiased coefficients on education, experience, tenure, and race. The coefficients permit tests of hypotheses from the labor market segmentation literature. We also examine coefficients in the sector determination equation to determine if black women are significantly more likely to end up in the secondary sector.

Race and Occupational Differences Among Women Workers

Actually, it is not evident a priori that race is a major factor in female labor market segmentation insofar as several statistics suggest that race plays a less crucial role in differentiating women's labor

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[1] Dickens and Lang (1985a, 1985b, 1986); a more general sample including women is used in Dickens and Lang (1987).

market opportunities than it does for men. Although minority women still earn less on average than nonminorities, racial differentials in earnings in the female labor market have declined markedly over the past decades and are presently much smaller than for men.[2] Moreover, occupational segregation by race within the female labor market has also been declining, although in 1987 17 percent of all black women would have had to change the major occupational classification of their jobs in order to have a distribution similar to that of white women (Bureau of Labor Statistics, 1988).[3] Thus, while there is reason to hypothesize that race plays a role in determining a woman's position in the labor market, we were not certain whether or not female labor markets would turn out to be segmented by race prior to undertaking this research.

The Segmented Labor Market Hypothesis

Since several overviews of the segmented labor market literature have appeared (Taubman and Wachter, 1986; Cain, 1976), only the central theses of the theory will be reiterated. Most simply, it is posited that the labor market is divided into two sectors. The primary sector is typified by relatively high pay, stable employment, possibilities of promotion up administratively-defined job ladders, equity and due process on the job, and pay which increases with education and work experience. The secondary sector is characterized by low pay, little opportunity for advancement via promotion or investment in human capital, little return to further education or work experience, arbitrary personnel practices, and intermittent employment.

[2] In 1985 black women earned 90 percent of what white women earned in a usual week, whereas a black man earned only 73 percent of what white men earned. In 1967 a similar ratio among women was 79 percent and a similar ratio among men was 69 percent (Bergmann, 1986).

[3] This is down considerably from both 1940 (when it stood at 62 percent) and from 1960 when it equaled 45 percent (Reskin and Hartmann, 1985). In 1940, 70 percent of working black women labored as maids, cleaning women, cooks and so forth in private households, and only 1 percent held clerical jobs. In 1987, on the other hand, only 4 percent were private household workers and 26 percent held clerical positions, close to the 30 percent figure for white women (Reskin and Hartmann, 1985; Bureau of Labor Statistics, 1986).

Figures for 1987 are based on the 13 major occupations in the Census classification scheme. The Duncan index is calculated as being:

$$\frac{1}{2} \sum_{i=1}^{n} | x_i - y_i |$$

where x_i is the percentage of one group in the occupation (e.g., white women), and y_i is the percentage of the other group in the occupation (e.g., nonwhite women). Interestingly, the same measures of occupational segregation by race for men are both larger and have declined less over time (see Reskin and Hartmann, 1985).

Firm-specific human capital theory, transactions cost-based models, efficiency wage theory, and explanations centering on collective worker preferences have been offered to explain why the two sectors arise and are not eliminated by mobility of workers or competitive pressures on employers. In all these models, primary sector employers have opportunities to choose applicants from the queue of workers wishing to obtain desirable jobs. Women and minorities, in particular, suffer employment discrimination with regard to entry into the primary sector.

The dual labor market approach is often accused of excessive simplicity. Consequently, models with further segmentation within the primary sector, and thus three or more sectors, have been developed; Osterman (1975), for example, distinguishes between upper and lower tiers of the primary labor market on the basis of whether or not jobs offer autonomy and a degree of personal participation. Since so many women work in jobs which partake of some characteristics of both the primary and secondary sectors (e.g., clerical jobs with little autonomy, relatively low pay, limited opportunity for advancement, but typically stable employment), we are sympathetic with this approach. Nonetheless, as a first step our empirical work is based on a two-sector model. Implicitly, our procedure places intermediate low-autonomy jobs like clerical work in the secondary sector.

Methodology

Initially we set out to investigate labor market segmentation among women by using the switching regressions with unknown regimes model developed by Dickens and Lang. This methodology is advantageous because, rather than assigning individuals to the primary and secondary labor markets by arbitrary criteria, it uses a maximum likelihood procedure to detect a bimodal distribution in the wage equations. In addition, the model can be used, under stringent assumptions, to test the hypothesis of free mobility between sectors. Despite a number of attempts using different specifications, alternative definitions of the dependent variable, various initial settings of the parameter values, and permitting models to iterate more than 50 times where possible, we were unable to get the model to converge using 1983 data on women.[4] Our experience is not unique; Dickens and Lang tell us their procedure does not always converge even when perturbed.

[4] The computer program was not in error—we have been able to obtain results with 1983 CPS data on men. With women, however, the likelihood surface for the switching equation appears to be too flat for use of this methodology.

As an alternative, we divided women into two groups, based on criteria which will be discussed below, and estimate wage equations for each group using selection bias techniques. Following Lee (1978), who pioneered a similar model for union/nonunion wage equations, we explicitly test for free worker choice of sector in our second stage of estimation. Our model has three equations. The first is a sector determination equation indicating the labor market location of the individual. The second and third equations are the wage equations for the primary and secondary sector, respectively:

(1) $$I^{*} = a_0 + a_1 (\ln W_{pi} - \ln W_{si}) + a_2 'X - e_c$$

(2) $$\ln W_{pi} = b_p 'Z + e_{pi}$$

(3) $$\ln W_{si} = b_s 'Z + e_{si}$$

where W_p = the individual's primary sector wage; W_s = the individual's secondary sector wage; X is a vector of factors influencing labor market location; and Z is a vector of factors influencing the wage. I^{*} is a latent variable reflecting the net pecuniary and nonpecuniary gain from an individual locating in the primary market if I^{*} is greater than zero. Since the wage equations are estimated on the subsamples of those assigned to a sector, correction for sample selection is necessary to obtain unbiased wage coefficients. This is done by including an inverse Mill's ratio, calculated from the reduced form of the sector determination equation, in the wage equations. With this correction, the coefficients on education, experience, and tenure can be used to test for the differences in the return to human capital predicted by the segmented market theory.

We can also test for barriers to mobility between the primary and secondary markets. Any mobility hypothesis would indicate that, after controlling for other factors, workers choose the market in which they could earn a higher wage. We can measure the effect of the wage difference on sectoral choice from the estimate of the structural sector determination equation. The coefficient on ($\ln W_p - \ln W_s$) must be positive for these to be unfettered worker choice (see Lee [1979] for further detail).

A disadvantage of this model, relative to the unknown regimes approach, is that individuals are assigned to primary or secondary labor markets by arbitrary criteria. In prior research, various combinations of income, occupation, and industry criteria have been used to assign individuals to labor markets. Whatever criteria are used, the results are always subject to the criticism that they derive from the particular classification scheme and that other schemes would produce substantially different results. Here we have chosen to divide our sample by position in the wage distribution. In order to explore the effect of different assignment schemes, however, we estimated nine models using different cutoffs in the wage distribution. Our first model assigns 90 percent of the women to the secondary sector. In each successive model 10 percent of the individuals are shifted to the primary labor market. We find that estimates of key coefficients are not particularly sensitive to small changes in the classification scheme, with major results stable for all systems with 50 percent or more working women classified in the secondary sector.

Our data set was derived from the May 1983 Current Population Survey. It is limited to women who are working but are not self-employed or employed in a family business. The wage equations are fairly standard and the sector determination equation is composed of factors related to labor supply.[5] The measure of wages is usual weekly earnings divided by usual weekly hours.

Results: Sector Determination Equations

We will focus our discussion on the systems in which 20 percent and 50 percent of the sample were assigned to the primary sector.[6] These models are representative of those for which half of all employed women or more were considered to be secondary sector workers. Dickens and Lang (1987) estimate that in 1973 10 percent of all black working women and 24 percent of all white working women were employed in the primary sector; by 1983 those figures were higher, but still below 50 percent, at 32 and 45 percent, respectively. Furthermore, discussions of gender in the SLM literature often suggest that women work predominantly in the secondary sector.

Table 1 presents results for the sector assignment equations. Clearly, these contain evidence of racial discrimination in location in the wage distribution that is supportive of the segmentation hypothesis. Black women are significantly more likely to be located in the lower part of the wage distribution, as are less educated or experienced workers.[7]

[5] This specification is appropriate to testing the hypothesis that workers with a given set of personal characteristics choose the sector in which they work. We also tested models with all of the variables in the wage equation except tenure (which is an outcome of employment in a particular job) in the sector determination equation, as would be appropriate under the view that job characteristics (like establishment size) in part determine the sector location of the individual. Results for these variants were very similar to those discussed in the text.

[6] Results on the other models discussed are available from the authors on request.

[7] Hispanic women are also more likely to be secondary sector employees, but the coefficient in this instance is insignificant.

TABLE 1

Key Coefficient Estimates for the Second Stage Sector Determination Equations (Standard errors in parentheses)

	50% Primary	20% Primary
Education	.36°°	.20°°
	(.01)	(.01)
Experience	.02°°	.01°°
	(.002)	(.002)
Black	−.20°°	−.10°
	(.06)	(.06)
Hispanic	−.07	−.12
	(.08)	(.09)
$\widehat{\text{Ln } W_p} - \widehat{\text{Ln } W_s}$	−4.33°°	−2.95°°
	(.26)	(.13)
Log likelihood	−4161.5	−3211.0
Number of observations	7315	7315

Note: Experience is measured as Age − Education − 6. All equations also controlled for marital status (married, separated/divorced), southern residence, SMSA residence, and being a principal earner. Full results are available upon request.

°° Significant at the .05 level on a 2-tailed test.

° Significant at the .10 level on a 2-tailed test.

Not unexpectedly, the predicted wage differential between sectors (which comes from the wage equations to be discussed) is on average large and positive for both primary and secondary workers. For instance, in the 50/50 split secondary workers would have a 55 percent higher wage in the primary sector, while primary workers would have a 63 percent lower wage in the secondary sector. Surprisingly, the wage difference term is negative and highly significant in the sector assignment equations, as it is for all of the models with 50 or more percent of women in the secondary market. This result is puzzling if one contends that workers choose the sector in which they work based on wage differences.

Results: Wage Equations

The results from the wage equations, presented in Table 2, also provide evidence supportive of segmented labor market theory. As predicted, there were generally lower returns to education and potential experience in the lower part of the wage distribution, even after correcting for selection bias. In the 50/50 split, secondary

TABLE 2

Coefficient Estimates for Wage Equations
Under OLS and Selection Bias Models
(Standard errors in parentheses)

		50% Primary		20% Primary	
Variables	OLS	Primary	Secondary	Primary	Secondary
Education	.068**	.059**	.021**	.046**	.032**
	(.002)	(.004)	(.004)	(.009)	(.003)
Experience	.0106**	.0087**	.0052**	.0073**	.0065**
	(.0012)	(.0015)	(.0012)	(.0022)	(.0011)
$\text{Experience}^2/100$	−.022**	−.019**	−.013**	−.015**	−.015**
	(.006)	(.003)	(.002)	(.005)	(.002)
Tenure	.026**	.017**	.017**	.010**	.020**
	(.002)	(.002)	(.003)	(.003)	(.002)
$\text{Tenure}^2/100$	−.052**	−.026**	−.043**	−.011**	−.048**
	(.006)	(.006)	(.008)	(.007)	(.006)
Black	−.097**	−.066**	−.045**	−.056**	−.065**
	(.014)	(.017)	(.015)	(.021)	(.013)
Hispanic	.013	−.010	.012	.017	.017
	(.020)	(.022)	(.019)	(.030)	(.017)
Selection	—	.155**	.096**	.038*	−.011
		(.037)	(.036)	(.058)	(.035)
Number of obs.	7315	3915	3400	1831	5484

Note: Experience is measured as Age − Education − 6. All equations also controlled for marital status (married, separated/divorced), southern residence, SMSA residence, collective bargaining coverage, part-time status, and size of establishment where employed (25-99, 100-499, 500-999, 1000+). Full results are available upon request.

** Significant at the .05 level on a 2-tailed test.

* Significant at the .10 level on a 2-tailed test.

workers receive 36 percent of the return for education received by workers in the primary sector. Under the assumption of independence of errors in the two equations, the difference between the education coefficients is statistically significant in any conventional test. In the 80/20 split the return to education in the secondary equation is 70 percent of the return in the primary sector, but the difference is not statistically significant. Similar results are obtained from the potential experience variable. Returns to experience are lower in the secondary sector, although they are significantly lower only in the equation with a 50/50 split between the sectors. In both splits, secondary sector workers have wages that peak after about 20 years of tenure with an individual employer; the primary sector workers' wages peak later, after 33 or 45 years, depending on the split.[8]

Our equations indicate that racial wage discrimination exists in both sectors and is of approximately equal magnitude. Black women's wages in a given sector are between 4.5 and 6.5 percent lower than otherwise comparable workers. Thus, 35 to 54 percent of the black-white wage differential evident in the single-sector OLS equation is explained by racial differences in obtaining primary sector jobs.

Sensitivity of Results to Specification

We find very different results for the systems in which 60 or more percent of employed women are classified as primary sector workers. In these systems, the wage difference coefficient in the sector determination equation is positive and significant. This gives some support to the view that dual labor market results critically depend on the classification scheme adopted by researchers. For the systems with 70 or more percent of women in the primary market, the coefficients on experience and education in the wage equation are negative and significant. Further, the coefficient on black is positive and significant. These results run counter to all shades of economic theory, suggesting that the classification of a substantial majority of women into the primary market is not reasonable.

Conclusion

Although there are undoubtedly other possible explanations for the earnings patterns uncovered in this paper, they generally are in accord with the predictions of segmented labor market theory. For women, blacks are more likely to be in the secondary sector—under any reasonable definition in terms of wage cutoffs—than are whites, and this explains in part remaining racial earnings differentials. Increased education, work experience, and tenure yield somewhat smaller increases in earnings in the lower part of the labor market than they do in the high end, after correcting for sample selection bias in the wage equations. And there is little evidence that workers choose the sector in which they work based on earnings differentials, other things equal.

[8] Of course, workers in the primary sector also gain because they, on average, have more education and longer job tenure. While mean tenure in the primary sector is 8.6 years for the 20/80 split and 7.5 years for the 50/50 split, tenure in the secondary sector is 5.1 and 4.4 years, respectively. Similar differences exist for education. In the 50/50 split, mean primary sector education is 13.7 years, while secondary sector workers average 11.9 years. This is not true of experience, as mean experience in both sectors in each model is approximately 18.5 years.

Of course, these results are preliminary and may be a result of the manner in which the primary and secondary sectors were defined in terms of hourly earnings alone. In the next few months we intend to estimate other models with alternative definitions of sector. This is important because sample selection models like ours always do rest on the somewhat arbitrary definition of sector, unlike the endogenous switching models. Nonetheless, to date these two contemporary approaches to the econometric analysis of dual labor markets produce quite similar results that are in general supportive of the segmentation hypothesis.

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Gender and Economic Restructuring: The Case of South Bend, Indiana

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During the last decade, earnings in South Bend, Indiana, have fallen from above the national average to below. Some analysts attribute this to a "rust-belt" phenomenon: the shift from heavy manufacturing to services and lighter manufacturing results in new dominant employers with a lower ability to pay higher wages than the departing large manufacturing firms.[1] Charles Craypo (1983, 1988) reached a similar conclusion, but emphasizes that the decline in unionization levels and union bargaining power, key consequences of deindustrialization, caused pay to fall.

This paper has two objectives: to extend Craypo's union bargaining power explanation by emphasizing the importance of gender in explaining collective action and the existence of segmented labor markets. The hypothesis is that the decline in union strength, the increasing presence of women in the labor force, and sexist norms—the social subordination of women—interact to affect the growth of male earnings in a community. The chain of interaction is union representation and bargaining power. I explore the possibility that, in South Bend, the decline in unionized blue-collar employment and the increasing presence of women workers has allowed firms—some with high ability to pay and unharmed by deindustrialization—to lower the growth of men's wages by employing women at low wages. The entrance of women has also affected the labor movement's ability and propensity to cope with these changes. This paper initiates a project to investigate an important question: How does gender inequality, or sexism, affect men's pay?

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[1] In 1956, 57.8 percent of South Bend's jobs were in manufacturing, while the share in the U.S. was 41.4 percent. By 1984 South Bend's share in manufacturing was almost equal to the U.S. share, 26.2 and 24.8 percent, respectively. Between 1969 and 1979 real earnings in South Bend fell by 5.5 percent, while U.S. earnings fell by only 2.4 percent.

South Bend's population fell by 2.7 percent throughout the 1970s while employment grew by 23.7 percent (Peck, 1987). The otherwise steady increase in the labor force participation of women was dramatic when compared to the decline in male employment growth. In South Bend, between 1970 and 1980, full-time female employment grew by 37.3 percent, while male employment grew by only 5 percent. Men's pay fell by 9 percent, while women's real pay increased by 4 percent. The pay gap narrowed at the expense of men's wage growth (Ghilarducci and Clark, 1985).

Labor segmentation models explain more fully the interaction of worker collective action, community norms, and firm strategies than do neoclassical models.[2] Yet there are differences among what I characterize as labor market segmentation models, views, or genres—the dual labor market models, the radical models, and the Cambridge models. Each would approach the South Bend case differently.

The "dual labor market" explanation would focus on changes in market demand and the decline in basic manufacturing to explain the expansion of female-dominated, secondary-sector employment which absorbs female labor and in which firms are small and have low profit rates.[3] The dual labor market model would direct economic development policies towards attracting basic manufacturing. The radical segmentation models predict that employers will take advantage of a community's social divisiveness by threatening to and, at times, actually replacing men with low-cost female workers.[4] Occupations characterized by high degrees of sexism[5] should, therefore, experience lower-than-average male earnings growth and, presumably, lower-than-average growth in labor costs. Low-paying employers would not necessarily be small and low-profit firms.

The Cambridge labor market segmentation approach would view the changes in the South Bend economy as a dynamic and uneven process—where technological and market changes cause uneven impact on sectors and groups of workers. The possibility of women being substituted for men would not be ruled out, but this literature

[2] See Fischer (1987) for a review of labor market models.

[3] In Rubery et al. (1984) the neoclassical component of the dual labor market model set forth in the "first" and "second" generation of the work of Doeringer and Piore (and others) is well described. The dual labor market model is embodied succinctly in Dickens and Lang (1985).

[4] See Reich (1981) for a discussion of how racism affects white workers' pay and Edwards, Reich, and Gordon (1982) for a description of the radical segmentation model.

[5] An occupation would be considered to have high degrees of sexism if there is a gender trait identification with the job, or the occupation has strict gender hierarchies and pay differentials between men and women.

would focus on how these changes affect the strategies and expectations of workers (Rubery, Tarling, and Wilkinson, 1984). The radical and Cambridge models would agree that economic development policies aimed at the secondary sector, enforcing and improving labor standards and labor laws and by supporting union organization, would improve working conditions more effectively than would attracting manufacturing firms with generous public incentives. How men will be affected by policies to restructure the secondary sector and to improve women's working lives determines what will be the political support for and overall welfare implications of these alternative policies.

The remainder of this paper develops the link between men's pay, bargaining power, and gender. Three sets of facts bolster the argument that the feminization of the labor force affects bargaining power, as does the decline in basic manufacturing: (1) the presence of large nonmanufacturing firms; (2) the weakening effect of sexism on unionization; and (3) the effect of sexism and the feminization of the labor force on the employers' pay policies. The dual labor market (in this case the neoclassical model has similar conclusions) approach of concentrating on the demand side—the effects of deindustrialization—ignores how sexism and the feminization of the labor force works on the supply side to create low paid sectors and may lead to ineffective employment policies.

Core Nonmanufacturing Firms

The first piece of evidence for the bargaining power thesis is found on the demand side. Manufacturing employment in large firms such as Studebaker and Bendix has fallen (Craypo, 1983, 1988), but remaining nonmanufacturing firms are still large firms. In 1970, 30 of the largest manufacturing firms were employing, on average, 763 workers; in 1962 the top 30 employed, on average, more than 1,000 workers. In 1980, the average size of the top 30 manufacturing firms fell to 515 workers, but the top 30 nonmanufacturing firms employed an average of 661 workers. The fact that firm size in manufacturing has fallen would be consistent with the dual labor market models that the fall in men's pay is due to an increase in secondary employers. However, a large proportion of new jobs created were in very large nonmanufacturing firms.

Changes in the size of nonmanufacturing firms are not available, but many of the top 10 nonmanufacturing firms (hospitals, schools, retail trade) have grown. Moreover, these firms are not peripheral firms dependent entirely on local demand. For instance, the

University of Notre Dame exports higher education services nationally, and the health, retail, and finance and insurance industries service the surrounding rural communities. The shift in employment has not been from large primary firms and exportable industries to small firms and peripheral, secondary industries.

Community Norms and Job Integration

The second set of factors suggest that firms have the opportunity to lower the growth of male wages when women enter the labor force because sexism exists and union strength that once protected men from the threat of low-cost labor has eroded. South Bend has many traits of a strong union town and has a working-class character, but unionization has not been an important force in setting women's pay. South Bend unions gained strength by racial integration—but they were not sexually integrated.[6]

In South Bend, sexist norms exist in many dimensions, in gender-specific duties, and in the social and economic subordination of women. The community's sexist norms are found in the weak Indiana government support for women and children. Indiana ranks 30th in per capita income, but 38th in AFDC monthly welfare payments. Child care is relatively absent in Indiana—one out of four 3- and 4-year-olds in the U.S. are in a preschool program; in Indiana the ratio is less than one in eight. Moreover, an eventually successful unionization effort by secretaries at the South Bend School Board points to the community's institutionalized sexism. In 1984 the secretaries petitioned the School Board for a union election, as janitors and groundskeepers in years past had done successfully. The Board refused the secretaries' request. (Indiana public-sector labor relations law requires public-sector agencies to decide if a representation election should be held.) The Teamsters union sued, charging sex discrimination.

Religious life and activities compete for a woman's time and identity and the particular religions that are dominant in the community, Mennonite, Seventh Day Adventists, and Roman Catholic, teach gender roles that subordinate women to men.[7] The

[6] Milkman (1987) documents the policies of CIO unions to move women out of their WWII jobs in the 1940s. The flip side of the family wage campaign was a lack of commitment to support wage increases for women. Moreover, it must be remembered that industrial unions represent the workers the employers hire.

[7] The city and surrounding communities are heavily identified by the religious faith of their residents. The University of Notre Dame is located in South Bend (it is a major Roman Catholic university), and Goshen College, a Mennonite institution, and Andrews University, a major Seventh Day Adventist college, are near South Bend. There are also four Jewish synagogues and temples—a large number for a community of less than 150,000.

strong cultural presence of organized religion in the community, together with the unions' effective exclusion of women, influence women's assertiveness in the labor force. This environment can have a number of labor market effects. Inequality between men and women has some social legitimacy, because for women child-rearing and homemaking are considered to be competing, not complementary, tasks to paid work.

One might expect that the social adherence to gender roles would lead to severe occupational and industrial segregation. Severe occupational segregation would bolster the dual labor market view that women's and men's labor markets are essentially separate, so pay can fall in the male sector while demand expands in the lower paid and more competitive secondary and feminized sphere. Thus, an exogenous increase in "women's" jobs generates higher demand for women and higher wages relative to men who are losing their jobs in the primary sector. Men's pay falls because "their" jobs are disappearing.

Surprisingly, however, occupational segregation and industry segregation has decreased at a faster rate in South Bend than in the U.S. I adjusted the Duncan index to standardize for the occupational and industrial mix changes in order to measure the sex composition of the workforce by itself, controlling for the immense increases in service employment relative to manufacturing. Following Beller (1984), this standardized Duncan index allows me to compare sex segregation in South Bend and the U.S. without being confounded by the fact that South Bend has experienced a relatively larger decline in male dominated jobs.

South Bend's employment sex segregation in 1980 was smaller than the national experience, because women entered all occupations and industries in South Bend in a pattern that was less sex-segregated than the U.S. experience. In 1970 the national Duncan index, which represents six broad occupational categories, was 40, compared to 45 in 1980—this means that in 1970 40 percent of U.S. workers would have had to change jobs in order for the nation to reach perfect integration; but in 1980, 45 percent would had to have moved. In South Bend, by contrast, the index was 42 percent in 1970 and 22 percent in 1980. The corresponding figures for industry segregation are, for the U.S. 35.1 in 1970, and slightly worse in 1980 at 35.7. In South Bend the industry index decreased from 40.1 in 1970 to 34.9 in 1980. (These calculations are available from the author.)

This challenges the conclusion that women entering the labor force are in sectors separate from the men. In South Bend women are entering men's jobs and men are increasingly employed in female jobs. Whether or not men's pay falls in an occupation which women are entering because women are low-cost alternatives—a finding consistent with the radical view—or men's pay falls because men enter lower paying women's jobs—a view not inconsistent with all three views—requires an extensive case study investigation, the elements of which are described below.

Women as Low-Cost Alternatives to Men

I regressed the growth of median male earnings in 59 places in the U.S. between 1969 and 1979 and found that the proportion of women in the labor force in 1980 was significantly negatively related to average male earnings growth and that male earnings growth was higher in places where the pay gap widened even after controlling for male employment growth. The places where pay equity was improving were the places where men's pay was falling—just as it had in South Bend. Please examine regression #1 in Table 1. If these places, where the pay gap narrowed, experienced more occupational integration, like South Bend, then, consistent with Blau and Beller's (1988) findings—that women get less returns in integrated jobs than do men—this divides men and women which, in turn, lowers their propensity to organize and for men to maintain their pay levels.

The growth in the proportion of women in the labor force was not significantly related to men's earnings growth which, superficially, is inconsistent with the radical hypothesis (see regression #2 in Table 1). But, a better statistical test of the radical hypothesis would be at the occupational and industry level. The regressions would test the questions: Does men's pay in an occupation (industry) fall when women enter? What happens to firms' profits when women enter the labor force?

Table 2 shows that, at least in five broadly defined occupations in South Bend, the faster women entered an occupation, the slower male pay increased. The female rate of entry into the operative occupations was the lowest in South Bend and male earnings growth was the second highest. The percentage increase of women's employment in the managerial and professional positions was second only to precision employment (where the numbers are small) and male earnings growth was the lowest in that category.

TABLE 1

OLS Regressions for Growth in Male and Female Earnings, 1969-1979
(Standard deviations in parentheses)

Dependent variable for Regressions #1 and #2:
Growth in full-time median male earnings 1969-79. Mean: 1.0351.

Dependent variable for Regression #3:
Growth in full-time median female earnings 1969-79. Mean: 1.1537

	#1 Parameter Estimate	#2 Parameter Estimate	#3 Parameter Estimate
Intercept	1.127°°	1.447°°	1.462°°
	(.02997)	(.1518)	(.1609)
Percent change in ratio between men's and women's earnings	1.438°°	1.397°°	−.7822°°
	(.3193)	(.3062)	(.3252)
Percent change in male employment	.0295	.0397	.0416
	(.0388)	(.0375)	(.0389)
Percent change in proportion of women in the full-time labor force	−.1458		
	(.1265)		
Percent of women in labor force in 1979		−1.018°	−1.0604°
		(.4456)	(.4739)
R^2	.285	.331	.172
n	59	59	59

°° Significant at the 99 percent level of confidence.

° Significant at the 95 percent level of confidence.

TABLE 2

South Bend: Growth Rates Largest to Smallest, 1969-79

Female Employment Growth		Male Earnings Growth		Female Earnings Growth	
Ranked Occup.	Rate	Occup.	Rate	Occup.	Rate
a. Precision	79%	c. Technical et al.	117%	b. Managerial/ professional	147%
b. Managerial/ professional	67	e. Operative	104	d. Service	137
c. Technical, sales, clerical	36	a. Precision	97	a. Precision	132
d. Service	22	d. Service	96	c. Technical et al.	107
e. Operative	8	b. Managerial/ professional	85	e. Operative	74

Based on interviews with, as yet, only six employers in manufacturing and nonmanufacturing, I tentatively conclude that employers are hiring more women, but not using pay to lure them to (especially professional) jobs. Entry level jobs are paying less, but more interviews are needed to glean how men's pay is affected in general. Nursing wages and benefits are moderated by an informal agreement between the three major hospitals in the area, clearly reducing pressure on profits and prices. A plastic molding firm, whose major competitor, Nylon Craft, Inc., has maintained a nationally famous child-care center in order to retain women workers, is dealing with a new labor shortage by raising wage rates 20 percent. They still expect only women to apply—they do not conceive of having men in their light plastic assembly line. All six personnel managers agreed that women are less likely than men to ask for raises and promotions.

Bargaining Power, Worker Strategies, and Government Policy

Viewing labor markets as segmented is superior to competitive market models, which presume barriers eventually erode. When women, with less experience in collective action, assertiveness, and lower social status, enter the labor market and male jobs, personnel strategies and the effectiveness of worker protective strategies change.

In South Bend, and elsewhere, an effective union strategy had been to organize oligopolistic firms and to differentiate union workers from other workers by skills while controlling entry into craft and industrial jobs (Milkman, 1986). Unionizing women will require a deviation from this union strategy (Rubery, 1978), unless another source of complacent skilled labor appears. Wilkinson and Bronsnan point out the fact that women are "badly paid compared with the skills and effort they apply to their work means a surplus is created" (1987). Strategies to organize women will depend on whether that surplus goes to men, consumers, or employers in the form of higher male pay, lower prices, or higher profits.

Finally, the possibility that the entrance of women could erode the earnings and conditions of an occupation requires reevaluating government job creation policies. For example, Craypo has suggested that manufacturing may return to South Bend not because tax abatements, government bonds, grants, and enterprise zones are effective lures, but because unions have been tamed (1988). Policy-makers have more options when nonmanufacturing firms can provide better pay and working conditions; for instance, by strengthening fair labor standards (providing the effects of collective action where it doesn't exist) and otherwise restructuring low-paid jobs with policies such as: comparable worth legislation, day-care provisions, enforcement of equal pay and opportunity laws, and support of unionization efforts. Computer simulations show that if the minimum wage was $4.50 per hour in 1986 (Indiana's state minimum hourly wage is $2.00), pay to South Bend workers would have increased by $44 million, and $22 million would have accrued to women (Ghilarducci, 1988). If women are a reserve army, then raising their working conditions and pay would bolster men's pay. If women are in low-paid profitable sectors, these policies will reduce profits or raise prices.

Conclusion

For over two decades, segmentationist labor market theorists have challenged the neoclassical models by including social norms, bargaining power, industrial organization, and market demand fluctuations to explain market outcomes. But, the demand side factors have been traditionally the prominent factors in the analysis—especially in the dual labor market case. The case of South Bend shows that ignoring gender divisions in the labor force and the increasing feminization of the workforce would lead to an incomplete analysis of what the long-term effects of the decline in male, unionized, blue-collar labor will be. The evidence and the theories point in the direction that gender divisions in society can maintain low-paid sectors, regardless of employers' ability to pay and vulnerability to market demand. More detailed interviews and empirical research needs to be done in order to describe and model how low-cost female labor weakens the growth in men's pay through substitution and weakened bargaining power.

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DISCUSSION

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All three of these papers advance the view that the labor market position of women is changing significantly, although each paper is concerned with a different aspect of that change. Unfortunately, whatever change that is occurring appears to be too recent, and theory and data too imperfect, to allow definitive characterization of the evolving position of women in the labor market.

Teresa Ghilarducci is concerned with why in South Bend, Indiana, between 1970 and 1980 real earnings for all workers fell by as much as 5.5 percent compared with a national decline of 2.4 percent. Previous writers explain South Bend's laggard earnings trends in terms of changes in industrial structure or a decline in union bargaining power. Ghilarducci suggests that an additional explanatory factor may be the increased ability of firms to employ women rather than men and to lower thereby the growth of men's wages.

In support of her thesis, Ghilarducci notes that in South Bend between 1970 and 1980 full-time female employment grew by 37.3 percent, male employment by just 5 percent, and occupational segregation by gender fell substantially more than it did nationally. She also presents preliminary regression analysis of earnings trends across 59 metropolitan areas and finds that male earnings increased significantly more slowly in cities with a higher percentage of women in the 1980 workforce.

Ghilarducci's observations, however, fall well short of what is required to sustain her thesis. Before we could place any confidence in her regression findings we would have to see a more fully specified analysis that held constant such factors as local unemployment rates, shifts in industrial structure, and the impact of national bargaining settlements. Her analysis would also be more aptly conducted at a disaggregated level. If decreased occupational gender segregation adversely affected male earnings trends in South Bend, the impact

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might better be documented by comparing earnings trends across sectors that had differential recourse to female employment.

By applying sophisticated econometric techniques to micro-data sets, several recent studies have yielded new evidence on labor market segmentation. Dale Belman and Paula Voos extend this research specifically to females.

Belman and Voos say their principal concern is with explaining why the earnings of black women are only 90 percent those of white women. But their findings have broader implications.

First of all, Belman and Voos offer an alternative methodology to that of unknown regimes—which would not converge to yield estimates over their data set—for the econometric study of labor market segmentation. Like early studies of labor market segmentation, they assign women into primary and secondary sectors by an arbitrary criterion—position in the wage earnings distribution.

But Belman and Voos have, in addition, a regression equation which predicts the sector to which individual women belong. A woman's sectoral location is explained in terms of a vector of her personal and local labor market characteristics, and the estimated percentage difference between the wages that she could potentially earn in the different sectors.

Based on their sector determination equation, Belman and Voos correct the two earnings equations for sample selection bias. If the initial, arbitrary sector assignment criterion is approximately accurate, this econometric procedure should yield unbiased estimates. The problem of arbitrariness remains, but Belman and Voos report results for nine different assignment cutoff points in the wage distribution, from 10:90 to 90:10.

When 50 percent or more women are assigned to the secondary sector, Belman and Voos report findings that are broadly consistent with the labor market segmentation hypothesis. They estimate that from 35 to 54 percent of the earnings gap between white and black women is due to disproportionate location of black women in the secondary labor market.

There are, however, several difficulties with Belman and Voos's approach. Their stated focus on the earnings gap between white and black women seems overly narrow. This earnings gap has declined from approximately 50 percent in 1950 to 21 percent in 1967 and 10 percent in 1985. Belman and Voos give no reason why we should not expect the gap to decline further. If the history of this earnings gap testifies to the severity and longevity of racial discrimination, its trend decline appears to be strong evidence of a long-term erosion in discriminatory practices.

I would encourage Belman and Voos to address in addition the issue of labor market segmentation among women—segmentation that may well persist or worsen, even as the racial earnings gap diminishes. Several recent empirical studies indicate that more women are entering high-paid occupations. There have also been increasing numbers of young women entering the labor market, many of whom still wind up in traditional women's jobs, such as clerical work. In the long term, the net result of these trends should be an increase, on average, in women's relative economic position. But an additional, possible result is greater earnings inequality among women, along with sharper lines of demarcation between those women who are increasingly able to climb to higher rungs of primary-sector job ladders and those who remain confined to the secondary sector.

Belman and Voos's statistical results should afford insights into the structure of the female labor market. In this regard it would be useful to know the effect of using a wider variety of assignment schemes on their basic economic results, as well as the kinds of jobs and the ages of women that fall into different labor market sectors. It would also be useful to compare the results obtained from their assignment schemes with those from the unknown switching regime approach of Friedberg, Lang, and Dickens.

Friedberg, Lang, and Dickens directly address the issue of labor market dualism among women using unknown regimes and data from the May Current Population Survey for 1976-1984. They estimate their model jointly for men and women, but allow the coefficients on schooling, experience, and experience squared to differ by gender. Their most striking finding is that as many as 90 percent of men fall into the primary sector and 80 percent of women into the secondary sector. They also find sharp differences in the estimated coefficients for men and women (though these are not reported in the present paper).

Previous study by Dickens and Lang of labor market structure among men found strong evidence of dualism, with men in the secondary sector earning little or no return to either experience or education. By contrast, the current paper reports that even secondary sector women earn substantial returns to education, returns that appear to be increasing over time.

Returns to experience for secondary-sector women, on the other hand, remained almost negligible throughout the 1976-1984 period.

Friedberg, Lang, and Dickens interpret this as a statistical artifact of trying to estimate returns to experience with cross-section rather than longitudinal data.

On this latter point, the authors support their interpretation by emphasizing that women under 30 years of age had a substantially greater probability of being classed in the primary sector. They might also have noted that estimated returns to experience for primary-sector women increased sharply over the time period.

The authors conclude that dualism is a less apt typology for the labor market experience of women than the existence of a single women's sector. To me, however, their econometric results suggest somewhat different conclusions. Although a large majority of women still earn little return to experience, there are at least initial signs of the emergence of a primary sector of women's employment, alongside a women's secondary sector that is distinct from that of men. It is not surprising that secondary-sector women earn returns to education while secondary-sector men do not. A large percentage of women are engaged in clerical work—work that puts a greater premium on literacy and social skills than does most secondary-sector jobs for men.

Caution must be exercised in interpreting the presented empirical results, however. Sector assignment probabilities for women in a given age group fluctuate substantially from year to year. Furthermore, unless we are confident of the number and structure of equations that best describe labor market segmentation, it can be hazardous to use an unknown regimes approach for drawing comparisons across a period of time. If the model embodies an incomplete segmentation scheme, for example, individuals may be misclassified in different ways at different dates, causing artificial trends to appear in the data.

VII. THE EFFECT OF IR AND HR POLICIES AND PRACTICES ON ORGANIZATIONAL PERFORMANCE

Employee Involvement Programs and Firm Performance

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Unionized and nonunion employers have adopted employee involvement and participation (EI) initiatives in order to enhance organizational performance. Programs with such names as quality of working life (QWL), quality circles (QC), and labor-management participation teams, however, have not been uniformly successful. While some EI efforts seem to have improved firm performance, others have been abandoned after meeting employee resistance or disrupting workplace operations (see Walton, 1985).

In nonunion settings, EI may enhance performance when it occurs in conjunction with other work practices, such as flexible work deployment and assignment systems, that are designed to motivate employees and respond to their needs. In unionized settings, EI programs may be adopted to improve productivity and offset some of the labor cost increases associated with collective bargaining (Kochan, Katz, and McKersie, 1986). In both settings, improvements in performance are due to increased labor productivity that arises when workers have greater commitment and motivation and more

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opportunities to use their skills and knowledge. This study considers whether effects of EI on performance vary with the union status of the firm or with the extent of decision-making authority that an initiative grants to employees.

Data and Sample

Data for this study were collected as part of a larger study of human resource management (HRM) policies and the economic performance of U.S. business units. Information on the financial performance of business units, contained in Standard and Poor's COMPUSTAT II data file for 1986, was merged with responses to a survey of HRM policies followed by those businesses during that year. Overall, a sample of 495 business units reported human resource data that could be merged with financial performance data (for details, see Delaney, Lewin, and Ichniowski, 1989).

Responses from 227 business units in the manufacturing sector are analyzed in this study because data on potentially important determinants of firm performance, such as measures of market power, are available only for manufacturing industries. This approach also reduces the extent of unobserved heterogeneity that would occur in a sample of manufacturing and nonmanufacturing firms. Finally, we focus on EI efforts covering manufacturing workers to reduce other problems that could confound estimates of the relationship between EI and firm performance.

While future analyses will focus on other measures of performance, this preliminary study uses a business unit's return on capital assets (ROA) as the dependent variable. ROA, defined as the ratio of net income to identifiable assets, is calculated from the COMPUSTAT II data file. A dummy variable indicating the presence of an employee involvement or participation initiative is created from our questionnaire.[1]

Empirical evidence of the effects of EI programs on firm performance is mixed. Studies by Kochan and his associates provide the most rigorous tests of the effects of EI or QWL efforts on the economic performance of firms (for a review, see Kochan, Katz, and McKersie, 1986). While that research reveals little or no efficiency gains, it suggests that better established participation plans could have

[1] The EI variable is based on answers to the following question: "Employee participation initiatives are variously referred to as *quality of worklife*, *quality circles*, *employee involvement*, and *labor-management participation teams*, among others. Do you have these or other formal employee participation programs with any of these employee groups?"

larger effects than the relatively limited EI programs that have been studied (see Katz, Kochan, and Keefe, 1987; Katz, Kochan, and Gobeille, 1983; Shuster, 1983; Rosenberg and Rosenstein, 1980).

To address this possibility, we categorize the EI programs in our sample as having high or low decision-making authority.[2] Differences in firm performance may occur across high and low authority EI programs because employees may respond more favorably to an initiative that gives them more voice in workplace decisions than a program that gives them little say in work-related decisions.

Our analysis also includes a more precise measure of union status than has been used in other studies. We identify three union-status categories: (1) Firms having only unionized manufacturing and production employees are referred to as "totally unionized firms." (2) Firms having both unionized and nonunion manufacturing and production workers are referred to as "double-breasted firms." (3) Firms having only nonunion manufacturing and production workers are referred to as "totally nonunion firms." This specification allows us to identify differences in EI-induced effects on ROA that occur between unionized firms with nonunion operations and totally unionized firms. Our estimates gauge the effect of an "average" EI initiative (or an "average" high- or low-authority EI initiative) on ROA. Thus, the results provide a baseline EI program effect that generally cannot be discerned from small-sample studies of EI initiatives.

Employee Involvement and Union Status

Table 1 presents information on the EI programs for manufacturing and production workers in totally unionized, double-breasted, and nonunion manufacturing firms.[3] The data also indicate the extent to which EI initiatives affect the unionized and nonunion operations of double-breasted firms. The table suggests three observations. First, within double-breasted businesses, unionized and nonunion employees appear to have the same likelihood of being covered by an EI

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[2] Respondents answered the following question using a five-point scale that ranged from (1) "no authority" to (5) "complete authority": "For employee groups with a formal involvement or participation program, how much *authority* to make decisions and *implement recommendations* on the issues listed does the *involvement program* have?" We classified programs scoring above the median response of 2 as being high authority programs. Programs receiving a score of 2 or less were classified as low authority programs.

[3] Missing values on the EI measures cause the reduction in sample size from 227 to 182 cases.

program. Unionized and nonunion workers were treated differently in only three of the 54 double-breasted businesses. In other double-breasted firms either both groups or none of the workers were covered by an EI initiative.[4]

TABLE 1
Unionization and Employee Participation

	Business Unit Union Status			
		Double-Breasted		
Participation Measure	Totally Unionized	Unionized	Nonunion	Totally Nonunion
Proportion of business units having a formal employee participation program	.500 (10)	.574 (54)	.593 (54)	.432 (118)
Proportion of formal participation programs having high decision authority	.200 (5)	.613 (31)	.563 (32)	.412 (51)

Note: The data cover manufacturing and production workers in manufacturing industries. Sample size is in parentheses.

Second, the incidence of EI programs is similar across the union-status categories, though the proportions are somewhat lower in totally nonunion firms than in the other firms. Third, while none of the EI efforts in the sample gave complete decision-making authority to employees, more than one-half of the programs in double-breasted firms and 41 percent of the programs in totally nonunion firms gave workers high decision-making authority. In contrast, only one of the five initiatives in totally unionized firms gave high decision-making authority to workers.

While it appears that workers are granted more decision-making authority by EI plans in firms that are either totally or partially nonunion, this conclusion should be tempered by the fact that the sample contains few totally unionized firms. Yet, unreported data suggest that EI initiatives in totally unionized businesses have lower levels of employee participation than EI initiatives in other business units. High worker participation is defined to occur where 40 percent

[4] Because of this finding, the three firms having different EI policies for their unionized and nonunion operations are excluded from our multivariate analyses. As a result, an EI initiative either exists for both union and nonunion employees or does not exist in the remaining double-breasted business units.

or more of a business unit's manufacturing employees are covered by the EI program. High participation occurs in 45.1 percent of the EI programs in totally nonunion firms and in 20 percent or less of the EI programs in double-breasted or totally unionized firms. Thus, while union status does not appear to affect the adoption of EI initiatives, EI programs appear to provide workers with more decision-making authority and to cover more workers in firms with nonunion employees than in firms with unionized employees. Given these observations, it is useful to consider how union status and EI initiatives can influence ROA.

Theoretical Framework

An economic analysis of EI is more complex in unionized settings than in nonunion settings. In a unionized environment the productivity improvements stimulated by EI programs are probably combined with relative increases in labor costs. Also, both the possible efficiency effects of EI programs and the wage and nonwage effects of unions can affect different measures of firm performance in different ways. We examine the effects of EI and union status on ROA. Labor cost and productivity differentials will affect both the total profit and capital stock components of this index of firm performance.

Assuming that EI programs reflect productivity (especially labor productivity) differences, and that EI programs in unionized businesses indicate some combination of labor productivity and cost differentials, several distinct "EI-union status" cases can be developed. The simplest case involves the effect of EI in nonunion environments. If a totally nonunion business implements an EI program that enhances labor productivity, ROA will increase relative to ROA in nonunion environments having no EI program (and, hence, no productivity effect). Because output in firms with EI can be produced with the same capital stock but relatively less labor input, profits will be higher.

The impact of an equivalent productivity-enhancing EI program on ROA in totally unionized businesses is less clear, however, because unionization should alter labor costs. In this case, differences in union behavior and assumptions about the nature of the production process will alter theoretical predictions. However, Clark's (1984) derivation of the effects of changes in labor costs and productivity on ROA illustrate several key dynamics. Clark considers, among other theoretical possibilities, a monopoly union, "on-the-demand-curve," framework with a constant elasticity of substitution, and constant returns to scale production technology. In this case, if d^L is a labor productivity differential (due to EI or other union policy), and the union also raises labor costs, then the change in ROA due to union-related EI and labor cost differentials ($\eta_{roa,u}$) will be:

(1) $$(\eta_{roa,u}) = \alpha m[1 - \sigma] - d^L$$

where $\alpha =$ labor's share, $m =$ markup, and $\sigma =$ the elasticity of capital-labor substitution. This change in ROA is less positive than an equivalent EI-related productivity effect in a nonunion business because labor costs increase under unionism. These effects may lead to a decrease in ROA relative to the "no EI-nonunion" base case, depending on σ, because capital stock is the denominator of this performance measure. Where σ is less than one, $\eta_{roa,u}$ will likely be positive, although it could turn negative. Where σ is greater than one, $\eta_{roa,u}$ will be negative.

The ultimate effect of productivity and labor cost differentials on ROA critically depend on σ because capital investment is the denominator of this index. If σ varies across totally unionized and partially unionized businesses, then $\eta_{roa,u}$ will differ between these firms. For example, double-breasted and totally unionized businesses may respond differently to labor cost changes due to unionism. In most firms, the total change in capital stock resulting from a change in labor costs is comprised of a scale and a substitution effect. A double-breasted firm may not substitute capital for labor in its unionized operations, however, when there is a relative increase in labor costs. Instead, it may choose to deplete the capital stock of its unionized operations. If so, σ will be lower, and $\eta_{roa,u}$ will be more positive in double-breasted firms than in totally unionized businesses exhibiting a more substantial substitution effect.

Double-breasted firms, however, may follow different patterns of capital investment. It may be easier for these firms to expand their existing nonunion operations than it is for totally unionized firms to create new nonunion facilities. If, for these reasons, the rate of capital investment for the firm as a whole is greater for double-breasted firms than for totally unionized firms, the preceding theoretical predictions are reversed.

On balance, holding all factors other than wages fixed, a given EI-related productivity effect will have its largest positive effect on ROA in nonunion establishments that suffer no labor cost disadvantage. The same EI-induced productivity effect will have a less positive impact on ROA in totally unionized or partially unionized businesses than in totally nonunion firms because collective bargaining typically increases labor costs. Whether the partially unionized business with a productivity-enhancing EI initiative, the totally unionized business with a productivity-enhancing EI initiative, or the nonunion business without EI exhibits the highest ROA depends critically on how capital investment changes in response to increases in the relative price of labor under unionism.

Empirical Estimates

Reduced form equations of the following general form are used to estimate the effects of EI and union status on ROA:

(2) ROA = f(EI, UNION, Product Market Characteristics, Labor Market Characteristics)

A dummy variable and two mutually exclusive decision-making authority variables are used to measure EI. Union status is measured with dummies for totally unionized businesses and double-breasted firms.[5] Since the theoretical discussion suggests that EI should vary across the different union-status categories, the ROA equation will also be estimated with interactions between the EI variables and the union status variables.

Table 2 presents results for three different specifications of the EI and union-status variables in the ROA equation. In model (1), the EI variable and the two union variables are constrained to have independent, additive effects. EI has no significant effect on ROA when it is assumed that participation program effects are the same in all union-status environments.

Model (1) indicates that ROA is lower in totally unionized firms than in nonunion firms. The difference in ROA between double-breasted and nonunion firms, however, is not significant. Based on our theoretical discussion, the significantly lower ROA among totally unionized firms is consistent with a union-related wage differential in combination with a value of the elasticity of capital-labor substitution greater than one.[6]

[5] Other control variables are: the four firm concentration ratio in the three-digit SIC category as a measure of market power; the average grade completed, average experience, and average experience squared among workers in the three-digit SIC industry as measures of differences in labor quality across industries; the percent male and percent white among workers in the three-digit SIC category; and a dummy variable to differentiate durable from nondurable manufacturing firms as a further control for other unobserved industry differences. These data were obtained from the May 1985 Current Population Survey and the 1982 Census of Manufacturers.

[6] It would also be consistent with a value of σ less than one in the theoretical model if there is a labor productivity differential due to unionism d^L that is greater than $(\alpha \circ m)$ $[1 - \sigma]$.

TABLE 2

Results of Regression of Business Unit Return on Assets on Employee Participation and Unionization Measures

Independent Variables	Model 1	Model 2	Model 3
EI program	1.49 (3.06)	—	—
High decision authority	—	2.61 (3.84)	—
Low decision authority	—	.41 (3.71)	—
Totally unionized	−16.94** (6.86)	−16.79** (6.89)	—
Double-breasted	3.41 (3.71)	3.19 (3.75)	—
Totally nonunion low authority	—	—	1.38 (4.46)
Totally nonunion high authority	—	—	2.90 (5.04)
Double-breasted no EI program	—	—	3.23 (5.20)
Double-breasted low-authority	—	—	2.30 (6.97)
Double-breasted high authority	—	—	7.57 (5.51)
Totally union no EI program	—	—	−11.14 (9.58)
Totally union low authority	—	—	−15.76 (10.86)
Totally union high authority	—	—	−36.64* (20.19)

Note: Standard errors are in parentheses. Regression equations also include measures of the average levels of education, experience, experience squared, percentage male, and percentage white of each industry's manufacturing workers, a durable goods dummy variable, and the concentration ratio for each 3-digit industry. Sample size equals 178.

** $p < .05$; * $p < .10$.

The EI and union-status variables are again constrained to have independent, additive effects in model (2). In the specification, however, EI efforts with high and low levels of worker decision-making authority are allowed to have different effects on ROA. While the coefficient on the high authority variable is greater than the coefficient on the low authority variable, both coefficients are insignificant. The results also indicate that totally unionized firms have lower ROA than nonunion firms.

Complete interactions between union status and EI decision-making authority are estimated in model (3). The nonunion sample provides the simplest test of the extent to which EI programs enhance productivity because union wage effects do not affect firms' decisions. If EI improves productivity in these environments, ROA will be higher where EI programs exist. The coefficients for low-authority and high-authority EI programs in nonunion firms, however, are both insignificant. As a result, there is no evidence that EI affects ROA in nonunion firms.

EI programs may not have equivalent productivity effects in all environments. For example, if unions facilitate efforts to coordinate EI initiatives and assure workers that EI serves their interests, then an EI-related labor productivity differential could be greater in unionized firms. However, the model (3) coefficients provide no evidence of higher ROA for double-breasted or totally unionized businesses with EI programs. The point estimates for double-breasted firms are positive in model (3) but none of the coefficients is significant.

We do not emphasize the model (3) results for totally unionized firms because of the small number of observations in these three cells. In any event, the estimates provide no evidence that EI programs enhance ROA in totally unionized firms.

Conclusion

Our analyses suggest three conclusions. First, while unionized and nonunion workers seem equally likely to be covered by an EI program, union status appears to influence the type of EI programs implemented. Workers in unionized firms appear to have less authority in their participation programs than do workers in nonunion or double-breasted firms. EI initiatives in totally nonunion firms cover more employees than EI programs in other firms. This may be due in part to the lower incidence of EI programs in totally nonunion firms; EI programs may occur primarily in the totally nonunion firms that desire widespread employee participation. Second, consistent with the results of other studies (see Kochan, Katz, and McKersie, 1986), we find no evidence that EI programs enhance ROA in totally unionized, double-breasted, or totally nonunion manufacturing firms.

Third, theory indicates that the effects of EI programs may be sensitive to the measure of performance analyzed. In particular, in unionized environments ROA is influenced by efficiency effects and labor cost differentials. EI programs may not appear to influence ROA because these two effects are not adequately disentangled in our empirical model. Consequently, other measures of firm performance, such as labor productivity, may provide a more direct test of the economic impact of EI programs. Future studies of the economic effects of EI programs should construct and analyze other measures of firm performance.

Future research should also provide a closer analysis of the nature of EI programs. Our distinction between high and low decision-making may not capture inherent differences in worker commitment and motivation across various kinds of EI initiatives. For example, the extent to which information sharing, profit sharing, and links to strategic business decision-making are built into EI programs may critically influence the impact of these programs on firm performance (see Kochan, Katz, and McKersie, 1986, p. 149). In addition, EI effects on firm performance may differ according to the age of the initiative and the extent of employee participation.

Although broad-based survey research does not provide the contextual richness of a case study, it permits identification of average or baseline effects of EI programs. Knowledge of such effects improves researchers' ability to interpret the results of case studies and small sample analyses. Yet, the results of broad-scale analyses of cross-sectional data have limitations. The complexities of the relationship between EI programs and firm performance may only be evident in longitudinal analyses. For example, if EI initiatives occur in response to low levels of performance, then the absence of significant effects in a cross-sectional model may indicate that EI successfully raises the performance of firms above the relatively low levels of prior periods. A complete understanding of the effects of EI programs, however, will require insights from both large and small sample studies of participation initiatives.

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Human Resources, Technology, and Economic Performance: Evidence from the Automobile Industry*

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Amid continued debates about how best to restore U.S. competitiveness in a global economy, one issue is frequently revisited: the relative contributions of human resource management and new technology to firm performance. In years past these sources of competitive advantage were often portrayed as mutually exclusive. The reduced labor costs and enhanced managerial control said to result from a technology-based strategy was seen as antithetical to the investment in human skills and move towards participative or self-managing work structures envisioned for "high-commitment" organizations.

In recent years the conventional wisdom has shifted. Companies have found that new technologies introduced without corresponding changes in human resource policies are too often poorly implemented and underutilized; similarly, they have found that human resource innovations frequently become isolated and stagnant unless explicitly linked to technology and/or business strategy. Accordingly, a new hypothesis has emerged, commonly advanced in the business press: that it is the integration of technology strategy with human resource strategy and overall business strategy that contributes most effectively to high economic performance.

Yet there is still very little theoretical or empirical work that explores this hypothesis. Aside from the socio-technical theory pioneered by Eric Trist in the 1950s (in essence a theory of self-managing work groups as the building block for less hierarchical, non-Tayloristic organizations), the interaction between the social and

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technical realms of work has received little examination. Empirical research on these topics has been tended to focus narrowly on a few simple indicators of technology or industrial relations/human resource management, with little attention paid to their interaction and only limited evidence of any link to economic performance.

In response, a group of researchers at MIT has carried out a series of studies in the automotive industry over the past five years that both provides some theoretical and empirical support for the "integration" hypothesis and raises some unanswered questions for future research in this area. This paper will review this body of research, offer some preliminary findings from the most extensive effort to date, and close by highlighting some analytical dilemmas that we hope to address in future work. In short, this paper is only an interim report on work in progress.

Previous Studies

Two early studies explored the interrelationships between plant-level industrial relations, economic performance, and quality-of-work-life (QWL) efforts at a number of plants within the same company over a period of several years. The first study (Katz, Kochan, and Gobeille, 1983) found strong associations between industrial relations and economic performance measures, with only limited support for the hypothesis that quality-of-work-life efforts improve both kinds of performance. The wide variety of industrial relations measures used in the study were found to be significantly intercorrelated, supporting a comprehensive and systemic view of these variables; the limited impact of QWL programs, it was argued, indicated the extent to which these efforts were generally isolated from the production system, with little effect on work organization, process improvement, or skill development.

The second study (Katz, Kochan, and Weber, 1985), utilizing a more extensive data set from the same company, emphasized the dynamics of these relationships over time, finding that increasing levels of grievance activity, absenteeism, discipline, and local contract demands produce "conflict cycles" in which a low trust, adversarial perspective on all interactions between union and management is reinforced and strengthened. No stronger support for the contribution of QWL programs was found, although again the authors had no data on whether any reductions in work rules or job classifications or changes in other practices linked to the production system had resulted from these efforts.

A more recent study (Katz, Kochan, and Keefe, 1988), carried out within the same company as the two earlier studies, expands the analysis to include a variety of variables that assess the extent of integration between human resource/industrial relations practices and the technical (production) system, such as the existence of teams, presence of certain work rules, number of job classifications, and work group participation in production decisions and the introduction of new technologies. Those work practices which reduce relief and idle time and increase management discretion over the allocation of overtime, layoffs, and job transfers were found to have a strong positive association with economic performance (fewer labor hours, fewer supervisors per production worker, and higher quality scores). Those practices which increase worker participation in work group and technology-related decisions were also positively associated with economic outcomes, although only weakly. These findings are consistent with those of the previous two studies, and confirm that industrial relations innovations that are linked to changes in the production process have a more substantial impact on economic performance than those that are not.

There are two anomalous findings in the 1988 study, however, that pose some analytical questions for this stream of research. The number of job classifications had virtually no independent effect on economic performance. This was surprising in light of the highly visible efforts of this company to reduce classifications in order to increase the flexibility of labor deployment. Furthermore, after controlling for the effects of the other variables noted above, the use of work teams was negatively associated with the economic performance variables; outcomes were worse in plants with team systems. Again, this runs counter to prevailing views of the advantages of teams for motivation, skill development, and problem-solving, views which had prompted serious efforts by management and the international union to diffuse team systems widely within the company. Also, the previous research would have predicted that the reduction of classifications and introduction of teams, both linked to production system changes, would have had positive links to economic performance.

The finding about work teams in particular was directly contradicted by another MIT study (Krafcik, 1988) involving 29 automobile assembly plants owned by a variety of companies and operating in a number of countries. Productivity data, based on the number of direct, indirect, and salaried labor hours per vehicle, were collected during plant visits and later adjusted to achieve comparability, using such factors as the size of the vehicle, the option content, and the number of welds required by the product design; further adjustments were made so that only a set of "standard activities" common to all plants were considered in assessing performance. This analysis showed a wide variation in economic performance among the 29 plants in the sample: the five plants in Japan averaged 20.3 hours per vehicle, the thirteen plants in North America (three of which were Japanese transplants) averaged 24.4 hours, and the eleven plants in Europe averaged 33.9 labor hours per vehicle.

Furthermore, the performance differentials appeared to be linked to the use of team systems. However, it was the existence of team systems *in conjunction* with a variety of decentralized manufacturing practices (e.g., just-in-time inventory systems, the integration of quality inspection with production jobs and the resulting minimizing of end-of-process repair) that resulted in high performance.

There are three possible explanations for the discrepancy between the Krafcik and Katz, Kochan, and Keefe studies. The first relates to the history of change at the one company that provided data for the three linked studies described above. The earlier two studies found that quality-of-work-life (QWL) programs had only limited influence on economic performance, and argued that one reason was their isolation from issues related to the production process. The attempt to introduce work teams at many of these plants came at a time when QWL efforts had stalled and were somewhat discredited. Furthermore, teams were often introduced as a quid pro quo from the union for management investments to keep the plant operating. Thus there may be considerable variation in what is meant by a "team plant" within this company; at some plants, teams are perhaps little more than a formal structure for grouping workers, while at other plants they are part of a broader initiative to increase participation.

This suggests a second reason. Perhaps it is only where *clusters* of work practices occur together that any systematic change (and improvement in economic outcomes) can be predicted. This is supported by the Krafcik data which combined a number of independent variables (including the use of teams) in a management index that proved to be an excellent predictor of economic performance. The Katz, Kochan, and Keefe study, in its reliance on regression analysis, which examines the effect of one variable while holding all other variables constant, did not explore any such "clustering" effect. This hypothesis is further supported by another study of the effects of industrial relations innovations on economic performance at Xerox (Cutcher-Gershenfeld, 1988). Clearly, methods that test theoretically-related clusters of variables are essential for research of this kind.

Third, it is possible that any focus on formal structures such as teams or formal procedures and rules will miss some variables critical in the explanation of economic performance. Many analyses of the Japanese successes in manufacturing emphasize the importance of continuous improvement, or *kaizen*—a process of incremental problem-solving on the shop floor that involves the entire workforce and aims not at achieving any fixed goal but at the (unreachable) goal of eliminating all defects. This organizational process, while certainly facilitated by particular structures and policies, is certainly not an inevitable result of their implementation. Thus, any measures which capture formal structures and policies without indicating whether these are accompanied by high levels of incremental problem-solving activity may prove to be misleading as predictors of economic performance.

Research Questions

Taken as a whole, these studies suggest that industrial relations/ human resource policies, practices, and structures do affect economic performance, with the greatest impact occurring when these changes are linked to changes in the production process. This is consistent with the "integration" hypothesis advanced at the outset, although the "technology" variables here are more related to work organization and production methods than to new automated equipment. Furthermore, the conflicting results about the impact of work teams and reduced classifications point to the importance of examining the combined effect of interrelated clusters of policies and practices and of attempting to measure organizational problem-solving processes.

In preparing for the next stage of this research, one goal was to test a more comprehensive model of the specific policies, practices, and structures related to human resources/industrial relations and the production system that are expected to result in high economic performance. What variables should be measured and on what theoretical basis should they be clustered for analysis? Another goal was to investigate the role of new hardware technology—the robots and other forms of flexible automation heralded by many in the U.S. industry as the solution to productivity and quality problems. Does hardware technology improve performance by itself? Or do investments in new technology need to be coupled with changes in the human resource/production system area to be effective, as the broader version of the "integration" hypothesis would suggest?

Shimada and MacDuffie (1986) offer a theoretical model of the Japanese approach to organizing manufacturing production that addresses the first set of questions. They describe the Japanese production system as highly dependent on effective human resource capabilities. This dependence results from the choice of such production policies as just-in-time production (in which inventory levels are kept low to minimize costs and highlight production problems), quick die changes (in order to make the production of smaller lots economical), quality inspection built into production jobs (in order to build in quality the first time rather than inspecting it in later), and minimal repair areas (because with no place to put vehicles needing repair, the pressure to achieve quality on the line is maximized). These policies help achieve both high productivity and high quality, and are only effective if the workforce is skilled, motivated, and adaptable. Human resource policies and practices aim to develop these capabilities.

The distinctive features of Japanese employment policies and work organization are thus seen as an outgrowth of a business strategy that requires the integration of human resource and production strategies. These include recruitment to long-term employment, for which a willingness to learn new skills is more important than previous experience; extensive training and job rotation to develop multiple skills; compensation contingent on performance, particularly skill development; internal promotion; low status differentiation among managers and workers; and work teams. Complementing these policies and structures is the incremental, continuous problem-solving (*kaizen*) that is an integral part of daily production activities. *Kaizen* improves performance not only by eliminating production problems but also by maintaining and improving the skills, adaptability, and motivation of the workforce. Thus, problem-solving processes are the dynamic element that makes the integrated production/human resource system operate effectively.

While this model is derived from Japanese organizations, it is not seen as culturally-bound. In fact, Shimada and MacDuffie find that the Japanese production system has been quite completely transferred to Japanese-owned "transplant" operations in North America, with impressive economic results. Indeed, the Krafcik study finds that the transplants demonstrate economic performance comparable to plants in Japan. So we expect these policies, practices, structures, and processes to be associated with high economic performance wherever they are found.

The Krafcik study also suggests a hypothesis about the role of new programmable automation in assembly plant performance. He constructed a Technology Index that measures the amount of flexible automation (primarily weld, paint, and assembly robots) in a plant, adjusted for production volume. This index does not measure the level of fixed (non-programmable) automation in a plant, but is still a reasonable proxy for the level of capital investment since most new investments in assembly plants at this time involve the greatly expanded use of flexible automation. He found that this index had no significant link to economic performance; there were both high and low performing "high tech" plants. He did not have the data to test for an interaction effect between the technology index and measures of the human resource/production system; such a test is attempted in the current work.

Current Research

A new study (Krafcik and MacDuffie, in progress) is now under way, involving a survey questionnaire sent to 67 assembly plants in over 20 countries. The survey both uses the methodology for measuring economic performance and technology from the earlier Krafcik study (for some plants, updating these measures) and measures independent variables drawn from the Shimada/MacDuffie model.

To date, data from 38 plants are in hand, with commitments to return the survey from another 28 plants—a potential response rate of 84 percent. It would be premature to offer analyses of even the partial sample, since some data are still being checked. What we will offer here is an examination of paired prototype plants—three pairs of plants from North America and one comparison plant from Japan. The pairs are grouped according to economic outcomes; one pair achieves both high productivity and high quality (as does the Japanese comparison plant), the second pair achieves high productivity but only moderate to poor quality levels, and the third pair achieves moderate to poor results in both productivity and quality.

For these seven plants, two indices were constructed that measure a variety of policies, practices, and structures: the Human Resources Index and the Production System Index. The intent in developing these indices is twofold. First, they provide a way of clustering theoretically-related variables in these two areas, in order to examine their separate and combined links to economic performance. Second, the variables in both indices were chosen to highlight not only formal policies, practices, and structures but also some of the organizational processes underlying them. While the survey format constrains the amount and validity of the process data that are collected, the effort does yield some significant insights.

The variables making up the indices and the coding specifications are described in an appendix.[1] To summarize briefly, the Human Resource Index measures recruiting practices; hiring criteria; training given to new and experienced production workers, supervisors, and engineers; compensation systems; internal promotion policy; policies intended to reduce status differentiation; the percentage of the workforce in work teams and/or Employee Involvement/Quality Circle groups; the influence of team members on personnel/industrial relations issue; and the number of production and skilled trades job classifications. The Production System Index measures the amount of space allocated to the repair area, the frequency of inventory deliveries to the assembly line, the number of suggestions made per employee per year, the percentage of these suggestions that are implemented, the influence of work team members on production issues, the presence of staff support for Statistical Process Control and other problem-solving activities at the work group level, the extent of job rotation, and whether mass relief (all workers take breaks at the same time) or tag relief (groups of workers are relieved by utility workers on a staggered basis) is used.

Besides the productivity measure of total labor hours per vehicle, the key outcome measure of quality is measured. The quality measure is derived from customer survey data obtained from J. D. Power, an industry consulting group, that measures the number of defects found per 100 vehicles. The Power quality scores were adjusted to reflect only those defects that an assembly plant could directly affect; for example, defects related to engine or transmission difficulties or to design problems were excluded.

All indices were normalized to a scale of 0 to 100. The maximum score of 100 for the Human Resource and Production System indices is equivalent to the sum of the maximum scores for each variable in the index, while the maximum for the Technology Index is set at the level of the most automated plant in the 38 plant sample received to date. (See appendix for more details.) Finally, a combined Human

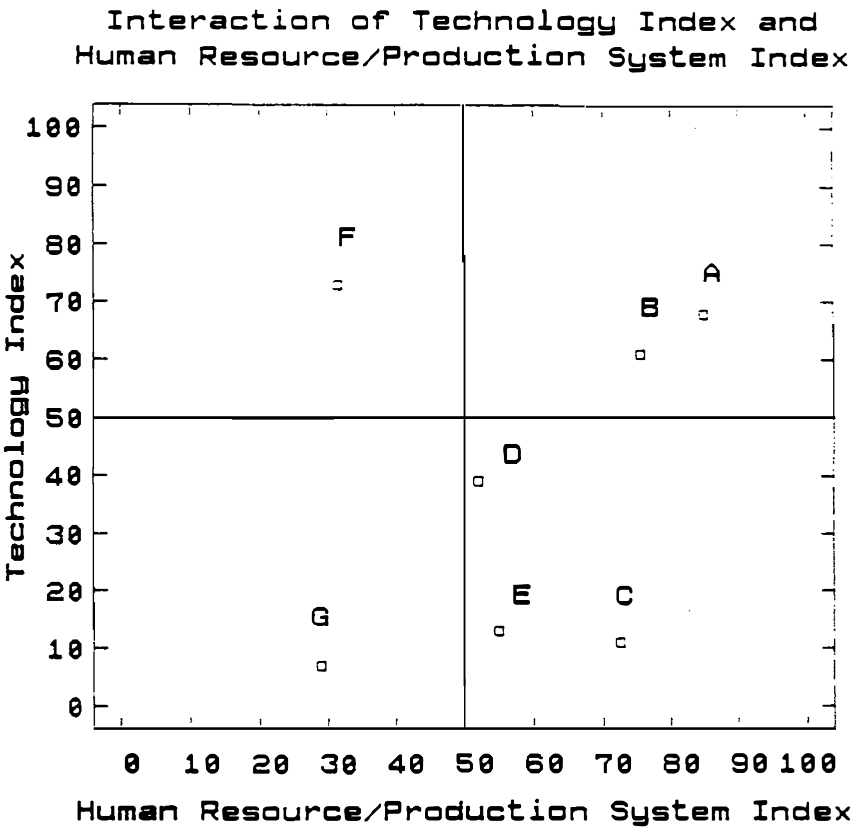
[1] This appendix is available from the authors upon request.

Resource/Production System (HR/PS) score was computed as a simple average of the two indices.

Results and Discussion

Figure 1 plots the plant scores on the Technology and the Human Resource/Production System (HR/PS) indices. If the preliminary data

FIGURE 1



are consistent with the hypothesis that performance is a function of the interaction of technology and HR/PS, the higher performing plants should be located in the upper right-hand quadrant. The upper left-hand quadrant captures the effects of a high technology strategy without significant HR/PS innovation. The lower right-hand quadrant captures the effects of a low technology strategy with major HR/PS innovation, and the lower left-hand quadrant captures a low technology, traditional HR/PS strategy.

Table 1 then lists the performance results and index scores for the seven plants. Dotted lines separate the three pairs of plants and the Japanese comparison plant (Plant A). Plant B is a Japanese-owned transplant in the U.S., associated with the same company as Plant A. Two U.S. companies are represented among the remaining five plants.

The combined HR and PS score tracks economic outcomes quite closely. Plant A, in Japan, has the best overall performance and the highest HR/PS score; Plant G has the worst overall performance and the lowest HR/PS score. This relationship is quite consistent for all the intermediate plants. (It is worth noting that we believe the very poor quality record of Plant E is due in part to product design factors that we could not completely factor out of the quality score.)

Furthermore, while the amount of flexible automation (Technology Index) appears to boost performance for the plants with high HR/PS scores, it does not demonstrably affect performance for the plants with low HR/PS scores. For example, the fact that Plant B outperforms Plant C may be due to the higher level of technology it has. In contrast, Plant F barely outperforms Plant G, with whom it shares a low HR/PS score, despite its dramatically higher level of technology. As expected, the two highest performing plants fall in the High HR/PS-High Tech quadrant of Figure 1 and the worst performing plant falls in the Low HR/PS-Low Tech quadrant. Moreover, Plant F performs quite poorly despite its very high level of technology and Plant C achieves quite high performance despite a very low level of technology. Thus while technology contributes to performance, it is hardly determinative.

There are some tentative indications of the relative importance of the human resource and production system variables in comparing Plants A, B, and C. Both Plant A and B have a PS score that is higher than their HR score, while the converse is true for Plant C. Since the variables that attempt to capture organizational problem-solving processes primarily affect the PS Index, this may indicate that while human resources policies may constitute a necessary condition for high performance, they are not sufficient without effective problem-solving activities in the production system. The reverse logic is also true; the moderately high PS score of Plant G has little effect on

TABLE 1

North American Assembly Plant Comparison

	Plant A	Plant B	Plant C	Plant D	Plant E	Plant F	Plant G
Productivity (labor hours per vehicle)	12.7	19.7	21.2	18.8	21	29.6	32.6
Quality (defects per 100 vehicles)	49.3	46.3	52.2	75.3	146	91.7	97.5
Technology Index (flexible automation)	68	61	11	39	13	73	7
Human Resources Index (HR)	78	72	83	50	56	17	28
Production System Index (PS)	92	77	62	54	54	46	31
Combined HR and PS Score	85	75.5	72.5	52	55	31.5	29

Note: Plant A is located in Japan and is included for comparison purposes. Plant B is a Japanese-owned plant in the U.S.

performance (despite the high level of flexible automation) without extensive support from the human resource system.

This simple analysis also confirms the importance of considering productivity and quality performance in tandem. Plants D and E show impressive productivity performance, despite their moderate to low HR and PS scores. But they fail to achieve the high levels of quality that most observers now agree constitutes the primary standard for market success in this industry. Only plants A and B, the two that are high on both the Technology Index and the HR/PS Index, achieve both high quality and high productivity.

In summary, these early analyses provide tentative support for the "integration" hypothesis, in two ways. High economic performance results from human resource and production system policies, practices, and structures that are closely integrated. Further performance enhancements arise when these changes are combined with investments in flexible automation. New technology alone is not enough to improve economic results. In terms of relative contribution, it appears that high performance can be achieved even in a "low tech" plant where there is substantial innovation in the human resource and production systems, while the converse is not true.

This effort obviously constitutes a very preliminary look at a complex topic. Yet the results suggest that further analyses of this kind, utilizing the full sample, will be quite rewarding. A number of tasks lie ahead. The clustering of variables into indices here was a priori, based on Shimada and MacDuffie (1986). While this is quite appropriate, the internal reliability of these clusters needs to be verified. Other variables with potential explanatory power, such as the characteristics of the workforce, need to be introduced into the analysis. A combined productivity/quality outcome measure will be constructed and used as an alternate performance measure, as will such variables as production flexibility (the ability to handle a complex model mix and to change mix rapidly), absenteeism, and turnover. To support the value of a "clustering" analysis, its results must be compared with those of conventional regression analysis. Finally, to understand more fully the relationship between organizational problem-solving processes and the variables measured here (i.e., whether the survey measures are accurate indicators of problem-solving activity), a qualitative study of problem-solving in four to six North American assembly plants will be carried out.

All in all, this series of studies in the automobile industry promises to bring us closer to understanding, both theoretically and empirically, the important interactions between human resources/industrial relations innovations, new technologies and production practices, and economic outcomes. Such an understanding may have immense practical and policy implications, and points to the value of long-term, incremental research strategies in tackling thorny research problems—precisely the qualities that appear to pay off in manufacturing performance.

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Grievances and Plant Performance: Is Zero Optimal?*

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Increased grievance activity, as a signal of employee voice and discontent at the workplace, can have a potentially negative effect on the firm's productivity (Freeman and Medoff, 1984). However, the increased use of the grievance procedure by workers also may reveal elements of the increased monitoring of employees by management which has the potential to enhance productivity. During the past several years a number of studies have appeared in the economics and industrial relations literature showing that various measures of grievance activity have negative impacts on productivity (Norsworthy and Zabala, 1985; Ichniowski, 1986; Ichniowski and Lewin, 1987; Katz, Kochan, and Keefe, 1988). These studies have generally found that there is a negative functional relationship between grievance activity and measures of industry, firm, or plant productivity. They attribute this impact to the costs to the firm of processing grievances and increased worker discontent that more grievances imply. These studies have either explicitly or implicitly suggested that deviations from zero grievance levels would result in reduced economic efficiency at the firm level. In contrast, we suggest that these results are obtained from models that are not complete, and that in a more fully specified model, where monitoring and production levels and changes are accounted for, these results may not hold.

To illustrate, Ichniowski argues, in the first article about linking grievance activity to economic measures of productivity, that increases in grievances are symptomatic of inconsistent managerial

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actions and that the expected worker reaction to this behavior would be to reduce effort (Ichniowski, 1986). Further, the time that it takes to file and process grievances would further reduce firm productivity. In an application to nine paper mills owned by the same company, Ichniowski specified a production function that included grievance procedures and found that "the 1.9 percent drop in labor efficiency associated with a move from *no grievances* to the average grievance rate results in a 1.45 percent drop in the overall productivity of the mill." Further, all of the major results in the paper suggest that increases in the number of grievances from a simulated number of zero result in a reduction in labor efficiency, a loss in production, and a potential for a loss in profits. Moreover, other studies, such as those cited in Ichniowski and Lewin (1987) in their review of the topic, have generally found results consistent with the one mentioned above, even though they use very different measures of productivity. The results from these studies suggest that firms which have profit maximization as a primary objective should attempt to reduce their level of grievance activity to as close to zero as possible.

In contrast, our study suggests that grievance activity can be viewed as a response to changes in the level and type of production in manufacturing. We develop this finding by examining the production of large airplanes over a ten-year period in which the demand for output and internal methods of production change substantially. The results show that we cannot differentiate increases in unit labor costs that occur as a result of increases in grievance activity or ones that are due to changes in production. Consequently, the relationship between grievances and productivity found in previous research may be misleading. However, a more plausible solution to this issue lies in a more complete specification and estimation of the relationship between production and grievance activity.

In the remainder of this paper we present theoretical propositions, the underlying rationale, and some preliminary correlations and estimates from our model. Finally, we present our conclusions and potential generalizability of our results for firm policy decisions based on our estimates.

Previous Work and the Rationale for the Model

In a recent critique of a study that attempted to link industrial relations practices to firm performance, Edward Lazear (1988) noted that the relevant studies in this area failed to take into account the basic economic assumption that profit maximization is consistent with making the worker as well-off as possible per dollar of profit. Further, he goes on to state that the impact of work rules on costs must be explicitly modeled. Specifically, costs can go up either because hours used go up or because hours per unit stay constant and wages go up. Finally, Lazear notes that cross-section analysis of plants in examining industrial relations practices may "pick up too many things." These would probably include unanticipated changes in industrial relations practices. Where changes in worker behavior due to managerial practices were anticipated, he argues, management would have an opportunity to adjust. Consequently, he views many of the results of studies that attempt to link industrial relations practices to firm performance with some suspicion.

In developing the underlying rationale for our model, we attempt to correct for many of the issues raised by Lazear in his comments on the industrial relations and firm performance literature. In our model we assume that firms attempt to maximize long-run profits. Also, we assume that the increased monitoring of workers is generally associated with higher grievance levels and perhaps productivity, and we show formally, within the context of our theory in a follow-up to this study, that only under special circumstances would a firm maximize profits by having zero grievances. However, in the general case some monitoring enhances productivity, but too much results in a decline.

In order to illustrate under what kinds of circumstances our analysis would/would not apply, we provide some examples. A special case where zero grievance activity might be optimal is in the operation of a laboratory where the nature of the work is the development of solutions to a long-term independent research project. Under these circumstances, workers who are closely monitored by management may think that their freedom is being jeopardized, and may reduce their work effort and overall productivity. However, in the general case we assume that supervision over the relevant range of output contributes positively to productivity.

In the general manufacturing case, some monitoring of workers by management increases output. When the change in output due to managerial monitoring in the production function is positive, then grievances that result due to this monitoring would, over a large range of production, also be positively associated with productivity. Further, when real wages go up in the plant, then the response by management may be to increase output per worker through the intensity of work effort or to change the method of production, holding physical capital constant. This process may result in an increased number of grievances as management tries to increase productivity to the new level of wages. Another alternative outcome occurs when management responds to increased product demand by increasing monitoring to speed up production. Again, the effect is an increase in grievances, but unit labor costs may go up.

In our formal model, the shape of the grievance function, as a proxy for increased managerial monitoring with respect to productivity, is an inverse U, with higher productivity as grievances and monitoring increase over a range of productivity, and declining productivity at higher levels of supervision. At low levels of monitoring and grievances, workers who are not grievance filers may be given too few signals regarding appropriate work behavior at the plant. In contrast, too many grievances may result in the reduction of time and effort by employees at the plant that others have found dominant. Therefore, there is an optimal level of grievance activity that maximizes profits.

Data and Preliminary Estimates

Researchers in industrial relations, like John Dunlop, have suggested that to analyze the impact of any firm labor policies on productivity or profits, the study should be done at the company level rather than an examination of any detailed industry code. Further, he cautions researchers to be careful to examine the same kinds of workers producing the same products (Dunlop, 1988). In following this approach, we were able to obtain data for both workers and production processes for a plant as well as for the final assembly division. The proprietary data used in this study is monthly longitudinal information that forms a panel for the period 1978 to 1988. This data set is unique because these unionized employees have been working on the same product over a ten-year period. The site for this manufacturing division employs approximately 37,000 workers and is one of the largest plants for the production of major aircraft in the world. Over the past ten years, employment at the plant has varied from 14,000 to 40,000 workers based on fluctuating demand for the product. The assembly portion of the plant had 4,500 workers in 1988, and there had also been considerable variability in this part of the facility. The plant was unionized for the entire period of the study.

The grievance data for the plant were disaggregated into type of grievance and the step and method of settlement. Further, information is available regarding the amount and the cost of management time necessary to adjudicate each grievance. Overall plant information on personnel and productivity was available for the period of analysis.

Our data set contains information on the production process as well as the human capital characteristics of the plant. In addition, information is available on the final assembly portion of the plant and has proxies for the capital/labor ratio over time. Given the method of production of airplanes, each worker has a set of tasks that are performed on each manufactured plane for a specific period of time. Since every plane is built to each customer's specifications, the task will vary somewhat for each new plane. Therefore, unlike an assembly plant in the production of automobiles, the nature of the work varies more and tends to be more diverse for each unit of output that is produced. In this plant, the amount of fixed capital per production worker/task has remained constant over the period of the analysis. Finally, we used plant and final assembly productivity data measured by the hourly dollar value output per unionized production worker.

Although we cannot provide our fully specified model in the space allocated here, we do present some suggestive evidence on the potential linkages of production activity, grievances, and unit labor costs. The econometric model specified below is related to the rationale of the theoretical model developed in the earlier section outlining the role of grievances on productivity. We used plant information for employees covered under the collective bargaining contract to estimate the impact of changes in planned production levels and in the methods of production on grievance activity. These production activities implicitly included increases in the monitoring of workers under the bargaining agreement.

In developing estimates from our data on productivity and grievance activity, we provided both simple correlations and regression estimates for grievance activity. The data for grievances filed for bargaining unit employees in the plant show that it averages approximately 3 per hundred per month. We correlated grievance rates with unit labor costs in the plant for the period 1978 to 1987 using monthly data. This resulted in 98 monthly time series observations (N) that were used to estimate correlations and regression equations. The simple correlation between grievance activity and unit labor costs is .68, which is statistically significant at the .99 confidence level. This suggested that as grievance activity goes up, so did the unit labor costs. These results are consistent with earlier studies showing that grievances and productivity measures are negatively related and that the optimal level may be zero. Unfortunately, this simple correlation fails to take into account that grievances may be filed by employees as increases occur in the demand for the product causing speedups in production activity, or because changes in the method of production also may result in increased monitoring of the workforce.

Regression equations for grievance activity and productivity were constructed in order to examine the recursive structure we described earlier in the model section. In our model, we attempted to more fully specify a grievance equation to take into account the changes that occur in manufacturing that may lead to higher levels of grievance activity. In equation (1) we estimated a reduced form grievance model over the period of analysis for the whole plant. The results for equation (1) are presented below:

$$\text{(1) Griev. Rate} = \text{Constant} + \underset{(7.13)}{13.04}\ \text{Planned Rate} + \underset{(2.40)}{7.74}\ \text{Change in Spantime} + \underset{(6.78)}{17.50}\ \text{Problem Department} + \text{Residual}$$

$R^2 = .87$ N = 98 Time Period, 1978-1987 Monthly Data, excluding strikes/slowdowns

(Values in parentheses are standard errors. Coefficients and standard errors include Cochrane-Orcutt corrections for autocorrelation [Pindyck and Rubinfeld, 1981].)

where the grievance rate (Griev. Rate) is the number of grievances divided by the number of union workers in the department, the Planned Rate was the expected weekly production of airplanes averaged over the month, Change in Spantime was the change in the expected time that is programmed to produce an airplane, and Problem Department was a dummy variable that controls for a department that was having an abnormally large number of grievances as a result of personal problems with supervisors in a given month.

The Planned Rate was the variable that reflected most clearly changes in expected output over a specified period (this variable was defined as the weekly average planned output for the month in question). The Change in Spantime variable is the changes in the method of production of a plane. This generally reflected periods when workers were required to do different types of jobs, and it often resulted in changes in job classifications and duties. The increased time devoted to overseeing these new production processes may have resulted in an increase in the level of grievance activity. These results suggest that increases or changes in the method of production are positively correlated with increases in the rate of grievances, implying that as output goes up, so does the grievance rate. Now, as the Planned Rate and Change in Spantime increase, the unit labor cost ordinarily increases. Consequently, we cannot be sure if the increase in planned production or independent exogenous grievance activity is causing unit labor costs to increase. However, we do have some evidence that the residual component of grievance activity is associated with a decrease in unit labor costs.

Our results suggest that two factors may be causing grievance activity to increase. First, as a result of increased product demand in the short run, workers are being encouraged to increase output with little or no change in capital. This may require reductions in de facto breaks at the workplace and attempts at the reduction of work rules. Second, as a consequence of the need for greater output or changes in the methods of production, the result may be increased monitoring of the workforce by supervisors. In either case, by not accounting for these phenomena, it could result in a misspecification of any production function relating grievances to output, and thus produce biased estimates of the coefficients. A plausible interpretation of our results is that increases in the demand for more rapid output may be causing greater monitoring and grievances which are both correlated with increased unit labor costs in the production of airplanes in this plant.

More specifically, our results show that when there is a one-unit increase in the planned production schedule for workers in the plant, the grievance rate goes up by .22 percent at the mean. Moreover, as the production process is changed, there is also an increase in the grievance rate. Therefore, as demand for the product increases and the production line activity accelerates, the result is an increase in grievances. Some analysts might erroneously attribute increases in unit labor costs that also come with increases in the production line to the increased grievance activity that may have been caused by the greater amount of activity on the production line. These results suggest that any analysis that attempts to examine the role of grievance activity on aggregate measures of productivity should take into account the changes in production activity that influence both the level of grievance filing and unit labor costs, and should separate out the causes of grievance activity.

These results have several implications for firm policy. Although grievance activity when viewed in isolation from the other objectives of the firm may increase unit labor costs, this may be an incomplete analysis. More specifically, grievances may occur as a result of other objectives of the firm such as increases in output or changes in the production process. Consequently, firm policy based solely on the reduction of grievances without taking into account other product market or production line changes may result in inconsistent strategies. For example, an objective of the firm may be the reduction of grievances to a certain specified rate. Another goal may be the reduction of unit labor costs below a certain level. These outcomes may be incompatible under certain output and production change scenarios. The consequence of trying to meet both objectives would be inconsistencies that may result in reduced productivity or profits. In this case, a joint strategy considering objectives of both grievance reduction and unit labor cost minimization would need to be considered. Therefore, grievance activity should be viewed from the perspective of the overall goals of the firm.

Conclusions and Implications

One of the major concerns of studies attempting to link human resource practices to the economic performance of the firm has been the role of employee voice or complaints as manifested through the grievance procedure (Kleiner et al., 1987). The research thus far has found that reducing grievance activity increases firm productivity, to the extent that zero grievances might be the amount that would maximize profits. In examining one large plant that produces the same product over a ten-year period using monthly data, we find that increases in the production rate are correlated with both increases in grievance activity and increases in unit labor costs, which also include increased overtime and hiring and training of new workers. This implies that when there are increases in the demand for the product and increased production within the same period of time, this results in the potential for increased monitoring of employees and higher numbers of grievances. As part of an effort to speed up the production line, one cost that management should consider is the higher number of grievances that will be filed as a consequence. However, the economic gains of the increase in production activity may outweigh the costs of the larger number of grievances. When production is increased or schedules are changed in the manufacturing process, the result is greater employee monitoring by management. This increase in grievances may be worth it for some firms. Although grievance activity may reduce productivity, all else equal, the more important question may be the economic causes as well as the consequences of grievance activity. In conclusion, we suggest that the study of grievance activity on organizational performance should be analyzed in large part from the perspective of the production objectives of the firm. Moreover, longitudinal studies of a firm that hold constant the type of output, as in this case, can serve to complement ongoing cross-sectional studies across organizations.

As our research proceeds, we plan to examine the role of grievance activity controlling for the changes that are occurring in the production process, including changes in the speedup of the production line. Further, the demand for grievances that are caused by political or other organizational issues related to union activity over which the company has little control will be examined explicitly. Moreover, human capital characteristics of the workforce, as well as changes in the demographic composition of employees, also may result in exogenous factors influencing grievance activity. In addition, the impact of changes in wages over time and their impact on grievance activity and unit labor costs will be examined explicitly. All of these issues need to be addressed before we can determine a more fully specified functional relationship and estimate more carefully the nature of the correlation between grievance activity and productivity.

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DISCUSSION

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These papers are good examples of the new interest in human resources practices and the performance of the firm. Although this interest seems to have been stimulated by the "Great International Competitiveness Derby," industrial relations research has long been concerned with the product market as both a constraint on, and consequence of, industrial relations activities. Now that the product market has been rediscovered, it seems fair to ask: What is it that industrial relations scholars bring to the study of organization performance? I have some thoughts on that question; the three papers at this session may illustrate my points.

But first, let me say that the papers are really very interesting. The authors are grappling with difficult conceptual and methodological problems. Each has invested considerable effort in generating primary data. Because we are unable to publish lengthy research reports, many details are not included in these papers, making it somewhat difficult to assess them properly.

Industrial Relations and Organizational Performance

Industrial relations is not alone in the effort to find linkages between dimensions of human resources—types of workers, policies, and practices—and the performance of organizations. This is one of the questions that gave rise to the discipline of Organization Behavior. Economists are now interested in the so-called "new personnel management" which has become the art of fashioning rigorous micro-economic stories to explain longstanding and seemingly irrational practices.

Among industrial relations specialists, the study of human resources and organization performance has focused on the extent to which human resources can produce strategic resources for the firm. That is, how a policy or practice, or sets of policies and practices,

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improve performance over time and relative to competitors in the labor and product markets. This work is in its early stages, and some logical questions have not yet been addressed. One of these I find especially interesting is the tendency to use an implicit model of firm and employee behavior that doesn't permit for the dissemination of such performance-enhancing practices. Perhaps it is not the practices or policies themselves that make the difference; rather, human resources' contribution depends on the context of the relationship, that complex set of attitudinal and behavioral relationships we have long called the industrial relations system.

If I am correct, then industrial relations scholars have a comparative advantage in the study of organization performance. Our tradition is one of identifying the complexities of industrial life and the motivations of all the actors at the workplace. It is a tradition that recognizes employment as a relationship which may take several equally valid forms—a condition we call pluralism. One comment I have on these papers and the study of organization performance in general is that in an attempt to be empirically relevant, we may be forgetting these traditions.

The Instant Papers

Kleiner, Nickelsburg, and Pilarski's paper on grievances helps to resolve the enigma of a negative correlation between grievance rates and productivity. This persistent finding exists despite the intuitional hypothesis that by providing workers with an outlet for their disputes, morale and motivation should go up. The study shows that we should control for the level of production activity. Increased production requires more monitoring, which results in more grievances. The implication is that a zero rate of grievances may not be desirable, because even though labor costs may go up as grievance rates rise, more production also may mean more profit.

From the vantage point of industrial relations research, there are several unanswered questions in the paper. First, what motivates grievances in the first place? Second, the model assumes that higher levels of production are associated with closer monitoring of employees, but includes no direct measures of monitoring. Third, the paper assumes that within one enterprise each grievance can be treated as an identical event, even though some grievances concern individual due process and others are questions of contract interpretation affecting groups of employees. Fourth, there is no mention of changing supervisory styles or preferences to settle or not to settle controversies on the shop floor. Fifth, no mention is made of the union's intraorganizational climate or changes in public policy in the 1978–1987 period. In short, there is no context to help us understand and appreciate the evidence.

A particularly glaring omission is the absence of labor market indicators as measures of employee opportunity costs, particularly in a period of analysis that includes two recessions. Admittedly, the price of a grievance system is its impact on production costs. But productivity effects also should be viewed in comparison to higher turnover rates. The theory, after all, is "voice" and "exit," not small voice, loud voice.

Delaney, Ichniowski, and Lewin's effort is one of the first attempts to rigorously and empirically establish whether or not EI programs contribute to the economic performance of the firm. They find that (1) EI programs in unionized units offer workers less authority than offered to workers in programs conducted in nonunionized and partially unionized units, and (2) EI programs in all settings were not related with increased return on assets (ROA). The second conclusion is consistent with other studies; the first makes sense, because unionized workers can have a bigger impact on decision-making through collective bargaining.

While their data are very rich and their analyses very thorough, these authors, too, fail to give us a context with which to understand their findings. To begin with, why do firms institute EI programs? The literature, and my own casual empiricism, notes the rapid spread of such activities in firms with productivity problems, those on the cutting edge of HR, and those just looking for something to do. We also know that these programs have a very short half-life. Is EI a low cost device for motivating workers? Does it have offsetting monitoring costs?

Similarly, more should be said about why workers would prefer EI systems and the interaction of those wants with collective bargaining.

With regard to measurement, I would make two points. First, the paper equates the presence of EI with its effectiveness. Given the broad popularity and differential expectations from these programs, it is probably inappropriate to equate all EI efforts, as is done by using a dummy variable to represent the presence or absence of a program.

Second, return on assets (ROA) as an index of organization performance tends to complicate rather than simplify the analysis. The authors note the sensitivity of ROA to labor costs and productivity differentials, especially in the unionized settings, and recommend using productivity measures in subsequent research. But why select ROA to begin with? What is the behavioral linkage—direct or indirect—that goes from increased motivation to balance sheet results?

Additionally, ROA has another, more serious deficiency. It is an accounting indicator, not an economic one, that suffers from an upward bias. Firms buy assets at different times and at different prices. Older industries therefore have, ceteris paribus, cheaper assets and ROAs with correspondingly smaller denominators. Moreover, cheaper assets make for smaller depreciation allowances, greater profits, and a larger numerator in the ratio. Thus variance in ROA can be achieved simply because of variances in the average vintage of assets and the extent to which the firm is dependent upon capital goods (that is, its production function).

The consequence of this for the paper could be very important. By using ROA as a proxy for real economic performance, variation in the true distribution of performance is understated.

The paper by MacDuffie and Kochan, in my opinion, comes the closest to recognizing the role of industrial relations complexity in the relationship between human resources and organization performance. It begins by noting that the relationship between human resources and performance may be influenced by the timing of the research, as well as our focus on individual treatments instead of clusters of policies and practices. Additionally, they suggest looking at models that produce subtle and incremental changes in the short run. It presents a novel research design to permit the intensive investigation needed to attack the problem.

Comments on the substantive results are premature. On the methodology, however, I am concerned with the construction and use of indices that represent large factors in their research domain. Such a practice was used previously to study the comprehensiveness of collective bargaining. In that research and here, I wonder whether such indices tend to destroy the richness of the data.

One final observation. It is interesting to note how each of these papers—in fact, much of the work being done on the subject of human resources and organization performance—deals with manufacturing companies. Manufacturing companies may be the easiest subjects to study, but are not representative of where the jobs are or are likely to be.

VIII. DOCTORAL CONSORTIUM

Summary and Comments on the Panel Discussion: Industrial Relations: Where Are We Now? Where Are We Going?

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The IRRA Doctoral Consortium is intended to enable current doctoral students and junior members of the industrial relations community to become better acquainted with the field of industrial relations and to discuss critical career and research choices. Doctoral Consortia at the IRRA Annual Meetings have included speakers from a wide range of interests and careers within the field of industrial relations. The specific topic addressed by each speaker is usually one relevant to his or her area of expertise within the field. Topics are selected primarily with the interests of doctoral students and junior faculty members in industrial relations and allied fields in mind. Nevertheless, the sessions are open to all interested parties, and we are pleased to have had several senior members of the industrial relations community, including a number of practitioners in the field, in attendance at this year's session.

This marks the third consecutive year in which the Doctoral Consortium has been held at the Annual Meeting of the Industrial Relations Research Association. The organization and structure of this year's session was similar to that of the 1987 Doctoral Consortium held

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in Chicago. The session is expected to be relatively informal, and it is scheduled as a "brown bag" affair. The two-hour time restriction for the Consortium requires that each speaker's talk be relatively brief, usually no longer than 15 or 20 minutes. This limitation allows time for reasonable discussion of the issues presented and permits all of those present an opportunity to participate. Those in attendance are given an opportunity to introduce themselves to the group and to identify their interests during the session. Also, following each panel member's presentation, a brief period for questions and discussion on the topic just presented is provided.

The theme of the 1988 IRRA Doctoral Consortium, "Industrial Relations: Where Are We Now? Where Are We Going?" was intended to reflect an emphasis on directions for future research and work-related activities in the field. Speakers and topics discussed at this session included: Marvin Hill, arbitrator and Professor of Management at Northern Illinois University, who spoke on post-dissertation life in academia ("Surviving Academia: A Trip Through the Swamp for New Ph.D.'s"); David Lewin, Professor, Graduate School of Business, Columbia University, who titled his talk "I.R. v. H.R.: What's the Difference (If Any)"; and Janet Norwood, Commissioner of the Bureau of Labor Statistics, whose presentation focused on "Changing Compensation Concepts and Their Measurement."

The salient point made by Marvin Hill, which is of most importance to the students in attendance, is the need to choose carefully the environment in which one will teach and conduct research. The match between the individual scholar's interest and the school's learning and orientation is far more important than initially might appear. A good match of interests can mean success, while a poor match can actually hinder research. For example, it is common among business schools that industrial relations is generally low on the list with regard to stature. There is a perception among many business faculty that the area is "soft" and not rigorous. The opposite perception prevails in IR departments, a situation which provides the ideal environment for an individual in the area. On the other hand, HR researchers may find a growing acceptance and emphasis in business schools.

A second important point in choosing a school is how much support exists for research in the candidate's specific area within the field. One should decide what area or areas he or she desires to research and select an institution which will provide the necessary support. Support is clearly evidenced by the people who are there. If the program one is considering does not have well known, substantial people, the school probably does not actively support the program. A school where there is just one person in the candidate's area is probably not the best match. That person may leave, and support will crumble. On the other hand, if an area is represented by three or more faculty members, one may find several thrusts to the field, which can be to the advantage of new faculty members.

In spite of the emphasis within the field on quality research, one also needs to find the appropriate balance between research and teaching. Being a good educator involves more than merely attending class and occasionally keeping office hours. While there is no question that most Ph.D.'s are well trained in their field, there is a real difference between being "well trained" in a specialty and "well educated." Likewise, a distinction should also be made between being "well educated" and a "good educator." The point here is that one should not neglect teaching simply because it is less visible than research.

A prospective faculty member needs to be cognizant of the institution's character and culture before deciding whether or not this is the place he or she desires to spend the next several years. A candidate should not hesitate to seek clarification on those issues considered important to a prospective faculty member. When considering an appointment, there is nothing wrong with asking up front what the expectations of the department are with regard to tenure. Also, find out what the school wants you to be. Many professors enter a university as one thing and end up as another. Does the school want you to be a "numbers cruncher" or an "institutionalist"? Further, some schools hire good young people but never keep them; however, such an institution may serve as a good stepping stone. Professor Hill concluded by stating that one should have a game plan but be flexible.

Whereas Marvin Hill stressed the importance of being clear of one's academic area and where one fits in, David Lewin's presentation helped in delineating the difference between the two major streams within the field of industrial relations. However, rather than attempt to draw any distinction between the study of industrial relations and that of human resources, Professor Lewin addressed differences between academic jobs in IR and those in HR. He also discussed the implications of these differences to doctoral education and research training in the broad field of industrial relations. Both relevant coursework and research focus under each stream are quite distinguishable.

Awareness of these differences is essential if one is to make a clear choice of specialty within the broad field at an early stage of career development.

Recent years have witnessed a shifting trend away from strictly IR-oriented jobs towards a greater emphasis on HR-oriented positions in the academic labor market. The study of industrial relations has been greatly influenced by the many recent and significant developments in the nonunion sector of the labor market. These developments, in turn, have served to change the structure and content of most IR-HR programs. One indication of this influence is the fact that most traditional IR programs in colleges and universities across the country have begun to include human resources courses in their curricula. Many of these programs have even been renamed to reflect their increased and redirected emphasis on HR.

The increased emphasis on HR studies in industrial relations programs, however, does not imply that an outlet no longer exists for research emphasizing the IR aspect of IR-HR. Professor Lewin noted that the level of research and interest in IR studies has not declined in proportion with the level of unionization in the United States. Furthermore, in light of the changing environment of trade unionism, new questions concerning the role of unions have emerged as salient research issues, and alternative ways of looking at "older" issues in IR are being suggested. Finally, nonunion firms have begun to adapt many of the practices first employed in unionized firms, such as procedures for handling grievances, and these emerging practices provide greater opportunity for IR-type research. It is clear, therefore, that the possibility exists for an individual trained in IR-HR to teach in both subject areas, yet conduct research in but one of the two areas.

Notwithstanding the ongoing and substantial opportunities for research in the field, current doctoral students in IR must, at the very least, be trained to teach both IR and HR courses. For this reason, according to Professor Lewin, it has become imperative that the IR-oriented Ph.D. student gain ample exposure to topics in the human resources area. In addition, a primary concern of Ph.D. candidates in the IR stream of the field should be the direction and focus of IR training. While this area can trace its roots to economics, the study of industrial relations is no longer undertaken solely within the realm of the economics discipline. This presents the IR-oriented Ph.D. with not only the choice between an IR and an HR focus, but also with having to choose between an IR program or an economics program.

If one looks to how each of the areas views conflict, one may answer the question of whether an industrial relations program or an economics program is more suited to the needs of a Ph.D. in IR. The central focus of the study of industrial relations is conflict; yet economists tend to consider conflict an aberration or an imperfection. On the other hand, IR accepts conflict as the normal state of affairs, and IR is focused on finding explanations for this phenomenon. Furthermore, unlike economics programs, one is likely to find both IR and HR courses in IR programs. Nevertheless, IR programs must also provide their doctoral students with the analytical tools and methodological training necessary to meet the demand of today's academic labor market. For these reasons, Professor Lewin suggests an IR program may be a better choice between that and an economics program for the student interested in the study of industrial relations.

David Lewin's talk brought to the attention of scholars entering the field the emerging distinctions between IR and HR, as distinct fields but with many overlapping concerns. Following this portion of the Consortium, the focus shifted somewhat to a consideration of concepts and the measurement of employee compensation as well as the changing face of the U.S. labor force. As was the previous discussion of the relationship between industrial relations research and the study of human resources, Janet Norwood's talk was both timely and relevant to the interests of those in attendance.

According to Commissioner Norwood, recent changes in the structure of industry, combined with a declining rate of inflation, have moderated increases in basic wage and salary compensation. Also, a significant share of the labor force is now comprised of workers born during the post-World War II "baby boom" era. Workers in today's labor market are more concerned about job security, the cost of health care, and retirement income than were past generations of workers. There are more females in the labor force than ever before, and many of these women are single parents with young children. Because of these shifts in the demographic makeup of the labor force, increased national attention has focused on the changing role of work and the family.

Included among other factors cited as having contributed to recent labor market changes is an increase in market and global competition. The increase in competitive market forces, in turn, has led managers to perceive a need for improving output quality and cutting costs. Given this rapidly changing environment, in the late 1970s managers began reevaluating their compensation systems. Much of this reevaluation concentrated on the cost associated with the benefits portion of employees' total compensation.

The combination of demographic, social, and economic changes with increased efforts on the part of employers to cut costs has led to a growth of more innovative, more flexible, and more integrated benefit plans. In response to these market changes, employers have developed different means of providing health care to workers, child care assistance, and paid leave benefits. Alternative programs for savings and retirement and new methods of worker participation in decision-making also have been implemented in many firms.

Unfortunately, these changes in employee benefits also make the measurement of total compensation far more difficult. The new and emerging concepts of employee benefits have precipitated new methods of measuring total compensation by the Bureau of Labor Statistics. Along with the dramatic changes in employee compensation found in the 1980s, problems have arisen in the measurement of these new forms of compensation. The BLS has taken a number of steps toward addressing the need for more timely information on some of the newer benefits that are emerging in response to changing demographic and social patterns. For example, the BLS recently began publishing dollar-level estimates of hourly cost for about two dozen types of employee benefits. These estimates are now published annually along with compensation indexes and percent change data. The BLS also has taken to conducting "quick-response" surveys of employers. One such survey, conducted through a combination of mail and computer-assisted telephone interviewing, was used to obtain information on the provision of child care benefits. Such procedures are becoming more necessary in order to obtain more detailed information than is currently available from traditional benefit surveys such as the BLS's Employment Cost Survey.

Janet Norwood chose to address the changing nature of the labor force and of work practices rather than to simply concentrate on changing patterns in the provision and measurement of compensation. Her discussion highlighted the changing nature of the labor force and the labor market. Many of the accepted postulates of industrial relations derive from a previously stable profile of the U.S. labor force. In light of the fact that its composition and structure appear to be undergoing some deep transitions, Commissioner Norwood's comments are of particular interest to the emerging scholars in the industrial relations field who were present at this session. That is, the consequences of recent product and labor market restructuring will undoubtedly have a substantial impact on future research conducted in the fields of human resource management and industrial relations.

As the academic field of industrial relations would appear to be in a state of transition, all three topics covered at this year's Doctoral Consortium were felt to be especially relevant by those in attendance. Business schools are now hiring IR graduates, and new areas for teaching in the field are emerging. Old and once stable topics in the field are no longer the major focus of industrial relations research, and many of these new and emerging research streams are of growing interest to prospective employers. Finally, information necessary to conduct research on the changing industrial relations area is becoming more difficult to assess and measure. These aspects of change, therefore, are of particular concern for the recent entrant into the industrial relations field.

IX. COMPANY AND UNION COMMITMENT: AN EXAMINATION OF TWO IMPORTANT CONSTRUCTS*

Union and Company Commitment: A Comparative Analysis of Full-Time and Part-Time Workers

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A review of organizational and industrial relations research conducted during the past decade reveals a considerable interest in the topic of employee commitment. Organizational behavioralists primarily focused on identifying the factors which shape workers' commitment to the employer organization. More recent studies with a labor relations perspective explored worker attachment or commitment to the union organization (Fullagar and Barling, 1987; Clark and Gallagher, in press). Dual commitment studies, on the other hand, evaluated the relationship between commitment to the employer and union organizations. These studies reexamined and challenged long-standing beliefs about the extent to which worker commitments to the union and employer are competing or complementary forces (Angle and Perry, 1986; Conlon and Gallagher, 1987; Fukami and Larson, 1984; Magenau and Martin, 1985; Thacker and Rosen, 1986).

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* Joint session with the Academy of Management.

Collectively, these commitment studies have greatly enhanced our understanding of worker commitment to the employer and union organizations. At the same time, they have illustrated the complexity of factors which are related to commitment and the relative importance of individual, job, and union-based dimensions in shaping worker commitment.

Despite the development of commitment research, it has almost exclusively concentrated on the attitudes and behaviors of full-time employees. Rotchford and Roberts (1982) noted that part-time workers, while often discussed as a staffing strategy, are essentially "missing persons" in organizational research. The effect of full- or part-time employment status on union or dual commitment has not been well researched.

Growth of Part-Time Employment

Studies of part-time worker commitment have been minimal despite the evidence of a significant trend in the U.S. and Canada toward an increase in part-time employment. Bureau of Labor Statistics (BLS) data indicated that part-time employment opportunities in the U.S. grew almost twice as rapidly as full-time employment during the 1970s and mid-1980s. Kahne (1987) noted that part-time and temporary workers in the U.S. represented approximately 27 percent of the labor force. Part-time employment in Canada also comprises an increasing proportion of the total employment. Part-time workers were approximately 4 percent of the workforce in the early 1950s (Wallace, 1986) compared to 17 percent in 1986 (Statistics Canada, 1986). Zeytinoglu (1987) noted that between 1973 and 1983 the Canadian part-time workforce increased by 52 percent. The growth of part-time employment in both countries can be attributed, in part, to the growth of the service sector which has disproportionately relied upon part-time work schedules. But the part-time employment growth also reflects the demand preferences of employers (Ichniowski and Preston, 1986); the supply side employment desires of women, school age youth and older workers (Deuterman and Brown, 1978); and, in some industries, an involuntary reaction to product demand conditions.

Research Issues

The growth of part-time employment raises issues which are of potential concern to both unions and employers. Union organizing activities may be more challenging. Developing unionized part-time workers who are involved with and supportive of union positions and activities may be difficult. Gordon et al. (1980) suggested union commitment is of practical significance to unions for reasons that the ability of local unions to achieve their objectives is dependent upon the members' behavioral and attitudinal support of the goals and functioning of the local union organization. Where unions are successful in extending membership to part-time workers, the extent to which they hold the same level of commitment to the union organization compared with their full-time counterparts arises.

Employer organizations experience parallel concerns. Is there a relationship between full- or part-time employment status and worker commitment to the employing organization? Given the behavioral significance associated with organizational commitment (e.g., job performance, absenteeism, organizational effectiveness, etc.), the degree to which commitment is affected by employment status might have implications for the strategy of part-time hiring and/or efforts associated with commitment building.

The ability to hypothesize the effect of employment status on union and employer commitment is hampered by the limited number of empirical studies and by the presence of competing theories. Among the studies which examined differences between full- and part-time workers on the dimensions of job and organizational attitudes, the results produced conflicting conclusions. Depending upon the study in question, part-time employment was associated with less and, in some cases, greater commitment than what was found for full-time workers (Eberhardt and Shani, 1984; Logan, O'Reilly, and Roberts, 1973; Miller and Terborg, 1979; Still, 1983). Both "partial inclusion" and "frame of reference" theories have been used to rationalize these conflicting results and to explain discrepancies between the findings.

Morishima in his research of union commitment (1988) found that, among unionized airline employees, part-time employment status was significantly related to higher levels of union commitment. However, subsequent research by Sherer and Morishima (in press) revealed that when wage tier and job tenure were also considered, the employment status effect was nonsignificant. These results contradict those of Martin and Peterson (1987) that full-time workers are significantly more committed to the employer and union organization than part-timers. While the results are contradictory, they do suggest a consistency in that the status-commitment relationship may be moderated by other organizational and job variables such as wage tier.

In the context of the limited and often contradictory results, this study investigated two general issues. First, do differences exist between full- and part-time workers in their levels of employer and union commitment? Second, are these possible differences the result of employment status per se or, rather, more reflective of other individual, job, and union-related variables which have been identified in the commitment literature?

Research Design

Two unions which represent both full- and part-time employees in large urban hospitals in a western province of Canada were surveyed. Union S represents workers primarily employed in hospital support services (e.g., housekeeping, maintenance, security, clerical, etc.). Union N is comprised entirely of professional registered nurses. Each union's membership includes full- and part-time employees in the same bargaining unit. Membership in each union was a condition of employment as a result of union shop agreements with the employer hospitals.

Sample

A stratified sample based on employment status from each union's membership roster was used. Data were collected by a mail survey which included two follow-up mailings. A total of 685 members of Union S were surveyed. Of this number, 449 or 65.5 percent of the questionnaires were usable. For Union N, 634 or 68 percent of the 930 questionnaires were usable. For both unions, approximately 54 percent of the respondents were classified as part-time employees.

Measures

The survey questionnaire was multisectional, requesting participants to respond to a broad range of items pertaining to individual and job characteristics, job attitudes, attitudes concerning employment in the hospital organization, attitudes toward the local union and unions in general.

Dependent variables. The two dependent variables of interest examined in this paper are employer and union commitment. Employer commitment was measured with a 9-item version of the Porter Organizational Commitment Questionnaire (OCQ; alpha = .85). Commitment to the union was measured with a 17-item form of Gordon et al.'s (1980) union commitment scale. All 17 items were combined to provide an overall measure of union commitment (alpha = .83).

Independent variables. Consistent with other commitment studies, the possible correlates of both employer and union commitment were classified into three broad groups: individual/job status, job-based, and union-based.

The principal independent variable of interest, employment status (FULLT), was defined as a dichotomous variable (where 0 = part-time and 1 = full-time employee). The status classification was based upon union membership records and confirmed by the respondent's self-reported hours of work. Other individual job-status variables that were considered include: employee's age (AGE); highest level of formal education (EDUC); number of years employed by the hospital (TENURE); and two other dichotomous variables: MOTHER (where 1 = female with children at home, 0 = otherwise); and whether or not the respondent held a job which carried supervisory responsibility (SUPERV, where 0 = no, 1 = yes).

Included within the group of job-related variables were four multi-item measures. JSATEXT measured worker satisfaction with the extrinsic aspects of the job (alpha = .65). JSATINT was a self-reported assessment of intrinsic job satisfaction (alpha = .83). Employee satisfaction with the immediate supervisor was assessed through a 4-item scale (SUPSAT; alpha = .87) while INFLU measured the individual's perceived level of influence concerning the performance of his/her job (alpha = .90).

The following multi-item scales are the four union-related variables which parallel the previously indicated job or employer based measures: USATBNB measuring employee satisfaction with the performance of the union in improving extrinsic (bread and butter) issues (alpha = .70); USATRLS reflecting worker satisfaction with the quality of internal union-member relations (alpha = .86); and STEWSAT measuring member satisfaction with the local union steward (alpha = .91). A parallel to the measure of job influence was a single item (UNINF) assessing the respondent's perceived influence (voice) in the affairs of the local union.

Results

The results of this initial comparison between full- and part-time employees are presented in Table 1. With the exception of Employer Commitment among members of Union S, there exist significant differences in commitment depending upon employment status. Most

TABLE 1

Comparison of
Full- and Part-Time Employees
Employer & Union Commitment

	Full-Time (N=204)	Part-Time (N=242)	F
Union S			
Employer commitment	3.61 (.72)	3.65 (.53)	.31
Union commitment	3.24 (.43)	3.08 (.39)	16.00***
Union N	Full-Time (N=278)	Part-Time (N=334)	F
Employer commitment	3.27 (.63)	3.38 (.55)	4.93*
Union commitment	3.29 (.41)	3.13 (.36)	24.21***

Scale Range: 1-5, Univariate F-tests

* < .05

*** < .001

notably the results of overall Union Commitment support that full-time employees are significantly more committed to the union than their part-time union counterparts.

Whether these differences are due to employment status per se or are reflective of other individual characteristics, job, or union-related attitudes is examined in Table 2. The regression results indicate that when individual, employer- and union-based variables are controlled, the significance of the employment status distinction is removed. Only in the case of Union Commitment among members of Union N does the status variable significantly contribute to the explanatory model when other variables are considered. Although not observable in Table 2, the regression analyses revealed that for Union S, the relationship between employment status and employer commitment was nonsignificant after respondent's demographic characteristics were controlled. Similarly, the significant relationship between status and union commitment was eliminated for Union S after the demographic variables were introduced.

TABLE 2
Regression Results:
Employer and Union Commitments

Independent Variables	Employer Commitment		Union Commitment	
	UNION S (N=412)	UNION N (N=572)	UNION S (N=412)	UNION N (N=572)
AGE	.010	.025*	.006	.010
EDUC	−.074**	−.166**	−.038	−.008
TENURE	.008	.003	.000	−.001
MOTHER	.074	.026	−.087*	−.024
SUPERV	−.036	−.032	.098	−.021
FULLT	−.087	−.048	.060	.122***
JSATEXT	.043	−.014	−.071*	−.095***
JSATINT	.222***	.216***	.100***	−.048*
SUPSAT	.152***	.168***	.047	−.035
INFLU	.185***	.216***	.024	−.013
USATBNB	.110	.094*	.054	.096**
USATRLS	−.063	−.000	.119*	.252***
STEWSAT	.072*	.055	.047	.079**
UNINF	−.021	.012	.063	.003
R^2	.54	.48	.26	.31
$\bar{R}^2$	.53	.46	.24	.29
Overall F	33.41	35.52	9.95	17.14
P	.000	.000	.000	.000

* < .05
** < .01
*** < .001

Discussion

The study reveals that differences in union and employer commitment do exist between full- and part-time employees. However, the extent to which these differences are a clear function of full- or part-time employment status per se is suspect. A more likely explanation is that demographic differences which may distinguish between full- and part-time workers (e.g., age, education, tenure) are collectively more dominant correlates of commitment than employment status. Furthermore, the effects of worker attitudes toward the job and the union are more useful in explaining the variance in commitment than is employment status. However, the strength of these variables in explaining union commitment differs depending on the particular unions under consideration.

Further investigation into the status-commitment relationship is warranted on a number of dimensions. Among part-time workers, the extent to which the number of hours worked, the voluntary/

involuntary nature of the part-time decision, and the perceived satisfaction with benefit coverage affect union and employer commitment should be pursued. More detailed dimensions of union commitment (e.g., loyalty, willingness to work for the union) can similarly be studied to determine if employment status differences exist in the perception and expression of union commitment. In addition, subgroup analysis based on employment status would facilitate determining the extent to which job and union related attitudes and experiences are equally important in shaping both forms of commitment for full- and part-time employees. The existence of different or similar antecedents of commitment for full- and part-time workers might be an important issue for unions and employers seeking to build commitment among part-time workers who are continuing to become an increasing share of each organization's membership.

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The Effects of Quality of Work Life on Commitment to Company and Union: An Examination of Pre-Post Changes

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The purpose of the present investigation is to advance the understanding of company and union commitment by examining these constructs pre and post the implementation of a joint union-management Quality of Work Life (QWL) process. This study attempts to fill a gap in the QWL literature by examining these two important constructs as they are influenced by a participative endeavor.

Organizational commitment has been the focus of a great deal of research since Porter, Steers, et al. (1974) first developed their organizational commitment scale. Organizational commitment has been investigated in a variety of settings and has been related to a host of important organizational outcomes including attendance, turnover, job performance, and job quality (Steers and Porter, 1983; Steers, 1977). In a discussion of the factors that cause commitment, Steers and Porter (1982) offer specific hypotheses that structural influences and work experiences (i.e., increased participation) will foster organizational commitment.

Gordon, Philpot, et al. (1980) developed a measure of member commitment to the union which generated considerable interest in this topic. Their study revealed that commitment to the union was best represented by four factors, including loyalty to the union, responsibility to the union, willingness to work for the union, and belief in unionism. This factor structure has been replicated in a variety of settings and in a variety of populations (Ladd, Gordon, et al., 1982; Thacker, Fields, and Tetrick, in press). In this study we

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hope to increase the understanding of the influence of a "QWL experience" on the various components (factors) of commitment.

Research has identified a variety of important outcomes associated with union commitment, including union participation, support for union political activity, union attendance, and voting behavior (Fields, Masters, and Thacker, 1987; Fukami and Larson, 1984; Fullagar and Barling, in press; Thacker, Fields, and Barclay, 1988). A number of antecedents of union commitment have also been identified (Fullagar and Barling, in press; Thacker et al., 1988). None of these studies focuses specifically on the effects of participation in the workplace.

Quality of Work Life has received a great deal of attention in the published literatures, consisting mainly of anecdotal claims regarding the benefits of QWL programs. Furthermore, although QWL is generally advocated as a joint union-management process, only a few studies have demonstrated that QWL will result in positive outcomes for unions (Verma, in press). The majority of available research assesses QWL from a company perspective. Clearly, there is a need to investigate QWL as a truly joint union-management process.

Proponents of job enrichment and Quality of Work Life cite improvements in job attitudes, specifically job satisfaction and organizational commitment, as expected outcomes of increased participation (Walton, 1985; Steers and Porter, 1983; Miller and Monge, 1986). Although the QWL literature offers hypotheses regarding anticipated outcomes, there is little research which verifies these predictions. In fact, most of the bases for hypothesizing positive outcomes is the popular "pro-QWL" anecdotes and propaganda. Furthermore, Fields (1982) argues that global improvements in outcomes are not to be expected strictly from participation in an intervention, but only when the intervention is successful. Given this, we offer as an initial hypothesis: Organizational commitment and job satisfaction will increase after the implementation of a QWL effort only when the effort is seen as successful by participants.

Most conclusions regarding "union outcomes" are based on the feelings and beliefs of union leaders. These beliefs are generally that QWL efforts will weaken the union (Kochan, Katz, and Mower, 1984). However, Verma (in press) has suggested that union involvement in joint union-management endeavors is unlikely to result in adverse outcomes for the union. Furthermore, although not specifically addressing QWL, Fields and Thacker (1985) and Thacker and Fields (1987) have demonstrated that the "proactive" behaviors required by union officials in a joint QWL effort will improve rank-and-file attitudes to the union. This leads to a second hypothesis: Union members will increase their commitment to the union across the four commitment factors as a function of union involvement in a joint QWL process. Only the behaviors of union officials associated with the start-up of participative processes (i.e., soliciting input, increased interaction with members) and not the success of those processes are hypothesized to influence member commitment to the union.

Method

Organizational Setting and Subjects

This research was conducted in a large midwestern utility involved with two separate joint union-management QWL endeavors. The samples will be referred to as Intervention 1 and 2, respectively. The samples are distinguished mainly by (1) the time period of QWL involvement, and (2) the geographic location of employees. Each committee/team had both a union and a management representative initiate the group as co-chairpersons.

In each intervention the QWL effort began with the formation of a steering committee. This committee, comprised of third-level managers and the president and/or vice president of the local unions, represented each of the various functional departments (construction, service, etc.) in a geographic region. Second-level teams were then created which consisted of second-level managers and chief stewards. Finally, grass-roots teams (problem-solving teams) were initiated from a specific functional group and were comprised of a supervisor and steward along with volunteers from the rank and file.

Subjects included all nonmanagement, rank-and-file employees within the two different QWL efforts. The employees in both samples were represented by two different local unions of the same international. There were 293 employees in Intervention 1 and 119 employees in Intervention 2. Approximately 75 percent of all eligible employees completed surveys.

Design and Data Collection

Data were gathered through survey administrations to the same subject population at two points in time, using a repeated-measures (within-subjects) methodology. In both interventions the first survey was completed prior to the start-up of the intervention. A coding system was employed to match the responses of each subject across the two survey administrations. Only the data from subjects who completed surveys at both administrations were used in the analyses reported here.

Measures

Company Commitment. A nine-item shortened version of the commitment scale developed by Porter et al. (1974) was used. Coefficient alpha has been previously reported for this scale at .82.

Job Satisfaction. A nine-item scale was developed specifically for this study which addresses overall satisfaction and satisfaction with the intrinsic component of jobs. Coefficient alpha = .77.

Loyalty to the Union. Eight items reflect the instrumental nature of the union and member pride in association with the union. Coefficient alpha = .88.

Responsibility to the Union. Five items represent the degree to which an individual is willing to fulfill the day-to-day obligations of union membership. Coefficient alpha = .76.

Willingness to Work for the Union. Three items reflect the willingness of a union member to work for the union. Coefficient alpha = .83.

Belief in Unionism. Three items indicate the degree to which an individual believes in the principles of unionism. Coefficient alpha = .76.

QWL Success. This was measured by a single item requesting respondents to indicate how successful they believed QWL had been to date. Response categories varied from (5) very successful to (1) very unsuccessful with (3) representing neither successful nor unsuccessful. In the correlational analyses, all five response categories were retained. However, in subsequent analyses of variance, three categories are used representing successful, neither, and not successful.

Analyses

To test the overall hypotheses, a multivariate repeated measures analysis of variance is computed. In this design, six dependent measures are employed, including the four union commitment factors, organizational commitment, and job satisfaction. Intervention (1 or 2) and QWL success (not successful, neither, and successful) served as between subjects factors. Finally, Time of Administration (first or second) serves as a within subjects factor. A full factoral model is computed using the SPSS-PC MANOVA procedure.

Two questions were asked of each respondent at the second survey administration to assess whether they were (1) presently on a QWL team, or (2) had ever served as a member of a team (each question requested a yes or no response). The above MANOVA was recomputed twice substituting both present and prior team membership for QWL Success.

Results

Correlations among the variables are displayed in Table 1. The pattern of correlations within and between the two survey administrations provide considerable evidence for the construct validity and reliability of the measures. The correlation matrix represents a form of multi-trait, multi-method matrix. The two sets of company variables and union variables can be conceptualized as the multiple traits. The two time periods of measurement represent the multiple methods. Evidence for construct validity is demonstrated through the convergent and discriminant properties of multiple methods as they are applied to multiple traits.

An examination of the correlations for the time 1 measures indicates that the four union commitment factors display low to moderate intercorrelations (.38 to .57) among themselves. The company variables are correlated ($r = .61$), but the company variables are not correlated (multiple traits) with the union variables (.02 to .20). This pattern is replicated within the results of the second survey administration. The time 1–time 2 correlations (multiple methods) are higher for the same variable (.59 to .69) than they are for different variables (.23 to .46). This provides evidence for reliability (test-retest) and convergence. In addition, the fact that both the union variables and the company variables correlate more highly among than between themselves over time provides additional evidence of divergence.

The repeated measures MANOVA described in the method section was computed. Significant multivariate main effects were detected for all three independent variables: Time of Measurement ($F = 5.83$, $P < .01$), Intervention ($F = 4.70$, $P < .01$), and QWL-Success ($F = 6.04$, $P < .01$). The only significant multivariate two way interaction was detected for Time and Measurement by QWL-Success ($F = 3.22$, $P < .01$). Univariate analyses of variance were computed for all significant main effects and interactions. Univariate analyses for the multivariate Time effect indicated that only loyalty to the union ($F = 19.5$, $P < .01$) and responsibility to the union ($F = 5.3$, $P < .05$) varied over the two time periods of this study. The descriptive

TABLE 1

Correlation Matrix

	Time 1 Measures						Time 2 Measures								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Time 1 Measures															
1 Loyalty	—	.34	.57	.54	.20	.26	.69	.23	.46	.44	.12	.20	.09	.02	−.08
2 Responsibility	—	—	.39	.38	.02	−.09	.23	.57	.33	.28	−.05	−.03	−.15	.02	−.05
3 Belief	—	—	—	.38	−.10	−.04	.39	.27	.66	.26	−.07	−.01	−.11	−.02	−.10
4 Willingness	—	—	—	—	.10	.09	.42	.24	.36	.65	.02	.04	−.02	.08	.01
5 Organizational Commitment	—	—	—	—	—	.61	.17	−.03	−.07	.08	.57	.41	.16	−.06	−.02
6 Job Satisfaction	—	—	—	—	—	—	.23	−.05	−.03	.09	.44	.58	.16	−.13	−.04
Time 2 Measures															
7 Loyalty							—	.35	.60	.61	.19	.25	.15	.04	−.01
8 Responsibility							—	—	.41	.42	−.04	−.01	−.10	.03	.00
9 Belief							—	—	—	.48	−.13	−.04	−.10	−.01	−.02
10 Willingness							—	—	—	—	.01	.04	.01	.06	.08
11 Organizational Commitment							—	—	—	—	—	.62	.38	−.07	.00
12 Job Satisfaction							—	—	—	—	—	—	.41	−.09	−.04
13 QWL Success												—	—	.13	.14
14 Present Members												—	—	—	.54
15 Prior Membership												—	—	—	—

statistics indicated that the mean levels for both of these variables increased over time.

Univariate analyses for the Intervention effect indicated a significant difference only for loyalty to the union ($F = 9.8$, $P < .01$). The results suggest that respondents from Intervention 1 displayed higher levels of loyalty to the union than those from Intervention 2. The QWL-Success effect generated significant univariate effects for five of the six dependent variables including loyalty to the union ($F = 5.4$, $P < .01$), responsibility to the union ($F = 5.4$), belief in unionism ($F = 3.4$), job satisfaction ($F = 14.6$, $P < .01$), and organizational commitment ($F = 2.08$). Finally, the interaction of success and time generated significant effects only for organizational commitment ($F = 7.5$, $P < .01$) and job satisfaction ($F = 13.7$, $P < .01$), the two company-related variables. The descriptive statistics indicate that when QWL was successful, the levels of satisfaction and organizational commitment increased, and when QWL was unsuccessful, they decreased.

The additional analyses uncovered no significant main effects or interactions for either present or past team membership for any of the dependent variables.

Discussion

The results of this study support both of the hypotheses. The following discussion is divided into two parts for company and union commitment.

Company Commitment

The pattern of results for the company variables differed from that of the union variables. The most notable differences concern the role of QWL-Success. Neither company commitment nor job satisfaction displayed a significant main effect for Time. However, the Time by QWL-Success interaction indicates, as hypothesized, that for company commitment to improve, it is necessary for the participative endeavor to be successful.

Union Commitment

Perceptions of QWL-Success did not moderate increases in the level of union commitment. Between the first and second administrations, loyalty to the union and responsibility toward the union significantly increased. This finding is consistent with Fields and Thacker (1985) who determined that changes in union commitment are a product of changes in the behavior of union officials. Proactive behaviors of union officials which are associated with involvement in a QWL intervention result in improved attitudes. These improvements occur irrespective of the success of the intervention.

Two of the four commitment factors did not change. This argues for a multivariate view of union commitment and is consistent with Gordon et al. (1980) and Thacker et al. (in press) who found that the four factors of union commitment are related to different sets of variables.

The main effect for QWL-Success produced a result that has implications for both company and union organizations. Overall, success produced a significant effect on all but one of the variables in this study. Independent of Time of Administration and Intervention, subjects who displayed negative attitudes toward both the company and union tended to perceive the participative endeavor as unsuccessful. Although this potentially represents a form of response-response bias, there is enough evidence in the differential patterns of correlations, both between the union and company variables and across the two time periods, to rule this phenomenon out. We believe that this finding identifies the "disenchanted worker," those individuals who will not be receptive to company or union efforts to involve them in decision-making. There is no doubt that these individuals exist. The moderator variable research from the job design literature (Hackman and Oldham, 1980) has noted the presence of disenchanted workers, but has failed to deal with them adequately.

Conclusions

Several conclusions can be generated from this research. First, the success of an intervention is necessary when assessing the effectiveness of a participative endeavor from a company perspective. Second, given that the success of a QWL endeavor does not influence union commitment, companies will benefit from the QWL process only when the endeavor is successful, but the union does not appear to be constrained by this. In addition, contrary to popular conjecture, past and present team membership, in and of itself, does not influence participants. Finally, the presence of disenchanted workers represents a potentially interesting and important area for future research. An understanding of these individuals in order to identify and incorporate them into QWL and related processes will be critical if total involvement is to be accomplished. Unique research designs will be required to further investigate this phenomenon.

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Predictors and Outcomes of Different Patterns of Organizational and Union Loyalty

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Recently there has been an upswing in the research on dual allegiance (i.e., commitment to both union and company). This resurgence of interest in dual loyalty stems in part from the decreasing unionization levels in the United States and the development of new forms of collective bargaining which require more cooperative labor-management relationships (Kochan, Katz, and McKersie, 1986).

Several problems exist with this body of research. First, considerable variation in the conceptualization and measurement of both company and union commitment prevails, preventing easy comparison between studies. Second, previous research on dual loyalty has ignored the full range of different patterns of loyalty. Third, prior studies have been cross-sectional in nature and therefore have precluded causal analysis. Consequently, the present research identified four different patterns of loyalty to the organization and union: (1) individuals loyal to *both* company *and* union (dual allegiance/loyalty); (2) individuals loyal to *neither* the union *nor* the company (dual nonallegiance); (3) individuals loyal to the union, *not* the company (unilateral union loyalty); and (4) individuals loyal to the company, *not* the union (unilateral company allegiance).

The rationale underlying this differentiation is that the interaction between company and union loyalty is a more important determinant of subsequent behavior in organizations (both unions and companies) than either company or union loyalty alone. At the same time, it is just as important to understand which union and company experiences result in the four different patterns of loyalty.

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The selection of appropriate constructs to be tested as possible predictors and outcomes is critical for assessing the predictors and consequences of different patterns of company and union loyalty. We based our selection of predictors and outcomes on previous research and theorizing about company loyalty and union loyalty. The work experiences and attitudes considered in the present study included intrinsic and extrinsic job satisfaction, job involvement, work and role stress, and supervisory support. All these variables have been associated with company commitment (Mowday, Porter, and Steers, 1982) or union loyalty and activities (Fullagar and Barling, 1987).

Several union attitudes and experiences are associated with unionization in general and union loyalty in particular. These include the quality of union-management relations, general attitudes towards unions, perceived union instrumentality, and participation in union activities (Fullagar and Barling, 1987), all of which were measured in the present study. In addition, because the two core behavioral elements of industrial relations are conflict and change, which themselves are central to the experience of negative stress (Bluen and Barling, 1988), and because work stress correlates significantly with organizational commitment (Fukami and Larson, 1984) and pro-union attitudes (DeCotiis and LeLouarn, 1981), the role of industrial relations stress in predicting different patterns of union and company commitment was investigated. Because previous studies are typically based on cross-sectional designs, they cannot answer the more fundamental question of what work and/or union experiences result in the four possible patterns of loyalty, nor do they indicate how the outcomes for the company and for the union vary as a function of the four patterns. To address these issues, the present study used a three-wave panel, longitudinal design.

Method

Subjects and Setting

All participants in the study were employed on a full-time basis by one of two large universities in Ontario. Two different unions were studied, one from each university: a faculty union and a support services union.

Procedure

Questionnaires and a letter from the relevant union president indicating the support of their Executive Committee for the research were sent to approximately 1,800 respondents. Of the 1,800 questionnaires initially distributed, 464 were returned at Time 1, giving a response rate of 25.8 percent. A second administration of the questionnaire was conducted six months later. It was felt that this time period was sufficient to allow for causal effects to emerge. At Time 2, 426 were returned, yielding a response rate of 22.2 percent. At the third and final data collection phase, questionnaires were sent only to those respondents who had replied at either Time 1 or Time 2 ($N = 603$). Of the questionnaires distributed, 323 questionnaires were returned.

Questionnaires

The data gathered for the study were classified into three sections, (1) demographic data, (2) organizational/work-related experiences, and (3) union-related experiences.

Demographic data. Research on both company and union loyalty suggests that a number of demographic variables predict loyalty (Fullagar and Barling, 1987; Mowday et al., 1982); therefore subjects were asked to provide relevant information (e.g., gender, company and union tenure, age).

Company/organizational experiences. Different questionnaires were used to assess organizational loyalty, job satisfaction, job involvement/alienation, role conflict and ambiguity, and peer and supervisory support. Commitment to organization was measured by Porter and Smith's (1970) 9-item Organizational Commitment scale. Warr, Cook, and Wall's (1979) 16-item Overall Job Satisfaction scale was used because it assesses both intrinsic and extrinsic job satisfaction. Kanungo's (1982) 10-item scale was administered to assess Job Involvement. Role conflict (6 items) and ambiguity (8 items) were assessed in the present research using Rizzo, House, and Lirtzman's (1970) questionnaires. Finally, the supervisory support dimension (consisting of 9 items) from Moos's (1981) Work Environment Scale was administered.

Union experiences. Union loyalty was assessed by a 10-item scale distilled from a factor analysis of Gordon et al.'s (1980) 28-item questionnaire. This factor has been found to account for most of the variance in union commitment and to be stable across samples (Fullagar and Barling, in press; Ladd et al., 1982). To assess the general quality of union-management relations, Biasatti and Martin's (1981) 11-item questionnaire was administered. The negative perception of industrial relations events was measured by Bluen and Barling's (1987) 19-item short form of the Industrial Relations Event Scale (IRES).

Brett's (1980) 8-item questionnaire was administered to assess attitudes toward unions in general. Union instrumentality was assessed using Chacko's (1985) 7-item perceived union instrumentality scale. Finally, a 10-item measure similar to that used by Fullagar and Barling (in press) was used to assess the extent of individual involvement in union activities (i.e., union participation). With the exception of the supervisor support scale, where the internal reliability was modest, the internal reliability and test-retest reliability over six months (Time 1 to Time 2) of the other scales were satisfactory.

Data Analysis

A longitudinal design was used in which data were gathered at three points in time, each separated by a six-month time period. On the basis of a median split, subjects were divided into four patterns of allegiance. The first major issue addressed in the present study was whether prior organizational and union experiences predict current membership in one of the four groups. To assess this, a multiple discriminant function analysis was computed. The organizational and union experiences assessed at Time 1 were treated as the predictor variables, and group membership at Time 2 was the outcome variable. The second phase of the analysis aimed at determining whether different patterns of loyalty exert different organizational and union consequences. Organizational loyalty and union loyalty measured during the second administration of the questionnaires were dichotomized on the basis of a median split (high vs. low allegiance) and treated as independent variables in a 2 X 2 multivariate analysis of covariance (MANCOVA). The dependent (outcome) variables consisted of organizational and union experiences measured at the third and final time period. The covariates in this analysis were age, and union and organizational tenure, all three of which have been associated with union and organizational attitudes and behaviors.

Results

The most powerful discriminators of the four patterns of commitment were attitudes to unions, union involvement, perceptions of union-management relations, and intrinsic job satisfaction and role conflict. Two discriminant functions were derived, which were interpreted as an organizational and union function. These functions discriminated significantly between high and low union allegiance, and high and low organizational allegiance, but were relatively less successful in correctly predicting dual allegiance (see Table 1).

TABLE 1
Classification Results

	Predicted Group Membership			
Actual Group	1	2	3	4
1. Union allegiance	71.7%	13.2%	7.5%	7.5%
2. Organization allegiance	0.0%	61.5%	15.4%	23.1%
3. Dual nonallegiance	2.9%	17.1%	71.4%	8.6%
4. Dual allegiance	20.9%	27.9%	4.7%	46.5%

To determine whether the differing patterns of dual commitment had different union and organizational consequences, multivariate analyses of covariance were computed. The results of the parametric ANCOVAs are presented in Table 2. The results of Wilson's (1956) distribution-free factorial ANOVA for those variables which did not satisfy the homogeneity of variance assumption are presented at the bottom of the same table. Again, the results of the ANCOVAs suggested unique consequences for both union loyalty and organizational commitment. Levels of organizational commitment at Time 2 predicted subsequent organizational outcomes, but had little effect on union-related variables. Similarly, different levels of loyalty to the union at Time 2 predicted union behaviors and attitudes at Time 3, but not organizational experiences.

Discussion

The results of the present study isolated the predictors and outcomes of diverse patterns of union and organizational loyalty. Generally, the results of the discriminant function analysis concur with previous findings that suggest that union and company commitment tend not to share common personal, job, and work-related predictors, but are determined by unique factors (Fukami and Larson, 1984). This finding runs contrary to Stagner's (1956) speculation that dual allegiance is attributable to employees' perceptions of their employer and union as a unit, and that union and company commitment can be predicted by common variables.

There was one exception to this trend, and that was union involvement. Involvement in union activities significantly contributed

TABLE 2
2 X 2 ANCOVA Results

Dependent Variable	Organizational Commitment (A)			Union Commitment (B)			Interaction AxB
	M High	M Low	F	M High	M Low	F	F
Industrial Relations Stress	7.58	8.69	0.40	8.68	7.66	0.33	0.12
General Union Attitudes	38.51	37.19	2.58	40.83	33.44	62.75**	0.25
Extrinsic Job Satisfaction	41.99	36.96	24.66**	38.63	40.28	2.49	0.02
Intrinsic Job Satisfaction	38.86	33.71	22.85**	35.43	37.10	2.24	0.08
Job Involvement	41.63	36.52	8.16**	38.66	38.31	0.13	0.00
Role Conflict	29.23	32.55	5.26*	30.18	31.45	0.55	0.04
Role Ambiguity	13.84	16.35	8.27**	15.25	14.41	0.82	0.18
Coworker Support	9.02	8.04	8.64**	8.63	8.16	1.69	0.17
Supervisor Support	8.44	7.18	10.44**	7.76	7.66	0.06	0.20
Wilson Distribution-Free ANOVAs			X^2			X^2	X^2
Union-management relations			0.45			1.79	0.20
Perceived union instrumentality			2.94			0.54	0.67
Union involvement			0.24			84.05**	3.16

* $p < 0.05$
** $p < 0.01$

to both the organization and union discriminant functions. Both Stagner and Rosen (1965) and Magenau et al. (1988) have suggested that involvement in union activities facilitates greater union commitment. The present findings go further in that they suggest that involvement in union-related activities not only predicts loyalty to the union, but also commitment to the employer. Consequently, increasing the levels of membership involvement would not appear to detract from company commitment. One practical implication of such a finding is that management should not view a union's attempts to increase involvement amongst its members as necessarily detrimental to the company's health.

The findings of the multivariate analyses of covariance again supported the concept of divergent models of union and organizational allegiance. High loyalty to the union only exerted an impact on union-related consequences in that it facilitated subsequent positive attitudes to unionism, greater involvement in union activities, and more positive perceptions of the union-management relationship. Similarly, high organizational commitment had such organizational repercussions as predicting greater intrinsic and extrinsic job satisfaction, increasing job involvement, reducing both role ambiguity and conflict, and fostering stronger perceptions of co-worker and supervisor support. It would appear that the consequences of union and organizational allegiance differ. These results have strong implications for both unions and faculty organizations. Specifically, high commitment to the union does not appear to have any adverse effect on job and organizational attitudes. Indeed, no effect was found. Likewise, strong attitudes of commitment to the employing organization has no impact on attitudes to unionism, involvement in union activities, or perceptions of the union-management relationship. It would appear that union and organizational commitment are separate concepts amongst white-collar, faculty union members in that they have unique and distinct predictors and outcomes. It would be interesting to test whether this "distinctness" generalizes to blue-collar workers and other types of unions where the interdependency between management and labor is greater.

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DISCUSSION

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As Dr. Thacker indicated in his introduction, my role as discussant today is to view these papers from a management or corporate perspective, and I'll do my best to fulfill that role. My strategy for doing so is to examine these papers with the same eye that I examine all the other reams of correspondence that pass through and around my office each day. The critical questions that I ask myself are:

Is the topic important? If so, I'll take the time to begin reviewing it. When my review is complete I ask: Did I learn anything useful? Useful in terms of causing me to address an issue previously ignored. Useful in terms of causing me to rethink an existing belief/strategy. And most important, useful in terms of enabling me to make better decisions and thereby perform my job more successfully.

The topic of these papers, commitment, to the organization and union, I consider of critical importance. More today than ever, organizations face challenges and pressures brought about by global competition, regulation and deregulation, hostile takeovers and acquisitions, to name a few. These pressures require organizations to examine the traditional ways they manage their business. With few exceptions it boils down to driving costs down while improving product and/or service. It means getting employees to do more with less. Commitment from these employees to the organization's goals is essential and this commitment will be difficult to achieve and maintain when one considers the complexities of an increasingly diversified employee base—the increase in part-time and temporary workers and the shortage of skilled labor that lies ahead.

Let me say a little more about what I think commitment means to a business. When I think about commitment, I try to avoid viewing it as some vague psychological construct related to being loyal to the organization. I try to avoid thinking about it in terms of self-report

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responses to items on research questionnaires or surveys. Rather, I try to think of it in terms of specific behaviors committed employees engage in that less committed employees do not. And I think these behaviors go far beyond coming to work each day, on time, putting in a full day's work, and staying with the organization (i.e., low turnover).

A committed employee learns about the organization of which he/she is a part. They *actually* read the organization's internal communications and articles about their organization appearing in other outside publications. When outside of normal working hours, committed employees are looking out for the best interests of the organization. They'll speak up knowledgeably and articulate the organization's positions on critical issues to their community leaders, to their neighbors, and to their legislators. When committed employees spot a problem with their organization's product—a disgruntled customer, for example—they won't turn their heads; they'll take action to correct it. So the issue of gaining the commitment of employees is and will be of great relevance to managers like myself.

A concern I have with these studies (overall) is what their commitment scales are measuring. I'm not sure self-report questionnaires capture or reflect the commitment that the organization needs.

So let me make a few brief comments on the papers that have been presented here today. I'll start by commenting on the Barling-Fullagar paper which focused in on the *determinants* and *consequences* of being in one of their four allegiance groups. Their confirmation of previously published findings indicating that union and company commitment are determined by unique factors gives me, as a manager, further confidence that cooperative efforts with my union counterparts will not entail participation in a *zero sum game*. That is, the union's gain does not mean my loss. This is an important point and one that managers in my company frequently discuss. The average local field manager when urged by people like myself to begin working more with their union counterparts toward increasing participation balks out of fear of losing power and, *worse yet*, giving the power to the union who they fear will take advantage of it. Many managers believe that cooperative efforts with the union is a platform upon which the union is able to increase their members' commitment to the union at the expense of their loyalty to the supervisor and the company.

When studies such as this are published and made available for use with these managers, managers will begin at least questioning their beliefs, making it somewhat easier to move toward cooperative engagement with their union counterpart.

While the history of labor-management relationships may be adversarial, there is little doubt that the last decade has seen significant shifts toward cooperation. In some industries such as the one Doug Fraser and Irv Bluestone helped shape as UAW leaders, or the communication industry that I'm involved with, which deals primarily with the Communications Workers of America, cooperation has been in place for many years on an ever increasing array of fronts. As union and management leaders spend more and more time together cooperatively, sharing not just the problems of today but also the future of their organizations, their strategies and goals, will the factors related to commitment to their respective organizations remain so independent? Or, will employees begin to react on the basis of a *cooperative accountability* and begin to react to their union and company leaders more commonly? This possibility needs to be examined more closely.

The Fields-Thacker paper was conducted as part of a joint union-management QWL effort. I must admit I found their initial hypothesis *and* finding counter intuitive—that being that the mere participation in the joint QWL effort on the part of the union leadership, rather than the success of the effort itself, is what appeared to cause an increase in union commitment. For management, on the other hand, it was the success or failure of the process rather than the mere participation that was the essential factor for increasing commitment to the organization.

This finding suggests that the union leadership, contrary to what many union leaders openly express, really has little to risk in becoming involved in a joint participation effort with management. As long as they are pro-actively soliciting input from their members, increasing their interactions with them, etc., commitment to the union and to them as leaders will be enhanced.

From a managerial perspective, I think that finding constitutes a mixed blessing. On the one hand it will be a factor in convincing the union leadership that their participation may be far less risky than they might perceive or predict, and in that sense this finding is useful.

On the other hand, as a manager, I'm not so comforted by the notion that I may be engaging in a partnership where only one partner—the company—bears the risk of failure. In fact, I don't see how, if that were really true, that the partnership could last very long.

So I find myself questioning the finding, or at least looking for a more comfortable explanation. I think the explanation may lie in the specific setting and timing of this research in relation to the stage of development of the QWL effort. These data were collected at the early stages of this cooperative effort. At the start-up, it *may* be true that the union leadership will have *much more* to gain than lose since it clearly provides the union more access to its members, many of whom will have had little prior opportunity for such interactions. These members will see, perhaps for the first time, their leadership working with management to bring about increased levels of participation, more joint problem-solving, etc. If the start-up moves too slowly or fails in its early stages, these leaders, as in this study, could still be viewed as having given it a real try—doing its best to get management to give up its authoritarian ways which have become ingrained in the style of so many managers.

We all know that forging productive joint union-management efforts takes time. It must go beyond start-up toward an ongoing, more complex relationship. As these processes do move beyond the start-up stage, will levels of commitment to the union remain unrelated to the perceived success of the effort? I think not. My experience suggests that the honeymoon at start-up, if there really is one for the union, is short lived. Members' expectations of their union leadership will increase over time. No longer will commitment increase as a result of more pro-activity and interaction unless, of course, that activity is seen as leading to meaningful gains for the members. I believe that employees will hold leaders of both the union and management accountable for the success or failure of the joint effort, and most of that accountability will be at the local leader's doorstep. Hopefully, future research will be able to look at the risk/reward potential for both union and management engaged in joint efforts over a much more extended period of time.

Before closing, let me just briefly comment on the paper by Dan Gallagher and Kurt Wetzel. I found it interesting—not so much on the basis of its findings, but mainly due to its focus. It really did get me thinking about an issue I've known about for some time, but one which I've done little planning for, or any real in-depth thinking about. So this paper has been useful in getting me to think about this issue more. It's an issue that we must begin understanding more about and one I believe is related to the larger issue of managing the increasingly diversified workforce. The discussion of diversity here is the very nature of the employment relationship and we know very little about its impact on us in terms of employee commitment. Can we manage part-time and temporary workers in a traditional manner? Is their level of commitment to the organization proportional to the hours they work? Do these workers have different needs and different expectations?

This research found no strong evidence that employment status was predictive of levels of employee commitment to either the union or the company once factors related to individual, employer, and union were controlled. So apparently there is no simple answer. Part-time workers are no more a homogeneous group than are their full-time counterparts. Clearly, more research is needed in this area.

Let me close by restating that I believe this topic of commitment is an increasingly important one and will become an increasingly complex one.

The research of the past may no longer be useful in identifying and understanding the antecedents and consequences of commitment in light of the changing nature of working relationships, especially those between union and management. Commitment factors may well be significantly affected as cooperation between union and management becomes the norm.

Commitment factors might also be influenced by the influx of much larger numbers of women and minorities into the labor force, by increases in part-time and temporary workers, and, certainly, by the shortage of skilled labor which will soon be in evidence—a shortage that will cause organizations to compete with one another for their services and loyalty.

I applaud these researchers for their work and encourage them to look for opportunities to conduct research in those industries and in those arenas which are at the cutting edge of our future—those that come closest to exhibiting the characteristics of the organizations of the 1990s.

DISCUSSION

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Since a practitioner from management and labor also serve as discussants on this panel, I've been asked to confine my remarks to methodological issues. I interpret this to mean an examination of the appropriateness of methods employed and the extent to which we can have confidence in the findings reported.

The papers presented in this session continue the trend of integrating organizational behavior, human resources management, and industrial relations research. Each examined the notion of dual commitment, i.e., simultaneous commitment to the employing organization and commitment to the union.

Drs. Gallagher and Wetzel investigated the relationship between commitment, both to the employer and to the union, and employment status, defined as full-time or part-time. Controlling for other variables, the relationship between commitment and employment status was not consistent across two different unions. Rather, they found that organizational variables were related to employer commitment and union variables were related to union commitment.

The immediate problem concerns a confounding variable. The respective unions also represent different occupations. We don't know if differences are between unions or occupations since they are perfectly redundant. Thus, the conclusion might also be that the relationship between employment status and commitment is not consistent across occupations.

There still remains the problem of multiple dependent variables related to the same set of independent variables. A canonical analysis could, at that point, be conducted. If the authors wanted to remain in the framework of univariate regression, then the opposite commitment variable could be employed as a covariate. While this would

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inflate the overall R^2, the interest would appropriately turn to a test of significance of the incremental R^2 on employment status.

Fields and Thacker investigated the effect of a QWL program on commitment to the employer, four dimensions of commitment to the union and job satisfaction. I agree with the authors that much of the "evidence" in reference to the effects of QWL programs is anecdotal. Thus, I was pleased to see them employ a pre-post design.

My initial observation has to do with the dependent variables. Since job satisfaction has been reported to be related to commitment to the employer in previous research, one must initially wonder why it was not employed as a covariate in a MANCOVA analysis.

A problem may also be introduced by differences in the time periods of data collection between the two Interventions. For Intervention 1, the time between measurements was 12 months. For Intervention 2, the time between measurements was 32 months. Since an attempt to code for this difference would be redundant with Intervention, we can't be certain if the two local unions differ on the dependent variables or if any differences are due to differences in the times at which the measurements were taken. This makes the interpretation of the Intervention effect problematical to say the least.

I would further suggest that if the authors want to propose union leader behaviors as a major influence on union loyalty that they measure union leader behaviors and include them in the model. Proposing that differences in union loyalty are due to union leader behaviors from a dummy or effects coded variable representing two local unions will not suffice.

The last issue I wish to address relates to their discussion of the "disenchanted worker." Their basis for this is that persons who displayed negative attitudes toward the company and the union tended to perceive the participative program as unsuccessful. This was true only for the zero-order correlations on union loyalty.

I thought the more intriguing correlations were those between QWL success and both past and present membership on QWL committees. Those correlations suggest that persons who have actually served on committees don't think the program will be successful. Of course, I recognize the danger of trying to draw conclusions from zero-order correlations. It might have been more instructive to include past and present membership as additional independent variables in the MANOVA rather than substitute each for QWL success and conduct separate analyses. This would also enable the authors to determine if the relationship between commitment and QWL success is moderated by past or present membership on a committee.

Drs. Barling and Fullagar were concerned with commitment from a causal framework. While their thinking in this direction is commendable, they have not made a convincing case for the causal sequence they state in their discussion. In particular, posing a categorization of loyalty at Time 2 as a dependent variable in a discriminant analysis on a number of perceptual and attitudinal variables measured at Time 1 and then posing it as an independent variable to predict those same variables in Time 3 is not adequate to substantiate a case of causation.

They essentially have a nonrecursive causal model which must be properly identified and analyzed. Another problem resulting from the manner in which the analysis was conducted is simultaneous equations bias. The problem can be addressed by either indirect least squares or two-stage least squares analysis (Chiswick and Chiswick, 1975).

I have the same concern about using stepwise discriminant analysis that I do about stepwise regression. For a given set of data, a stepwise procedure cannot necessarily find the best fitting model or the real model (Klecka, 1980). In addition, the F-tests and p-values are "pseudo" values.

The resulting problem may be in the incorrect classification of cases to groups. For example, the authors report an average correct classification of 62.94 percent. However, approximating the proportional reduction in error statistic, tau, resulted in a value of .56. This means that classification based on the discriminating variables made only 56 percent fewer errors than would be expected by chance. I would feel much more comfortable with a larger percent reduction in error.

Another concern may be posed as a question. Is loyalty a normally distributed variable measured with a quasi-interval scale or is it categorically distributed with equal numbers of persons in each of four categories? My question, of course, has to do with giving up the statistical power and information content of the commitment variable by forming the groupings to conduct the discriminant analysis.

A minor disagreement I have is the use of the classification of nonallegiance rather than low allegiance. Since the values of the median splits were not provided, there is not a way of assessing whether cases assigned to this group were still positive in their loyalty to the union and to the organization. Employing a five-point Likert-scale, nonallegiance would be exhibited by persons achieving a summated score of less than 39 on the union scale and less than 27 on the company scale. Likely, the use of the median split incorporates persons meeting this requirement with persons who demonstrate loyalty to the union and to the organization, albeit at low levels.

Where do we stand after these research efforts? In my opinion, we've not made much progress. I think the research presented does take a positive step in moving to pre-post measurements and longitudinal data collection. In doing so, however, we will begin to encounter the issues of model specification, identification variables, various forms of correlated residuals, and other methodological problems with which other disciplines have had to be concerned. As we move the research agenda toward more integration of organizational behavior, industrial psychology and industrial relations (including labor economics), our greatest task may be in bridging the methodological watershed of disciplines.

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X. THE NEW LAW AND ECONOMICS OF LABOR LAW

Economic Analyses of Labor Law

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In this paper I sketch some ways in which economic analyses can be used to think about legal issues in labor law. The most controversial thing that I have to report, and which I will resist all challenges to document, is that in most of the better law schools, labor law is considered an intellectual backwater. While other academic fields, often marked by economic analysis, are flourishing, not so labor law. Nonetheless, I come to my task with some ambivalence because distinguishing "thinking like an economist" from "thinking like a lawyer" turns out to be difficult (see Gellhorn and Robinson, 1983). There are some things that we can identify as not thinking like an economist, however. Law and economics does not engage in the parsing of a particular statute's legislative history. It does not compare the facts and language of one case and another to decide whether the two are "really consistent." It does not rely on judgment calls unsupported by a theoretical framework about what is good and bad policy.

Economic analysis of law explores the consequences of alternative legal rules. To examine the consequences of legal rules, we need (at least) some theory of what motivates the behavior that the rule seeks to regulate and of how the targets of the rule will adapt their future behavior to the rule. An economic analysis need not answer both questions, however, to be considered first-rate. For example, an analysis that offers a persuasive explanation of why creditors take

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security interests in chattels will be a useful contribution to our understanding of commercial law, even if it leaves to others the application of its insights to particular legal issues. Thus the criticism that a particular exercise of economic analysis does not "solve the problem" is inapt, just as would be the criticism of medical research that the results standing alone will not cure cancer—if the research carries us further down the road to a cure, then it is a success.

In the discussion that follows, I identify directions that the economic analyses of labor law issues have taken: analyses of market models of what unions do, bargaining theory, economic stories, rule precision, and empirical observations. While I sometimes offer citations to illustrate scholarship, this is not an attempt to identify the best and the brightest of labor law and economics scholarship.

Market Model Analyses

A policy analysis of labor law issues is more difficult if one has no theory of what unions do. My guess is that it is the absence of such theories that has led some labor law scholars to rely on the meaningless (see Scott and Leslie, 1988) "unequal bargaining power" slogan of worker-firm relations.

Theories of how labor markets work are prior to theories of what unions do in those markets. The labor market model most commonly found in the literature is the price theory model. In this model, the market acts as *if* workers and firms engage in a daily auction for positions and employees. Workers respond to wages and wage-like benefits (vacations, good lighting). Firms pay for marginal productivity. Workers with experience may carry more marginal productivity than inexperienced workers. Greatly expanded, this is the model found in most basic labor economics undergraduate texts. It has considerable descriptive power.

A second model is the internal labor market model. This model describes firms as reacting as best they can to formidable problems of measuring the marginal productivity of workers, who work in teams. Workers respond to relative wages (how their treatment compares to that of their fellow workers) as or more often than they do to absolute wage levels. Many worker skills are unique to how a particular firm conducts its business, and acquisition of these firm-specific skills places the firm and the worker in a difficult bilateral monopoly, where the worker has unique value to the firm, but the value cannot be carried by the worker to another firm. Incumbency and seniority, not marginal productivity, govern.

Two models of what unions do correspond roughly to these labor market models. The standard model—the monopoly model—describes unions as monopolists of the labor supply. By facilitating anticompetitive cooperation among workers, unions drive up wages and benefits. The costs of this exercise of monopoly power are borne by customers and unemployed workers. While the model is technically nonnormative, the conventional judgment is that unions can be justified, if at all, only on distributional or political grounds.

Corresponding to the internal labor market model is the relational contract model of what unions do. In this model, unions act within an environment in which relative wages and working conditions are critical to workers, worker skills are often job- or firm-specific, it is difficult for firms to monitor cooperativeness, and workers are vulnerable to firm opportunism in end-game situations (e.g., as the worker nears the end of her career). While unions can rationalize relative wages and working conditions, encourage cooperation and skills acquisition, and thus benefit both workers and owners, they do not necessarily perform these functions. Although the firm finds itself in an internal labor market, the union may confine its activities to raising wages and working conditions and protecting the gains, i.e., the union acts as a monopolist.

Several examples suggest how these models have and can shed light on labor law issues. The best of the scholarship on labor antitrust law has worked within the confines of the price theory model to describe the impact on markets of a variety of union and firm tactics (Leslie, 1980; Meltzer, 1965; Winter, 1963). Second, the models have suggested why unions might negotiate restrictions on plant relocations and shutdowns (Wachter and Cohen, 1988). Last, I have used models to address questions of bargaining unit policy (Leslie, 1984).

No one has yet used economic analysis to explain why a union with monopoly power would seek to "preserve" bargaining unit work. Economic analysis of the behavior of firms suggests that there is only one monopoly profit to be made; and if a union is already earning that profit, why would it seek to "tie in" other job tasks? A satisfactory explanation might give direction to the question of whether work preservation ought to be condemned as a secondary boycott. Second, it may be that the rules respecting "successorship" in labor law bear an interesting relationship to the models. As a hypothesis, consider the proposition that if a union is a price theory monopolist, the successorship laws do not protect it in a sale of company assets, but if the union has acted as a relational contractor, it is protected.

Freeman and Medoff (1984) first suggested a third model of what unions do: collective voice. The model has been expanded to cover a variety of collective goals in the work place. In this model, unions reduce the coordination problems that lead to the underproduction of collective goods (goods that when secured for some, will be enjoyed by others as well). The model is helpful in considering bargaining unit policy, and by applying some of the monitoring and bonding analysis of managerial behavior, a tentative explanation of the "at will" employment phenomenon (nonunion workers seldom negotiate for "good cause" protection, while union workers always do) has been set out (Leslie, 1984). The application of the model to union security devices has been familiar for some time (Olson, 1965).

Bargaining Theory Model

Some labor law rules are designed to police behavior and cannot be altered by managers and unions. The rules of secondary boycotts, labor antitrust, and representation election conduct are examples. Other (most?) labor law rules are gap-fillers: they can be varied or waived by the parties and apply only when the parties have tailor-made a term. Examples include when a grievance can be carried to arbitration, whether and subject to what conditions the parties will engage in multiemployer bargaining, and whether it is a breach of contract to engage in a sympathy strike. If labor and management could bargain around gap-filling legal rules costlessly, then the content of the rule would be irrelevant. Indeed, if the bargaining is *costless*, the rule-maker could announce that each case would be decided by a flip of the coin, knowing that the parties would tailor-make their own rule and that the coin would never have to be flipped.

No one argues that labor bargaining is costless, but there is disagreement on what initial assumption ought to be made about the magnitude of transactions costs in labor bargaining. If transactions costs are surmountable, adopting the legal rule that the majority of labor bargainers would reach if they bargained over the issue will save those majoritarian bargainers the costs of crafting a tailor-made rule. The savings in bargaining costs will be smaller if the opposite legal rule is adopted because only the idiosyncratic will be able to avoid tailor-making a rule.

If transactions costs are prohibitive, a different rationale is required for concluding that the legal rule ought to be adopted that matches what the majority of bargainers would adopt if transactions costs were lower. In the case of prohibitive transactions costs, an economic rationale for "replicating the hypothetical bargaining" is unavailable, and other philosophical justifications must be sought (see Coleman, 1989).

Professor Stewart Schwab's (1987) assumption is that bargaining costs in labor are low relative to other bargaining contexts, and his article spins out the implications of that assumption for the content of legal rules. My approach has been to take seriously the casual comments of bargainers, such as "unions never give anything back," and to assume that transactions costs in labor bargaining are substantial. My article (Leslie, 1989) speculates about the nature of those transactions costs.

The bargaining theory approach to legal rules is either critical to an understanding of the consequences of labor law rules, or it is irrelevant because we do not know whether and what transactions costs are high or low. Two research agenda suggest themselves. The first is to consider whether the legal rules can be drafted in such a way as to reduce transactions costs. The second is to devise ways of testing empirically whether there are substantial transactions costs in labor bargaining.

Economic Stories

The next analytical agenda is of a different kind. Whether transactions costs are high or low, the choice of the "best" legal rule may be dictated by what outcome we think most parties would choose if they bargained over a particular issue in advance. Economic analysis of legal issues in subjects of law other than labor seeks to identify that hypothetical bargain by making plausible assumptions about parties' motives—what they seek to accomplish, how they respond to risk, what they consider to be "strategic behavior"—and by telling a story that predicts the bargain.

Take an example from contracts. Seller, a middleman, contracts to deliver "1.5 million gallons of molasses of the usual run from the National Sugar Refinery, Yonkers, N.Y." to buyer at a fixed price. Seller fails to deliver all the molasses because the output of the Yonkers Refinery was less than expected, and the refinery did not fill the seller's order. Is the contract discharged?

An economic analysis looks for a plausible story about how such a buyer and seller would have contracted for the risk of inadequate refinery output, had they foreseen the risk and contracted in advance. Assuming profit-maximizing motives and risk neutrality, it is in the interest of both parties to put the risk on the party who can bear it most cheaply. A risk is measured by the probability of its occurrence times the impact of the occurrence. Here the impact of the occurrence is known to both parties: If the Yonkers Refinery produces too little molasses, buyer will have to purchase substitute molasses of similar quality, perhaps at a higher price. The most probable story is that the seller is better able to reduce the risk that the contingency will occur by contracting with the Yonkers Refinery in advance either for a promise that the refinery will maintain current production levels or that whatever molasses is produced will be allocated to this seller (or he might contract for an alternative supply with an alternative refinery). Taking precautions against the risk, including insurance, is cheaper for the middleman—that would seem to be why the buyer is dealing through a middleman rather than buying directly from the refinery.

I count this as economic analysis. It makes assumptions about behavior that are "economic," and it looks to the prospective effects of a legal gap-filler that specifies (in the face of a silent agreement) whether reduced output by the refinery will discharge the seller's obligation. It may be that there is a more probable story; if so, it is the execution of the analysis, not the form, that is at fault.

This is the style of economic analysis that is familiar in other fields, but is late coming to labor law. It may be more difficult in labor law. In contracts we assume that the parties have a mutual interest in maximizing the gains from trades (by allocating risks to the most efficient risk-bearer, for example); in labor bargaining the parties' motives may be more complex and may vary with the context. The economic models of what unions do are obviously relevant to this kind of inquiry. I tell one such story in a forthcoming article about multiemployer bargaining (Leslie, 1988).

Rule Precision Analyses

Legal rules can be placed on a continuum from the precise to the multifactored (Ehrlich and Posner, 1974; Leslie, 1989). The most precise rule is one that turns on one, easily determined fact. When a rule turns on many facts, which have to be prioritized, and when parties have difficulty predicting what facts will be found, the rule becomes multifactored.

Both precise and multifactored legal rules are overinclusive and underinclusive, but for different reasons. A precise rule is, by definition, predictable to the parties to which it applies. But because the precise rule ignores relevant facts, the rule "captures" (e.g., declares conduct to be a secondary boycott or a refusal to bargain) conduct that a fuller inquiry would reveal ought not to be captured (overinclusiveness); and it fails to capture conduct that a fuller inquiry reveals ought to be captured (underinclusiveness). The multifactored rule is overinclusive and underinclusive because the parties cannot predict in advance what facts will be found nor how they will be prioritized by the decision-maker—thus some conduct is overdeterred and other conduct is underdeterred.

Labor law analysis needs to use these insights more often. For some conduct, the danger of overinclusiveness and underinclusiveness produced by ignoring "relevant" facts is the more serious; for other conduct, the greater danger is that parties will seriously mispredict future outcomes. Where current actions are more important as a matter of policy than is later liability, the predictability and speed of determination of a precise rule may be a critical advantage. Perhaps the labor law rule covering successorship is an example of a precise rule (did a majority of the "successor's" employees work for the predecessor?) where the costs of unpredictability are great because *ex post* remedies are difficult to fashion. The multifactored rules covering employer refusals to bargain in good faith may be subject to criticism by similar reasoning. (In the latter example especially, I do not claim that "economic" analysis produces wholly different insights from more traditional policy analysis, but it holds the promise of ordering the discussion more efficiently.)

Empirical Analyses

Empirical studies are useful to labor law analysis if the study is driven by the right question. Thus a detailed study of how a particular set of complicated negotiations were conducted in the steel industry in 1978 may have many valuable uses, but it is difficult to find a labor law policy analysis where such a study has been demonstrably helpful.

It might be difficult to agree on what examples of empirical analysis count as "economic." Clark's (1980) study of the cement industry and the question of whether unions increase productivity could have been conducted by an academic in one of several fields, but it was in fact conducted by an economist and is thought of as economics. I see the analysis of empirical data by Paul Weiler on the question of comparable worth (Weiler, 1986) and on the labor board's procedures and remedies (Weiler, 1983) as economic, but I would have no objection if others put a different label on it. Empirical analyses of what unions do is not recent (see Haber and Levenson, 1956); but labor law gives it too little attention. If greater numbers of PhD economists are coming to law school than have come in previous years, as is my guess, perhaps empirical work will increase.

There are two other sorts of empirical work that have appeared in labor law, but only infrequently. Getman, Goldberg, and Herman (1976) collected data and conducted interviews respecting the effect of campaign tactics on representation elections, and became a cottage industry. I doubt that they would describe their research as economic. Stuart Schwab (1988) had law students negotiate mock collective bargaining agreements to see if alternate placements of legal entitlements had allocative and distributional effects. I suspect that if asked to label that research, he would call it economic. Schwab's technique has a noble history in the field of social psychology.

Predictions

It is hard to predict the future of scholarly inquiry, and especially difficult in labor law. Unions operate in the marketplace and so do firms and their managers. Economic analysis of firm and managerial behavior—antitrust, bankruptcy, corporations, mergers and acquisitions, takeovers, commercial law—dominates the best legal literature, but this has occurred only in the past 10 to 20 years. It has hardly touched labor law, yet in my view it is the most powerful set of analytical tools available. If it comes to labor law scholarship as it has to other fields, it will also have an impact on the practice of law—much as the economics of firm behavior has had an impact on the practice of antitrust law.

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The Economics Invasion of Labor Law Scholarship

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The invasion of economic analysis into law schools is hardly new. Richard Posner's treatise is in its third edition, a nonexhaustive 1984 bibliography lists some 700 law and economics articles (Goetz, 1984) and is already dated, and teaching materials in most legal subjects are chock full of references to the economic approach. But labor law scholarship—particularly scholarship examining the National Labor Relations Act (NLRA) and other laws regulating unions—has not yet been overrun. Douglas Leslie made an early beachhead, and work by Campbell, Dripps, Schwab, Wachter, and others secured the immediate territory. The Chicago crowd has held a symposium on the economics of labor law. And Leslie has even added economic analysis to the second edition of his Labor Law casebook, a clear sign of entrenchment.

What explains the recent invasion of economic analysis into labor law scholarship? Or perhaps the question is better put, why was the invasion so long delayed? True, the "new" law and economics started in private law (largely common law) areas like tort and contract, and labor law is a statutory, public law field. But economic analysis long ago expanded its reach to public law areas ranging from criminal law to corporate law to administrative law. And in some ways, economic analysis of labor laws—which regulate explicit markets—would seem natural ground for an early takeover. After all, labor economists and industrial relations specialists have long studied unions and collective bargaining. But, as Richard Posner observed as late as 1984, "despite abundant opportunity, there has been relatively little writing in an economic vein about the particulars of labor law, especially—and especially surprisingly—of labor law as I am narrowly defining it [to mean the NLRA]."

A major reason for the delay has been the difficulty in finding a common set of reference points for traditional labor law scholars and

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those inclined to an economic approach. Economists' traditional concern with efficiency seems at odds with a statute that protects the monopoly position of unions. Nevertheless, common reference points have begun to be identified.

One fruitful avenue of the economics approach is to translate into an economics framework the traditional language that lawyers use in labor law litigation. This translation is a familiar method of the economics invasion in other areas of law. In tort law, for example, economics analysis has given terms like the "reasonable person" standard of negligence an efficiency spin—a person acts reasonably when the marginal benefits of the act exceed its marginal costs. Similarly in contract law, economics analysts have sharpened the meaning of "good faith." The aim is not to change the legal meaning, but to find its deeper connections and synthesize seemingly separate issues into a single framework.

Industrial Peace and Efficiency

The ever-present buzzword of labor lawyers is "industrial peace." The Senate Report explaining the 1935 Wagner Act emphasized its primacy ("The first objective of the bill is industrial peace"), and Board and court opinions have used it as the prime policy argument ever since. Any labor law position that can be couched in terms of industrial peace is likely to be a winner, unless (as often happens) it meets a counter argument about industrial peace. An economics invasion cannot gain much headway until it can place industrial peace within its framework. Conversely, labor law would welcome the invasion if economics could import some meaning into the phrase, for "industrial peace" is so overused as to become a meaningless platitude. It is as amorphous a principle as "reasonable person" in tort law or "good faith" in contract law was before the economics invasion of those fields.

A natural move for an economics analyst might be to equate industrial peace with efficiency. Can this be done? A labor lawyer might initially characterize industrial peace as tranquil relations between labor and management. More concretely, industrial peace may be the absence of strikes. Certainly, reducing strikes has been a major goal of labor law. But labor law has never sought to prevent all strikes; indeed, Section 13 of the NLRA specifically preserves and protects the right to strike. In urging industrial peace, then, Congress had a broader aim than simply limiting strikes. Ultimately, Congress desired to maintain a capitalist economy and to promote smooth and efficient commerce. It determined that optimal labor policy would leave labor relations to private collective bargaining between labor and management.

Protected and promoted by the national government, collective bargaining is intended to prevent fundamental, perhaps violent, upheaval in our industrial system. Undoubtedly strikes will occur because they are a necessary element of private collective bargaining. But a system in which private parties write their own contracts in accordance with their private interests will also promote the free flow of resources to those who value them most highly. Putting resources to their most valued use is the essence of an efficient economy. It thus seems natural to equate the goal of industrial peace with the goal of an efficient economy where capital and labor flow freely.

One critique of this equation of industrial peace and efficiency might come from economists who emphasize the inefficient monopoly results of unions. How could a law that promotes unions, they might ask, be taken to have a first principle of efficiency/industrial peace? A possible reply comes from other economists who emphasize a second, efficiency face of unions, either as countervailing powers against monopsonistic employers (see Lipsey and Steiner, 1984), or as institutions that solve collective goods problems in the workplace (e.g., Freeman and Medoff, 1984).

Even assuming that unions are inefficient, however, one could view Congress as having made a metadecision about efficiency in creating the labor laws: our free-market system would not have survived without collective bargaining to channel the demands of workers for a larger role in the industrial life of our economy. Congress could then be seen as desiring efficient labor markets constrained by the existence of unions.

I dramatically oversimplify labor law by claiming that all labor law rules are designed to promote industrial peace and thereby efficiency. Labor law has other, nonefficiency principles. Proponents of the original Wagner Act emphasized that collective bargaining would also further industrial democracy, so that workers could have a voice in controlling their working life. The Taft-Hartley amendments emphasized the freedom of workers to reject collective bargaining. But these alternate societal goals have been overshadowed by the concern for industrial peace. More important, perhaps, are distributional principles within labor law—principles that directly favor labor or management, and only secondarily promote a societal goal like industrial peace. Labor law has two major distributional principles, pointing in opposite directions. One goal of labor law is to equalize the bargaining power of unions with management; an opposing principle emphasizes that labor law must maintain management prerogatives over decisions at the core of entrepreneurial control.

In sum, labor law has a prime principle of industrial peace, that economists might equate with the goal of efficiency, and distributional principles as well. The Coase Theorem, the centerpiece of law and economics scholarship, can help structure our thinking about the tradeoffs between efficiency and distribution.

Collective Bargaining and the Coase Theorem

The Coase Theorem (see Coase, 1960) asserts that, under low transaction costs, initial legal entitlements do not affect the efficiency of outcomes, because parties can bargain around inefficient rules. Where the entitlement finally rests depends on which side values it more highly, not on which side the law granted the entitlement to initially. The Coase Theorem recognizes, however, that initial entitlements may affect the distribution of wealth between the parties. The Coase Theorem can give insight into the relationship among the basic principles of labor law. Because efficiency is linked to industrial peace, initial legal entitlements cannot affect industrial peace in cases where the Coase Theorem applies. Arguments based on industrial peace are therefore irrelevant in this class of cases. Legal entitlements can affect distribution, however. Thus distributive arguments, such as the desire to equalize bargaining power or the desire to preserve management prerogatives, are relevant to cases covered by the Coase Theorem.

Potentially, the Coase Theorem applies to (therefore making industrial-peace arguments irrelevant in) all cases where the parties can bargain away benefits the law provides one side or the other. The class of cases includes all situations where unions can waive bargaining rights or where labor law rules establish mere rebuttable presumptions for construing contracts. Examples range from a Supreme Court decision holding that a company commits an unfair labor practice for selectively disciplining union officers after a wildcat strike (but noting that the collective bargaining contract could explicitly sanction such discipline), to the holding that an individual employee's assertion of a collective bargaining right is concerted activity under NLRA Section 7 (but noting the contract could limit methods of asserting rights), to a recent Board decision interpreting a no-strike clause to include a promise not to engage in sympathy strikes (unless the clause explicitly allows such strikes).

The Coase Theorem is thus useful in suggesting connections between cases that labor lawyers have treated as quite distinct. The finding of connections has been a major function of the economic approach to law generally, and the economic approach to labor law seems helpful here as well.

Problems of the Coase Theorem

One should not unhesitatingly apply the Coase Theorem to collective bargaining. A major problem—emphasized by Coase himself—is that transaction costs may prevent efficient bargains. I have argued, however, that transaction costs may be lower in labor bargaining than in other areas, particularly because the Labor Board supervises, under Sections 8a(5) and 8d of the NLRA, the good faith bargaining of the parties (Schwab, 1987).

Even if transaction costs hamper efficient collective bargaining, the Coase Theorem can structure our thinking about labor law. The Theorem suggests that, when transaction costs are high, initial legal entitlements will affect the efficiency of final results, and thus industrial-peace arguments are relevant. A tradeoff may exist, then, between furthering industrial peace and furthering the distributive goals of labor law.

Bargaining Models and Labor Law

The Coase Theorem paints a rosy picture of bargaining outcomes, without presenting a clear model of the bargaining process. One question, for example, is whether a waivable entitlement or presumption increases the bargaining power of the nominal holder. In competitive markets, a waivable entitlement will not benefit the nominal holder. Under competition, price equals cost. The nominal entitlement holder gains nothing (or loses nothing) by waiving the entitlement because costs have not changed. For example, suppose labor law presumes that workers cannot be fired without just cause, unless the individual contract specifies otherwise (remember we are examining the competitive, nonunion labor market). This presumption will not help workers. If the cost to employers of this clause exceeds the benefits to workers, and transaction costs are low, workers will waive the presumption. The marginal revenue product of workers has not changed, and thus their wage should not change. Workers are not made better off from the presumption.

Collective bargaining does not occur in a competitive market, but in situations of bilateral monopoly. In these situations, favorable legal entitlements, even if waivable, may enhance the bargaining power of the holder. Initial legal entitlements force the nonholder to put the issue on the table. This act reveals that the nonholder thinks the item is important, and reduces the chances of obtaining the item at a low price. Thus, even if parties generally trade entitlements to the highest valued user, the law affects how much the other side will pay for it. Some experimental evidence suggests that this may occur in labor bargaining (see Schwab, 1988).

The Future of the Economics Invasion

The economics approach has substantial untapped potential for understanding our labor laws. Exploring the effects on collective bargaining of waivable rights could lead to a new role for unions. Much labor legislation, such as OSHA and ERISA, is mandatory and global, applying to unionized and nonunionized workers in all plants and industries. One potential role for unions is to waive statutory rights when local conditions keep the national norm from being in the workers' best interest. This new role of unions would lessen the hostility of firms to unions, because unions could substantially increase efficiency by tailoring statutory standards to local conditions. Unions would not waive these rights unless their workers would benefit from the waiver. Before one could seriously advocate this role for unions, however, more study must be done on the benefits waivable legal entitlements give to the holder. Further, one must examine how well unions represent the interests of their members. The useful literature on worker democracy could perhaps be supplemented by a careful inquiry into the principal-agent problem as it applies to union members and the leaders who make the decisions.

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An Internal Labor Market Approach to Labor Law: Does Labor Law Promote Efficient Contracting?*

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The National Labor Relations Act (NLRA) is a statute in search of a theory. Recent decisions by the Supreme Court and the National Labor Relations Board (NLRB) have led many labor law scholars to reconsider the purposes of the statute and the extent to which the legal doctrines that have developed over the last half-century further these purposes in an internally consistent way.

Traditional labor law scholars have interpreted the language and intent of the NLRA as an attempt to foster industrial peace and industrial democracy. Historically, this view finds much support. The strikes and related industrial violence of the 1930s were of great concern to lawmakers, and the labor policy of that period was viewed as a mechanism to restore industrial peace. This policy included an attempt to "democratize" the workplace by giving workers through unions a collective voice in determining their wages and working conditions. Yet the ability of these traditional theories to explain or anticipate the development of labor law doctrine has decreased over time as the statute has matured and labor relations problems have increased in complexity. As a result, many traditional scholars have come to embrace the view of James Atleson (1983), who concluded in a recent study: "When most of the major [NLRB and Supreme Court]

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decisions are seen as aberrant . . . it is time to face the inability of the received wisdom to predict or justify the decisions and directly confront the values upon which these doctrines are based."

An alternative model of labor law has recently been advanced by the "Chicago School" of law and economics. Relying on empirical findings that collective bargaining allows unions to raise wages above competitive levels, Richard Posner (1985) concludes that the major purpose of labor law is to enable workers to cartelize the labor market. The Chicago School recognizes that not all labor law rules further cartelization. It interprets the law as balancing the workers' right to cartelize the labor market against the competing demands of firms. However, since the model does not explain the balancing process, it cannot predict how the Board and Court will resolve future economic conflicts.

Our purpose is to offer a third interpretation of the NLRA that both describes past decisions and predicts future decisions under the NLRA in a manner that is consistent with the goals of the statute. Specifically, we argue that key NLRB and court decisions can be reconciled by interpreting them as being motivated by, or at least consistent with, economic efficiency.[1] The essence of our model is that labor law, to a significant extent, deals with the market failures or high transaction costs that exist in the internal labor market, or the labor market inside firms. We do not claim to provide a single comprehensive explanation for all aspects of the law; a complete model must also draw from the cartel and traditional models. Nevertheless, we believe that the efficiency model offers the most solid theoretical foundation on which to rest past decisions and to build future interpretations of the NLRA.

In Section I we sketch the efficiency model. In Sections II and III we compare this model with the cartelization theory and the traditional legal scholarship of industrial peace and industrial democracy in two key areas of labor law. Section IV concludes with a comment on the statutory intent of the NLRA.

I.

The distinction recognized in the economics literature between the external and internal labor markets is critical to our analysis. In the external market, jobless workers seeking to join the labor force, or employed workers seeking to change jobs, search among different

[1] In so doing, we draw from our earlier work, Wachter and Cohen (1988).

firms for the best array of wages and working conditions. Meanwhile, firms with vacancies to fill search among workers for those best able to fill the job at the lowest wage.

The economics literature has long argued that this external labor market is highly efficient. In this market there are large numbers of parties on both the demand (firms) and supply (workers) sides. The result is that wages adjust to narrow any imbalance between the supply of and demand for workers. Although market outcomes may be judged as distributionally unsatisfactory, any governmental intervention in this market is likely to decrease rather than to enhance efficiency.

The external labor market lies at the core of the cartelization theory, under which labor law is viewed as enabling unions to engage in noncompetitive rent-seeking. A claim that labor law promotes efficiency in this market would require demonstrating that external markets are monopsonistic. However, there is little evidence of monopsony in today's external labor market and, in light of the great increases in worker and firm mobility in the external market, no serious claims are made to the contrary.

In contrast, the internal labor market (ILM), which involves ongoing employment relationships, is fraught with potential market failures.[2] ILMs develop as technological considerations require firm-specific investments and as asymmetric information necessitates the monitoring of work effort. Workers make sunk investments in training and monitoring by accepting deferred compensation. At the same time the firm makes sunk investments in shared training costs and in intangibles such as reputation in the labor market. These sunk investments lead to a bilateral monopoly in which both sides have the potential to behave opportunistically by expropriating the other side's expected returns on its investments.

The parties have incentives to respond to the market failures in the ILM through efficient contracting. An efficient contract is one that maximizes the joint profits of the parties and minimizes the potential for opportunistic behavior. Although the parties may write such contracts on their own, high transaction costs may prevent such a result. The labor law of the NLRA can be interpreted as an attempt to foster efficient contracting in the ILM.

[2] Review articles on the economics of the internal labor market include Parsons (1986), Rosen (1985), and Wachter and Wright (1988).

II.

The doctrine of mandatory subjects of bargaining provides an instructive vehicle for comparing the alternative models. The NLRA requires the firm and the union to bargain over "wages, hours, and other terms and conditions of employment." In applying that requirement to various economic decisions by the firm, the NLRB in *Otis Elevator* developed a rule that treats as mandatory subjects those decisions that "turn on labor costs." Conversely, those decisions that primarily concern the "scope and direction" of a business are not mandatory. Bargaining over such topics is "permissive," but the firm can make such decisions unilaterally and the union cannot strike if it disagrees. These rules derive from the Supreme Court's decision in *Fibreboard*, which held that a firm committed an unfair labor practice when it subcontracted work without bargaining to impasse, and in *First National Maintenance* which held that a firm could "partially close" its operation and lay off workers without bargaining over the decision.

If the courts followed the industrial democracy model, one would expect that they would tilt in favor of a broad interpretation of mandatory subjects that would include decisions involving capital. Although *Fibreboard* arguably supported such a broad interpretation, *First National Maintenance* rejected that view. Traditional scholars therefore find these two cases hard to reconcile under their theory of the NLRA. For example, Clyde Summers (1979) has observed, "Decisions to continue subcontracting, to close one of several plants, to build a new plant, . . . are all decisions which may be more important to the employees than wages or hours of work."

The cartelization model has somewhat greater success in reconciling these cases. *Fibreboard* fits the cartelization theory because if a labor union cartel's primary job is setting the wage above competitive levels, then giving management the unilateral right to subcontract work to low-wage, nonunion workers would defeat the purposes of the cartel. The cartelization theorists would explain *First National Maintenance* by reference to the fact that cartels are self-limiting. Because monopoly rents cause a flow of resources away from the cartel, they could argue that the law needs to balance the ability of the cartel to set wages against the ability of the firm to transfer resources away from the cartel.

We have argued in a separate article that the current doctrine of mandatory subjects of bargaining largely comports with rules that the economic literature on implicit contracts has shown to have important efficiency aspects. Although the argument is too complex to discuss in detail, the main features are outlined here. In the ILM, the firm has informational advantages in determining its optimal scale and scope of operations as dictated by product market conditions and its production function. Because bargaining and information-sharing generate transaction costs, efficiency is ordinarily promoted when the firm is given an entitlement to set its scale and scope of operation. On the other hand, if the firm also has a unilateral entitlement to set wages, the firm has an incentive to misrepresent product market conditions in order to increase its profits through opportunistic wage cutting.

An efficient internal labor market contract allows a firm to reduce its labor costs unilaterally by cutting employment along a prearranged seniority schedule, but not by cutting wage rates. This adjustment forces the firm to take a sunk cost loss of forgone output and revenue and lost investments in junior workers and physical capital. Such a contract thus has self-enforcing properties: if a firm must take a sunk cost loss in order to reduce total labor costs, it would be costly to the firm to overstate any decline in product market conditions.

The legal rules governing mandatory subjects mimic this efficient contract. The rules save on transaction costs while reducing the potential for opportunistic behavior. The subcontracting in *Fibreboard* was the equivalent of a wage cut because it involved the replacement of high-wage union workers with low-wage nonunion workers to do the same work at the same place of employment. The decision to subcontract does not involve a sunk cost loss since output and hence revenue do not have to be reduced. Allowing firms to institute this type of subcontracting unilaterally would thus not be consistent with efficient contracting. On the other hand, the partial closure in *First National Maintenance* involved a layoff and hence a decision concerning its scale of operations. Unilateral layoffs that follow a seniority schedule are consistent with efficient contracting rules under which the firm's sunk cost loss, in terms of forgone revenue and lost investments in junior workers, varies directly with the number of layoffs.[3]

[3] The Board's labor cost test was recently rejected by the Court of Appeals for the Fourth Circuit in *Arrow Automotive*. We agree with the court that the Board's application of the labor cost test in *Arrow* is problematic; however, we have offered a way to interpret the labor cost test in a manner consistent with the efficiency model in Wachter and Cohen (1988).

III.

Although the mandatory subjects doctrine is of relatively recent vintage, a second area in which the theories may be compared has been well developed for many years. This area involves the use of "economic weapons," that is, the scope of the union's rights to engage in concerted activity and management's rights to counter such activity. A key case in this area is *Mackay Radio*, in which the Supreme Court held that an employer has the right to replace workers striking for economic (as opposed to unfair labor practice) reasons with new workers, and has the right to give those replacement workers the first claim to jobs even after the strike is resolved.

Advocates of the industrial democracy approach viewed this early case as the first unexplained deviation from their vision of the NLRA. It provided employers not only with a crucial weapon to defeat a strike, but also with the first step in ousting the union entirely, since replacements were later given the right to vote in a decertification election. Yet *Mackay Radio* has not been watered down by subsequent decisions or modified by the subsequent statutory amendments to the NLRA. Hence, although many traditional scholars view that doctrine as inconsistent with the original statute, it clearly expresses the Court's and arguably Congress's interpretation of the statute.

It is also difficult to explain *Mackay Radio* under the cartelization model. If the central purpose of the NLRA is to enable unions to achieve noncompetitive wages, then any limitation on concerted activity by unions strikes at the heart of that purpose. Moreover, any attempt to justify the decision on the basis of a balancing test is incomplete absent the ability to predict how the balancing would operate in future cases.

However, the line drawn by *Mackay Radio* is consistent with the efficiency model, since the rule helps deter opportunistic behavior by both sides in the ILM. Recall that in the ILM, sunk investments by both parties create the potential for opportunistic behavior. Suppose that a strike occurs because a firm with monopsony power in the ILM has demanded that the workers agree to lower future wage rates, that is, a lower expected return on their sunk investments. In this case, striking workers would have little to fear from replacement workers since these workers would not accept jobs that offer a stream of future wages below competitive levels. Alternatively, any replacement workers who accepted jobs would be reluctant to make sunk investments in a firm that had developed a reputation for opportunistic behavior.

On the other hand, suppose that the union is striking to achieve or to preserve a monopoly wage premium. The higher the premium, the greater the attractiveness of those jobs to replacement workers. In this case, the right to hire replacement workers is an important weapon. Nonstrikers would find such jobs better than those they could obtain elsewhere; moreover, the wage premium would compensate them for the risk and nonpecuniary costs associated with replacing striking workers.

The efficiency model can also explain the Supreme Court's rules governing the firm's dealing with replacement workers. In *Erie Resistor* the Court held that while the firm could offer replacement workers a permanent job, it could not offer them super-seniority for working during the strike. Absent such limitations, the potential for opportunistic behavior would be great. First, the firm would be able to attract replacement workers by offering them greater long-term benefits than striking workers. This is equivalent to offering higher expected future wages, thus undermining the efficient division of *Mackay Radio*. Second, after the strike, the firm that rehired union workers owed deferred compensation would later have an incentive to lay off those workers who had made substantial sunk investments. This effect would undo the efficiency properties of the *Fibreboard–First National Maintenance* dichotomy. Hence, *Erie Resistor* is necessary to preserve efficient contracting in the ILM.

IV.

In closing, we would like to touch on the issue of the original intent of the NLRA. Even if the efficiency model has greater explanatory power than the alternative models, it can have no normative force unless it is at least consistent with the statutory intent of Congress. Without going far into the issue, we are not prepared to surrender to the view that the statutory intent to cartelize the labor market or to provide for industrial democracy has been thwarted by court interpretations. A strong argument can be made that the intent of the drafters of the NLRA was to remedy difficulties in internal labor markets which, at the time, were relatively new institutions in terms of their size and scope. Workers' implicit contracts may well have been breached during the Great Depression as firms used the excess supply of labor in the external market to strengthen their own weakening financial position. The resulting strikes and labor unrest posed an economic threat to the joint profits of the parties.

Faced with these problems, the drafters of the NLRA could have focused their efforts on significantly shifting property right entitlements to unions in order to materially alter external labor market conditions. Such an approach would have been consistent with the traditional and cartelization models and inconsistent with the efficiency model. But Congress did not take that approach. Instead, the drafters concentrated on market failures in the bargaining process rather than on outcomes. Moreover, the drafters could have, but did not, seek to regulate competition in the external market, hence allowing competition between union and nonunion alternatives.

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DISCUSSION

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I generally applaud the work of people like Mike Wachter, Doug Leslie, and Stewart Schwab in their effort to introduce some of the insights of the law and economics literature into the study of labor law. Labor lawyers, particularly academic labor lawyers, tend to be obsessed with doctrine and normative issues. In a way we have become secular talmudists. However, in light of the trends in other areas of legal scholarship, it is clear that we are going to have to think harder about the functioning of labor markets and the role of unions if scholarship is going to be relevant to the formulation of labor policy in years to come.

As an initial matter, however, I think it is important to be precise about what we mean by "law and economics analysis." Otherwise, we risk overstating the implications of such analyses for labor policy "on the ground." There are at least five ways to think about the role of economic analysis in the study of labor law—four of which are noncontroversial, and a fifth claim which is considerably more questionable, and which I think informs a good deal of what is in the papers delivered today.

Facilitating the Assessment of Impact

One role for economic analysis which all would accept, even the most diehard of traditionalists, is to help assess the actual impact of legal institutions and rules. For example, if the goal of labor law is to redistribute wealth to the working class, we should want to know (1) whether collective bargaining produces a persistent union wage premium and (2) if so, the conditions under which such union premiums persist. Policy-makers should be alert, for example, to whether such premiums are purchased by declining employment levels or other costs. Such studies would give us a better understanding of the costs of pro-union density policies and raise questions as to

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whether redistributive objectives should be purchased by other, more direct means such as tax and spending measures.

For another example, the recent federal plant closing law would benefit from a similar empirical assessment. It may well be that burdening plant closings with mandatory notice requirements has impacts on capital investment decisions that, when fully understood, argue for different ameliorating mechanisms for communities affected by plant closings.

Offering a Better Understanding of What Unions and Collective Bargaining Do

The traditional economist's view of labor unions is that they function as wage monopolists, and that the ability of a union to maintain a union wage premium over time depends on its ability to eliminate competition over labor costs in a given product market. Unions are thus deemed a labor-cost generating mechanism which plays no socially useful role in competitive markets. We owe to Freeman and Medoff's book, *What Do Unions Do?*, and to people like Leslie and Wachter, the understanding that this account of the role of unions is incomplete, for it fails to recognize the beneficial role of unions in promoting the collective voice and deepening the internal labor market commitment of workers.

Such an alternative conception yields a more accurate cost-benefit picture to aid in the determination of social policy regarding unionization. Moreover, it raises questions about what sort of institutional arrangements will maximize the collective voice/relational contract benefits of union representation while dampening the wage monopoly costs. For example, we may wish to move closer to the Japanese model of enterprise unionism which promotes the union voice role by giving unions considerable institutional security, while at the same time confining the union's focus to the particular enterprise. Arguments for increased management disclosure of product market decisions may play differently under such a model than under the NLRA's adversarial approach.

Facilitate Analysis of Particular Labor Law Doctrines Which Are Concerned with Enabling Parties to Strike Deals Which Are in Their Joint Interest

A third, noncontroversial role for law and economics analysis is to facilitate analysis of particular labor law doctrines which are principally concerned with enabling parties to strike deals which are in their joint interest. Much of labor law doctrine is about the rules governing the bargaining process: the law is unconcerned with substantive outcomes, but it does wish to facilitate the making of agreements. Here there is a close fit between the goal of the statute and the conventional focus of law and economic analysis.

A good example would be the *Steelworker Trilogy* and the Supreme Court's other decisions in the labor arbitration area in which the Court can be said to have set up a number of background rules to minimize the transaction costs of collective contract-making. The Court has ruled that absent explicit language to the contrary, every collective agreement embodies an implicit no-strike promise regarding arbitrable disputes. Although unions understand that mid-term strikes over arbitrable issues undermine the arbitration process, they may be reluctant for internal political reasons to waive a right of largely symbolic value. The law steps in, however, to establish this term as the baseline, promoting the arbitration process and furthering the real preferences of the parties.

Such a perspective might be particularly useful in the current debate over whether there is a duty to bargain over major entrepreneurial decisions. If the objective here is to facilitate the reaching of agreements which transactions costs stymie (including some of the social psychological impediments present in particular collective bargaining environments), policy-makers might wish to require prior consultation but without importing the usual rules attending so-called "mandatory" bargaining decisions, such as *Truitt* disclosure, suspension of the decision until impasse, and the union's right to engage in collective economic pressures.

Identify the Purpose of the Particular Legal Rule

A fourth, again uncontroversial, role for law and economics analysis is to help the NLRB, courts, and policy-makers identify the particular purpose of the legal rule. Stewart Schwab, in his article on Coase and collective bargaining, argues that the legal rules over whether there is a duty to bargain over entrepreneurial decisions have nothing to do with the promotion of efficiency in Paretian terms. It does not matter, he maintains, where the legal entitlement is placed as long as it is a waivable entitlement, for the parties will bargain around the rule. Such rules, in his view, have only distributional consequences. Wachter and Cohen, in their University of Pennsylvania article, argue that in some circumstances, such rules deter parties from opportunistic behavior and hence such rules may help promote efficient internal labor market arrangements. Leslie, I believe, is somewhat more skeptical than Schwab about the low-transaction cost assumption of Coasian analysis when applied to collective bargaining settings. But however we come out on this dispute, it is clear that identifying the actual purpose of the rule promotes intelligent cost-benefit analysis and forces decision-makers and policy-makers to be more precise about what they are trying to accomplish.

Equating Paretian Efficiency with the Goals of the NLRA

The fifth, and I think problematic, claim for law and economics analysis is to argue that Paretian efficiency is the only, or predominant, goal of the NLRA statutory scheme. This is, as I understand it, a prescription for existing positive law rather than an idealized statute that economists would write.

This fifth claim is most evident in the writings of Richard Posner, Richard Epstein, and others of the Chicago School mold, who offer a particularly simplistic version because they assume away the problem of labor market failure. If labor markets indeed function like commodity markets, the entire statutory scheme should be scrapped. But the problems here are twofold: (1) Congress plainly thought there was a problem with the functioning of labor markets, and (2) even more salient, the microeconomic assumptions underlying this approach do not fit labor markets, as evidenced by the failure of this theory to explain major phenomena such as the persistence of unemployment and racial discrimination.

A more sophisticated version of this claim is offered by writers like Leslie and Wachter and Cohen, for they take seriously the story of labor market failure. Three steps are usually taken by such writers.

First, there is a severe discounting of the possibility of market failure in the operation of external labor markets. Witness, for example, Wachter and Cohen's statement that monopsony is not a significant problem.

Second, there is, correspondingly, a virtually exclusive focus on the possibility of failure in the operation of internal labor markets. Hence, Wachter and Cohen argue that labor law can help deter strategic behavior by employers who attempt to "cheat" on implicit relational contracts. And Leslie in his article on bargaining units argues that unions help reduce transaction costs that prevent employers from offering the kind of job security that would promote firm-specific investment in training and long-term job commitment.

Third, although these writers recognize that the labor laws might serve other goals, these other goals are shunted to the side. Schwab does this by equating the "industrial peace" objective with Paretian efficiency. Wachter and Cohen do this by maintaining that their view best *predicts* what courts and policy-makers will be doing.

There are several problems, in my view, with even this more sophisticated version of the efficiency claim, which I can only sketch at this point:

First, internal labor market considerations are not important in many employment settings, and this would seem particularly true of low-wage and high-turnover industries. This raises the paradox that legal protection of unions is justified under this approach where the law's intervention is perhaps least needed. Or, put differently, there is no justification under this view for legal protection of unions where at least Congress thought it was most needed.

Second, even on its own terms, the case has yet to be made out for legal intervention of the sort represented by the NLRA. For example, the law could just as easily (and at far less cost) reduce transaction costs by setting forth a job security/relational standard form contract backed by some adjudicative mechanism (whether arbitration or an administrative agency), which an employer and a "members' only" union could *opt* for when this was in their mutual interest.

The NLRA, however, does much more than provide such a standard form. For example, the law mandates—(a) exclusive bargaining rights rather than "members' only" unionism; (b) a political representation structure based on majority rule; (c) a legally enforceable duty to bargain; (d) limits on the use of particular economic weapons (e.g., *Erie Resistor*); (e) some nonwaivable rights (e.g., Sec. 8(a)(2) limitations on union involvement in firm management, Sec. 8(a)(5) scrutiny of one-sided agreements without arbitration); and (f) a legal right to pursue (free of antitrust laws) elimination of labor competition in a particular product market.

Ultimately, the efficiency claim cannot give a full account of the statutory scheme which—without entirely displacing market forces—sought to promote a collective representation option for workers irrespective of whether this was necessary to further Paretian efficiency.

Again, if the objective is to develop a theory of existing positive law, the efficiency theorist has essentially two choices—either (a) drop the insistence that efficiency in Paretian terms is the only or predominant goal of the statute and hence the only or predominant criterion for judging legal rules *or* (b) begin to take more seriously a more expansive notion of market failure resembling the "unequal bargaining power" premise, which the efficiency theorist rejected at the outset of the enterprise.

XI. ENTRE NOUS; COMPARING THE UNITED STATES EXPERIENCE WITH IR DEVELOPMENTS IN CANADA

Managerial Strategies in Canada and the U.S. in the 1980s*

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The 1980s have been marked by profound changes in U.S. industrial relations, largely stimulated by management. American employers have negotiated reductions in terms of collective agreements and sought to oust unions through a variety of means including movement of capital from union to nonunion sectors (Verma, 1985), human resource policies aimed at reducing worker propensity to unionize (Kochan, Katz, and McKersie, 1986; Verma and Kochan, 1985), and opposing certification elections through the use of consultants, unfair dismissals of union activists (Freeman, 1985) and other available legal means (Klein and Wanger, 1985). American employers generally relied upon economic arguments to justify their actions, though the long history of antiunion activities among American managers is well known.

There is a natural assumption that Canadian managers, given the similarities between the two countries, would follow policies similar to

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their American counterparts. U.S. firms own a large proportion of Canadian industry. The proximity and disparate populations of the two countries cause substantial American cultural and intellectual influences on Canada. For example, Canadian labor law was strongly influenced by the Wagner Act, and the development of trade unions in the two countries has also been closely linked. Collective bargaining is similar in both nations as well, emphasizing detailed regulation of workplace behavior. In recent years, however, divergences in the two countries' industrial relations systems have attracted increasing attention, mostly focused on differences in their labor movements (Meltz, 1985) or labor law (Weiler, 1983).

This literature does not address the influence of employers on the evaluation of the industrial relations system. Given the similarity of the two countries, one would expect Canadian employers to act much like their American counterparts, especially since Canadian firms often compete in the same markets with Americans, using similar technologies. However, this paper will show that recent management industrial relations practices in Canada differed substantially from those in the U.S., and it explores the underlying causes of the differing managerial approaches. These issues have both theoretical and practical implications for the U.S.

Canadian Management in the 1980s

In our study we examined managerial practices and initiatives at a number of unionized firms in key industrial sectors of the economy, including mining, basic steel, electrical equipment manufacturing, forest products, oil refining, and supermarkets, in Ontario, Quebec, Alberta, and British Columbia, using interviews with senior executives and secondary sources. The respondents reported on the measures their companies had taken to meet economic pressures arising from the recession of the early 1980s (Thompson and Verma, 1987).

Like their counterparts elsewhere, Canadian employers responded by cutting costs through layoffs and other traditional methods, including greater reliance on part-time workers. Their basic approach to labor relations was to work through the existing system of collective bargaining to deal with economic pressures. Three sets of policies were especially prominent: the decentralization of the labor relations functions, expansion of labor-management consultation, and improvement in the terms of collective agreements.

By international standards, bargaining structures in Canada are highly decentralized. During the 1980s further fragmentation occurred. Employers in the construction, supermarkets, meatpacking, pulp and paper, and trucking industries withdrew from employer associations or broke out of bargaining patterns. Several firms reported shifting greater responsibility for industrial relations decisions from the corporate to the plant level.

Formal programs of labor-management consultation concentrating on production, financial results, and the like were common initiatives, while employee involvement programs appeared infrequently (Betcherman and McMullen, 1987). Some provincial labor federations, such as those in British Columbia and Ontario, opposed such programs, though both labor and management in the oil refining industry have been enthusiastic about them (Cunningham and White, 1984). At the industry level, major employers and unions in automobiles, steel, forest products, and textiles formed joint committees to cooperate in common causes such as lobbying against American import restrictions, manpower adjustments, the development of new markets, and the like. In Newfoundland, the construction employers recently concluded a tripartite agreement with labor and government aimed at reviving a sagging business, including employer commitments to job security and union agreement to raise operational flexibility through multiskill trades.

Surveys of changes in the collective agreement at the establishment level reveal a process of continuous adjustment in Canada. One survey of 32 firms in British Columbia in 1985 found that 62 percent of the establishments had negotiated changes in work rules, such as those governing manpower assignment and work scheduling (Verma, 1986). A follow-up survey of 52 manufacturing plants was conducted for this study in 1987. Of this sample, 20 to 40 percent of the plants reported substantive changes in the agreement designed to provide greater flexibility in exchange for gains in income and job security.

Beyond these initiatives, what Canadian employers did *not* do was significant. Respondents reported little interest in displacing existing unions. Apart from such statements, there is other evidence of employer dealings with unions. Among the 11 jurisdictions in Canada, only the province of Alberta shows any steady increase in union-initiated unfair labor practices. By contrast, the number of ULPs filed by unions rose sharply in the U.S. (Freeman, 1985).

Underlying Causes

Apart from the decentralization of labor relations, Canadian management has not followed the American pattern of labor relations, despite other similarities between the two countries. According to one theory (Adams, 1981), management behavior is seen as a product of three forces: government action, labor philosophy and strategy, and managerial attitudes. The Adams model does not explicitly incorporate the environment, but its influence is implicitly recognized. Each of these is examined in turn.

Public Policy

Although the Canadian legal framework was greatly influenced by the Wagner Act, the predominance of provincial jurisdiction has facilitated numerous policy changes, and the two systems have evolved in different directions. For instance, very few of the elements in U.S. labor law introduced in the Taft-Hartley Act were adopted in Canada. The Canadian approach has been to bring negotiated arrangements between the parties within the law, so that prohibitions of strikes during the contract and requirements of grievance procedures are common statutory requirements in Canada. Moreover, it is difficult, if not impossible, for Canadian employers to replace strikers permanently during a labor dispute. Another important difference is in the area of enforcement. While enforcement by the NLRB in the U.S. has gradually tilted against labor (*Business Week*, 1984), most Canadian enforcement agencies have continued to provide strong deterrents for recalcitrant employers in the form of severe penalties such as quick reinstatements of dismissed employees and damage awards (Carter, 1976). These policies have been attributed to the existence of the social democratic New Democratic Party (NDP), whose social programs are often incorporated into the platforms of centrist political parties (Bruce, 1988).

The Labor Movement

The rate of union penetration in Canada is now approximately double the U.S. level. The continued strength of Canadian trade unions has been attributed to the labor movement's militancy, structure, and the desire and ability to organize (Rose and Chaison, 1985). Others have argued that the Canadian polity is rooted in group or communal values, while the American is characterized by the Lockean ideal of liberal individualism (Lipset, 1986). Whatever the reason for labor's numerical strength, Canadian unions engaged in a number of major strikes to enforce demands on crucial issues, such as pension improvements or contracting out. To these analyses one should add another salient feature of Canada: its geography.

Environmental Constraint: Geography

From a managerial point of view, an important difference between the two countries lies in the geographical distribution of wages and unionization. In the U.S., regions outside the Northeast and Midwest offer opportunities for employers to relocate in areas where wages are low and unionization weak. For instance, a manufacturer can move from Michigan or Ohio to the Carolinas and benefit from average wages 44–65 percent lower and a rate of unionization one-third as great and still be in close proximity to market centers. In Canada, two factors reduce the incentive for employers to relocate. First, the interprovincial variation in wages is smaller. Second, wage levels are not highly correlated with rates of unionization. Thus, some provinces with low unionization rates, such as Alberta or Prince Edward Island, are remote from large population centers or have high labor costs. Thus, the absence of low wage/low unionization regions like the American South has reduced employer incentives to escape unionization in Canada. In addition, resource industries, an important component of the Canadian economy, are by definition relatively immobile.

The Role of Managerial Strategies

The above discussion, if taken in isolation of the independent input of management, appears to suggest that Canadian managers have avoided (or accepted) unions to the extent that environmental constraints have permitted them. Such a deterministic view of management decision-making has been challenged both by organization theorists (Child, 1972) and industrial relations scholars (Kochan, Katz, and McKersie, 1986). It is important, therefore, to ask if Canadian management's conduct in this regard has been, at least in part, influenced by managerial choice and not solely by environmental constraints.

Economic conditions in the two countries in the 1980s were characterized by a deep recession, low inflation, and high unemployment. The average unemployment rate during 1980–1986 was higher in Canada (9.9 percent) than in the U.S. (7.9 percent). Canadian managers were thus able to operate during a strike. However, except for a handful of incidents, employers did not hire strikebreakers. Presumably most managers assessed the cost of this option to be greater than that of winning concessions through tough bargaining. Canadian managers responded by working within the existing collective bargaining system. A few managers publicly expressed their acceptance of the legitimate role of a union in the enterprise (Minville, 1982), despite a strike record in the 1970s that was extremely high by international standards. Apart from any economic gains from the workplace, Canadian employers were able to capitalize on their position vis-à-vis the labor movement to engage in cooperative measures with political or social goals through joint industry committees.

By contrast, in the U.S. management acted much differently. They justified their actions by pointing to the demands of the market. However, it is difficult to accept this argument in the face of the Canadian evidence. The foundations of American management's ability to operate outside collective bargaining were laid well before the onset of deregulation and foreign competition from Asia (Verma and Kochan, 1985; Kochan, Katz, and McKersie, 1986). It may be argued that the ability to avoid unions may have substantially reduced management's willingness to give collective bargaining a chance in the 1980s in the face of severe market pressures. On the other hand, a more constraining Canadian context may have taught management to work within collective bargaining.

In the long run, the distinction between managerial choice and environmental constraints may be illusive. The evidence from both countries suggests that environmental constraints shape managerial choice and vice versa. However, managerial choice appears to be derived from management attitudes and values which are independent of environmental constraints (Kochan, McKersie, and Cappelli, 1984). A good illustration of this can be found in the U.S. airline industry where the more profitable companies were more likely to seek concessions than were those in financial difficulty (Walsh, 1988). Managerial attitudes and choices themselves may be shaped by environmental constraints, but that is evident only in the long run.

Conclusion

Despite many similarities in the economy and society and a similar industrial relations system until the early 1960s, Canadian and American managements have responded very differently to the market pressures of the 1980s. While many U.S. managers worked to develop a parallel nonunion employment system, Canadian managers worked largely within collective bargaining to seek such changes that addressed market demands. This conduct of Canadian managers has been shaped by important environmental influences such as geography, the legal framework and its enforcement, and the strength of the labor movement. However, the evidence suggests that the independent choice and judgment of Canadian managers to opt for this approach has also been important. The example of these two countries suggests that managerial choice in industrial relations may be independent of environmental constraints, at least in the short run. In the long run, management attitudes and values which drive managerial choice may be shaped by environmental constraints. Further comparative research on managerial value systems in the two nations may shed light on this issue (see Thompson and Moore, 1975).

The analysis in this paper is not meant to suggest that Canadian managers have welcomed unions or that they generally accept independent employee representation as a desirable goal. In the long run the environment shapes management attitudes and defines the realm of feasible actions. In the short run, however, managerial choice within the feasible range is an independent input along with the environment. A positive feedback cycle for stabilizing the industrial relations system can be created only if sufficient environmental constraints can be brought to bear on management. Since the physical environment is harder to manipulate, it implies that the institutional environment must be constructed such that managerial energies are channeled in the desired direction. This analysis suggests that although managerial choices may be exerting their independent influence in the short run, the key policy variables are those that shape institutional constraints on management. Managerial choice has contributed to a decline of the collective bargaining system in the U.S. while it has had the opposite effect in Canada.

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The Drive for Autonomy by Canadian Auto Workers

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On December 10, 1984, the International Executive Board of the United Automobile Workers Union (UAW) took two votes. By a 24 to 1 margin the Board defeated a proposal by Canadian Director Robert White to give the Canadian region autonomy in collective bargaining with the major auto producers. Later the Board decided by a 17 to 7 margin to form a special committee to arrange for the secession of the Canadian locals and their 120,000 members from the international union. Thus was born the Canadian Auto Workers—Travailleurs Unis de l'Automobile Canada (CAW).

Despite the obvious importance of an independent CAW for the history of the Canadian labor movement and the bargaining power of the UAW (Katz, 1986), the split between the two unions has received relatively little attention in the labor relations literature. The purpose of this paper is to present a more detailed examination of some of the factors involved in the formation of the CAW. We focus on the evolution of trade union autonomy in Canada, on differences in bargaining power and strategy between the Canadian and American auto workers, and on the course of development of the CAW since its independence.

The "Canadianization" of the Labor Movement

Until very recently the development of the Canadian labor movement was closely linked to events in the United States. Except in Quebec, where a strong, independent labor movement was nurtured by the separate language and culture in that province and by the support of the Catholic church, Canadian trade unions were historically dominated by U.S.-based international unions (Crispo,

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1967). However, since World War II, the labor movements in the two countries have followed increasingly divergent paths. The Canadian labor movement has seen membership increasing due to strong organizing activity, while membership and organizing success have been declining in the U.S. (Rose and Chaison, 1985).

There are two ways in which these divergent paths have led to the "Canadianization" of the Canadian labor movement. First, within the U.S.-based international unions, Canadian membership has grown relative to that in the U.S. Thompson and Blum (1983) show that from 1960 to 1978 the Canadian share of international union membership rose in 22 of 26 unions studied. Rose and Chaison (1985) also demonstrate a rise in the percentage of Canadian members from 1974 to 1980 in six major international unions, including the UAW. As the Canadian membership share in these unions has risen, so has the desire of Canadians for greater independence in policy decisions affecting Canadian workers. To this end the Canadian Labour Congress conventions in 1970 and 1974 adopted resolutions designed to limit the degree of control exercised by the international unions over the activities of their Canadian locals (Adams, 1976).

Secondly, there has been a sharp decline in the percentage of Canadian union members who belong to international unions. This percentage fell steadily from 95 percent in 1902 to 51.4 percent in 1975 (Adams, 1976) and further to 40 percent by 1984 (Benedict, 1985). While this decline is largely due to the growth of public-sector unions and the organization of a number of new, independent private-sector unions, it also reflects a significant number of Canadian breakaways from international unions (Crispo, 1967; Adams, 1985; Benedict, 1985). While the CAW is the largest and most prominent of the breakaway unions, its decision to separate from the UAW can be seen as part of an evolutionary process within the Canadian labor movement.

Canadian Autonomy Within the UAW

Within the UAW there was also a gradual increase in the autonomy of the Canadian locals that accelerated under the stress of concession bargaining. In the 1960s and early 1970s, Region 7 of the UAW was renamed the Canadian Region, a constitutional amendment made the Director of the Canadian Region a UAW Vice-President and member of the International Executive Board, a separate Canadian issue of the newspaper *Solidarity* was initiated, a separate research staff was authorized, and the Canadian Region was permitted a separate affiliation with the International Metalworkers Federation (White, 1987). However, the collective bargaining process with the major auto producers was tightly controlled by the international. Beginning in 1967, Chrysler workers in both countries were covered by a single international collective bargaining agreement. At Ford and General Motors (GM) separate collective bargaining agreements covered Canadian and U.S. workers, but the Canadian contract settlements were always based upon the pattern established in U.S. negotiations.

Shortly after Robert White was named Director of the Canadian Region in 1978, the auto industry began its slide into serious recession and the UAW was faced for the first time with demands for concessions. In his recent book White (1987) describes how the strategies of the Canadian and U.S. branches of the UAW increasingly differed as concession bargaining proceeded. The international agreement at Chrysler ended when White refused to accept wage and benefit cuts mandated by the U.S. Congress as the price for loan guarantees. In 1982 the Canadian Region resisted an early opening at Ford and GM and won contract settlements in which the only concession was the loss of nine personal holidays. At Chrysler, the Canadian workers struck while the UAW leadership opted for a delay in negotiations. As a result the Canadians won a pay increase and, for the first time, set the pattern for the Americans. Finally, in 1984 White again refused to follow the concessionary pattern set in the U.S. and, after a 13-day strike against GM, obtained a settlement that retained the COLA and annual wage improvements and rejected the lump-sum payments and profit-sharing agreed to in the U.S. Allegations that the UAW headquarters had unduly interfered in Canadian negotiations to insure that they did not get a better deal than had been attained in the U.S. led White to propose autonomy for Canada.

Differences in Bargaining Power and Strategy

It seems clear that the move to an independent bargaining stance and ultimately an independent union by Canadian auto workers stemmed from a rejection of the need for concession bargaining and the possession of sufficient bargaining power to resist concessions. The difference between the Canadian and U.S. auto workers in this regard can be traced to greater job security and a different environment for labor relations in Canada.

Job Security

As indicated in the recent papers by Kaufman and Martinez-Vazquez (1988) and Cappelli and Sterling (1988), worker support for concession contracts hinges on the extent to which the membership feels threatened by job loss. The empirical research in both papers suggests that ratification votes in the U.S. for concessions in 1982 and 1984 varied widely across local unions in a way that reflected variation in job security. The Canadian Region appears to have enjoyed a significantly greater degree of job security in the 1980s than did UAW members in the U.S. For example, in 1984 vehicle production and auto employment in Canada reached levels exceeding the previous peaks in 1978, while U.S. auto jobs were still 22 percent below the 1979 peak (Benedict, 1985). Job security and bargaining power in Canada can be largely attributed to the following three factors:

First, the production of cars and trucks by the major producers in Canada is governed by the 1965 Canada-U.S. Automotive Agreement, commonly referred to as the Auto Pact. The Auto Pact allowed for free trade in auto products between the U.S. and Canada, thus permitting the rationalization of North American production facilities (Helmers, 1967). The Auto Pact also provided for protection for Canadian output and content, in essence, requiring the production of one vehicle in Canada for every vehicle sold there. One effect of the Auto Pact has been a significant increase in assembly operations in Canada (Holmer, 1983).

Second, there is evidence that labor costs in Canada in the early 1980s were lower than in U.S. auto plants by as much as $8 per hour. This is due to rapid productivity growth associated with the efficiency gains from the Auto Pact (Fuss and Waverman, 1987); lower fringe benefit costs, largely reflecting government provision and control of health care expenditures; and the exchange rate (List, 1985). Fuss and Waverman (1985) present a comparison of econometric cost function estimates for the auto industry in Canada, Japan, and the U.S. Measured in Canadian dollars, unit production costs rose by 86 percent in Canada, 116 percent in Japan, and 118 percent in the U.S. during the decade of the 1970s. And over the same time period, unit labor costs measured in each country's own currency rose 11 percent in Canada, 14 percent in Japan, and 17 percent in the U.S.

Third, Canadian bargaining power at Chrysler was enhanced by the fact that popular models were produced there. First, the Fifth Avenue and later the Caravan/Voyager were models produced at Windsor that enjoyed strong demand (Kolchin and Smackey, 1986). And at GM the high profitability of Canadian operations (McQueen, 1986) added to the union's strength.

Environment

The relative strength of the Canadian auto industry helps explain the ability of the Canadian auto workers to resist concessions in that industry. However, across all industries Canadian unions were far more successful in avoiding concessions than were U.S. unions (Adams, 1985). For example, in 1983 the Canadian UAW was able to win a two-year extension of an existing contract without concessions from Massey-Ferguson, a beleaguered farm-implement manufacturer (Austen, 1983). The overall public policy environment towards labor unions, the militance of the unions, and the lack of a significant non-union strategy by most Canadian businesses have contributed to the evidently stronger position of Canadian unions on the issue of concessions (Huxley, Kettler, and Struthers, 1986). And the strong growth in the labor movement and the cohesive structure of the Canadian Region in which local and national agreements are negotiated simultaneously helped the Canadian auto workers avoid to a large extent the decline in organization and erosion of connective bargaining that have sapped UAW bargaining power in the U.S. (Katz, 1986).

Developments Since Independence[1]

The establishment of an independent auto union in Canada was generally widely approved by the membership and received a great deal of public support, and the CAW was able to quickly organize to service its members (List, 1985). The CAW essentially retained the organizational structure of the Canadian Region. The Executive Board of the union consists of three headquarters officials and nine elected local leaders. The Canada Council, composed of 400 local leaders, meets quarterly and is the CAW's parliament. A Quebec Council is composed of local union leaders from that province. The structure of the CAW emphasizes a close connection to the rank and file, a situation leading to a tightly knit organization that is responsive to the members but which also can, through industrious staff people, control the membership. This is evidenced by large ratification votes for recommended settlements.

The CAW has negotiated contracts with Chrysler in 1985 and with the big three in 1987. The main objective of the union in 1987 was to

[1] This section is based on interviews with W. J. Fisher, Vice-President of Human Resources, Chrysler Canada, Ltd., and with Robert White, President, Canadian Automobile Workers.

get substantial pension increases, including a pension COLA, as a way to encourage older workers to retire early, thereby creating more job opportunities for younger members. The CAW chose Chrysler as the target for negotiations because of its leverage resulting from Canadian production of the popular front-wheel-drive Magic Vans. After a three-day strike, the union won a settlement that met its pension objectives in a unique six-year pension agreement and that provided wage and benefit increases in a three-year pact. This agreement served as a pattern for settlements at Ford and GM. The labor relations climate is described as very good by both union and management since the companies now better understand Canadian positions and since they cannot look to the UAW leadership in Detroit to solve contract problems.

The bargaining philosophy of the CAW continues to emphasize the futility of wage concessions and the impossibility of negotiating for job security in a cyclical industry faced with technological change and foreign competition. Thus the union is continuing to seek traditional protection plans for senior workers. The CAW views programs such as job training for laid-off workers as a governmental function and not a subject for collective bargaining. There is a willingness on the part of the union to consider changes in job classifications, but only in an evolutionary fashion in existing plants.

In addition to collective bargaining, the CAW has been active in union organizing and in developing educational programs for its members. The CAW has added about 15,000 members through organizing efforts, not counting 20,000 fisherman who are in the process of leaving the United Food and Commercial Workers Union for affiliation with the CAW. The CAW is also in the process of doubling its organizing staff. The union has spent $30 million on rebuilding its Education Center where over 3,000 workers have completed a four-week course on labor relations under a paid educational leave program. The CAW is also running a one-hour human rights course at GM.

Conclusion

The separation of the CAW from the International UAW can be seen as a natural consequence of differences in the evolution of the Canadian and U.S. union movements and as a response to the opportunities presented by differences in bargaining power between the two countries. Two issues remain unexplored in this paper. The first is why the UAW was unable to decentralize bargaining in order to keep the Canadians in the international union. The second deals with the leadership role of Robert White. By all accounts, White is widely perceived as an extremely capable and unique union leader (Ward, 1984) and the question remains as to whether the independent Canadian course of action would have been as extensive if White were not the Director of the Canadian Region in the early years of this decade.

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The U.S.-Canada Split in the United Automobile Workers

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In 1984 Robert White, director of the United Automobile Workers' Canadian region, initiated the separation of the Canadian wing of the union from the international. The process was finalized by convention vote in 1986 (United Automobile Workers, 1986a). In this paper I will examine the UAW split from the UAW leadership's perspective. The split presents us with a conundrum. Why should the United Automobile Workers, with all its tradition of militancy and solidarity, accept the decision of the Canadian region of the union to divide? From a more bureaucratic calculation, why should an organization allow the dues from 120,000 members to be removed from the organization without a battle? It will be argued here that, based on the parameters of their decision-making, the UAW's top leadership acted rationally in allowing a split, even though the long-term cost of their decision to allow the Canadian Auto Workers to break from the international may be great.

The Transformation of the Auto Industrial Relations in the 1980s

UAW leaders' changed bargaining situation in the 1980s can be summarized as follows: Starting in 1979 the UAW was forced to give important concessions to American carmakers, in response to shocks created by rising oil prices, increased Japanese competition, and the difficulties associated with adjusting to these shocks for American car companies. Starting in 1982, concessions spread to the more profitable Ford and General Motors, taking the form of work rule concessions and temporary freezes of aspects of compensation (Katz, 1985, pp. 49-66; Cappelli and Sterling, 1988; Kaufman and Martinez-Vazquez, 1988).

Top leaders' willingness to accept concessions to save jobs engendered stress between layers of the full-time leadership (Katz, 1986; Katz and Sabel, 1985). From the beginning of the implementa-

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tion of their strategy, some local and regional leaders have articulated an alternative. This alternative argued essentially the following: Wage and work rule concessions are not a way to preserve jobs. The corporations will take whatever savings they make in such concessions and reinvest them all the faster in new technologies, which will further displace workers. If workers give back paid holidays, the corporations will be able to cut employment levels correspondingly. If productivity improvements in general are achieved, manning levels will be cut. Therefore, the only realistic strategy for the union in a time of international change is a struggle against employer demands for concessions (Shaiken, 1982, 1984). This alternative strategy was articulated through a small grouping of local leaders, Locals Opposed to Concessions in 1982 and, most importantly, through the New Directions Movement in UAW Region 5 (southwest United States). The New Directions Movement could point to some successes at the local level in fighting concessions as the fruits of their alternative strategy (Metzgar, 1985; Elsila, 1982).

Aside from the issue of internal democracy, the essential challenge of Jerry Tucker and the local leaders who support him is over bargaining strategy. Tucker and company prefer "older methods"—a fight against concessions—rather than cooperation. In September 1988 Tucker finally won the long-contested directorship of the region. That the Department of Labor was obliged to intervene in the UAW over the Region 5 directorship is an indication of the bitterness of the conflict. That Tucker is the first regional director since the early 1950s to be a political/strategic opponent of the top leadership is an indication of the "one party" character of the UAW (Slaughter, 1988; Perusek, 1988; Stieber, 1962).

The Canadian regional leadership of the UAW took an approach which was similar in its essentials to that of dissidents, in Region 5 and elsewhere in the United States. They argued against the concessions strategy of the international leadership. This conflict came to a head in 1984 negotiations with General Motors.

1984 UAW Contracts: The United States and Canada

The 1984 American General Motors contract was a radical departure from what had come before. Instead of the traditional cost-of-living (COLA) and annual improvement factor (ALF) increases, this contract tied a substantial portion of wage increases to productivity and company performance. This GM contract was the first major American deal to peg wage increases to anything other than the consumer price index (Dodsworth, 1984).

What the UAW leadership got for itself in the 1984 GM contract was a definite role as joint decision-maker. First, the $1 billion job bank was to be co-managed by the union leadership and the corporation. Second, a $100 million venture capital fund was similarly to be co-managed. Finally, GM agreed to build the new Saturn car in the United States; in 1985, even before a production site was decided upon, GM worked out a labor agreement with the UAW leadership (UAW General Motors Department, 1985, pp. 45–51; *Business Week*, 1984).

The UAW hailed their GM contract as a landmark deal which guaranteed job security to thousands of workers (UAW General Motors Department, 1984, p. 1). But the leadership's failure to restore a 3 percent annual improvement factor led to a difficult GM council meeting, which passed the pact by only a bare margin under Bieber's threat that a strike would aid Reagan's presidential campaign (Ptaszik, 1984, pp. 3–4). Dissidents among local UAW leaders also charged that the job bank provided no real security from plant closings, outsourcing, or new technology. Worst of all, only 4,000 workers per year could be enrolled in the job bank (Kelly, 1984). The *Wall Street Journal* agreed when it compared GM's contribution to the job bank, $167 million per year over six years, with "about the cost of one new paint shop in one new auto plant" (Woutat, 1984, p. 1).

Despite rhetorical claims that the UAW leadership was winning back concessions made in previous contract rounds, the 1984 pact was aimed primarily at placating the car companies. Real job guarantees would add a measure of inflexibility at precisely the time when the companies needed to cut costs most. Similarly, significant wage increases would add additional costs to American products (Lehner, 1984, p. 26).

In Canada, Robert White led a two-week strike against General Motors, winning a traditional settlement with superior wage provisions and more time off than in the United States (*Daily Labor Report*, 1984, p. A7). He obtained annual wage increases instead of profit-sharing for Canadian General Motors workers. White charged that Bieber attempted to dictate elements of the economic settlement for Canadian workers—such as lump-sum wage increases. This was the straw that broke the camel's back between the Canadian regional leadership and Solidarity House. The Canadian leadership was in a position to bargain much harder than the American leadership for wage increases. The Canadian dollar's erosion obliged them to do so; the lower level of unemployment among Canadian auto workers gave them the opportunity. As Table 1 shows, in 1984 Canadian auto labor costs had fallen to 69 percent of American, adjusting for differences in national currency (see also Job, 1984). Incidentally, this means that Canadian auto workers' wages had deteriorated by 30 percent since wage parity was achieved in 1973 (White, 1984, p. 10).

TABLE 1
Compensation Comparison, U.S. and Canada, in National Currency and Indexed in U.S. Dollars, 1975-1987

Year	United States		Canada	
1975	$ 9.53	100	$ 7.38	76
1977	11.22	100	9.42	79
1978	12.37	100	10.39	74
1979	13.43	100	10.97	70
1980	15.88	100	12.43	67
1981	16.94	100	13.89	68
1982	17.99	100	15.18	68
1983	18.23	100	15.59	69
1984	18.92	100	16.91	69
1985	19.63	100	17.76	66
1986	19.69	100	18.61	68
1987	20.39	100	19.33	72

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, "Hourly Compensation Costs for Production Workers, Motor Vehicles and Equipment Manufacturing (U.S. SIC 371), 19 Countries, 1975-1987," August 1988 (unpublished data).

This was not the first time that White had successfully deviated from bargaining patterns established in the United States. In 1982 he had successfully refused to reopen GM and Ford contracts—when the Americans were reopening them to give concessions.

But in 1984, the involvement of Solidarity House in Canadian bargaining constituted "interference" from White's point of view. White reports that at the December 10, 1984 International Executive Board (IEB) meeting, which approved dividing the union, he argued that interference really signified concessions. His request for autonomy, in turn, indicated that the Canadian union would not allow the international to determine its stance on Canadian bargaining according to what would be acceptable in Detroit (White, 1985, p. 6; Report of the UAW Director for Canada, 1985).

Conclusions

Perhaps the most curious aspect of the split in the United Automobile Workers is that it could be achieved so easily. There was little rancor or animosity, no messy public squabbling. Although the American IEB majority contended that White's move to split the union was "unconstitutional," they did not stand in his way (*Solidarity*, 1984). We must assume that they considered the benefits of the move to outweigh its costs. What did they gain?

For Bieber, the continued existence of the Canadians in the UAW meant allowing a potential pole of attraction for all the dissident elements in the lower levels of the bureaucracy—in other words, anyone who wanted to fight wage and work rule concessions. His calculation: we lose Canadian dues, but we gain in internal governability. In addition, Solidarity House could be far less concerned with dues income in general by the 1980s, for a startling transformation of the UAW's financial base had occurred. As Table 2

TABLE 2
United Automobile Workers,
Income and Expenditures, 1967 and 1987
(in millions of current dollars)

	1967	(% of Total)	1987	(% of Total)
Total income	$86.3	(100.0)	$388.7	(100.0)
Dues	75.4	(87.4)	191.9	(49.4)
Total expenditures	93.6	(100.0)	391.6	(100.0)
Officer and staff pay	15.5	(16.6)	40.0	(10.2)
Benefits to members	54.0	(57.7)	59.1	(15.1)
Purchase of investments	3.6	(4.0)	78.4	(20.0)

Source: Calculated from U.S. Department of Labor, Office of Labor-Management Standards, *Labor Organization Annual Report* for the United Automobile Workers, 1967, 1987.

indicates, in 1967 the UAW still relied heavily on dues; they comprised more than 87 percent of total income. But by 1987 dues made up less than half of the UAW's total income—49.4 percent. Dues income, once the essential element of union finance, had become just one of several income sources—returns from investments were now of growing importance. Between 1969 and 1984, the UAW's membership dropped from 1.53 million to 1.12 million. But in those years the organization's real net worth (in 1967 dollars) *rose* from $111.9 million to $224.3 million (Mazey, 1970; Majerus, 1985; United Automobile Workers, 1986b). Clearly, the UAW's international leadership had found ways in the 1980s to make its organization relatively independent of its dues base. (Simultaneously, the UAW had shifted away from expenditures on member benefits—from 57.7 percent in 1967 to just 15.1 percent in

1987. On the other hand, a rise in purchase of investments, from 4 to 20 percent, occurred in the same period.)

From White's perspective, continuing in the international meant being constantly hamstrung in wage bargaining and in wider organizational/political aspirations, which center on a metalworkers' federation and the New Democratic Party (Canadian social democracy). While White referred to, and generally received, overwhelming support from below, the split was a maneuver he engineered himself. While in the short run it probably strengthens the bargaining situation of the CAW, in the longer run it could obviously weaken both Canadian and American auto workers. It adds another obstacle to international solidarity in an industry where purely national solutions are ruled out by the character of production and markets.

The UAW split is precisely a reflection of the different bargaining strategies of the international leadership of the UAW in Detroit and White's regional leadership in Canada. The Fraser-Bieber leadership's response to the international restructuring of the automobile industry was to work hand-in-hand with the corporations, to reopen contracts to provide wage and work rule concessions, and to allow the corporations wide latitude in pursuing technological, organizational, and geographical restructuring. White disagreed with this strategy.

What was the role of Canadian nationalism in the UAW split? To be sure, it was far easier for Bieber to rid himself of the troublesome Canadians—union members and leaders bent on pursuing aggressive bargaining instead of shifting toward cooperation. Bieber does not have this luxury in dealing with Jerry Tucker in Region 5. And White could rally such unanimous support among Canadian auto workers only by playing to national sentiments. Real bargaining issues were concretized by the different positions of Canadian auto workers and the Canadian dollar. Yet, the left-right conflict between White and Bieber is reproduced in the United States: The issues which precipitated the split also divide Solidarity House from that minority of U.S. local leaders who argue against concessions.

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Public Policy and the Scope of Collective Bargaining in Canada and the United States

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Until recently a common misconception in the United States has been that the industrial relations systems of Canada and the U.S. are essentially the same. Though the two countries share a common public policy ancestry in the Wagner Act, many features of industrial relations have in fact always been distinctive above the 49th parallel. In recent years interest in the differences between Canadian and U.S. labor relations has heightened, due at least in part to the striking contrast in the health of collective bargaining and unions in the two countries. Indeed, during the time period from 1961 to 1981 union membership in the U.S., as a percentage of the employed labor force, declined by approximately six percentage points; during the same time period union membership in Canada *grew* by approximately six percentage points (see, for example, Kumar, 1986, p. 127).

Among the many possible explanations for the diverging experiences of unions in the U.S. and Canada may be differences in the law undergirding collective bargaining in the two countries. It is the purpose of this paper to explore one critical aspect of labor policy, namely, the legal regulation of the substantive scope of collective bargaining. After reviewing the common heritage of labor legislation in the two countries, we describe the different approaches to defining the subject matter of collective bargaining taken in the U.S. and Canada. We then discuss, among other things, the possible significance of these differences for the state of unions and collective bargaining in the two countries.

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Two Prongs of Public Policy in the U.S. and Canada: A Common Ancestry

The Wagner Act was rooted in positive support for the right of workers to choose whether to engage in collective bargaining with their employers over "wages, hours, and other terms and conditions of employment." This same premise underlay Canada's adoption of the Wagner Act model under the War Measures Act in 1944 and subsequent provincial legislation. In both countries the policy support for collective bargaining was a response to labor unrest and demands for a removal of impediments to union formation at times of national crisis (the Great Depression in the U.S. and World War II in Canada). In other words, establishment of the right to engage in collective bargaining was held to be a fundamental right of association, but also had the instrumental objective of limiting or channeling industrial conflict *through* collective bargaining.[1]

The twin desires to contain industrial conflict and to give workers the opportunity to bargain through union representatives continued to be important concerns in both countries, as trade unions and collective bargaining grew in the U.S. and Canada with support of their respective laws. In response to these concerns, however, the U.S. and Canadian approaches (and, to some extent, the reasons each country engaged in the regulation of the scope of bargaining) diverged. In Canada, concerns about containing or reducing the number of work stoppages, among other things, led policy makers to remove some subjects from the scope of bargaining and *require* that they be included in collective bargaining agreements. Regarding all other subjects at bargaining, the scope has remained open. In the U.S., on the other hand, forms of economic pressure were expressly outlawed and several bargaining subjects were declared unlawful (by the Taft-Hartley Act), in an effort to control industrial strife. Moreover, debates about what matters properly belong on the bargaining table (or what issues should be outside the joint determination of union and management) led the U.S. to adopt a distinction among subjects that must be negotiated (at one side's request) and subjects over which bargaining is consensual. We elaborate upon these approaches on the scope of bargaining below.

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[1] In the U.S., fostering bargaining and channeling conflict were two primary purposes of the National Labor Relations Act (NLRA), although many, often conflicting, objectives for the NLRA have been offered (see, for example, Klare, 1978; Gr ss, 1985).

The U.S. Approach

Although the Taft-Hartley Act has had some effect on the scope of bargaining (that is, it outlaws the closed shop, featherbedding, and hot cargo agreements, and enables states to pass "right-to-work" laws prohibiting compulsory dues-paying and membership provisions), U.S. statutes have provided only a vague framework for determining the scope of collective bargaining. Instead, the U.S. approach to regulating the substance of bargaining has its genesis in interpretations of the general duty to bargain with employees' representatives, imposed by the original §8(5) of the Wagner Act. That obligation, according to the Senate Labor Subcommittee, was designed to address concerns that the right to bargain collectively would otherwise be unfulfilled and that "[s]uch a course provoked constant strife, not peace" (National Labor Relations Board, 1949, p. 2312, cited and discussed in Miller, 1965, pp. 180–81). But with concerns about strife as the only backdrop, the NLRB and the courts were faced with deciding both the procedural and substantive requirements of the bargaining obligation. And, in 1958, the Supreme Court was to take a critical step in determining the scope of bargaining, as it confronted directly the question of what properly belongs on the bargaining table in the famous *Borg-Warner* case.[2]

In that case the Supreme Court endorsed a distinction among bargaining issues that must by law be negotiated at one party's request—viz., mandatory subjects—and issues over which bargaining is purely consensual—viz., permissive subjects. Moreover, the Court ruled that neither party may pursue a permissive issue to impasse, a right enjoyed by the parties in the negotiation of mandatory items. It is interesting to note that by limiting the subjects over which the parties could strike or lockout, *Borg-Warner* could be viewed as an attempt to control or regulate industrial strife. Yet, this was not the apparent motivation of the Supreme Court. Instead, the intention of the Court with its *Borg-Warner* holding was to foster collective bargaining over important employment concerns, that is, issues that fall within the statutory distinction of "wages, hours, and other terms and conditions of employment,"[3] rather than over issues peripheral to the employment relationship.

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[2] *NLRB v. Wooster Div. of Borg-Warner Corporation*, 356 U.S. 342 (1978).

[3] Although the failure to bargain with employee representatives is established as an unfair labor practice in §8(a)(5) of the NLRA (formerly §8(5) of the Wagner Act), this vague statutory guide to the subjects of bargaining is identified in §8(d). See 19 U.S.C. §§158(a)(5), (d) (1974).

In *Borg-Warner* the Court viewed the employer's insistence on a prestrike ballot of employees and a recognition clause excluding the national union (considered to be internal union matters by the Court) as tantamount to a subversion of the employer's duty to bargain about important employment interests. Thus, in *Borg-Warner* the Supreme Court expressed its notion of proper bargaining subjects. But more than simply expressing its views, the Court was shaping the scope of bargaining; by denying parties the exercise of their full economic muscle with which to extract concessions on permissive subjects, meaningful negotiations of these issues were made less likely (for a review of scholarly arguments on the point, see Sockell, 1986).[4]

Whatever can be said about the *Borg-Warner* case and the Court's judgment of what belongs on the bargaining table, the holding bore a pro-collective bargaining message. Ironically, however, that message was to get turned around as the mandatory/permissive distinction came to be used in later years as a tool to keep issues off the bargaining table, rather than to promote collective bargaining. Indeed, in recent years subjects once classified as mandatory (or classified inconsistently) are today permissive because they are viewed as falling within "management's domain." More specifically, issues such as partial plant closures, relocations, most forms of subcontracting, and work consolidations, among other things, have been effectively excepted from the bargaining obligation (that is, they are classified as permissive) because labor tribunals believe that to place these items within that obligation would be inefficient, would deprive owners of their property rights, would contravene the custom and purposes of the Act, or would be an exercise in futility (Sockell, 1986).

These so-called management matters involved in directing and leading the enterprise, which fall within the permissive domain, also include sales and leasing of assets, mergers, plant closures, discontinuation of product lines, and automation—a list that far outnumbers (if not outweighs in likely significance) the permissive issues viewed as internal union affairs. It is also noteworthy that contrary to the spirit of *Borg-Warner*, decisions according permissive status to certain issues, effectively placing them within management's control, have been intended to protect management (or, ostensibly,

[4] Some scholars remain skeptical about the extent to which the mandatory/permissive distinction actually affects the scope of collective bargaining (see, for example, Atleson, 1983; Kohler, 1983). Still there is empirical evidence that the distinction negatively affects the negotiation of permissive issues (Delaney and Sockell, forthcoming).

U.S. enterprises) rather than to foster or promote collective bargaining. In any case, these decisions reflect critical value judgments made by labor tribunals about what does and does not belong on the bargaining table. And it is those judgments, more than any other concern, that have determined the U.S. approach to regulating the scope of bargaining.

The Canadian Approach

Although in Canada the focus has been on regulating work stoppages or controlling industrial strife (and, thus, Canadian law has imposed significantly greater constraints on work stoppages themselves; see Weiler, 1980), the mandatory/permissive subjects of bargaining distinction has never been adopted in any of the 11 Canadian jurisdictions. In essence, the *Borg-Warner* reasoning has made little sense to Canadian legislators and adjudicators in that the distinction prejudges the legitimate bargaining objectives of the parties. Instead, the scope of bargaining (apart from *illegal* collective agreement provisions) is left up to the parties to decide, including the definition of those issues over which a work stoppage will occur (Adams, 1965, p. 575).

There are notable exceptions to this open scope of collective bargaining, but in the opposite direction of U.S. policy. That is, certain collective agreement provisions are *required* in several Canadian jurisdictions, eliminating the potential for industrial conflict over these issues by simply mandating their inclusion in the collective agreement. Briefly, the following subjects have been affected by the Canadian approach:

No Strike/Lockout Clause and Grievance Arbitration

One expression of the Canadian effort to reduce the level of work stoppages is the fact that in every jurisdiction strikes and lockouts during the term of the collective agreement are illegal. The American quid pro quo of grievance arbitration has also been almost universally adopted as fulfilling the collateral requirement that the parties adopt a mechanism for resolving contract disputes without a work stoppage (Adams, 1985, p. 678).

Union Security

So far there is no such thing as a "right to work" law in any Canadian jurisdiction. To the contrary, three jurisdictions (Quebec, Manitoba, and British Columbia) impose the agency shop as a minimum requirement, while in Ontario and the Canada jurisdiction the agency shop is "almost universal" (Adams, 1985, p. 781). Several jurisdictions (Quebec, Manitoba, Canada, Saskatchewan, Ontario) either make the dues checkoff mandatory or require its inclusion in the collective agreement upon request by the union. The Saskatchewan legislation provides for a minimal form of maintenance of membership. In all of the Canadian jurisdictions closed shop provisions are explicitly allowed (Adams, 1985, p. 694).

Technological Change

Four Canadian jurisdictions (Canada, British Columbia, Manitoba, and Saskatchewan) have legislated minimal bargaining requirements regarding the effects of technological change. These provisions require notice to the union of impending changes and provide for either a reopening of the collective agreement or arbitration to resolve technological change disputes during the term of a collective agreement (Knight and McPhillips, 1987).

"Just and Reasonable Cause" for Discipline and Discharge

British Columbia and Manitoba labor laws require collective agreements to include just cause provisions, though the Manitoba law allows the parties to exclude probationary employees from the provision's coverage (Adams, 1985, p. 697). These substantive requirements are similar to those substituting arbitration for work stoppages during the term of the collective agreement in that, contrary to the situation in the U.S., unions in the relevant Canadian jurisdictions do not have to negotiate or strike for these rights which are created by law.

It should be noted that three of the Canadian jurisdictions that have gone furthest in legislating substantive requirements (British Columbia, Manitoba, and Saskatchewan) have done so under mildly socialist New Democratic Party governments. When conservative governments have been returned to power, however, these particular statutory provisions have not been deleted or significantly modified. Hence, it is fair to say that the Canadian public policy approach to the scope of collective bargaining has been to leave the determination of scope to the parties and, in the case of certain jurisdictions and particularly contentious issues, to limit conflict by imposing specific substantive requirements on collective agreements.

Observations: Divergent Approaches and Experiences

Given the different priorities lying behind the regulation of the scope of bargaining in the U.S. and Canada, a simple comparison of approaches and experiences would be somewhat unfair. Nevertheless, our foregoing discussion of each country's approach does suggest several observations.

First, the approaches taken to regulate the scope of bargaining in both countries manifest, to some extent, a distrust of the collective bargaining process. In Canada, concerns that the negotiation of union security, technological change, or just cause provisions might produce work stoppages, as well as the fear that the parties might fail to execute no strike/no lockout clauses, have resulted in requirements that bargaining agreements include these terms (rather than allowing the parties the right to decide whether to include these issues in their contract). In the U.S., on the other hand, the existence and application of the mandatory/permissive distinction reflects the notion that the parties cannot be entrusted with the responsibility to determine their own agenda. Having said this, however, the Canadian approach appears to be more consistent with a hands-off policy in terms of the scope of bargaining; the provincial and federal governments play no role in affecting the likelihood that any lawful bargaining subject will be executed (other than in the case of those subjects required to be in the agreement).

Second, the U.S. and Canadian approaches fare differently when compared against the twin goals of fostering collective bargaining or employee participation through their representatives and the channeling or controlling industrial conflict that underlie labor policy in the two countries. From the perspective of fostering bargaining, the virtually open scope of bargaining in Canada appears superior to the mandatory/permissive distinction among bargaining subjects applied in the U.S. In Canada, the policy is not to decide what issues properly belong within the exclusive control of management or union, but to encourage, in effect, that all issues be resolved by bargaining collectively. In this sense, the Canadian approach is more consistent with the true spirit of *Borg-Warner*.

In terms of channeling or controlling conflict, on the other hand, the Canadian approach might appear inferior at first blush. After all, since an open scope is accompanied by the right to strike over any issue, we would expect more strikes to occur in Canada than in the U.S. (other things equal) where the right to strike over permissive items is denied. Indeed, Canada consistently outstrips the U.S. in days lost due to work stoppages over the past 40 years (Lacroix, 1986). It is interesting to note, however, that the scope of bargaining has never been cited as a factor causing the relatively high rate of strikes, although many other reasons have been offered, including characteristics of industrial organization, bargaining structure, union militancy, and bargaining performance (Lacroix, 1986; Weiler, 1980).[5]

But, even assuming arguendo that an open shop per se causes more strikes to occur (than does the application of the mandatory/ permissive distinction), this does not necessarily mean that it is inferior from the perspective of containing industrial strife. The assumption that by denying parties the right to strike over an issue, or by keeping an issue off the bargaining table, the frustrations or discontent associated with that issue will disappear is a myopic one. Instead, this industrial conflict may find expression through other (perhaps less orderly and less obvious) collective or even individual means (such as slowdowns, working-to-rule, sickouts, sabotage, or absenteeism, to name a few). Thus, we cannot be entirely clear which approach serves the end of containing strife.

Finally, and related to the two foregoing observations, if one were to favor collective bargaining as a process for resolving matters of dispute between labor and management, and if one were to want to insure the vitality of that process, one would clearly opt for the Canadian approach to regulating the scope of collective bargaining over the approach taken in the U.S. Perhaps this is one reason for both the relative health of Canadian unions and the continuing decline of U.S. unions. The regulation of the scope of bargaining may be, in part, both a cause and a consequence of the underlying questioning of the value and place of organized labor in the U.S., and the greater role played by collective bargaining and unions in Canadian society. In the U.S., an ambivalence toward collective bargaining has resulted in a subtle diminution of labor's role as important issues have been taken out of the mandatory bargaining obligation. This, in turn, has made unions less attractive as they are spokesmen for fewer issues of vital concern to their actual and potential constituents, especially in a period of profound economic challenge, such as the 1980s. By contrast, unions remain a vibrant, if contentious, institution in Canada—a reality

[5] It might also be noted that the continuing growth of union density in Canada clearly increases the opportunities for work stoppages to occur relative to the U.S. experience.

reinforced and reflected in Canada's open scope of collective bargaining.

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DISCUSSION

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These comments will focus on the UAW-CAW split, not because the other papers are uninteresting, but space is limited and there are a number of points that need to be made.

I was ambivalent about accepting the invitation to be a discussant on this panel. The split was a painful experience for everyone, including myself. Yet it is an important chapter in UAW and North American labor history. In light of this, I did not want to pass up the opportunity to set the record straight.

This is especially necessary in the case of the Perusek paper, which is marred by several serious errors of fact and interpretation.[1] Even the Hyclak and Kolchin paper, which is generally on target, suffers from misinterpretation of the substance and circumstances of the 1984 UAW-GM bargaining and lacks historical richness concerning the more than 40-year history of the relationship between the Canadian and U.S. sections of the UAW.

The most significant factor underlying the split is Canadian nationalism. As Hyclak and Kolchin correctly note, the percentage of Canadian union members who belong to U.S.-based international unions has been dropping for more than two decades. In 1960, 72 percent of unionized Canadians belonged to U.S.-based international unions; by 1988 that figure is estimated to be only 33 percent.[2]

As Canadian nationalists like to point out, prior to the developments of the 1960s and 1970s, Canada was the only major industrial country without an autonomous, indigenous labor movement. It is beyond the scope of these brief comments to explore the historical

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[1] Limitations of space prevent development of the badly needed critique of the Perusek paper here. Readers who wish to obtain a copy of my written comments on his paper should contact me.

[2] Source: Bureau of Labour Information, Labour Canada.

circumstances that led to this unique situation, but other industrial countries far smaller than Canada had indigenous labor movements from the beginning.

Viewed from this perspective, the key question surrounding the UAW-CAW split just as easily could be, "Why did the Canadians stay loyal to the UAW as long as they did?"

The most important reason was that the U.S.-based union was sensitive to and supported its Canadian members' needs. This was true not only in collective bargaining, but also in legislative action. In collective bargaining, the U.S.-based union supported Canadian demands for wage parity, winning in the process several special wage parity adjustments, culminating in the achievement of full wage parity in 1972, with future parity assured by means of a unique cost-of-living formula based on a combined U.S.-Canadian CPI. In the political arena the UAW's support for the Auto Pact in the early 1960s, despite significant reservations about certain provisions, was politically decisive in the U.S. at a time when the Democrats controlled both the White House and the Congress. Despite one-sidedness of the Pact's provisions favoring Canada, the UAW supported ratification, based on the rationale that the resulting reduction of car prices in Canada would boost demand, thereby leading to more Canadian and U.S. jobs.

Canadian auto workers at that time could not have gotten either of these—wage parity or the Auto Pact—on their own. Active support by the U.S.-based union was indispensible for achieving both. The wage parity increases won by the UAW for its Canadian members came out of the total economic package negotiated for the workers in both countries. In the real world of collective bargaining, those parity increases therefore came at the expense of something else—whether it be an additional paid holiday for workers in both countries, improved medical benefits, or whatever else. In certain cases, strike action by U.S. members was necessary in order to achieve parity increases for their Canadian brothers and sisters.

The Auto Pact fostered tremendous growth in the Canadian auto industry, in both absolute and relative terms. The Pact contained two Canadian safeguards—a requirement that each auto company build as many cars in Canada as it sold there, plus an overall minimum Canadian content requirement of 60 percent. Nothing comparable was required by the U.S. The net result was a substantial incentive to the auto companies to locate North American production and employment in Canada. While the Canadian share of North American sales has grown only 1.5 percentage points since 1965, Canada's share of both production and employment has increased about four times as much in the same time period.[3]

The goal of wage parity—while maintained in nominal terms—proved elusive in real and purchasing power terms. No sooner had wage parity been negotiated than U.S. and Canadian currency values and inflation rates diverged, sharply and persistently. Wages in nominal terms followed virtually the same path in the two countries, but in terms of U.S. dollars there was a wide gap after 1976.

For reasons rooted in the fact that the U.S. and Canadian dollar were historically very close in value, auto workers in both countries viewed wage parity in terms of nominal parity, e.g., wage parity meant a GM assembler in Canada got the same nominal wage in Canadian dollars as a GM assembler in the U.S. received in U.S. dollars. Since nominal and real parity accidentally coincided, *nominal* wage parity was the Canadian auto workers' traditional goal.

Beginning in 1977, the Canadian dollar began a persistent and substantial decline in value relative to the U.S. dollar that continued until 1986. Though U.S. and Canadian auto workers continued to receive equal nominal wages, in the years that followed the value of the Canadian dollar drifted as low as 71 cents. Meanwhile, well into the early 1980s workers in both countries received equal nominal cost-of-living adjustments, based on a formula that averaged the U.S. and Canadian CPI with relative weights of nine to one. Since the resulting index closely tracked U.S. inflation, U.S. workers were well protected; Canadian workers, by contrast, received the same COLA adjustment in nominal terms as their U.S. brothers and sisters, but those increases left them less well protected against Canada's higher rate of inflation.

In addition to driving a widening wedge between nominal wage parity and real or purchasing power parity, these economic facts provided an added labor cost incentive to the auto companies to shift more of their North American operations to Canada, over and above the substantial incentive of the Auto Pact.

To make matters worse, differences in health care systems aggravated the differences in labor cost between the two countries. While national health insurance provided Canadians with excellent protection at moderate cost, the private health care system in the U.S. was experiencing skyrocketing costs. In addition to being morally unconscionable, the fact that the U.S. continues to be the only industrial country without national health insurance contributes to our

[3] *Ward's Automotive Reports*, U.S. Bureau of Labor Statistics, and Statistics Canada.

trade competitiveness problems, since health care which is provided efficiently and publicly in other countries must be provided privately, inefficiently, and at high cost in the U.S. Nowhere is this competitive disadvantage felt more acutely than in the auto industry, along the border between Canada and the U.S.

With these wage and labor cost developments as the backdrop, Chrysler's brush with bankruptcy raised the curtain on the first act of the drama of the split. Late in 1979 the U.S. government demanded that the UAW renegotiate its contract with Chrysler and make substantial concessions as a condition for receipt of federal loan guarantees that were necessary for the corporation's survival.

Even before the UAW Executive Board convened in emergency session to consider this extraordinary proposal, Bob White rejected concessions out-of-hand for Canadian workers on nationalistic grounds. He took the position that the U.S. government was not going to dictate the terms of a collective agreement to Canadian workers. At the time Chrysler workers in both countries were covered by a single international agreement, an arrangement that had been popular with Canadian workers as White acknowledged.[4] White's unilateral pronouncement undertaken without prior consultation with his colleagues on the UAW Executive Board soon led to the end of the international agreement.

Though the Canadian government subsequently put together an assistance package for Chrysler, the conditions imposed on the corporation were far different from those imposed by government in the U.S. Instead of insisting on concessions by the workers, plant closures, and the elimination of jobs, Canada required Chrysler to keep plants open and maintain a minimum proportion of its North American employment in Canada.

As the auto crisis of the 1980s intensified in the U.S. while Canada was comparatively unscathed, the bargaining priorities of auto workers in the two countries continued to diverge. U.S. workers wanted job security and curbs on plant closings and outsourcing, while those in Canada had more traditional economic demands.

In 1982 the UAW reopened its Ford and GM agreements in the U.S. early, while the Canadian auto workers declined to do so. The pros and cons of the UAW's decision have been debated extensively, and this is not the place to revisit that debate; suffice it to say that early bargaining averted a situation in which the UAW would have been

[4] Bob White, *Hard Bargains* (Toronto: McClelland and Stewart, 1987), p. 149.

faced with a strike deadline at a time when U.S.-made cars were selling so poorly that one-third of the membership at GM and Ford was laid off. Bargaining at the normal time in Canada, by contrast, meant bargaining against a strike deadline with a membership that had faced few layoffs in comparison with the U.S.

The last act in the drama was auto bargaining of 1984. The pattern UAW settlement with GM in the U.S. emphasized job security, in the form of a significant new commitment not to lay off any worker with a year or more of seniority, as a result of outsourcing, new technology, or other actions under control of the corporation.[5]

Bob White had no interest in this new job security program and sought instead larger Canadian wage increases. In the ensuing struggle with GM, it should be noted, UAW President Owen Bieber supported special increases for Canadian workers to compensate for higher Canadian inflation. While not recognized at the time by Bob White, it was subsequently revealed that Bieber's involvement was vital to winning those increases.[6] Furious at what he saw as U.S. "interference" in Canadian bargaining, and with the backing of the UAW Canada Council, White quickly made sweeping autonomy demands, backed up by the threat of outright secession in the event those demands were not granted.[7] As White probably expected, the autonomy demands were unanimously rejected by the UAW's U.S. leadership, precipitating the split. When it happened, the split was something of an anticlimax; the Canadians had been going their own way for more than four years. One large Canadian local union, it should be noted, opted to stay in the UAW.

In conclusion, for more than four decades Canadian workers benefited greatly from membership in the UAW. During those years it

[5] For details, see Sheldon Friedman and Lydia Fischer, "Collective Bargaining and Employment Security," pp. 418-29 in these *Proceedings.*

[6] Remarks of UAW President Owen Bieber to the National Chrysler Council Meeting, Detroit, January 4, 1985. Bieber's version of the facts of the 1984 UAW-GM bargaining in Canada differs markedly from White's. In one-on-one meetings with GM's CEO Roger Smith, Bieber underscored the seriousness of the Canadians' wage demands, and the fact that special Canadian adjustments were critical to getting a settlement. In fairness to Bieber, it would have been better if Perusek, Hyclak, and Kolchin had reported Bieber's version of events, too.

[7] To further put White's charge into perspective, it is worth noting that under the UAW Constitution, involvement of the president in any set of negotiations could not be construed as "interference." Quite the contrary, UAW presidents had an obligation to become involved if in their judgment such involvement would be in the best interests of the membership. During the 1984 UAW strike against GM in Canada, more UAW members were laid off in the U.S. as a result of the strike than were *on strike* in Canada, due to the tight linkage of GM's production across the U.S.-Canada border.

would have been unthinkable for them to take on the powerful multinationals on their own. With the stimulus of the Auto Pact, employment in Canada grew by leaps and bounds. Canadian production became significant enough for each of the Big Three to give Canadian auto workers independent bargaining clout. In view of the divergence of circumstances and goals between U.S. and Canadian auto workers in the 1980s, there came a point where the union's Canadian leadership decided to withdraw from the UAW. The union in the U.S. didn't think a split was in the best interest of workers in either country, but was realistic enough to recognize the power of Canadian nationalism and the fact that in a democratic union, in the final analysis, a decision of this kind had to rest with the Canadians themselves. From the perspective of the need for greater international labor solidarity in an era of ever more powerful multinational corporations, trade unionists had best be hopeful that the long-run damage from the split will not be great.

XII. TECHNOLOGY, WORK, AND LABOR RELATIONS

Technology, Skill, and the Education of Adult Workers

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The question of how new workplace technology affects job skill has been hotly debated since the earliest days of the Industrial Revolution. A paper presented at the 1878 meeting of the American Social Science Association condemned "the machine" for "minutely divid[ing] all work, requiring only knowledge or strength enough to attend a machine that will heel shoes or cut nails, or card wool, or spin yarn, or do some other fraction of a complete whole" (*The Evening Press*). There was by no means, however, consensus among 19th century observers on this issue. Nicholson (1892) believed, "The Division of Labor caused by Machinery has two opposite tendencies: on the one hand it leads to simplification of labor and loss of skill, and on the other, it involves in some branches far greater skill than before. . . . [O]n the whole, far greater skill is required now than formerly."

Today, the importance of technology's relationship to skill goes beyond academic discourse. It has become central to education and job training practice and policy. The flexibility of computer-controlled, programmable equipment and integrated systems along with their capacity to convey information, impose new skill requirements on employees who operate, maintain, program, and manage them. It is believed that new technologies are creating greater demand for "conceptual skills" or "intellective skill" with reduced demand for "motor skills" (U.S. Congress, OTA, 1984; Schuck, 1985;

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Zuboff, 1988), and that basic competency in reading and math, an aptitude for "team" work, and problem-solving ability will be increasingly important (U.S. Congress, OTA, 1986; Alfthan, 1985; Levin and Rumberger, 1983).

Moreover, it is apparent that the *process* of implementing new technology has as much to do with employee skill as does its utilization. Proponents of sociotechnical systems theory have long contended that effective technological innovation must focus on the human dimensions of the work organization (Passmore and Sherwood, 1978). However, job redesign must be guided by the desire to increase personal learning and empowerment, not just to attain greater productivity and flexibility (Blackler and Brown, 1985). A technology deployment process that is human-centered rather than technology-driven can itself serve as a vehicle for learning.

Research Design and Methodology

In an effort to explore these issues, I conducted a study in 1987 at an aircraft engine manufacturing plant in the Midwest. The plant was selected because it was at that time in the process of introducing a number of technological innovations. One such innovation was a computer-controlled parts storage and retrieval system known as the Central Storage System, or CSS. It consisted of interrelated pieces of equipment such as bar code label printers, laser scanners, conveyors, and automatic guided vehicles. These pieces of equipment were combined into subsystems, such as Receiving, Input and Dispatch (RID), where incoming parts were inspected, identified, sorted, and labelled before being transported to assembly or storage; the Unit Load Storage system, which utilized 85-foot-high storage bins and cranes for large parts storage; the Mini-Pik system, which contained 5400 drawers for the storage of small parts; and kitting stations, at which engine parts were combined with the precise nuts and bolts needed to assemble them into "kits" before being sent to the assembly stations.

Another technology type examined in this study was the Universal Build Stand, or UBS, a computer-controlled fixture which vertically held certain large engine types at assembly work stations. This permitted assemblers to perform their job tasks by repositioning the engines they were working on through entry of commands at computer terminals instead of having to lie on their backs on wooden dollies underneath horizontally suspended engines. The UBS technology was already in place during the data collection period.

For the purposes of this study, the Central Storage System was categorized as a "complex" technology type, since it consisted of an integrated, computer-controlled *system* which involved major restructuring of job tasks and required a significant degree of learning. The Universal Build Stand was classified as a "simple" type of technology, since it was a piece of computer-controlled *equipment*, the use of which required only moderate new learning and did not fundamentally alter the job tasks of assemblers.

Both qualitative and quantitative research methods were employed. Qualitative data were collected during 12 site visits over a seven-month period by means of participant observation, interviews of 30 minutes to one hour with company and union representatives and workers, and review of written documents provided by the company and the two unions representing hourly employees.

Additionally, a written survey was developed and administered to a sample of the plant population. A purposive sample (Kish, 1965) was selected, consisting of all first-shift production, skilled trades, managerial, and technical employees in three selected work sites. Because this study used a post-test only quasi-experimental design for nonequivalent groups (Cook and Campbell, 1979), units were selected which differed from one another in the types and amount of computer-controlled technology directly used by employees, and in the duration of such use. The survey was administered in the plant to 156 employees, representing 64 percent of the sample.

The study had a number of objectives. One was to determine whether employees who used different types of technology and had used them for varying lengths of time differed on the skill and attitude outcome measures. Another was to examine whether the process of technology implementation, including advance notification, significant participation in the implementation process, direct and formal communication from the company, and having one's views about the technology taken into account, affected employee attitudes about the technology and their perception of the amount of skill required by their jobs. A third objective was to test whether position in the company affected involvement in the technology implementation process. Yet another objective was to identify relationships between attitudes about the technology, feelings of collective efficacy, and perceived skill. Finally, the study explored how the type, duration, timing, and source of training affected perceived skill.

The outcome variable in most of the analyses—perceived job skill requirements—was measured not by job task analysis, but by constructs derived from historical and current literature on the relationship of technology to skill. Empirical indicants of each of the theoretical concepts used to define skill were developed and included in the survey instrument. The four concepts that were determined to be dimensions of skill, and used as outcome variables in the data analyses were: manual ability; knowledge, which referred to problem-solving skills and creativity; autonomy, which referred to judgment and discretion in the planning and performance of work; and control, which referred to independence and freedom from significant external control or rigid structure. The measures focused on skill requirements of jobs as perceived by the people performing them.

Findings

The interview and survey data revealed some interesting patterns. The decision to introduce the Central Storage System was made by three high-ranking managers, who did not solicit the input of lower-level managers and affected employees until the system installation was well under way. The need for expanded assembly area floor space and production capacity drove the company to begin using the new system before all of its components were operational, before the software had been "debugged," and before employees had been trained to operate it. Moreover, there is some evidence that the software vendor did not fully share information needed by company salaried and hourly employees. Clearly, the stress of repeated system failures played a part in shaping employee attitudes toward the new technology; production workers had the least favorable attitudes of any group, followed by managers.

One-way analysis of variance revealed that employees who had been given advance notification of the new technology and who had been invited to participate in its selection, installation, and programming reported greater perceived job control and more positive attitudes about the technology than those who had not. However, only 15 percent of the respondents were found to have been given both notification and an opportunity for participation in any aspect of the implementation.

Only four employees reported first learning about the technology by means of direct and formal communication from the company (as measured by a formal meeting with management or written communication from the company), and they reported higher perceived control than those employees who first learned about the technology by informal or indirect means. The most common way that employees of all job categories first learned about the technology was by word-of-mouth.

Position in the work organization was found to significantly influence involvement in the technology implementation process. Cross-tabulation of frequencies revealed that managers were more likely than technicians, skilled trades, or production employees to receive at least one month's advance notification (86 percent); participate in the selection, programming, or installation of the technology (73 percent); learn of the technology directly and formally from the company (25 percent); and have their views about the technology taken into account (100 percent).

Analysis of variance was used to test the effect of technology type on perceived skill among three groups of employees: those who directly worked with the complex technology (CSS), those who directly worked with the simple technology (UBS), and those who worked with no or very little direct manufacturing technology. Among hourly employees, manual ability was significantly lower for employees in the complex technology group ($\bar{X} = 9.13$) than for employees in the simple technology ($\bar{X} = 12.18$) or no/little technology group ($\bar{X} = 12.19$, where $p = .0000$). For salaried and hourly workers combined, those in the complex technology group reported less control ($\bar{X} = 10.29$) than those in the no/little technology group ($\bar{X} = 13.22$, $p = .0150$). These results provided empirical support for the "deskilling" theory on manual ability and control dimensions of skill.

When the effect of technology type on skill was examined by job position by means of one-way ANOVA, production employees working with complex technology reported lower manual ability, knowledge, and autonomy than any other category of employee, as Table 1

TABLE 1

One-Way ANOVA Effect of Complex Technology Type on Perceived Job Skill Requirements by Job Position

	Ability	Knowledge	Autonomy
Managers	n.a.	$\bar{X} = 25.17$	$\bar{X} = 19.33$
Technicians	n.a.	$\bar{X} = 19.75$	$\bar{X} = 19.00$
Skilled	$\bar{X} = 11.65$	$\bar{X} = 21.86$	$\bar{X} = 22.86$
Production	$\bar{X} = 7.18$	$\bar{X} = 11.41$	$\bar{X} = 12.12$
	$p = .0000$	$p = .0000$	$p = .0000$

Note: Analyses on the Control Scale yielded no significant results.

indicates. Although this was also the case for production employees working with the UBS, their mean skill scores were considerably higher than those of employees in the CSS units. While it was expected that duration of technology use would positively affect perceived job skill requirements, there was no statistically significant support for this hypothesis.

Attitudes about the new technology were found to correlate with the knowledge, autonomy, and control dimensions of skill, although the relationships between these variables were not particularly strong. Collective efficacy, which in this study referred to the extent to which bargaining unit hourly employees felt their union had exerted influence over the technology implementation process, also did not correlate strongly with perceived ability, knowledge, autonomy, or control.

On the issue of training in relation to the new technology, both survey and interview data suggest that providing the training before the technology was introduced had a far more positive effect on perceived autonomy than did training after the fact. Yet, of the 58 percent who reported receiving training in preparation for the technology, only 15 percent stated that they were given the training *before* the technology was introduced. This was the result of a management decision to abandon a comprehensive plan which called for advance training of CSS operators, in an effort to use the new system as quickly as possible. Receiving more than one type of training (e.g., on-the-job, classroom, etc.) was also found to relate positively to autonomy.

Conclusions and Implications

This study provided empirical evidence in support of the contention that new workplace technology deskills production work. Skilled trades employees, however, experienced skill upgrading in the areas of manual ability and autonomy. While the complexity of the Central Storage System and its inherent restructuring of job tasks had some bearing on the skill issue, it was the process of technology implementation that most adversely affected not only skill, but also the training and education of the production employees. The push from upper-level management to begin using the system before complete installation, testing, and software debugging was a serious error, as was the failure to train operators before it was installed.

There are several implications for practice. One is that there is value in involving all categories of affected employees at the earliest point of the technology decision-making process. Such practices have been associated with major productivity gains in Sweden and Japan (Levin, 1987). A second and related point is that successful adoption of new technology requires a transformation of prevailing attitudes about workers' capacity to learn. Tayloristic management practices and structures that inhibit the potential for continuous education must give way to work structures that promote enrichment of jobs and the people performing them. A third implication is the importance of training employees before the technology is in place and employees are expected to work with it. Training, though, should continue past the point of technology installation so that employees have guided opportunities to experience hands-on operation and system breakdowns.

Answers to questions of how technology and training affect job skill cannot be absolute, since organizational and individual factors that bear on these issues are relative. Still, the questions posed in this study are critical to post-industrial society and must continue to be explored.

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An Assessment of the Skill Upgrading and Training Opportunities for Blue-Collar Workers Under Programmable Automation*

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Programmable automation—the use of computers to continuously direct the operation of machines—has aroused both great expectations and the strongest fears. Some enthusiastically look to PA to provide a technological solution to the productivity problems of U.S. manufacturers (Bylinsky, 1983; Goldher and Jelinek, 1983). Others concerned about the changing role of workers wrought by computerization view the technology with some trepidation. Writers from Braverman (1974) and Noble (1979) to Shaiken (1984), Howard (1986), and Zuboff (1988) have described in quite similar terms the alienating conditions that they expect computerization is likely to bring to the factory of the future. In all of these writings we find the same image of an alienated blue-collar workforce diminished in its importance to production and relegated to tending computer-controlled machines—having to "pay attention" to the possibility of a machine breakdown but having little to actually do and only the dimmest comprehension of how the computer runs the operations. Rather, we are told that the white-collar programming specialist will play a dominating role, supplanting the blue-collar worker as the key actor in production activities.

As with all forms of automation, *programmable* automation involves the transfer of tasks performed by human operators to machine controls. Unless the scope of these jobs is changed to include the additional responsibility of having to write or edit programs which

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control the machine operations, the new technology is likely to require less involvement by these workers in key production decisions. That lack of involvement, or "anomie" as one writer has termed it (Blauner, 1964), can reduce anticipated productivity gains and even contribute to near-catastrophes, as had been reported to have happened at Three Mile Island. Moreover, even if blue-collar workers' job responsibilities are increased, they cannot be expected to be maximally productive if they are not fully trained in the use of state-of-the-art technology. Because of the discontinuities in expertise required to work with the new as contrasted with the old technologies, informal on-the-job training by itself is no longer adequate (if it ever was) for the task of developing these skills.

In this paper I discuss new findings on the skill-upgrading possibilities and training opportunities for blue-collar jobs most directly affected by programmable automation in U.S. manufacturing industries today, namely, machining occupations involving the set-up and operation of computer-controlled machines. These results are based on a 1987 national mail questionnaire and a telephone follow-up survey of a randomly selected sample of 1,386 U.S. establishments in 21 different manufacturing industries.[1] Previous studies have consisted of case study research.[2] For the first time these survey data permit us to address such questions as: (1) At the current stage in the development and use of the technology, are the new skills associated with creating and editing programs for PA largely the purview of specialists or is management dependent (and to what extent) on blue-collar workers to perform these functions? (2) To what extent are employers providing any *formal* training in these new skills?

Management's Dependence on Blue-Collar Workers to Perform New Programming Responsibilities

Programmable automation, whether in the form of stand-alone NC and CNC machines or as incorporated in complex flexible manufacturing systems, is still at an intermediate stage in its deployment and use in American industry. In 1987 we found that less than half (47 percent) of all metal-working establishments had

[1] Between October 1986 and March 1987, production managers in these plants were interviewed by the Center for Survey Research (CSR) of the University of Massachusetts-Boston, using a sampling frame that included the smallest size plants with fewer than 20 employees as well as the largest plants with more than 250 employees. For a more complete description of the study and our major findings, see Kelley and Brooks (1988).

[2] For a recent review of that literature, see Kelley (1986).

installed even one computer-controlled machine, and even among those that had adopted the technology, most workers employed in machining occupations were still primarily responsible for the operation of machines of the conventional, nonprogrammable type. Overall, only about one-fourth of all blue-collar workers who set up and operate machine tools actually use programmable machines. Hence, the full impact of the technology on the organization of machining work has yet to be felt.

Were PA mainly a tool of management for wresting greater control over the machining process from blue-collar workers as Shaiken, Herzenberg, and Kuhn (1986) have argued, we would expect to find the assignment of programming duties to those workers employed in traditional machining occupations to be very rare. Yet when we look at those workplaces that have adopted programmable automation, we do not find the kind of dominance by technical specialists that many writers have predicted. In 56 percent of the plants using PA technology, at least some blue-collar workers in a traditional machining occupation have major programming responsibilities, regularly writing new parts programs on computer-controlled machines. Moreover, as Table 1 indicates, two-thirds of all workers in these occupations have at least some responsibility for writing or editing parts programs and nearly 40 percent are expected to at least occasionally create new parts programs (and not just edit programs written by someone else). Only one-third of workers who set up and operate PA machines have no involvement in programming.

As a general proposition then, we find no over-riding tendency towards increased specialization and Taylorism accompanying the introduction of programmable automation. Our survey results suggest that, contrary to what we might have expected from previous case study research on this question, managers are far more likely to rely on workers in traditional blue-collar occupations than on white-collar specialists to write parts programs. Those workplaces in which we find management least likely to delegate any responsibility for programming are characteristically bureaucratic organizations where we would ordinarily expect to find a highly specialized division of labor: large, unionized plants of multiplant enterprises.[3]

The Need for Formal Training

The capacity to exploit a new technology depends greatly on the technical know-how and versatility of the workers who are expected

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[3] See Kelley (1989a, 1989b) for a more detailed exposition of these findings.

TABLE 1
Distributions of Employment by Programming Responsibilities

Type of Programming Responsibility	Pct. of Tradit. Machine Workers Using PA-Tools[a]	Pct. of All PA Workers With Any Prog. Responsibility[b]
Writing Programs		
Occasionally	16.6	22.3
Regularly	13.6	18.3
Occasionally or regularly	30.2	40.6
Editing Programs[c]		
Occasionally	40.0	53.8
Regularly	25.6	34.4
Occasionally or regularly	65.6	88.2

[a] Refers only to those occupations with primary responsibility for setup and operation of PA machine tools. Included in this category are occupations such as the "general machinist" where the worker is responsible for the setup and operation of a wide variety of machines, the more specialized "setter" with responsibility for only setting up these machines, and "operators" with no setting-up responsibilities.

[b] Included in the "All PA Workers with any programming responsibility" category are workers who specialize in the writing and editing of parts programs to the exclusion of other machining tasks as well as all those who perform some programming function but are employed in traditional machining occupations. Programming specialists account for only 11.1 percent of all PA workers with programming responsibilities.

[c] Workers who write programs often have responsibility for editing the programs they create. 33.9 percent of workers who setup and operate PA tools neither write nor edit parts programs.

to use that equipment. In the United States, skills training specific to particular processes and technologies is largely left up to the individual employer. Hence, the development of the skills and capabilities of the existing workforce depends greatly on how much training employers provide. It seems clear that in the long run the overall economy benefits (in terms of productivity increases) from the enhancement of workers' skills by employer-provided training. But in the short run, the private returns from training are highly uncertain and may not be sufficiently large for many employers to be willing to undertake it. Being more fearful of the loss of skilled labor to competitors than of the hidden costs of lost productivity and inflexibility in the utilization of labor that may result from a less than optimally trained workforce, too few employers may be providing training for needed skills—skills which, given the mobility of labor, would benefit industry as a whole more than any single employer.

More often than not, employers rely on blue-collar workers to perform the new programming responsibilities associated with computerization. Yet it's not at all apparent how workers learn these skills. Unlike strictly mechanically-controlled machines where a worker can develop skills in an informal way, relying on experimentation (i.e., by adjusting levers or "fiddling with the dials" and then observing what happens), with programmable machines the worker needs to have some familiarity with the codes or language used to "instruct" the machine *before* she/he can be involved in any experimental learning-by-doing. Formal classroom instruction seems necessary to enable the worker to access that language and make the "invisible" operation of these "smart machines" transparent. Without such formal instruction, the knowledge workers develop about "programming" is likely to be very limited, adequate perhaps to make minor modifications in programs written by someone else, but not enough for the worker to write a program for a new product or even to streamline an existing program, removing excess steps found to be unnecessary to complete a job. These are the kinds of adaptations of technology that lead to new productivity increases.

Classes in the new skills of parts programming are provided at only 16 percent of plants where PA machines are used. Were most of the workers who performed programming functions employed in such workplaces, we might have less concern about the rarity of employer-provided training. But as the results displayed in Table 2 indicate, the vast majority of workers who perform programming functions are employed in workplaces where their employers provide no formal instruction in how to perform these tasks.

TABLE 2
Distribution of PA Workers
With Different Types of Programming Responsibilities
Among Establishments With and Without
Any Formal Classroom Instruction

	Employer-Provided Training	
Type of Programming Responsibility[a]	No Classes (%)	Programming Classes (%)
Occasionally or Regularly Writes Programs	77.3	22.7
Occasionally or Regularly Edits Programs	70.2	29.8
Programming Specialists	62.4	37.6

[a] Each row sums to 100 percent. The percentages shown are for all workers in the sample with that type of programming responsibility.

Even if management is very dependent on its blue-collar workforce to regularly perform programming functions and relies heavily on the new technology, we find that the chances that an employer will provide any specific training in programming are still very modest. Even if all PA machine operators have regular program-writing responsibilities, the chances that their employer will provide training for that task are still very low—less than 1:3.[4] Similarly, when we consider the intensity of PA use at a plant, we would expect that the more that the machining process is dominated by PA technology, the more important the programming function is likely to be in enhancing productivity for the machining process as a whole. With a more intensive use of PA, we would therefore expect management to pay greater attention to the development of programming skills. Hence, if all machine tool operators at a plant are employed using PA tools, we would expect to find the chances of employer-provided training to be very high. But they are not. By our estimate, even when the plant is completely converted to PA technology, the odds are only 1:2.4 that management will offer instruction in programming.

Of all the scenarios we considered, we found that the most favorable chances for a worker to have access to employer-provided instruction in parts programming occurs in very large plants of large, multiplant corporations. In such establishments, the odds are better than 2:3 that the employer will offer programming classes to plant employees. However, my previous research on blue-collar job design indicates that these are the same type of workplaces that are the least likely to permit operator-programming (Kelley, 1988, 1989a). When we also consider that programming classes are more likely to be offered in workplaces where the programming function has been professionalized (i.e., where those who write parts programs usually hold a B.S. or higher degree), I conclude that the workers who are most likely to benefit from programming courses offered by employers are those in *white-collar* occupations (or those who have the chance to be promoted into such occupations). Since white-collar programming specialists constitute only 11 percent of all those who perform programming functions on computer-controlled machine tools, these findings strongly suggest that too few employers are providing training. And those that do train are failing to target the occupational groups most in need of instruction.

[4] Details on the model used to estimate the chances of employer-provided instruction can be found in "Chapter V: The Extent of Private Sector Training for Traditional and New Skills" of Kelley and Brooks (1988).

Policy Implications

Considering the ubiquity of new skill demands for machine operators related to the new technology and how few are employed in workplaces where any formal instruction in these new skills takes place, a strong case can be made that more training is necessary to better prepare blue-collar workers for their new responsibilities. Moreover, it's not very likely that very many employers will be willing to undertake further training initiatives by themselves. In particular, the kind of small, single-plant enterprise that is most dependent on a highly versatile blue-collar workforce with these new skills is simply not likely to have the internal resources to provide the training that is needed.

State-sponsored programs similar to the Machine Action Project in Massachusetts and the training program at the Institute for Technological Innovation in Michigan can be successful vehicles for bringing small employers together in training consortiums in which the costs of training are shared. The MAP project, for example, has led to the design of a training program cooperatively sponsored by a group of local employers who do not have the resources individually to provide the kind of broad-based combination of experiential on-the-job training and formal classroom instruction they believe is necessary to fully exploit the new technology's capabilities. Instead, these employers cooperate by providing work sites for the experiential training which takes place over a two-year period. The state provides the necessary classroom instruction through a local community college.

There is a need for such state-led training and apprenticeship programs to develop the kind of general skills that, for various reasons, most employers cannot be expected to provide on their own. Although these programs can be designed to meet specific employers' needs through on-the-job training, they should include a certain amount of more formal instruction broad enough to develop a well-educated industrial workforce with up-to-date skills and the basic knowledge necessary to acquire new skills as ever newer production technology is introduced. Because of the discontinuities in expertise required to work with the new as contrasted with the old technologies, informal on-the-job training by itself is inadequate. Moreover, because of the high inter-firm mobility of labor, only a small fraction of the economic benefits of a better trained workforce can be captured by the firm which invests in training. Hence, there is little incentive for the individual firm to invest in the kind of broad-based instruction for these technologies that is necessary to develop the skills that can be applied to the broad range of industries and production processes in which this technology can be (and has, to some extent, already been) deployed. In addition, there are economies of scale in the training process which require a "system" involving the cooperation of many firms. The German system of vocational education and apprenticeship, with heavy involvement of industry associations but also a state subsidy, provides a possible model.

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DISCUSSION

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Haddad confirms simultaneous deskilling of some jobs and upgrading of other jobs in one establishment as the result of introducing new workplace technology. She correctly emphasizes early training and preparation as an essential part of adopting new technology. And she correctly stresses the value of involving all affected workers early in the process of decision-making on introducing new technology. It's not just a matter of giving workers the illusion that they have been consulted. Workers do indeed have something important to contribute to this process.

Kelley correctly notes an unmet need for worker training, an underinvestment in training, because too many employers, particularly smaller-sized companies, fear they won't be able to get back their investment in training. I agree with her on the need to expand training opportunities, including labor-management-sponsored and state or local government-sponsored training programs. However, I believe we also need vastly expanded federal support for training as well as for education if the United States is going to meet the competitive challenge of the world economy.

Workers and Technological Change

Workers and unions have a big interest in the impact of technology on the nature of work, on labor-management relations, on skill requirements, and on patterns of employment and unemployment.

Technology brings potential benefits to some people—new jobs, higher pay, safer and easier work, higher productivity, higher levels of living, and more leisure. But also there are potentially destructive, injurious effects on some workers and on society—loss of jobs, loss of earnings and income, downgrading of skills and experience, new

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threats to the environment and to workers' health and safety, dehumanization of work, more polarized extremes of income distribution, and social instability.

The long-run benefits from technological progress and the long-run necessity for accommodating to technological change are much easier for workers and their unions to accept if the workers know that job security and income security are protected (McLaughlin, 1979). Workers want to share the benefits of technological progress without bearing an undue or unfair share of the burden of change and adjustment, and workers want to participate through their elected union officials in the decisions that are going to affect life on the job. Too often such decisions are made unilaterally, without consultation or discussion or negotiation, by faceless absentee management. More involvement by workers and unions, more joint decision-making, more industrial democracy can raise the quality of humane adjustments to new technology.

Advance notice, labor-management consultation, negotiation, and collective bargaining are logical ways of producing humane, worker-protecting adjustment to technological change. Workers and unions look to collective bargaining as their first line of defense in these situations. The flexibility of collective bargaining at the plant, company, and industry levels helps workers negotiate and settle potentially adverse effects of job-destroying technological change. Collective bargaining can provide a cushion to soften adverse effects on workers by setting up adjustment programs and procedures at the workplace. If this cushion is linked with job placement services, training and retraining programs, and unemployment compensation, the disruption of workers' lives and the job displacement resulting from technological change can be minimized.

Existing labor-management contracts in the U.S. include a broad range of technology adjustment protections for workers (Industrial Union Department, 1984). For example:

1. No-layoff guarantees against job loss or income loss.
2. Abolishing of jobs only when job-holders retire.
3. Severance pay for workers who lose their jobs and benefits paid by employers to supplement government unemployment compensation.
4. Income maintained for workers required to take lower-pay jobs.
5. Payment of relocation expenses for laid-off workers transferring to another plant of the same company.

6. Advance notice of plant closings and major layoffs (negotiated up to 3 months, 6 months, and even 12 months in some contracts).

7. Joint labor-management committees to deal with problems of workers adversely affected by technological change.

8. Early retirement options.

9. Training and upgrading opportunities for workers to take higher technology, higher paying jobs.

10. Remedial or refresher education, training, and retraining for workers about to be laid off or already laid off, to prepare them for new jobs.

These provisions do not constitute total protection, but they do offer some protection and some help to displaced workers.

Education and Training

Labor unions recognize that many "new technology" jobs require well-educated, well-trained, and highly-skilled workers. Many unions are deeply involved in education and training and other job-related programs to upgrade currently employed workers and to help unemployed, dislocated, and disadvantaged workers. Training agreements negotiated through collective bargaining play a major role in meeting the needs of specific industries for trained, skilled workers. More and more at the bargaining table unions are negotiating training and education and learning time for their members.

For example, the Auto Workers have negotiated training and education programs with General Motors, Ford, and Chrysler. In the steel industry, where half a million workers have lost jobs in the past 10 years, the Steelworkers union has more than 50 training centers with 30,000 workers enrolled. In the telephone industry where 30,000 workers have lost jobs in the past three years, the Communications Workers union and the Electrical Workers (IBEW) negotiated a 1986 agreement which provides $7 million a year for education and training for upgrading to deal with new technology and to prepare job-losers with new skills for new jobs.

We must make sure that education and training are available to all workers so they can upgrade their skills and get new skills to use new technology. And we must make sure that working people and their families share the benefits of the new technology—more income and better income distribution, higher living standards with more leisure, more education, and more opportunities for widespread citizen participation in political, social, and cultural programs.

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XIII. AFFIRMATIVE ACTION IN A CHANGING ECONOMIC ENVIRONMENT

The Importance of Timing Considerations in the Analysis of Data in EEO Litigation

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Although common sense suggests that when a formal complaint of discrimination is raised, its merits should be assessed by examining the employment practices operating at the time, courts have not always followed this policy. As a result, plaintiffs have sometimes been allowed to establish a prima facie case of discrimination solely on the basis of pre-Act evidence, while in other cases defendants have been able to include post-change data to rebut a plaintiff's showing of a prima facie case based on data from the effective date of the Civil Rights Act to the date of the charge.

We propose that initial liability be primarily determined on pre-charge data as these practices presumably generated the complaint. Such a protocol would bring the legal assessment of EEO data in line with the approach used in product liability cases where the focus is on what the manufacturer knew about the product at the time an alleged defect manifested itself as well as the plaintiff's knowledge of any potential danger at that time.

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In order to implement our proposal, we use statistical procedures for detecting a change-point to determine the period, if any, in which a discriminatory practice continued to operate in the post-charge period. Although most of the cases we discuss concern fair hiring, our approach is consistent with the Supreme Court's holding in *Bazemore v. Friday* (106 S.Ct. 300, 1986) that "A pattern or practice that would have constituted a violation of Title VII, but for the fact that the statute had not yet become effective, became a violation upon Title VII's effective date, and to the extent an employer continued to engage in that act or practice, he is liable under the statute" (106 S.Ct. at 3006). Statistical tests for a change-point should also aid courts in determining whether the employment practices changed prior to the limitations period, i.e., the defendant was in compliance with Title VII at the time of the complaint or changed later (typically after the charge). After illustrating the methods on data from *Gay v. Waiters Union Local 30* (649 F.2d 531, 9th Cir. 1982), we mention other decisions which might have been affected by a greater emphasis on timing considerations.

Gay v. Waiters Union, Local 30

The plaintiffs' original complaint charging race discrimination in the hiring of waiters was filed in March 1973 against the St. Francis Hotel. After much litigation concerning the certification of the relevant class, it was defined as "black males working or seeking work as waiters who, after March 28, 1970, were or are being or are in the future, on account of their race, . . . denied employment by defendant Saint Francis Hotel Corporation. . . ." The statistical portion of the district court opinion (489 F.Supp. 282, N.D. Cal. 1980) was primarily concerned with determining minority availability. Using a weighted labor market analysis similar to that described in Gastwirth and Haber (1976), the minority availability, π, was set at .111. The court noted that only testing the data for the entire period "would be questionable. Statistical testing of the type used here assumes that the employment practices being evaluated remained the same over the entire period. Material differences in the way selection practices within a single period affected black applicants would lead to invalid or misleading test results for the period." Since the court did not wish to rely on one time period, cumulative data were analyzed. The data, the **Z** statistic (number of standard deviations from the expected number of black appointments), the one-sided p-values used in the case (derived from the normal approximation to the binomial distribution with parameters n [sample size] and π [probability a member of the relevant labor pool is black]), and the exact p-values are reported in Table 1.

TABLE 1

Hire, Promotion, and Transfer Data for the St. Francis Hotel

Period	Positions Filled	Blacks	% Black	Expected Number	Z	Normal Approximation to p-value	Exact p-value
1970	12	0	0	1	−1.22	.1112	.2437
1970-71	35	1	2.9	4	−1.55	.0606	.0874
1971-72	111	6	5.4	12	−1.91	.0281	.0308
1972-73	153	9	5.9	17	−2.05	.0202	.0205
1973-74	193	11	5.7	21	−2.39	.0084	.0074
1974-75	256	13	5.1	28	−3.07	.0011	.0006
1975-76	293	17	5.8	33	−2.89	.0019	.0013
1976-77	329	21	6.4	37	−2.92	.0033	.0025
1977-78	371	25	6.7	41	−2.67	.0038	.0030
1978-79	390	38	9.74	43	−2.46°	(−.863)	.2225

Source: The raw data and Z statistics are taken from the opinion. We calculated the one-sided p-values.

The opinion noted that plaintiffs claimed that the hotels changed their practices during the course of the lawsuit, but did *not* introduce any statistical tests to support their argument. Judge Schwarzer observed that the hiring practices might have changed after 1975 because that year showed the greatest divergence between actual and expected black hires. One reason he may not have detected a change in the appointment practices is the existence of an error in the reported Z statistic for the entire 1970–1979 period. Rather than −2.46, the value is −.853, indicating a change from a statistically significant total difference through 1978 to a nonsignificant difference when the 1979 data are included. In Table 2 we report the data for *each* year, the Z statistic, and the *exact* p-value calculated from the binomial distribution. The p-value changes from being below one-half, indicating black under-representation, to one-half or more in 1976. When the 1970–1975 period is analyzed by itself, the probability of 13 or fewer black appointments out of the 256 is .006 or .012 if a two-sided test is desired. This p-value meets the two-standard deviation criteria noted in *Castaneda* and *Hazelwood.*

It is clear that the 1979 data in Table 2 cannot be considered as a sample from the same binomial distribution as the other years. Indeed, the probability that 13 or more blacks would be selected when 19 positions were filled when they form only 11.1 percent of the available

TABLE 2

Analysis of *Gay v. Waiter's* Appointment Data by Year

Year	Total	Black	Expected	Difference	Exact p-value
1970	12	0	1.332	−1.332	.2437
1971	23	1	2.553	−1.553	.2586
1972	76	5	8.436	−3.436	.1392
1973	42	3	4.662	−1.662	.3001
1974	40	2	4.440	−2.440	.1648
1975	63	4	6.993	−2.993	.1578
1976	37	4	4.107	−.107	.6069
1977	36	4	3.996	−.004	.6299
1978	42	4	4.662	−.662	.4944
1979	19	13	2.109	+10.89	.9999

labor pool is 5×10^{-9}, or less than one in a million, which might aid in establishing a prima facie case, under the *Hazelwood* criteria, of reverse discrimination in 1979.

The previous analysis is not entirely satisfactory as it does not specify a criterion such as the minimum Z value over the period is less than $-d$ standard deviations which corresponds to a p-value less than .05. Hence, we now use change-point procedures to substantiate the above analysis; i.e., we will test whether a change occurred and also estimate the time (year) it occurred.

The maximum likelihood (ML) procedure locates the change of the time k, for which the difference between the proportions of black hires in the two periods (through time k and after time k) is largest. In order for this to be a significant change-point, a statistic based on the minimum (for a one-sided test) or maximum absolute value (two-sided test) must be significant at the appropriate level (usually .05 for a two-sided test). The smallest p-value of the two-sided test occurs when the data through 1978 are compared to the 1979 data. This p-value is less than one in a million. Making the simple conservative correction for multiple testing, namely multiplying by nine, also yields an extremely small p-value. When we use the 1970–1979 period, we note from Table 1 that blacks received 16 fewer jobs than expected, which corresponds to a shortfall of 2.67 standard deviations or a *two-sided p-value* of about .008. An examination of the yearly data in Table 2 suggests that blacks began to receive their expected number of jobs in 1975 rather than in 1978. This anomaly arose because the data indicate two change-points, one at the end of 1975 and the other at the end of 1978.

A graphical procedure, proposed by Page (1955), is commonly used to indicate changes in a process. One plots the cumulative differences from expected, based on the Cusum chart,

$$S_k = \sum_{i=1}^{k} (X_i - n_i\pi) \tag{2.1}$$

or, equivalently, the cumulative observed *minus* expected number of minority hires. The minority group is receiving *less* (more) than their expected number of jobs when S_k is *less* (more) than zero. A pattern of change from under-representation to fair representation is shown when the S_k *decline* and then *level* off and become parallel to the x-axis. The plot of the values S_k shows that the leveling-off process began *after* 1975 and that a second sharp change occurred in 1979, confirming our previous analysis. Moreover, in *none* of the years prior to 1976 did the odds ratio (the odds of a black being hired relative to those of a white) approach .8, implying that the difference in success rates is truly meaningful and the **Z** statistic for 1970–1975 in Table 1 was −3.07.

We cannot know whether the defendant could have rebutted this analysis which should have made a reasonably sound prima facie case for the 1970–1975 period. However, the inclusion of the 1979 data six years after the suit was filed, which reduced the overall disparity to insignificance, seems logically irrelevant to the issue of whether discriminatory practices were operating in the pre-charge period. Indeed, in *O'Brien v. Sky Chefs, Inc.* (670 F.2d 864, 9th Cir. 1982), the Ninth Circuit reversed a finding of nondiscrimination which relied mainly on post-charge data.

A Proposed Protocol and Its Potential Effect

While further procedures based on Cusums and odds ratios which are also applicable to analysis of applicant flow data (based on the hypergeometric model) can be developed, courts and/or the legislatures need to ensure that the data needed to ascertain whether or when a change in hiring pattern occurred are available for analysis. In view of the fact that back pay may be awarded up to two years prior to the filing of an original complaint, it is reasonable to require employers to keep personnel records for at least three years. Of course, once a charge is filed, the employer should not destroy, alter, or correct the records without court supervision.

In order to determine the most relevant data base for assessing the situation at the time of the charge, either the data for the pre-charge period could be analyzed *or* we could see whether a change occurred *prior to or after* the charge. If, as in *Teamsters*, the change occurred after the charge, data until that time can be used to assess whether discriminatory practices were in effect during that period.

When the plaintiff succeeds in establishing a solid prima facie case based, in part, on the pre-charge or pre-charge and early post-charge data, courts should assume that these practices are likely to continue. This means that the burden of producing evidence that discriminatory treatment ended should be placed on the defendant. Change-point procedures and yearly odds ratios can be used to demonstrate this.

An advantage of requiring employers to keep records for three years is that the defendant may be able to show that a change occurred 180 days or more prior to the charge. In light of *Evans*, this should reduce the legal relevance of statistical data showing that minorities received fewer than their expected share of positions in an earlier period. Furthermore, defendants could use change-point methods to show that any questionable practices changed shortly after the charge, thereby limiting their potential liability.

We close by mentioning several other cases where the issue arose or might have been explored further had more reliable data for the earlier time period been available.

In *EEOC v. Sears* (839 F.2d 302, 7th Cir. 1988), the EEOC filed its complaint in 1973. Although the data showed that female representation in several types of sales positions more than doubled after 1973, the data for 1972 were of dubious reliability. The sharp change appears to support Judge Cudahy's dissent regarding the original liability. Indeed, he noted that women formed only 1.7 percent of full-time commission hires in 1973, but thereafter formed between 5.3 and 10.5 percent. Although the data are not reproduced in the opinion, had data from 1970 or 1971 onwards been available, a change-point test would probably support his view.

In *Adams v. Gaudet* (515 F.Supp. 1086, W.D. La. 1981), plaintiffs filed their complaint toward the end of August 1976. The data in Exhibit p-35, reproduced in the opinion, strongly suggest that blacks received more promotions in the post-charge period. The defendant analyzed the data from August 30, 1975, to the time of the trial (1980) and was able to demonstrate that during this period there did not appear to be a significant difference in the hiring and promotion rates of blacks and whites. Elsewhere (Gastwirth, 1988) we question the propriety of the combination methods used. Our point here is that by allowing the defendant school system to combine four years of post-charge data with only one year of pre-charge data to rebut a prima facie case based on six years of pre-charge data does not seem logical or consistent with the two-year eligibility period for back pay.

The case of *Green v. U.S. Steel Corp.* (46 FEP Cases 720, 3d Cir. 1988) concerned the firm's hiring pattern from mid-1972 through 1982. Judge Newcomer noted that a "dramatic rise" in black hires occurred in 1976 and logically concluded that this undercut the defendant's assertion that the disproportionately low ratio of black hires in other years was due to the lesser qualifications of black applicants.

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Affirmative Action and Black Employment

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During the mid-1960s a dramatic increase occurred in the relative income of American blacks as compared to whites. While the employment situation for blacks had shown some improvement before that time, 1965 seems to mark a point of departure. Median income of employed black men and women, expressed as a percentage of that of white men, began a steady climb especially notable compared to the lack of improvement in the status of white women.

Explanations for the Improved Status

This increase has encouraged researchers in economics, sociology, and industrial history to speculate about causes.

Educational Level

One explanation put forth for the upswing in the income of black males suggests that it was due to improvements in their educational level and quality. In comparing blacks born between 1900 and 1960 with whites born during those years, Smith (1984) notes a narrowing of the gap in racial educational levels. The retirement of older black males from the labor force raised the average quality, and hence income, of the aggregate of black workers.

Labor Force Dropout

Another hypothesis involves the increasingly greater labor force dropout rates of black males as compared to that of white males. Richard Butler and myself (1978) and Charles Brown (1982) have investigated the possibility that the acceleration of median income of employed blacks reflects, in part, the fact that individuals who are not working tend on average to be from the lower-wage group. At most

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10-12 percent of measured black male relative wage improvement is due to this source.

The Role of Government

While these stories partially explain conditions affecting black income during the 1960s, they fail to account for the dramatic upswing in black male wages that occurred right around 1965. This sudden jump demands an explanation involving an irreversible event of some kind, which brings us to the most obvious hypothesis. Much of the Kennedy-Johnson civil rights legislation was implemented and the first effective affirmative action programs were put in place in 1965. Richard Freeman (1973), and others, have argued that the upward jump in black income was due to pressure from the federal government. In my study of South Carolina conducted with Brook Payner (1989), we look beyond the aggregated national figures in an attempt to test the validity of this explanation and to examine competing hypotheses.

Disaggregating the National Data

Disaggregating the national data and examining it by region, Butler and Heckman (1978) note that only in the Southern region was there a steady upward trend in black median income. The big jump that occurred around 1965 appears, in fact, to be a consequence of a "blip" in the North Central region superimposed on a steady Southern trend begun in the 1960s.

A Southern Story

Payner and I decided to look more closely at data from the South, thinking that some of the changes in black status might have been due to economic forces existing there—for example, industrialization. Working with an extensive data base on South Carolina first used by Donald Dewey (1955), we were able to do a cross-sectional analysis of employment during the time period in question. We find a sharp dichotomy between black employment patterns in traditional manufacturing (textiles and apparel) and black progress in the more modern sectors of the state.

The South Carolina Story

Beginning in the 1950s much of the economic growth in South Carolina came from the entry of new industries into the state. From that time up through 1980—when our data end—industrialization has continued unabated. Thus a tight labor market has been present, undoubtedly facilitating the movement of black workers into manufacturing.

The story of South Carolina is one of two sectors: the modern and the traditional sectors (textiles and apparel). In 1960 a black male between the ages of 26 and 30 was 24 percent less likely to be working in textiles than a white male with similar characteristics. Ten years later, the probability that a black male would be found in this industry was essentially the *same* as that of a white. A similar story can be told for women.

Progress in the modern sector has been more gradual. As black education increased, so did black employment in these sectors. Controlling for skills, there is no evidence that blacks were ever excluded from these industries even in 1940, 1950, or 1960. There is strong evidence of systematic exclusion of blacks from traditional sectors.

The sharp dichotomy between modern and traditional sectors in the employment of blacks has a good economic and sociological explanation. The long-established tradition of the mill village, begun in the 1880s, tended to reinforce employment discrimination in textiles with residential segregation. As new textile manufacturers as well as other industries entered South Carolina, they were less bound to social patterns left over from the era of company housing. Newer firms were more willing to employ blacks, and there was a strong demand for labor during the period of industrial growth.

Government Contracts

An important factor in the growth of textiles during the mid-1960s was the millions of dollars in defense expenditures coming into the state. In 1965 Lyndon Johnson instituted a revival of the Office of Federal Contract Compliance, requiring that contractors employ more blacks. Examining our data county by county, we find that increased defense expenditures indeed coincided with greater employment of blacks.

The Breakdown of Discrimination

Textile firms in South Carolina were most definitely paying a price for not employing black workers. There was ongoing economic pressure encouraging them to change their hiring practices and seek cheaper sources of labor. After 1965, when blacks entered the industry, the real wages of white male textile workers ceased to grow, and the income of black men, relative to that of white men, began to increase steadily. The reduction of white male employment in the industry after 1965 at a time when total employment was still increasing is consistent with affirmative action shifting demand in favor of blacks and releasing a supply of black labor to the industry. Black labor supply put downward pressure on white wages.

Synchronized Breakthrough

It is possible that the simultaneous breakthrough of blacks in diverse counties of South Carolina was a consequence of the tight labor market. Nonetheless, it remains difficult to imagine that all firms would feel the pressure of labor needs simultaneously and would reach the decision to hire blacks at precisely the same time. The time series evidence of the advance of blacks in all counties at the same time suggests an important role for government policy.

Government Influence

Our analysis suggests that the government, in providing both affirmative action pressure and a justification for employing blacks, had a profound influence on the employment status of South Carolina blacks in the mid-1960s. This hypothesis offers the clearest explanation for the sudden increase in employment and wages of blacks. However, because of the tight labor market there is difficulty in identifying the upswing in blacks' status as simply the effect of governmental legislation. At the very least, government policy was facilitated by the tight labor market.

Our study of the employment of blacks in South Carolina provides us with a view, in microcosm, of what likely occurred throughout the South during the 1960s. It offers strong evidence for the role of federal affirmative action programs in securing black progress in traditionally segregated sectors. It also demonstrates the powerful role of educational improvement and market forces in the more modern sectors of the state.

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Contingent Workers and Equal Employment Opportunity

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The Growing Contingent Workforce

A major change has taken place in the American world of work in the 1980s. Many companies have reduced their *core* workforce and expanded their *contingent* workforce (i.e., temporary, part-time, and subcontracted workers). The shift to more contingent workers can produce several key benefits for management and some workers. However, these dramatic changes also can generate real social costs.

One of the key social costs arises in the area of equal employment opportunity. To put it bluntly: Are contingent worker strategies being used by corporations to weasel out of their equal employment opportunity goals? Are many U.S. corporations in the process of creating a two-tier system which favors white males? Do contingent worker strategies hurt minority and women workers?

While the actual situations and details experienced by different corporations are in many ways each unique, there are several common threads that run through the labor-related choices that all companies face. The recent shift in the human resources landscape becomes quite clear when one examines these common threads. One of these threads involves the concept of affiliation, or the degree to which workers will be associated with a specific employer. The Japanese model of lifetime employment represents one end of the affiliation spectrum. In this type of employee relations system, workers will spend their entire career with one company. The other end of the affiliation spectrum is represented by the day-laborer model. In this type of employee relations system, neither the worker nor the employer makes any commitments that last beyond sundown.

A second common thread all companies face in the area of human resources involves the concept of *stakeholders* (i.e., the legal, moral,

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* This paper represents the author's views and not necessarily those of NPA.

political, and economic claims various groups can make on a corporation). All employers function within a specific legal and cultural framework. But within these boundaries employers often have significant discretion in establishing the stake their employees have at work.

These two common threads, affiliation and stakeholders, combine to fashion the general type of human resources system used by a company. There are two very general types of workers: *core workers* and *contingent workers*. Core workers are those individuals who have a strong degree of affiliation with an employer and are treated as if they have a significant stake in the company. Core workers can be thought of as being part of the corporate family. They show long-term attachment with a company and have a real measure of job stability. To use the language of economists, core workers have an *implicit contract* with their employers that if they follow certain rules and norms and meet certain standards, their employers will provide a long-term home and some measure of advancement.[1]

In contrast, contingent workers are those individuals who have a weak degree of affiliation with a specific employer and do *not* have a significant stake in a company. Contingent workers are *not* part of the corporate family. They do *not* show long-term attachment with a company, and they often do *not* have a real measure of job stability. Employers most often do *not* make implicit contracts with contingent workers.

As indicated in Table 1, the contingent workforce has been growing almost twice as fast as the total labor force in the 1980s.

Costs and Benefits

The major benefits to employers resulting from contingent systems are greater human resource flexibility and lower labor costs. For example, contingent clerical workers often are paid only roughly half of the hourly rate of full-time workers (as indicated in Table 2). Also, contingents often are not covered by any fringe or health care benefit system.[2]

It appears that women and minority workers represent a large share of contingent workers, who are often paid less than core workers

[1] Sherwin Rosen, "Implicit Contracts," *Journal of Economic Literature* (September 1985), pp. 1144-75.

[2] Sar A. Levitan and Elizabeth Conway, "Part-Time Employment: Living on Half-Rations," Working Paper of the George Washington University's Center for Social Policy Studies, 1988, pp. 11-12.

TABLE 1

The Growth of the Contingent Workforce
(millions of workers)

	1986	1980	Percent Change
Temporary workers	.7	.4	75%
Part-time workers	19.5	16.3	20
Business services	4.8	3.3	45
Self-employed	9.3	8.5	9
An upper bound on the size of the contingent workforce	34.3	28.5	20
A lower bound on the size of the contingent workforce	28.3	25.0	13
Total civilian labor force	117.8	106.9	10

Source: Estimates based on data from the U.S. Bureau of Labor Statistics.

TABLE 2

Pay and Benefit Differences
Between Core and Contingent Workers

A. Median Hourly Earnings (1987)

Occupation	Full-Time	Part-Time	Percent Difference
Professional	$14.80	$8.30	78%
Clerical	8.80	5.70	54
Service Workers	6.69	4.15	61
Blue Collar	8.80	4.95	78

B. Percent of Workers with No Health Care Coverage

	Percentage with No Coverage
Full-time, full-year workers	8.1%
Part-time for noneconomic reasons	18.1
Part-time for economic reasons	30.6

Source: Estimates based on data from U.S. Bureau of Labor Statistics and The George Washington University Center for Social Policy Studies.

(and often receive no fringe benefits). For example, 20.1 percent of black women workers are part-timers, while only 9.8 percent of white male workers are part-timers. Roughly 26.6 percent of women workers are part-timers, while only 10.1 percent of men are in this group.

Company Response

While contingent work can bring "freedom" and "flexibility" to many workers, these workers could find themselves without basic benefits, paid low wages, and not on any real career path. Given these conditions, it is fair to ask: Are some companies constructing white, male "cores" that are covered up by a lower tier of female and minority contingents?

As part of research for a National Planning Association study on contingent workers, case studies were conducted with 50 major American companies. Out of these 50 major companies, only one corporation studied had even bothered to look at the equal employment opportunity implications of contingent worker strategies.

Company Z is a large manufacturing corporation that has taken a very serious interest in the above types of questions. The corporation's equal employment opportunity (EEO) office has been very active in all company efforts to improve human resource flexibility. This company's EEO office involvement has been mandated by top corporate executives. Managers in various parts of the company know that they must have the EEO office sign off on their flexibility plans.

In the case of down-sizing, the company EEO office uses a so-called matrix process which starts off with employee performance and length of service. A second matrix examines employee wage grades and performance. Based on the matrix analysis, preliminary employee down-sizing suggestions are made. The company EEO office then places its so-called overlay on top of the matrix analysis. The EEO overlay is based on an 80-percent rule. For example, suppose prior to a down-sizing 20 percent of a given group are minorities. Under the 80-percent rule, after the proposed down-size, at least 16 percent of the retained employees (i.e., 80 percent of 20 percent equals 16 percent) have to be minorities. If minority totals remain within the 80-percent rule, then the company EEO office will sign off on the proposed down-sizing. However, if the 80-percent rule is violated, then a new down-sizing proposal has to be created.

To give an example of how this system works, suppose a company had 1,245 employees. Assume minority workers represented 237, or 19 percent, of this total. If the firm were to down-size by, say, 345 workers to 900 people (i.e., a 27.7 percent down-sizing), then minority employment at a minimum would have to be 15.2 percent of the reduced workforce (i.e., 80 percent of 19 percent). Thus, the new total minority workforce could not fall under 137 workers. Hence, only 100 minority workers could be let go in this down-sizing. As the last hired and first fired under many seniority systems, many more minority workers might have been let go in this example if it were not for this EEO overlay.

The company EEO office also has attempted to keep data on the demographics of its part-time workforce. In terms of temporary workers, consultants, and subcontractors, the company EEO office has made sure that all of the suppliers of contingent labor services sign a strong EEO agreement as part of their basic contract with the company. "Of course these agreements are difficult to enforce, but we have made a real effort in many cases," a company EEO executive explained. In terms of contingent workers being converted into company core workers, the company's EEO office has created various affirmative action goals. While it may not always be easy, it does appear to be possible for a large corporation to balance both human resource flexibility and equal employment opportunity goals.

Conclusions

Several conclusions are in order:

1. The contingent workforce has seen dramatic growth in recent years.
2. Contingents are often paid much less than similar core workers.
3. Contingents often do not receive basic employee benefits.
4. Women and minority workers represent a major portion of contingent workers.
5. To date, very few companies have examined the equal employment opportunity implications of their contingent worker strategies.

I do not think that most companies have used contingent worker strategies to hurt minority and female workers. Instead, I think many companies are just unaware of the implications of their human resource policies. However, as indicated here, it is possible to increase the use of contingents and not hurt EEO goals.

XIV. HOW UNION MOVEMENTS IN THE U.S. AND EUROPE ARE RESPONDING TO THE NEW "FUTURES" WHICH ARE CONFRONTING THEM*

Industrial Relations in Sweden in the 1990s

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Four basic facts should be kept in mind as a background when we discuss the 1990s: (1) Sweden has full employment. (2) Swedish unions continue to grow in absolute terms and as a percentage of the labour force. (3) Sweden enjoys reasonably peaceful industrial relations. (4) Sweden has a labour government.

This paper will show that these remarkable pillars of a sound industrial relations system are hollow and might tumble down unless the unions prepare themselves to meet the challenges of the 1990s. They must have a flexible organisational structure and be prepared to tackle new problems which have never before been addressed. They must be prepared to fight the political wing of the labour movement which is prepared to settle down and administer the welfare state without much thought given to gaining new territory. Progress will not exist in a welfare state without a well-organised, alert, and demanding trade union organisation.

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The Economy

Full employment, through active and selective manpower programs, has been supported by all political parties, unions, and management ever since the 1950s. Full-employment policies are as sacrosanct in Sweden as the state church and the royal family. However, voices are now heard, and not only from the Brookings Institution, that we should allow more unemployment in order to avoid an inflation rate that tends to be higher than that in other European countries.[1]

This threatens the Swedish Model—the agreement between the unions and the government that the goal of economic policy should be full employment and a wage policy of solidarity. This means constituting a strict financial and monetary policy combined with an active and selective labour market policy, a progressive industrial policy for structural reform of industry and society, and a general welfare policy with fair distribution.

Several strains exist within the Swedish model, and they will not be any easier to deal with in the 1990s.

1. In the past, the watchdogs of the model were the central federations of labour and employers, LO and SAF, whose central wage agreements from the 1950s until the beginning of the 1980s guaranteed the wage policy of solidarity, including a remarkable relative growth in women's wages. (In 1960 female workers in the manufacturing industry received 70 percent of men's wages. The corresponding relation is at present 92 percent, but the gap is now widening again between men's and women's wages.)

The central wage agreements were a precondition for the wage policy of solidarity, even though the employers' reason for signing them was their guarantee of labour peace. They were opposed to their solidaristic effect.

In the latest rounds of wage negotiations the employers have stepped down from central negotiations, in which they took the initiative 30 years ago, and forced industry-by-industry bargaining with low contractual wage increases and, as a consequence, ever larger wage drift, i.e., wage developments through local bargaining outside of the national contract.[2]

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[1] Barry Bosworth and Alice M. Rivlin, eds., *The Swedish Economy* (Washington: Brookings Institution, 1987).

[2] The wage drift share of total wage increases in the engineering industry ranged from a high of about 80 percent in 1968-70 to a low of slightly over 40 percent in 1977-79 and back up to 70 percent for both 1986-87 and 1987-88. LO and SAF again signed a central agreement in March 1989.

2. LO-SAF is no longer the axis around which everything turns in Swedish industrial relations.

In private industry the union of clerical and technical employees, SIF, an affiliate of the white-collar workers federation, TCO, has grown remarkably along an increasingly independent course. In the spring of 1988 it engaged in a bitter strike against several large industries, including Volvo, with the purpose of obtaining more power over the distribution of local wage increases. While this could be said to be a fight also on behalf of the blue-collar unions, it nevertheless shows that the weight of the trade union movement is tipping over in favour of the white-collar unions.

The more significant change, however, is the increasing importance of the public sector and its industrial relations and the increasing strength of the public-sector unions in both LO and TCO, and, of course, in SACO/SR. The academic professions are strongest in the public sector.

Along with this change has come an increasing temptation on the side of the finance minister to intervene in wage negotiations, in his capacity as both employer and minister of public finance. He has not always been able to distinguish between these two roles.

The rapid, automatic, and unreflected growth of the public sector is in itself a dilemma for the social democratic welfare state. During most of the postwar period social-democratic reform policies have taken the form of identifying a need for reform and then satisfying this need through an extension of public activities financed by increased taxes. A third of the labor force, 1.5 million people, are employed in the public sector.

Now public opinion—or at least the media and the economists of the ministry of finance—are saying that taxes have hit the ceiling. We must satisfy the needs of child care, education, and old age care without increased taxes. Yet one need only look at the population pyramid to understand that this cannot be done without substantially lowering the quality of both education and care.[3]

In its wisdom, the ministry of finance is borrowing from Mrs. Thatcher's arsenal of antiunion policies, cash limits. For example, if workers in the public service negotiate wages higher than the limit set by the ministry, they are inviting cuts in personnel. In the public sector the employers are also accepting the leadership from private

[3] A chart of the Swedish population pyramid shows that fewer and fewer active workers have to pay for education and nursing of the very young and the very old. Copies of the chart are available from the author upon request.

employers in wage policy: rewarding individual skills among the employees rather than favouring collective efforts in successful group work.

Private industry and nonsocialist parties naturally favour privatization of the public sector. Now, the same message is heard from the social-democratic government. The answer from the union side in the 1990s must be to make the public sector more efficient through decentralization and co-determination. This does not rule out purchasing some public services from private contractors, when that is the most practical solution, but it also means an increasing competition *inside* the public sector and a right for public-sector companies and services to compete in what are now private monopolies.[4] There must also be a stop to the penny wisdom of the politicians and the bureaucrats: If the public health insurance administration is squeezed to the extent that it can only pay out money, the long-term ill or the injured will not have anyone to help them return to work. By spending some million kronor on rehabilitation, billions may be saved. Especially since there is now a great shortage of manpower, it is a waste of money and human resources to have several hundred thousand people drawing sick pay for months or to have them waiting for a decision on their workmen's compensation simply because the ministry of finance has fallen in love with *cash limits.* By saving on teachers' salaries, one will get bigger classes, lower quality education, and more dropouts.

3. The wage policy of solidarity creates bigger profits in successful industries. The wage-earner funds were meant to take care of these excess profits and invest them in new production facilities. However, the union dream was corrupted by the Palme government. The 13 billion kronor in the wage-earner funds are invested in the traditional industries which profited from the 1982 devaluation. As a consequence, Swedish industry now has tens of billions of kronor which it does not see the need for in investment programs at home, but instead uses for sheer speculation.

The special system of individual profit-sharing which has mushroomed in the last couple of years has gathered 20 billion kronor worth of convertible debentures in the hands of some 200,000 workers and managers, while the industrial expansion of Swedish firms takes

[4] Richard B. Saltman and Casten von Otter, "Re-vitalizing Public Health Care Systems: A Proposal for Public Competition in Sweden," *Health Policy* 7 (1987).

place abroad. The two best examples of recent Swedish ingenuity, Tetra Pak and IKEA, have seen fit to move their headquarters and product development abroad.

The government is not properly playing its role—that of pursuing a strict fiscal and monetary policy in the Swedish model.

The unions now have a chance to exploit our full-employment situation and to force a return to the Swedish model, including coordinated wage bargaining. The time has come to revitalize the wage policy of solidarity. The first task is to find a better basis for generally agreed-upon norms for wage policy instead of the traditional but rather sterile compensation mentality which so far has been the only way for public-sector employees to keep pace with industrial workers as long as there is no general job evaluation system covering all jobs, blue- and white-collar, public and private.

Another task is to develop a union strategy against the wave of individual profit-sharing schemes and other methods to favour employees in profitable firms. The wage policy of solidarity is the ideological core of the trade unions; a threat to this policy is a threat to the labour movement as such. However, the wage policy of solidarity must be supplemented by some form of collective profit-sharing.

The Swedish economy is being faced with the completion of the Common Market in 1992. Swedish industry is gearing up to be inside and the government wants the best possible deals short of full membership. If Swedish unions are to keep their influence in the new situation—co-determination, active labour market policies, etc.—one way, if not the only one, seems to be worker ownership coordinated by the unions. The other way is international collective bargaining coordinated by trade union international organisations. This must also come some day, but first the unions must gain strength nationally, and at present the development outside Sweden is not in favour of unions.

Trade Union Organisation

In 1980 the three central trade union federations, LO with 2.3 million members, TCO with 1.2 million, and SACO/SR with 250,000, all reached about 80 percent coverage in their respective fields—blue-collar, white-collar, and academic professions. In 1985 they had about 85 percent coverage. Particularly remarkable is the ability of the unions to attract women as members. The number of women in unions has increased dramatically, due not only to the increased participation of women in the workforce, but also to an increased level of organisation, despite the fact that many women work only part time.

The greatest growth has been recorded in the local government sector, due to a rapid increase of employment in this sector and to the long-term leveling off or decline in employment in manufacturing. The largest LO union is now the local government workers' union, KOMMUNAL, which has also elected a woman to the office of president.

Throughout the 1970s there was a constant increase in public service employment, particularly of women working part time (who were indeed responsible for the total increase in employment). This growth contributed both to holding the unemployment figures down to about 2 percent and to increasing the activity rate (total labour force as a percentage of total population between 16 and 64 years) despite a 15 percent decline in manufacturing during the same period. In 1980 the activity rate approached 80 percent. In 1986 it was 83 percent, and now it is 85.4 percent and still growing.

Interunion Conflict

Given the remarkable growth of trade union membership undisturbed by real wage loss, the spreading of American management philosophies, and media criticism of union bosses, there is also a growing problem of demarcation which will have to be met in the 1990s. For the first time in Sweden we have had demarcation disputes, i.e., workers going on strike because unions cannot agree between themselves where a certain group of workers should be organised. For instance, in the harbors there has been an understanding between the Local Government Workers' Union and the Transport Workers' Union that crane drivers in big harbors should be in the Local Government Workers' Union, and in small harbors the odd crane driver on shore should be in the Transport Workers' Union.

This spring the two unions could not agree whether the Köping harbor is big or small. The matter was referred to the LO executive, which has the final say on demarcation between the different member unions. The Local Government Workers' Union, which is now the largest union in LO, did not accept the verdict that this particular harbor was considered small and should consequently be organised by the TWU, and took their crane driver members out on strike.

Recently we have had a similar situation in the harbor at Gotland. Here it is an internal TWU problem and the question is whether lorry drivers should be allowed to tow their cargo into the ship, or if it should be done by harbor workers who have smaller and less polluting vehicles. The harbor workers threatened labor peace in all other harbors in the country if they were not given jurisdiction over the job.

Demarcation problems—though not disputes—also exist between the white-collar unions in industry and the industrial union of chemical and metalworkers. Should a skilled metalworker, a turner, who learns how to run and program his robot, be a member of the metalworkers union or of the white-collar union of clerical and technical staff, SIF? The employer would encourage him to join SIF. But the metalworkers' union is negotiating new pay scales, which is against the theory of a wage policy of solidarity, to keep him or her in the blue-collar union. In the graphical industry, mainly in newspapers, it becomes even harder to say what is a graphical or a journalist job. In the public sector more and more jobs are done by private contractors. Which collective contract should they follow?

Common to all these cases is the advent of new technology, welcomed by the unions in theory and principle, but causing problems for union organisation in practical life. Arbetslivscentrum has just completed a study of the problem with case studies from pharmacies, newspapers, the engineering industry, and harbors.

A general observation is that where unions nationally and at the local level take an active interest in questions of production and do not limit their activities to pay and social benefits, they also know how to deal with problems of demarcation. One such example is the Graphical Workers Union, which has an agreement according to which they accept new technology and agree to get retrained to new jobs. In exchange, they do not get laid off when their traditional skills are no longer required. My union, the Journalists' Union, does not take a similarly enlightened position, I'm afraid. So there still are problems, but they will be overcome and we will not have unorganised newspapers like in the U.S. and Great Britain. I hope that the two unions involved will see the light and merge into a media union similar to the German way.

And this is a second general observation: Demarcation problems will be with us to an increasing extent in the next decade. So far the unions seem not to have understood the severity of the problem, but they will have to if demarcation disputes shall not become a normal part of our life.

The Challenge of the Growth of Membership

The membership growth is partly due to tradition and culture. Swedes belong not only to unions, but to all kinds of interest organisations as a matter of general culture. We are, however, unorganised when foreign cultures come in, as in the computer industry which has brought along an American culture, with allegiance to your company first and your private career second.

But an important factor is also the various legislated and negotiated insurances which are either administered by the unions, like the unemployment insurance, or negotiated and administered by a joint company, AFA. Such insurances include a supplementary pension on top of social security and the national supplementary pension, ATP, group life insurance, supplementary sick pay, and supplementary insurance against occupational injury. A number of unions are also providing a home (household) insurance to their members which is administered by a labour-owned insurance company, Folksam.[5]

To be covered by unemployment insurance one must have worked under a collective contract for half a year; the supplementary pensions are based on one's earnings, etc. A well-paying job is the best basis for this kind of security. Why don't we nationalise the extra insurance, as they are after all a cost on the production and the extra arrangements mean additional bureaucracy? And why do the unions favour the haves against those who have not, e.g., the long-term unemployed who have quit the unemployment insurance fund and the students who get very low pay? The administration of the workmen's compensation system, adding 10 percent to your normal sick pay, is, for instance, so heavy now (after the medical profession has recognized a number of new illnesses as work-related) that the whole health insurance system is near a collapse and the workmen's compensation funds are depleted.

These are good questions for the unions to answer in the near future. It is clear that, for instance, the SIF has a large number of members in high tech workplaces who are members, it seems, only because of the insurance system. There is no trade union activity in these workplaces. The student population retaliates by rebelling against being unfairly treated in a welfare society—or by quitting their studies.

While it is clear that the organisation percentage is very high where the unions negotiate and administer insurance, and highest in Sweden, there is no evidence that we would not have the same organisation percentage if we rationalised the insurance system and had it all administered by the health insurance offices. With one exception

[5] Anders Kjellberg, "Facklig Organisering i Tolv Länder" (Trade Union Organisation in Twelve Countries), a report from the Lund University research project "Sweden Under Social Democracy 1932-76."

perhaps! It is very clear that the union responsibility for the unemployment insurance payments (a) gives the unions a stake in finding new jobs for their unemployed members, and (b) is one of the reasons why in Sweden we follow the "work line" in our labour market policy, leading to our spending 75 percent of our costs for the employment policy on retraining and other work programs and only 25 percent on cash benefits to the unemployed.[6]

Co-determination Developments

The labour law reform of the 1970s is well known and the questions at a conference of this kind is: how has it worked? Can we observe more worker participation, higher productivity perhaps, happier workers? What comes next?

Let me say first that the whole program should be considered *one* labour law reform. The new collective bargaining act, which we call the Co-determination Act, is only the umbrella over the reform. The most immediately practical parts of the reform were the *security of employment* legislation, which came in very handy when we had the recession and a number of plant closures in a rapid structural change at the end of the decade, and the *safety and health* legislation including the establishment of the *Work Environment Fund*, the latter providing secure financing of trade union information and education in the fields of democratization and safety and health and finances for worklife research. Over half a billion Swedish crowns a year from a wage tax are distributed by the fund, which has a union majority on its board. A third practical part of the reform is the *shop stewards act* which deals with the rights of elected stewards at the place of work, including their right to be away for union training.

The Co-determination Act itself finally opens up all matters, including traditional management rights questions, to collective bargaining with the right to strike. This was a framework legislation which was supposed to be turned into detailed practical agreements. Such agreements did not come about in the private industry until 1982

[6] The unemployment insurance is administered by the unions, but it is still possible to be a member of the unemployment insurance fund without being a member of the union. In the LO unions very few people have taken this chance, but more and more white-collar workers insure themselves against income loss due to unemployment while staying unorganised or quitting the union. In 1981, for instance, there were 4800 members of the SIF unemployment insurance fund who were not union members. By 1988 this figure had risen to 21,000, i.e., 8 percent of the membership. Even higher figures are quoted from the clerical employees union, HTF, where one out of seven belong only to the unemployment insurance fund. In spite of the drain, however, membership is increasing in both unions.

in the form of *development agreements* under a master agreement between LO and SAF, the Swedish employers' federation. To say that this development agreement is not particularly radical is an understatement. In fact, leading SAF officials openly say that the legislative offensive of the 1970s was a parenthesis, and that we are now back to the joint development strategies of the 1960s. The only difference now is that the unions have lost ten years of experience from work organisation reforms which were carried out unilaterally by the employers while the unions were busy crying for legislation.

Now under the development agreement, two national programs of production technology-work organisation reform are carried out. The research aspects of the programs are financed by the fund. They are the *Development Program* and the *LOM Program* (*Management organisation co-determination*). *The Development Program* has mainly been one of ergonomic design where most of the development work has been done by consultants in various industries. The program is now completed and the idea is that a bank of experience has been created for other workplaces to utilize.[7]

The *LOM Program* will continue until the end of 1989 and will establish a system of democratic dialogue which will bear fruit in the 1990s: the skills and experiences of the individual workers will be utilized in a democratic change process which will make work more interesting and industry and services, private and public, more responsive to the needs of the consumers and the general public.

Some 70 workplaces participate in the LOM program. They are clusters of workplaces in several industries. The work is followed by industry-wide joint councils. The researchers only act as catalysts providing a system of dialogue and otherwise staying in the background. We shall not, like so often has been the case before, see the good work and the dialogue stop once the researchers disappear.[8]

The problem for the unions in the next decade is one of accepting the challenge of the need for workplace change. The unions must give questions of production a much higher priority than they do today. This they must do at the same time that they battle with the finance minister over the causes of inflation.

Participating in a democratic change process is different from wage bargaining: at the same time, the system of participation must be

[7] "Towards a Learning Organisation," The Development Program, Arbetsmiljöfonden.

[8] Björn Gustavsen, "Creating Broad Change in Working Life: The LOM Programme," Arbetslivscentrum.

formulated in collective contracts. The knowledge is found in the plant union, not in the national union or in the national centre. The national unions must also be prepared to provide consultancy services to the plant unions involved in the change process and particularly to the small workplaces where the union stewards cannot work full time on union matters. All this calls for a considerable amount of flexibility and new thinking from the side of the unions, both nationally and locally. But this was, after all, also the stated purpose of the Co-determination Act—to decentralize decision-making and to give the individual worker power over his or her immediate work environment.

The Labour Government

The six years of the nonsocialist government, 1976-1982, if anything, can be seen as a parenthesis. This is not so because the labour party is so much wiser at governing, but simply because the three, now four, opposition parties, including the environment party, cannot produce a realistic alternative. However, with the growth of white-collar unions and with the public-sector unions witnessing more often an adversary in the social-democratic government, the cooperation between LO and the labour party is no longer hand-in-glove. LO has also eliminated the historic collective affiliation of local unions to the local labour party, even if at the national level the LO president is on the party executive board and is one of the leading social-democrats in the election campaigns.

No doubt the labour government will in the end come up with a fiscal policy that is more acceptable to the LO unions than if the nonsocialist parties had it their way. However, unless the government comes up with a fiscal policy that really supports a wage policy of solidarity, and unless the government can devise a better policy of dealing with the public sector and its unions than it is advocating today, we shall experience more conflicts in the 1990s.

An issue for some time now has been the marginal tax rate, with the nonsocialist parties advocating a 50 percent limit. The labour government has yielded to the pressure and lowered taxes for the high-income brackets, promising to go down further in spite of the fact that it hardly wins any votes on that promise. However, the lowering of direct taxes—even the direct abolishment of central government taxes—need not be against the union interest if coupled with other social policies.

As this is being written, suggestions for a radically new tax structure are being developed by the finance minister. It is expected that the direct government taxes will be drastically reduced and that instead the base for the value added tax will be widened. Deductions will be drastically reduced and taxes on earnings from capital will be the same as taxes on income from work. At present the VAT covers only 60 percent of all transactions. If it is widened enough, it will even be possible to lower the value added tax to the general European level and to also lower the direct government tax rate. (The new system will not affect the local government taxes which amount to around 30 percent of taxable income.)

However, the changed tax structure will have to be coupled with increased children's allowances and housing subsidies (especially for the young) if it is to be accepted by the unions. At any rate, the new tax structure and its effect on collective bargaining will be a central industrial relations issue throughout the 1990s. People who expect a general reduction of the tax burden will be disappointed.

Equal access to free education, free school luncheons, day care facilities for children so that both parents can pursue a career, free health care, sick pay for all—when one has all this through a collective savings system called taxes, one is free and rich, even if earnings are taxed at 60 percent.

Twenty years ago, when a person was 75 and going blind, she got a white stick from health care. Now she's angry if they only operate on one eye for grey cataract or glaucoma. People expect more services from the public sector in Sweden than in most other countries. This is understood, even by a blind government.

The Thatcher/Reagan Administration Approaches in Labor Relations

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In discussions of the declining fortunes of trade unions in the 1980s in Britain (see Table 1) and the U.S., reference is invariably made to the roles of adverse labor market conditions, increased management opposition, and the unfavorable political climate associated with two right-wing, conservative administrations having been in office. These sorts of discussions typically view the Thatcher and Reagan administrations' *views* of and *actions* towards trade unions as essentially similar in nature (Barkin, 1986).

This paper disagrees, at least to some extent, with this contention or belief by arguing that while the two administrations have essentially similar attitudes to unions, they have differed considerably in the way they have sought to achieve and bring about change in their respective labor-management systems. It is further argued that the differing approaches of the two administrations essentially derive from differences in the larger labor-management systems of the two countries. The key difference focused on here is the traditional position of the nonunion employment sector. In this paper I will discuss, in turn, the general approaches of the two administrations, some of the specific industrial relations initiatives of the Thatcher government in its role as legislator and public-sector employer, and the particular, larger labor-management system differences that would appear to help account for the different approaches of the two administrations, and I will conclude by raising some questions about the industrial relations "achievements" of the Thatcher government. As this outline indicates, the detailed discussion here will essentially

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TABLE 1
Selected Indicators of the Unions' Position in Britain in the 1980s

Year	Union Membership (000)	Number of Strikes	Number of Working Days Lost (000)	Percentage of TU Members Voting for Labour Party in the General Election
1979	13,289	2,080	29,474	51
1980	12,947	1,330	11,964	—
1981	12,106	1,338	4,266	—
1982	11,593	1,528	5,313	—
1983	11,236	1,352	3,754	39
1984	10,994	1,221	27,135	—
1985	10,716	887	6,402	—
1986	10,598	1,053	1,920	—
1987	—	901	3,525	42

Source: (For the first three columns) D. Metcalf, "Water Notes Dry Up," Centre for Labour Economics, London School of Economics, Discussion Paper No. 314, July 1988.

Notes: There were 453 trade unions in Britain in 1979, a figure that was down to 373 in 1985 (some 90 of these are TUC affiliates).

Calculations for the overall level of union density are obviously sensitive to what is included in the denominator. For 1985, calculations range between 35.8 and 51.4 percent.

cover the Thatcher administration, an emphasis which seems only appropriate from a researcher based in a British university who is speaking to an American audience.

A General Comparison of the Two Administrations

The two administrations are generally referred to as "neo laissez faire" ones committed to the principle of deregulating the operation of both product and labor markets, with unions and collective bargaining arrangements being particular institutional constraints that have been targeted to be "rolled back." Specifically, both administrations are seeking, firstly, a reduction in the overall level of workforce unionization (in Britain the high level of unemployment has been a major factor here); secondly (and most importantly), an increase in the size of the nonunion sector; and thirdly, a more "responsible" union movement, which will be democratic in its internal decision-making process, relatively dispute-free, flexible in its response to organizational change, and restrained in its wage demands. Furthermore, in the labor-management arena there are certainly instances of administration action (or inaction) which are similar across the two systems. For example, neither administration has operated a comprehensive, system-wide incomes or wage control policy, both have sharply reduced the extent of national level consultation with the union movement, and both have introduced personnel and budgetary changes in government departments that were perceived to be "soft" on unions. More specifically, some commentators have suggested a strong parallel between the Reagan administration's action in firing and permanently replacing members of PATCO in August 1981 and the decision of the Thatcher government in 1984 to remove the right to union membership of some 8000 civil servants at the Government Communications Headquarters (GCHQ) in Cheltenham; both actions have been viewed as constituting strong signals to private-sector employers concerning the attitudes of the respective administrations towards unionization.

More generally, however, the Reagan approach in the labor-management area can be characterized as a *reactive* one in that it has not repealed existing industrial relations legislation, nor introduced any new legislation, with the aim of constraining either the institutional or behavioral bases of unionization. Its approach of intra-government budgetary cuts, manpower reductions, and key administrative appointments (unfavorable to the unions) has been designed (1) *not* to oppose, interfere with, much less reverse, any ongoing occurrences and developments that have posed problems for trade unions, and (2) to try to add to these difficulties by administrative rather than legislative means; the decline in overall union organization from the late 1950s in the U.S. helps account for this approach (in contrast, the Thatcher government assumed office immediately following one of the major decades of union growth in Britain).

A recent assessment of the so-called "conservative" economics revolution has claimed that in practice the Reagan and Thatcher approaches are as different as chalk and cheese (*The Economist*, October 1987, p. 29). I would not go nearly as far as this particular judgment, although I would argue that the Reagan approach is really quite different from that in Britain where it has been observed that "the Thatcher government has embraced the principle of free market forces in preference to voluntary collective bargaining as the best method of organizing a labor market. In consequence, the government has begun to play a more active role in labor market policy" (Rubery, 1986, p. 66). In short, in Britain one appears to have almost a contradiction in terms with a government being highly committed to free market principles, but being highly interventionist in the labor market in order to achieve those ends—an approach distinctly different from the Reagan one.

The Thatcher Administration as Industrial Relations Legislator

As a working generalization, Conservative governments in Britain prior to the Thatcher administration have accepted the place and role of collective bargaining arrangements and been willing to engage in national level consultations and discussions with the TUC (indeed, the leading tripartite structure in Britain, the NEDC, was established by a Conservative administration). Moreover, although legislation has not been historically a key feature of the British industrial relations system, the Industrial Relations Act 1971 passed by the previous Conservative administration of Edward Heath did not seek to fundamentally undermine the position of unionization and collective bargaining, but was introduced as an alternative to wage control policy with the broad aims of (1) shifting bargaining power in favor of employers, and (2) ensuring the rights of individual union members in relation to unions as organizational entities (particularly in closed shop situations). The latter, traditional Conservative Party concern, remains a strong feature of the Thatcher administration's legislation, but this legislation, in terms of both what it has *repealed* and what it has *introduced*, constitutes a sharp break with past practice in seeking to limit the role and influence of collective bargaining so as to produce more "flexible" labor market operations at the national, regional, industry, and individual organization level.

The Thatcher administration has passed the Employment Act 1980, the Employment Act 1982, the Trade Union Act 1984, and the Employment Act 1988. These acts have, firstly, repealed certain measures passed by previous administrations. For example, statutory union recognition procedures have been repealed, legislation which sought to extend the employee coverage of industry-wide collectively bargained wages has been removed, and the 1946 Fair Wages Resolution of the House of Commons (which required government contractors to recognize trade unions and to pay the appropriate, industry-level collectively bargained wage) has also gone. And the Wages Act of 1986 has limited the content and coverage of legally enforceable minimum wage rates (e.g., coverage no longer applies to workers aged below 21). Secondly, this body of legislation has involved a substantial reduction in the extent of the civil law immunities which unions have traditionally enjoyed (as an alternative to positive rights in law) in Britain. For example, both secondary picketing and secondary industrial action are no longer permissible, action to extend union recognition or the use of labor-only contracts are outlawed, the definition of a trade dispute has been narrowed, the management ability to dismiss employees on strike (without risking an unfair dismissal claim) has been enhanced, and a union (and its officials) have only civil law immunity in authorizing or endorsing strike action when a majority of members approve such action in a ballot. There is also much more legal regulation of closed shops and of arrangements for the election of the executive committee of unions. The Thatcher government has also introduced a number of non-industrial relations specific legal and administrative measures which nevertheless have important potential implications for the industrial relations system (e.g., encouragement of new, small businesses); small firm employment has grown by some 10 percent since 1979 (and self-employment is up by nearly 40 percent).

The Thatcher Administration as Public-Sector Employer

Prior to the Thatcher administration coming to power in May 1979, the 1970s witnessed both Labour and Conservative administrations coming into continued conflict with public-sector unions as they struggled to reconcile their responsibility for macro-economic management with that for the well-being and fair treatment of their own employees in wage terms; incomes or wage control policies operated in some 66 months of the 120 months of 1970–1979.

The 1970s' belief that industrial relations problems in Britain were disproportionately based in the public sector has been greatly strengthened under the Thatcher administration where a major national-level dispute has occurred in virtually every year since 1979 (the public sector has accounted for between 44 and 88 percent of total working days lost in individual years in the 1980s). Indeed, the Thatcher government enjoys a reputation second to none of being "anti-public sector," a reputation most obviously associated with the privatization, competitive tendering, and cash limits initiatives and arrangements of the government. Indeed, public-sector employment has fallen by between 11 and 15 percent in 1981–1987 (a 5–8 percent fall if the effects of privatization are removed), and with most public-sector employees having experienced a considerable relative wage loss in the years 1982–1986. As well as the decertification of unions at GCHQ (and the removal of union recognition for senior managers at British Rail), it has been the public sector which has been to the forefront in the removal of closed shop arrangements; British Rail, British Gas, British Telecom, the water authorities, and the Post Office have all withdrawn from agreements providing for such arrangements. Furthermore, the Civil Service Department was abolished for being too soft on unions (its responsibilities being assumed by the Treasury), a report has recommended that line management should have increased personnel management responsibilities in the Civil Service, and the use of workforce ballots to obtain the opinions of individual employees (as opposed to going through the unions) has been most associated with certain parts of public-sector management (e.g., BL and the Coal Board). The Thatcher administration has also sought to downgrade the traditional role of the comparability criterion in public-sector wage determination, and to emphasize more the criteria of employee recruitment, retention, and performance-rated considerations. It is also strongly opposed to the continuing strength of industry-wide bargaining structures in the public sector (and more generally) and is currently seeking to encourage more decentralized negotiations in order to produce more local area variation in wage levels. Finally, the unilateral right to arbitration has been cut back in the public sector, and although the Thatcher government has not removed the right to strike in "essential" public-sector services, it has sought to increase the role and status of "less militant" employee organizations on bargaining bodies in the public sector. In one sense, the Thatcher government is seeking to make the public sector "more private-sector-like" (e.g., introduction of performance-related pay arrangements), but in another sense it is seeking to provide a leadership by example model to the private sector (e.g., in regard to attitudes towards the closed shop); the Thatcher government has certainly not downgraded the traditional role of the public sector as a "model" employer, although it has certainly changed the nature of the example it is trying to set to the private sector relative to that of previous administrations.

Why the Reagan-Thatcher Administration Differences?

This extensive program of legal and administrative actions stands in marked contrast to the position in the U.S. where "the dominant characteristic of the Reagan administration has been its indifference to industrial relations problems and issues. Indeed, it is the first national administration in 50 years that has not articulated a labor policy" (Weber, 1987, pp. 18–19). In seeking to account for the different approaches of the two administrations, it is useful to recall that both would like to see an increase in the size of the nonunion sector, a sector that has traditionally had much less of a presence in Britain than in the U.S. The reasons for this inter-systems difference can be discussed in terms of both the incentives and abilities of individual employers to operate on this basis.

If we initially concentrate on the lesser *incentive* of employers to operate nonunion in Britain, there are basically two factors or sets of influences to be considered. The first is the well-known contention that historically U.S. management has been much less well-disposed towards the institution of trade unionism than their British counterparts because of fundamental differences in the larger, historically determined value systems of the two societies. Such an argument has a considerable amount of intuitive appeal, although it has to be said that there are frequently considerable weaknesses in its manner of presentation. This is because: (1) the argument can easily become basically circular in nature; (2) studies of management value systems across countries do not always ensure that like is being compared with like; (3) there is the inevitable problem of the extent to which stated or reported attitudes and values of management are a good guide to their subsequent patterns of behavior; and (4) in the particular case of Britain, the establishment of union recognition arrangements and the growth of union membership historically owes more to government pressure to this end (particularly exerted on employers' associations during the two wartime periods) than it does to relatively favorable employer attitudes. A second consideration or influence that would particularly appeal to economists under this heading concerns the size of the union relative wage effect (Freeman and Medoff, 1984, p. 234). That is, if one views the incentive of management to oppose unionization as being largely a function of the size of (and growth in) the union relative wage effect, then it is worth noting that this effect was typically estimated to be only some 7 percent in Britain in the 1970s (11 percent in the early 1980s) compared to the 25–30 percent figure frequently reported for the U.S. in the same period of time.

Turning to the other (all too frequently neglected) side of the coin, namely the *ability* to operate on a nonunion basis, it is apparent that a considerable proportion of the decline in the level of union organization in the U.S. is associated with falling levels of union density in partially organized corporations that operate both union and nonunion plants. This "double-breasting" phenomenon has little counterpart in Britain due to the smaller geographical size of the economy, the absence of "right to work" legislation in a nonfederal system of government, the more established practice of "recognition by extension" in multi-establishment organizations, and the existence of national level legislation providing institutional rights (to consultation) for unions in redundancy and layoff situations. Admittedly, however, a small but growing tendency towards union derecognition has been increasingly commented on in media circles in recent years; the labor editor of the *Financial Times* estimates that there have been some 40 known cases of derecognition in the last four years.

The Thatcher Approach: A Success?

Taking all of the above into account, it would seem to suggest that the Thatcher approach is running against the tide of the system at large in attempting to build up the size of the nonunion sector in Britain. Nevertheless some general assessments of the Thatcher government have argued that "the most unequivocal success has been in the field of industrial relations" (*Financial Times*, 1987, pp. 83–84), while more specifically one should note the following factors and figures: (1) the proportion of manual employees in private-sector establishments where unions were recognized fell from some 84 percent to 70 percent in the years 1980–1984; (2) the nonunion status of private-sector establishments is significantly associated with newer, younger-aged establishments; and (3) high technology industry status (employing some 6 percent of the current workforce) is significantly associated with nonunion status.

More generally, a number of important question marks still hang over the potential longer-term success of the Thatcher program in industrial relations. Firstly, even supporters of the Thatcher approach have conceded that both the high unemployment and new restrictive legislative environment have had only a limited impact on the size of wage bargaining outcomes (relative to the level of inflation). Secondly, the aims and elements of the legislative program appear to involve certain internal inconsistencies (e.g., the government's belief that trade unions being relatively democratic and strike free are complementary, as opposed to substitute, relationships) and questionable assumptions (e.g., the government's belief that the militancy of national union officers exceeds that of shop stewards and the rank and file) which may not, through time, produce the sort of outcomes the government is seeking. For example, nearly 90 percent of all membership strike ballots in 1987 were in favor of industrial action; this figure has consistently risen each year, although admittedly only a minority of the ballots have been followed by actual strike action. Thirdly, no comprehensive and coherent solutions have as yet been put in place for the many problems centered around pay determination arrangements in the public sector. And finally, while the Thatcher administration has undoubtedly raised many important questions about the nature of the British industrial relations system, the answers offered have not always found favor with many private-sector employers (e.g., employers have been less than enthusiastic about removing closed shops, moving away from company-level bargaining and embracing profit-related pay arrangements). As a result, the lines and details of any new emerging system of industrial relations are far from clear and coherent at this stage, a result that is perhaps hardly surprising under nine years of "Thatcherism" which is "more a matter of attitudes and instincts than a clearly thought-out political philosophy in which policies fit together within a coherent intellectual framework" (*Financial Times*, 1987, p. 85).

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Towards a Renewal of French Unionism?

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"The world is changing. Let us change our unions!" This motto of the CFDT's 1982 convention clearly expresses the need to master the various futures facing unionism, to prevent it from "losing its soul" or disappearing.

Six years later, the facts confirm this necessity of renewing unionism. French unions organize, more or less, 10 percent of the employees, compared to 20 percent in 1975 (UIMM, 1985; Rosanvallon, 1988). The largest federation, the CGT, lost half of its affiliates in this same period; the second one, the CFDT, is now back to its 1970 membership (Croisat and Labbe, 1987).

The unions' influence decreased. Forty-seven percent of the employees would "trust the unions to defend their interests" in 1987, compared to 57 percent in 1977 (BRAEC, June 1988). At the enterprise committee elections in 1986-87, nonunions received 22.5 percent of the vote, compared to 16.5 percent in 1976-77 (BRAEC computations, based on Ministry of Labor data). At the 1987 Prudhommes election, only 44 percent of the employees voted. The last important strikes—railroad workers in December 1986, nurses in October 1988—were not union led; "coordinations," that is, informal and temporary councils of "spontaneous" leaders, were in charge.

Why is this a time of crisis—which means both danger and opportunity according to Chinese wisdom—for unionism? How is it combating the dangers and trying to seize the opportunities? I will discuss these two questions, mostly from the CFDT point of view.

France, in the 1980s

Like many other labor movements, French unions are facing some long-trend *changes in the economic and social life*, products of this

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long period of continuous and sustained growth often referred to as "the glorious 30s." The labor movement did not fully measure these slow transformations and often lagged behind in adjusting to them. At the same time it has to face the consequences of ten years of a broader economic crisis. This conjunction of long-term mutations and abrupt changes is accurately described as a "mutacrisis."

This mutacrisis led to some new economic features that I will briefly recall: heavy industrial restructuring, expansion of small enterprises, decline of traditional industries and development of services, disorganization of the local economy in various areas, rapid technological innovation creating new jobs and eliminating others. The French economy has had to adjust to a world-wide economy and stronger competition.

The consequences of this necessary "modernization" may be contrasted:

- 2.7 million people are unemployed; among them one million are not entitled to any kind of unemployment benefits and half a million receive less than 40 percent of the minimum wage.
- Real income of French families has increased by 10 percent since 1978; yet 2.5 million people have incomes under the poverty level, which led Rocard's government to establish a state-funded minimum income (revenu minimal d'insertion).
- Average per capita real wages did not decline over the past ten years, except in 1983 (−0.2 percent); but, since 1986 wages have been lagging behind other incomes, especially for state employees, and unemployment benefits have been reduced (Ministère des Finances, 1988).
- Nonstandard work contracts developed rapidly and, according to INSEE, covered 1.2 million employees in 1987. Some of these workers were in precarious positions, lacking most of the usual fringe benefits. Others found in these special jobs an answer to their specific needs.

The cultural and social backgrounds of employees have changed markedly. The level of education is higher, thanks to increased time in school but also to permanent training, made compulsory in the enterprises by the 1970 law. The information level increased with the generalization of TV and enterprises' communications policies. Women now usually work, even when raising young children. Half of today's employees were not part of the workforce in May 1968 and, since that famous rejection of the affluent society, the general standard of living has continued to rise (BRAEC, March 1985).

Workers' desires and perceptions have evolved. Their attitudes toward work and firm managers have become more positive. Workers under the threat of unemployment are inclined to consider profits not as proof of worker exploitation, but as a guarantee that they will keep their jobs. Work is also seen as self-fulfillment, with new requirements about its conditions, organization, interest, and participation in decision-making.

The balance between individual and collective approaches has changed slightly. Employees appear to be more self-reliant and individualistic. They more frequently distrust all kinds of large structures and institutions (political parties, national associations, or unions). They value less the feeling of being part of a large group than the recognition of a small community. These new trends do not mean a rejection of concerted activity, but show that new forms of collective action are needed (BRAEC, December 1986). In summary, both the sociological structure of the workforce and the aspirations of employees are no longer those that unions knew when they built their organizations after the second World War, nor even those of the 1970s. French society is, at the same time, offering more opportunities for individual choices and fulfillment as well as developing new inequalities, exclusion, and poverty.

More specific to France, perhaps, is a radical restructuring of *the political arena.* The election of Mitterand in 1981 put an end to an undisturbed rightist domination since 1958. An alternative was unknown, under the fifth republic. It raised crazy expectations among those on the left, especially among organized workers. The CFDT rank and file, even though this federation never endorsed the common program of government of the left, unlike the CGT, were convinced that the new government would "change life," according to the Socialist party motto: unemployment was to disappear and wages would rise, the quality of everyday life was to be better. The way the Socialist and Communist parties campaigned for this election was in part responsible for these illusions, but they were rooted in the old French belief of state omnipotence. The disappointment thus was all the stronger. The same pattern was repeated in the Chirac campaign of March 1986, with liberalism rather than socialism. Such an ideology has less of an audience among union members, although 20 percent of CFDT followers and more than half of the FO ones voted right (BRAEC, June 1984). But again, the delusion was strong and made possible the success of a much more realistic Mitterand campaign.

These tumultuous political years gave birth to a new configuration of power. The PS is in a dominant position; the right is splintered, with too many potential leaders and too few motivating ideas. Two major changes can be taken as definitive:

- The Communist party will not regain the 20–25 percent of the votes it was used to; it seems permanently reduced to the protest vote without sufficient dynamism to renovate itself.
- Extreme-right theories are no longer taboo by the recollections of the war and will play a part in French politics from now on; the 14.4 percent score of Le Pen may be his zenith, yet his ideas, under a more acceptable pretense, will still influence the right.

A decline in ideological approaches (which does not mean their disappearance), a gain in realism in the political debate, and a lack of motivating projects and procedures on the government's behalf have contributed to change in the relationships between French citizens and their politics. Given the old-time ties between unions and political groups in this country, the new political situation will exert pressures towards change in labor organizations.

Changing the Unions

These mutations of French society are not analyzed in the same way by all the labor federations in this divided labor movement. Some, mostly the CGT and FO, tend to minimize their influence and to conclude that they should not lead to a change in the nature of unionism and its modes of action and organizing. Others are engaged in a reevaluation, both practical and theoretical; that is the case of the CGC-CFE and of the CFDT. This last federation has been intently analyzing this problem for six years, has published numerous documents about it, has seen some internal disagreements on the consequences and proposals for change, and placed this debate as a main item of its November 1988 convention; thus it seems justified to focus on it here. I will therefore briefly discuss what the CFDT calls "adjusting unionism" in its ideological, organizational, and action aspects (CFDT, 41st Congrès, 1988; *CFDT Aujourd'hui,* March 1986, September 1987, December 1987, September 1988).

As for *ideology*, the CFDT felt the need to modernize its analysis and proposals about work, enterprise, and society, most of which had been discussed at the beginning of the 1970s. It renewed an old practice of social analysis, uninfluenced by any theory of society but based on the experience of its members. This collective analysis has often proved accurately critical. At its 1988 convention, the CFDT insisted on the real improvements which occur in the workers' situation and are largely due to union activity, therefore denying that any progress be conditioned by the nationalization of firms. It considers a market economy to be a guarantee of economic efficiency and freedom of choice for many, but pleads for indicative planning and state intervention to make up for the market's short-sightedness and inability to meet the part of the demand which is not immediately profitable.

Inside the enterprise, the CFDT acknowledges the necessity of a managerial leadership. It does not consider that employers' and employees' interests are necessarily in opposition. But it fights against the unlimited power that some managers claim. The process of decision-making should allow for employees to have their say; it also should allow consumers, local governments (mayors, regional elected council members, etc.), and state authorities to express other interests concerned with the enterprise policy; and managers should consider unions as legitimate actors and necessary counterweights to their own power. Union rights should be respected, and first the right to fair bargaining.

More globally, the CFDT concludes that in spite of some important progress, social life is still dominated by a profit-seeking economy that does not favor individual and collective participation in decisions. These characteristics explain the federation's will to realize a radical change in the economic and social life. But it thinks that such a change depends upon multiple transformations, in multiple places, and is not conditioned by political requisites; rather, it depends mostly on day-to-day union actions and their ability to advance their demands.

This analysis has consequences for the relations between the CFDT and the political left. It shows the limits of state capacities to realize social transformations and to solve such urgent problems as unemployment. The political factor was no longer the crucial one, as it had appeared to be in the 1970s in spite of the federation's will to preserve its autonomy. The new balance of political strengths inside the left, as between the left and right, and the misunderstandings created by the last endorsement of Mitterand among the employees, but also within the Socialist party led to the federation's decision not to endorse any candidates in the 1986 and 1988 elections. This was a break from what had been a continuing practice since 1969.

This new trend in the CFDT's theoretical approach may be summarized by one of the debates at its last convention: Was its social project to be characterized as "autogestion" or, as had been usual since 1970, by "socialisme autogestionnaire"?

A quite different field of reevaluation is *organization*. The CFDT engaged in various experiments to make unions more accessible to all kinds of employees, and especially those traditionally less organized—women, young and retired workers, professionals, and management employees. New organizational forms are being created to meet their needs. The specific difficulty of organizing workers from small enterprises, transient workers, and particularly young unskilled workers receiving training on their jobs (stagiaires) sometimes requires legal action. Sometimes the solution depends on bargaining, and more often still the creativity and generosity of union members. These three different approaches are being attempted.

With its own members, the CFDT is implementing new relations that are different from the traditional: informal discussions between national leaders and local members, or national conventions for specific union activists such as women or employees of small enterprises, for instance. It has renovated its information system, with more attractive publications, electronic mail, videos, and so on. A new plan for training shop stewards and union leaders was begun two years ago, with the participation of university members, permanent training professionals, or experienced union organizers; this plan focuses on methods and know-how as well as ideological issues.

The major problem facing this federation, as the others, is the decline in membership. Getting new affiliates may first appear to be a financial necessity. For the CFDT, though, thanks to an efficient use of funds, there is no real financial problem. However, the number of affiliates is a decisive factor of union bargaining strength. Stronger ties between employees and unions condition a union's ability to achieve its aims. The choice of issues to stress is sometimes misguided by a lack of communication with all the workers concerned, such as a decision to go on strike or to stop a strike. Without the extensive allegiance of workers, unions are inefficient and useless. The CFDT is engaged in a general organizational drive.

But it faces two difficult problems:

- How can it convince employees to affiliate when French law and collective bargaining do not secure any specific benefit to union members, except the "benefit" of employer hostility in many cases?
- How can it offer new forms of membership or participation in union activities to all the employees who agree with it, vote for it, often with help on particular occasions, but refuse to affiliate?

As a first step, the last convention voted a "bill of rights" for members and employees interested in union action.

The social and economic policies of the CFDT were carefully reviewed to ensure that they adequately and effectively reflect the new aspirations of employees, given the economic and political context. A few examples may illustrate this point.

French employers have been vigorously complaining that the administrative agreement, necessary before any layoff, prevented them from hiring workers. In spite of union opposition and of the hostility of public opinion, Chirac's government passed a law abolishing this procedure. The CFDT, having lost the legal battle, engaged in a bargaining process to oblige any employer firing workers to offer them a "social plan," composed of hours-sharing, transfers, training for new jobs, etc. The contract was signed in December 1986 and applies even to the small enterprises which were not covered by the previous administrative layoff agreement. This contract has many imperfections and will most certainly be modified by a new law to come, but the CFDT will not ask for a reinstatement of the ancient system.

Youth unemployment is particularly high in France (27 percent unemployed among young women under 25). The CFDT is totally opposed to the employers' demand that young workers be paid less than the minimum wage. But the CFDT supports the specific youth employment and training programs even though those programs do not offer "real jobs": no job security, no fringe benefits, sometimes no salary but an indemnity, costs largely paid by state funds and not by the enterprises. Some federations merely denounce these imperfections and would put an end to the programs. The CFDT prefers to improve the guarantees and benefits attached to them, by bargaining and by legal action. It is convinced that unemployment is the most precarious position possible for individuals and accepts some flexibility if a program helps to create jobs.

It takes the same position concerning work hours and strongly supported the Delebarre law in February 1986. One of the last laws passed by the Fabius government, it allowed enterprises to adopt much more flexible work hour schedules, if a collective agreement reducing work hours had been signed in its activity sector. The CGT opposed this law as giving up overtime benefits and submitting to the arbitrary will of employers. The CFDT thought it beneficial since it would help some particular activity sectors to manage efficiently and would facilitate job-sharing.

In its action against unemployment, the CFDT is also trying to create jobs, playing a new role for a French labor federation.

Sometimes it does so in an indirect way by compelling local governments and local enterprises to discuss and decide about the future economic development of the area; the "comités de bassin d'emploi" (tripartite employment area councils) have been efficient enough to convince Rocard's government to invest larger funds in such local development operations. Sometimes CFDT activists directly create new enterprises, especially when there are layoffs; most of the unemployed workers who take advantage of the funds offered them to create new enterprises are union members. Unthinkable ten years ago, these actions are strongly supported by the CFDT.

As for wages, French management is following the individualization fashion, even in plants where no individual criterion of productivity can be defined. In 1986, 15 percent of French employees received individualized wage increases. The CFDT does not reject individualization as a whole; it is appropriate that individual abilities and commitment be rewarded, and employees wish it to be so. But the CFDT has been fighting what is unfair and absurd in this wage system. CFDT's demands are simple: first, individualized salaries should not lead to a decrease in pay for anyone, but must involve only the repartition of wage increases; second, the decision on the increase should not be arbitrary, and the criteria principles should be negotiated with the unions; third, an appeal procedure should be easily available for anyone dissatisfied with the evaluation of his work.

A last illustration concerns quality circles and other forms of worker participation proposals made by employers. They are also quite fashionable. The CFDT always made the participation of workers—and citizens—a main issue on its agenda. It is quite satisfied when employers themselves propose it. This so-called "participative management" is no result of a sudden employers' conversion to "autogestion": it comes from clear-sighted self-interest at a time when human resources are the key of competitiveness. It may simultaneously improve firm efficiency, quality of worklife, and work satisfaction. For the CFDT it shows that the interests of management may coincide with the interests of the workers. CFDT members take an active part in all these forms of participation, but at the same time they are conscious of the many dangers inherent in them. In many cases the employers use them merely as a union-busting device, hoping to prove the unions useless. They support quality circles to destroy the expression groups created by the Auroux laws and eliminate whomever they want from the participation process. CFDT's aims are to ensure that no one is excluded from it and that it does not weaken the ways of opposing the employers' point of view in cases of disagreement.

This brief survey of some of the issues actually defended by the CFDT may be summarized by three basic principles adopted at its last convention:

- What is good for the firm is not always bad for its workers, and all bargaining processes are not zero-sum games.
- Workers should expect to lose some of their actual guarantees so as to gain new ones that cover all of them, even the unemployed, and are better adjusted to the economic imperatives.
- Unions must include in their agendas new issues, taking into account the individual needs of a more differentiated workforce.

The Various Futures Facing Unionism

Will this CFDT attempt to renew its organization, ideology, and action policies be enough to create a vast allegiance of employees? The first results are favorable. Membership was almost stabilized in 1987 and increased for a good number of unions in 1988. The CFDT is the only federation gaining votes in the 1987 enterprise committee election. Yet the answer is still unclear.

The last strikes showed once again the misunderstanding which exists among employees about union pluralism. This division is inherited from history—the weight of the Catholic church in French society on the one hand and the domination of the Communist party over blue-collar workers on the other. It is still very much alive among union activists. A provisory end was put to the church-state debate with the 1986 compromise about private schools. The Communist party now has less influence over blue-collar workers than the Front National. The progress of European unity is another factor pushing the French labor movement into greater cooperation. Most of the more powerful European labor movements are united, and it is hard for French unionism to take an effective part in the European discussions when it speaks through five different voices. One of the possible futures for French unions might be that they will weaken themselves in an internal fight. The employees will be less and less interested in such debates and will try to solve their problems individually or create coordinated groups to lead their strikes. Some, inside the CFDT, FO, CGC-CFE, and the powerful teachers federation, the FEN, do think about labor unification, though very few dare speak about it. But they believe that French unionism cannot renew itself and regain employees' support if it does not unite.

But the question should be reversed: Can French unionism renew itself if it tries to unite? The cultural differences between the various federations are so deep as to lead their members to opposing conceptions of what unions should do. Faced with such discrepancies, federation leaders may try to unite on the most conventional and old-fashioned basis, freezing any renewal. One possible future for French unionism is a corporative one, strong in the nationalized and state employee sectors, more or less absent from the private sector, satisfied with wage bargaining. This would certainly disappoint many groups of French employees.

The French labor movement is faced with a two-sided problem. Like most movements, it has to adjust to the new economic and cultural situation; it must invent new means of organizing, affiliating, and informing the employees who feel the need for it; it must keep its philosophy and ideology in pace with day-to-day reality; it must defend real issues of today's workers in a more efficient and participative way. It must renew itself. And at the same time it has to adjust to a new period of French political history which undermines the reasons for its pluralistic structure.

Will it be able to realize simultaneously its renovation and its unification? In my opinion, the durability of the actual resurgence and the very existence of a strong, solidarity-based labor movement depend on the answer it will give to this challenge.

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Industrial Relations Developments in France, West Germany, the U.K., and Sweden: An American Assessment

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This paper includes brief comments on recent industrial relations developments in France, West Germany, the U.K., Sweden, and the U.S. I begin with an overview of some major differences between IR developments in these countries—differences which have to do mostly with union membership and coverage and the overall influence and power of these respective labor movements. I then discuss some more subtle and perhaps also more important similarities: the labor movements of all five countries are searching for greater labor involvement and participation in national social and economic policy-making and in an organization of production and work at the shopfloor or workplace level of industrial relations. I conclude with a few comments on future work in comparative industrial relations.

Differences

Union membership, coverage, and overall influence clearly remain substantial in Sweden (whose unionized workforce, already at 86 percent, is in fact growing in absolute terms and as a percentage of the total workforce) and in West Germany (where there has been a slight drop in membership to about 38.5 percent, but coverage remains well above 50 percent of the labor force). British membership has declined from about 57 percent in 1980 to about 50 percent in 1986, and the unions in the U.K. have been under sustained political attack by the Thatcher government since 1979. Both membership and coverage have dropped substantially in France (from 20 percent membership in 1975 to only about 10 percent in 1988). U.S. membership dropped from 29 percent in 1975 to only about 16 or 17 percent today.

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Other differences have to do with the ideological approaches of these labor movements. The relatively strong labor movements of Sweden and West Germany appear to have become increasingly pragmatic over the past two decades. Both spend substantial amounts of time and resources in administering various aspects of social democracy, and both work fairly closely with their governments and business peak associations. By contrast, the French and British labor movements seem to have become rather bifurcated over the same time period, with some unions (notably in the public sector) becoming increasingly militant and ideological in their actions and rhetoric, while others are arguing for more cooperation with managements in meeting the challenges of changing technologies, demographics, and competitive conditions. The American movement is different again, remaining rhetorically pragmatic but, compared to Western Europe, still fairly militant in terms of industrial action.

Similarities

Notwithstanding these differences, there are widespread underlying similarities in the ways in which the approaches of all five of these labor movements are changing. These fall into two general categories: first, increasing interest in and attempts to influence national social and economic policies, and second (the more obvious), growing efforts to enhance labor participation in the decision-making about workplace-specific and firm-specific developments. Indeed, it might be said that despite the differences in their political stances and rhetoric, the labor movements of all five countries appear to be searching for a new ideology of labor participation in national and firm-level policy-making.

First, all of these labor movements are increasingly recognizing that the important industrial relations challenges of the day are intimately connected with (1) national industrial restructuring, (2) technology policy, and (3) demographic trends that call for changes in the form and content of training and retraining mechanisms. For example, the Swedish labor movement has historically been very involved in these areas in its role as a major partner in high-level tripartite industry restructuring schemes. In France the CFDT has called with renewed vigor for a return to more activist long-term indicative planning and state intervention. In the U.S. the AFL-CIO is in the process of developing a platform that calls for increased national attention to technological research and development, as well as the development of joint training and retraining mechanisms to deal with massive skills gaps projected to emerge in the coming decades (*Workforce 2000*, 1987).

At the level of the workplace and firm, at least portions of all these labor movements are pushing for (1) more influence in long-term investment decisions and business strategies that affect workers' employment security and the nature of their jobs, and (2) a broader role in the organization of work at the point of production. Many West German works councils are playing increasingly proactive roles in developing social and employment security plans to anticipate (rather than simply react to) strategic plans for industrial adjustment and production reorganization (Thelen, 1980). The French CFDT has recently argued that the interests of employers and employees at the workplace can to a significant extent overlap, and it calls for more union and employee voice at the firm level. The LO in Sweden is in the process of developing and implementing a widespread firm-level workplace democratization program that will cover 70 percent of all workplaces. Finally, American unions in the auto, steel, communications, and many other industries are experimenting with early involvement in strategic decisions about new technology introduction, other new investments, consequent training and retraining programs, and the like. Meanwhile, top leaders in the AFL-CIO endorse legislative and institutional changes to enhance employee voice in corporate governance and in how work is organized at the site of production.

The increasing importance of these developments has also been accompanied by new and unfamiliar strains in each of these IR systems. In West Germany some unions complain of the works councils' so-called "plant egoism"—their interest in protecting the interests of specific plants rather than the workforce as a whole (Thelen, 1988). In Britain the TUC has become concerned about the tendency of some firms to play unions off against each other, forcing them to compete on the basis of their cooperation with management initiatives for more flexible production processes. Meanwhile, leaders in the Labour Party are thinking of lobbying for works councils legislation, which may be viewed as encroaching on the traditional functions of unions. In Sweden much of the work reorganization of the last decade has been carried out unilaterally by employers, leaving the unions less involved than usual. In France the CFDT endorses, while the FO and CGT strongly oppose, more union-management cooperation and some more flexible organization of work at the shop floor. A debate about the respective roles of international unions, local unions, and potential nonunion representative bodies (for currently nonunion employees) is taking place among major U.S. union presidents.

Conclusion

These countries can no longer run their economies on the basis of the mass production of manufactured goods for stable world markets (Piore and Sabel, 1984). Changes in the international economy have made it increasingly important for workers and unions to play greater roles in national social and economic policy-making, and in the organization of work and production at the workplace. This trend seems unlikely to reverse itself. But the ways in which the labor movements of these countries address these challenges will differ substantially, and much can be learned from those different approaches. In particular, the American labor movement will benefit from continuing to observe (1) how the Swedish labor movement resolves problems that have to do with industrial restructuring at the national level, and (2) how the West German unions and works councils accommodate the tension between plant-specific and movement-wide interests as they are affected by the imperatives of industrial adjustment.

Both national and workplace level developments in industrial relations are ripe for new kinds of comparative research. While no single national "solution" can be imported from one country to another, much can be learned from the kinds of strains and tensions that emerge in the institutional arrangements of industrial relations as these (and other) labor movements try to expand their roles in the on-going adjustments of their major firms and industries, and their national economies.

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XV. FRINGE BENEFITS AND PUBLIC POLICY*

Is There a Market for Pension Insurance?

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Since the enactment of the Employee Retirement Income Security Act in 1974, participants in private defined benefit pension plans have been covered by mandatory insurance, operated by a federal agency, the Pension Benefit Guaranty Corporation. An interesting question that surrounds the federal insurance program is whether it arose because of market imperfections, or because the program is not intended to provide insurance but to effect transfers. Since the system does not adhere to basic insurance principles, it is easy to make a case in support of the latter hypothesis (see Ippolito, 1986, 1988). In this paper, however, I examine the alternate, that despite the possibility of a demand for pension insurance, special problems in the private provision of the insurance prevent a market from developing, thereby requiring government involvement. My main conclusion is that while problems in offering pension insurance exist, they are not unique to pension insurance and ought to be resolvable in the private market.

Principles of Pension Insurance

A *defined benefit pension* is a promise by a firm to pay workers an annuity at retirement age. Usually the benefit is proportional to years

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of service and some measure of final pay.[1] These plans are to be distinguished from defined contribution plans. In the latter plans, the firm makes some contribution (usually a fraction of wages) each period into a separate account for each worker. After a short vesting period (usually less than five years), the account belongs to the workers, even if they leave the firm or the firm fails. Federal insurance covers only defined benefit plans: The pension benefit is guaranteed even if the firm fails with insufficient assets in the pension trust fund to pay insured benefits (and is unable to make up the difference).

Pension Formula

For analytical ease, suppose that the worker's age is set to zero when he starts work in the firm. Then his age and service can be denoted by the variable a. Suppose that his pension benefit is paid in the form of a lump sum at retirement age R. Assuming that the chances of death or quitting the firm (or the firm failing) prior to retirement are zero, then the value of the pension to the worker of age (and service level) a is

$$(1) \qquad P_a = baW_R e^{-i(R-a)}$$

where i is the long-term interest rate, W_R is expected wage at retirement, and b is a constant reflecting the generosity of the plan. If I make the reasonable assumption that wage growth from age a to R equals the interest rate, I can rewrite (1) in terms of the worker's current wage in the following simple way:

$$(2) \qquad P_a = baW_a$$

Expression (2) says that the value of the pension promise is proportional to current wage and service. Thus, if current wage is \$20,000, service is 20 years, and the parameter b is 15 percent, then the value of the pension after 20 years of service is \$60,000.

Presumably workers pay for their pensions through compensating wage differentials.[2] More importantly, the evidence suggests that workers pay for their pensions as if they expect to receive pensions indexed to their final wage upon retirement.[3] This is in contrast to

[1] Some pensions pay benefits equal to some fixed-dollar amount times service. But since these amounts essentially are indexed to wages, they are indistinguishable from salary-rated plans for the purpose of this paper. See U.S. Department of Labor (1984).

[2] For some empirical evidence on this point, see Ehrenberg (1980) and Smith (1981).

[3] See Ippolito (1986), Clark and McDermed (1986), and Mitchell and Pozzebon (1986).

paying for a pension as if they expected to leave the firm imminently. Thus, in the above example, the worker with 20 years of service has contributed $60,000 in the form of lower cash wages in exchange for his promised pension, and he will receive this amount upon retirement (plus interest and additional accruals for further service) assuming that the firm survives.

Losses Upon Termination

If the firm fails and the pension plan is terminated, the worker will receive a pension that is far less than $60,000 in the above example. This is because upon a termination, the worker is legally entitled to his pension benefit as determined by the formula *except that it is not indexed to his final expected wage.* More generally, his pension value upon termination is

$$P_a^* = baW_a e^{-i(R-a)} \tag{3}$$

For the worker in the above example, if the interest rate is 8 percent and retirement age is 30 years after starting with the firm, then based on his first 20 years of service, his benefit upon termination is valued at $26,960 compared to $60,000 if the firm continued (compare expressions 2 and 3). The PBGC guarantees the equivalent of $26,960 regardless of the funding level in the plan. These losses as a percent of the ongoing pension value are higher for younger workers.

These calculations demonstrate the *coinsurance* provisions in the current insurance scheme. In the above example, upon termination, the worker loses over half of his pension benefit (compare the termination amount $26,960 to $60,000 in ongoing pension benefits). Clearly, workers have a stake in the continuation of the pension plan. The coinsurance feature increases the likelihood that a pension plan termination is an outcome of a genuine financial crisis on the part of the plan sponsor, not an attempt by the sponsor to take advantage of the insurance.

Role of the Interest Rate

The nominal interest rate is an important determinant of the cost of insuring termination-value pensions. Reconsider our one-worker example. Assume that there are no assets in the pension plan trust and no collectable claims against firm assets in the event of bankruptcy. When the interest rate is 8 percent, the insurance carrier assumes less than half the pension loss and the worker more than half. At a 2 percent interest rate, the insurance carrier absorbs over 80 percent of the loss, and the worker absorbs less than 20 percent. As the interest rate falls, the coinsurance provision is less important and presumably moral hazard problems increase.

In addition, the absolute level of claims is inversely related to the interest rate. At the 8 percent interest rate, the claims amount in our example was $26,960; at 2 percent, claims are $49,123 (this is the solution to expression 3 using a 2 percent interest rate). Thus, the amount of insurance coverage in real terms—and thus the cost of the insurance—varies greatly with the nominal interest rate.

The Market for Pension Insurance

The first question I will ask is, assuming that a market could develop without government involvement to insure against pension losses, might we see protection against ongoing instead of termination pension losses? I will then consider the more general question whether either type of insurance coverage could be developed.

Insurance for Termination or Ongoing Pensions

The problems with insurance against termination-value pensions are apparent from the discussion above. From the insurer's perspective, the amount of coinsurance, and therefore the potential for moral hazard problems, varies greatly with the interest rate. From the workers' perspective, the amount of protection against loss of pension wealth varies greatly with the interest rate. In addition, the amount of coinsurance varies markedly depending on workers' ages in the plan. These problems are addressed by an insurance contract written for ongoing benefits.

Consider the example used above. A worker with 20 years of service and 10 years from retirement has a pension worth $60,000 in an ongoing sense and $26,960 in a termination sense. An insurance contract for real benefits, however, is not necessarily twice as costly as one written for termination benefits in this example. This is because an explicit coinsurance factor must be set (the coinsurance is implicit in a termination insurance contract). If this is 50 percent, for example, the insured portion of the ongoing pension is $30,000, roughly the same as under a termination insurance contract.

The advantage of a contract stated in real terms is that the value of the insurance is not affected by changes in unexpected inflation, and therefore: (a) the coinsurance factor is stable; it does not depend on the nominal interest rate nor does it depend on the age of workers; (b) workers know the real value of their pension guarantee long before they attain retirement age; and (c) the price of the insurance does not need to be reassessed each period because of changes in long-term expected inflation rates.

This contract can be hedged on the asset side, permitting the insurance company to credibly promise to pay indexed pensions over a long time horizon.[4] The insurer, for example, can invest the present value of indexed benefits in 100 percent short-term t-bills. Over a long period, t-bills are expected to yield a small, risk-free real rate of interest plus the rate of inflation. To be conservative, the insurer either could write the contract assuming that the real rate of return will be zero, and offer a "bonus" at retirement in the event the return turns out to be positive; or it could index the benefit to the return on the t-bill portfolio. If the federal government issued indexed bonds, these would be even better candidates for a real pension liability match because such bonds are long term and explicitly pay a real interest rate plus the inflation rate.

Why Any Insurance?

The central question is whether a market in pension insurance would develop either for nominal or real benefits. That is, why would not all pension plan sponsors self-insure? Why would not all firms merely invest an amount in matched securities sufficient to cover liabilities in the event of plan termination? For example, in the case of termination-value insurance, the firm could invest the pension plan trust in long-term bonds up to the amount of termination benefits; in the case of real-value insurance, the trust fund could invest in short-term t-bills up to the amount of real benefits (subject to some coinsurance factor). Uninsured liabilities could be funded with other securities more appropriately suited to a long-term horizon. Thus, if the firm survives, full ongoing benefits can be paid upon retirement; if not, there are sufficient assets to cover insured benefits.

One reason self-insurance might not be optimal has to do with *information* problems. It is difficult for workers to monitor the firms' actions, and in particular to know that assets are held in a separate trust and are properly matched against insured liabilities. In many large firms that have valued reputations, this may not be a problem, but in many smaller firms, it is unclear that sufficient "trust" exists for

[4] In the case of an obligation to pay nominal (fixed) obligations, the insurer can invest the present value of nominal benefits in fixed-income obligations with maturities matched to the obligation.

workers to accept a promise of self-insurance from firms without at least some guarantee from a third party.

In these cases, by requiring an insurance contract, workers in essence hire an agent whose self-interest acts to guarantee that at least the insured portion of a pension promise is paid. That is, the insurance firm will attach conditions to the contract to ensure that a fully funded trust is set up that matches either termination liabilities or some portion of real value pension liabilities, whichever is promised in the insurance contract. The existence of a third-party insurer makes defined benefit pension plans more feasible in some firms than otherwise. In this case the insurer acts as a *quality-assurer*; it guarantees the "quality" of the insured portion of the pension.

In fact, such a market has long existed. In pensions called Allocated Insurance Contracts, the insurance company requires the plan sponsor to deposit incremental pension obligations during the year (in a termination sense). These monies are invested in a matched fixed-income portfolio: Workers are ensured of receiving at least termination pension benefits upon failure of the plan sponsor.

Another answer is related to *leverage*. Suppose workers prefer a larger but less certain pension, and thus implicitly support a decision by the firm to invest in, say, 100 percent growth stocks.[5] But they want some guaranteed pension if the firm encounters financial difficulties. Suppose one plan in 100 will terminate each year at random, and because of market volatility, funding ratios (when assets are invested in growth stocks) are either 50 percent or 150 percent in any given year.

In this example, only one all-bond portfolio is needed to insure nominal benefits for the single underfunded termination that is expected every two years. Without an insurer, all plans each must hold this amount of bonds in their portfolio to offer some insurance protection. With an insurer, all firms can invest most of their monies in riskier but higher-return stocks and still protect workers against termination.

Potential Problems with Providing Insurance

Though there is some reason to believe that a demand for pension insurance exists, are there reasons to believe that a market could not be developed? One problem often mentioned with the private provision

[5] If the investment return in these portfolios is below expectations, the firm might, for example, provide less generous ad hoc inflation adjustments to annuities after retirement.

of pension insurance is the potential for catastrophic risk: pension insurance claims might exhibit large temporal variation, perhaps threatening the viability of the insurer. This might be because pension underfunding and firm failure rates will be inversely related to market cycles.

For example, suppose premiums are set to pay average claims over, say, ten years. If large claims occur after the first year, the insurance company may be unable to honor its promises. The problem is especially severe if the size of the insured plan population is skewed. If a few large plans randomly terminate soon after the insurance begins, the insurance company can be overwhelmed.

The problem of one or two large claims overwhelming an insurance carrier is easily solved: the carrier can sell off pieces of the liability to other insurance carriers. The problems of market-wide volatility in claims can be more difficult to solve, but several potential approaches suggest themselves.

First, the insurance carrier can diversify across various insurance contracts; pension insurance can be restricted to a small portion of overall underwriting activity. Second, long-term insurance contracts can be written requiring insureds to continue paying premiums to the firm over a lengthy period. These contracts permit the insurer to borrow monies over the short term to accommodate extraordinary loss years. Or third, an industry group could orchestrate an industry-wide surcharge on all pension-insurance writing business, the surcharge to be used to offset unusually high claims years for the industry as a whole.

The problem of guaranteeing payment of benefits for upwards of 50 years into the future should not be a problem in the insurance market. Thousands of terminated pension plans sell billions of dollars of pension obligations to insurance firms each year, requiring payment of annuities far into the future. State regulations ensure a reasonable relationship between the nature of these obligations and the portfolio composition that secures the promises. While virtually all this business is written for nominal pension promises, there is no reason why indexed (or nearly indexed) annuities could not also be underwritten with appropriate matching of assets and pension obligations by the insurance company.

Likewise, insureds and insurers ought to be able to write a contract that makes the insurance credible over the long run. That is, the insureds must be protected against carriers dropping the protection once it is apparent that the insured is encountering financial difficulty.

Like life insurance contracts, however, this problem can be overcome with a term renewable policy. Additional coverage can be subject to new, higher rates, but rates for existing coverage can be changed only to reflect overall claims experience in the insurance carrier's pension-writing business.

What is more difficult and thus more costly to control is moral hazard on the part of the insureds. Defunding prior to pension terminations received by the PBGC has been widespread and important (VanDerhei, 1988), and shifting the pension portfolio to riskier investments under the same conditions must also be anticipated (Sharpe, 1976). Once it becomes apparent that the insured is in financial difficulty there is an obvious incentive to maximize exposure to the insurance carrier.

I have suggested elsewhere that the least costly solution to this problem is for the insurance carrier to be made the administrator of the pension plan. This permits plan sponsors to make all decisions affecting the plan including benefits formulas, investment strategies, and contributions, but gives the insurance carrier the opportunity to continuously monitor the plan's funding level and portfolio composition. The contract must include a provision for the insurance carrier to intervene in the operation of the plan once predefined violations of funding levels are observed (Ippolito, 1989).

Why Wasn't Insurance Written?

If pension insurance could have been written in the private market prior to ERISA, then why was it not written? One possibility is the lack of demand for insurance.

The demand for pension insurance will not be universal. First, in some cases, particularly if the firm is unionized, it might be optimal for stockholders and workers to maintain unfunded and uninsured pension plans (Ippolito, 1986). Second, many firms can offer a cheap self-insurance alternative by maintaining sufficiently high funding ratios in the pension trust; in so doing, firms can convey a guarantee-of-sorts that funds will be available to cover insured liabilities if the firm fails. Third, if the advantage of defined benefit plans was not important to some firms and workers, then in cases where trust between workers and firms was not high, firms could use defined contribution plans. Fourth, and finally, the administrative cost of providing insurance will be nontrivial and, for many firms and workers, the insurance simply may have been too costly.

Another possibility relates to a free-rider problem amongst insurance carriers. Since pension insurance had never been offered, the question of how to write an efficient contract prior to ERISA was paramount, and the history of PBGC is full of emerging moral hazard problems and attempts to stop them (Ippolito, 1989). Further, no data describing pension terminations existed, making it difficult to price the insurance. Thus, if one firm ventured into the market and discovered, through experience, how to write effective contracts and set appropriate prices, other firms could copy the solution, depriving the innovator of the opportunity to recoup its investment costs. If this was a serious problem, presumably the government has provided an information function by operating the PBGC.

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It's Time to Tax Employee Benefits

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Despite increasingly restrictive limits on tax-advantaged retirement benefits and a sharp reduction in marginal personal income tax rates that lessens the advantage of nonwage compensation, employer-provided fringe benefits, such as pensions and group health and life insurance, still represent the major source of erosion of the personal income tax base. The U.S. Office of Management and Budget estimated this "tax expenditure" at $44.1 billion for fiscal year 1989. The growth of nonwage compensation also markedly lowers payroll tax revenues and increases the long-run costs of the social security program.

In an era of large budget deficits and a future that includes the rising costs of an aging society, it is difficult to understand why such a large source of potential revenue is allowed to go untapped. Moreover, the failure to tax nonwage compensation creates serious inequities between those workers who receive all their earnings in taxable cash wages and those who receive a substantial portion in nontaxable fringe benefits.

This paper first explores the growth in employee benefits as a share of compensation and the impact of this growth on the tax base. The second section discusses the future of employee benefits and the third section explores the possible tax reforms that would slow the erosion in taxable compensation.[1] The conclusion is that the most workable approach for salvaging both the income and payroll tax bases might be to limit the percentage of compensation that can be exempt from the payroll tax on the employer's side and from the payroll and individual income taxes on the employee's side.

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[1] For excellent discussions of the appropriate treatment of employee benefits under a comprehensive income tax, see Sunley (1977) and the American Bar Association (1983).

The Growth of Employee Benefits and the Impact on the Tax Base

Between 1950 and 1987, employee benefits have increased from 12.9 to 27.7 percent of total compensation (Table 1). Part of the

TABLE 1

Growth of Employee Benefits, 1950-87

Compensation	1950	1960	1970	1980	1987
			Billions		
Total Compensation	$155.4	$296.6	$618.3	$1,638.2	$2,683.4
Wages and Salaries	147.2	272.8	551.5	1,372.0	2,248.4
For Time Worked	135.4	244.7	485.3	1,182.7	1,940.4
For Time Not Worked[a]	11.8	28.1	66.2	189.3	308.0
Nonwage Compensation	8.2	23.8	66.8	266.3	435.0
		As Percent of Total Compensation			
Nonwage Compensation	5.3%	8.0%	10.8%	16.2%	16.2%
Legally Required	2.4	3.5	4.3	6.2	7.0
OASDHI	0.8	1.9	3.0	4.1	4.9
Unemployment Compensation	1.0	1.0	0.6	1.0	0.9
Workers' Compensation	0.6	0.6	0.7	1.1	1.2
Agreed-Upon	2.9	4.5	6.5	10.0	9.2
Government Pensions[b]	0.9	1.2	1.8	2.5	2.4
Private Pensions & Profit Sharing	1.1	1.6	2.1	3.3	1.9
Group Health	0.5	1.2	2.0	3.7	4.3
Group Life	0.3	0.4	0.5	0.4	0.4
Other	0.1	0.1	0.1	0.1	0.2
Wages for Time Not Worked	7.6	9.5	10.7	11.6	11.5
Total Benefits	12.9	17.5	21.5	27.8	27.7

Source: Chamber of Commerce of the United States (1981), Table 21, (1982), Table 21, forthcoming, Table 17; U.S. Bureau of Economic Analysis (1986), Tables 1.14 and 8.4; and *Survey of Current Business* (July 1988), Tables 1.14 and 8.5.

[a] Estimated by the author using data from the Chamber of Commerce for 1951, 1961, 1971, 1981, and 1987.

[b] Includes federal civilian retirement systems, the Railroad Retirement System, the Military Retirement System, and state and local retirement systems.

expansion has had no impact on taxable income, however, since compensation for "time not worked" in the form of rest periods, holidays, and vacations is paid in wages, which are included in full in both the income and payroll tax bases. The growth of some other fringe benefits, which are not included in taxable income, has been beyond the control of individual employers, since it reflects the increased contributions required for legally mandated benefits, such as social security and unemployment compensation.

The main area of concern for tax policy and the major source of erosion of the tax base has been the growth of so-called "agreed-upon" benefits—primarily pensions, group health insurance, and group life insurance—which allow employees either to avoid the payment of income and payroll taxes altogether or to profit from the deferral of income tax payments until retirement. Employer contributions to these plans increased from 2.9 to 9.2 percent of total compensation between 1950 and 1987. Moreover, the figure for 1987 is artificially low since the enormous increase in stock prices in the 1980s has temporarily depressed employer contributions to private plans. Without this temporary decline in contributions, agreed-upon benefits would have been roughly 10.3 percent of total compensation in 1987.[2]

The Impact of Employee Benefits on the Income Tax Base

The effect of the exclusion of group health and life insurance on the income tax base and on personal income tax receipts is straightforward. Gross income is lowered by the amount of the contributions and taxes are reduced by an amount equal to the relevant marginal income tax rate times the excluded contributions. This reduction in receipts or tax expenditure is calculated annually by the Treasury Department and included in the *Budget*.[3]

The impact of the favorable tax treatment of pensions on the tax base and tax receipts is somewhat more complicated, since this type of employee benefit involves the deferral of taxation rather than complete avoidance. Thus, the Treasury's estimate of the net impact of pensions on tax revenues consists of two offsetting parts—the revenue loss calculated by applying the workers' average marginal tax rate to the currently tax-exempt employer contributions and pension fund earnings, and the revenue gain from currently taxing private pension benefits.

Calculations for 1987 indicate that the net revenue loss for the three primary statutory benefits—group health and life insurance and pensions—amounted to more than $68 billion, which represented 17 percent of personal income tax receipts in that year (Table 2). In other words, personal income tax revenues would have been 17 percent

[2] Without the recent stock market boom, employer contributions to pensions would have been roughly $30 billion higher (Munnell, 1987).

[3] See, for instance, U.S. Office of Management and Budget (1988), Special Analysis G.

TABLE 2
Revenue Effects Under Personal Income Tax from "Agreed-Upon" Employee Benefits, 1950-87[a]

Benefits	1950	1960	1970	1980	1987
			Billions		
Group Health Insurance					
Exclusion of Employer Contributions	−$0.2	−$0.8	−$2.8	−$15.5	−$25.4
Group Life Insurance					
Exclusion of Employer Contributions	−0.1	−0.2	−0.5	−1.3	−1.6
Pensions & Profit-Sharing					
Private Plans (net)	−0.6	−1.8	−4.9	−22.6	−22.8
Government Plans (net)	−0.5	−1.2	−3.2	−11.6	−18.7
Total Revenue Effect	−1.4	−4.0	−11.4	−51.0	−68.5
Addendum					
Revenue Loss as a Percent of Personal Income Tax Receipts	8.0%	9.6%	12.8%	20.3%	17.3%

[a] For a description of the sources and methods used to prepare this table and Table 3, see Munnell (1989), an expanded version of this paper.

higher if employee benefits were taxed in the same manner as wage and salary income, or tax rates could have been reduced approximately 15 percent and still have provided the same revenue.

Employee Benefits and the Payroll Tax

Like the income tax, the social security and unemployment insurance payroll taxes are theoretically applicable to a broad definition of wages that includes noncash as well as cash payments. However, employer contributions for group health and group life insurance and contributions to pension plans are also excluded by statute from the payroll tax base. Since a substantial portion of the decline in the payroll tax base, caused by the growth in employee benefits, occurs at higher earnings levels, benefit payments are not reduced significantly. Thus, the long-range costs of the social security program rise as the ratio of employee benefits to total compensation increases (Chen, 1981).

The magnitude of the cost increase has been calculated by comparing the current system, in which Social Security actuaries estimate that the ratio of wages to total compensation declines by 0.2 percent annually, with a system where the ratio remains constant. The analysis reveals that if the ratio stabilized at current levels, the projected payroll tax rate required to finance the retirement and disability portions of the social security program over the next 75 years could be reduced by roughly 0.2 percentage points.[4] That is, instead of requiring revenues equal to 12.4 percent of taxable payrolls to cover promised benefits, the system could be financed for the next 75 years at an average cost of 12.2 percent. In case one is tempted to dismiss this saving as insignificant, it is useful to point out that a 0.2 percentage point reduction in the tax rate would have lowered 1988 payroll taxes by $4 billion. Moreover, this figure would increase in each subsequent year to reflect the growth in taxable payrolls.

Of course, it is also interesting to look at the immediate payroll tax revenue loss associated with employee benefits without considering the long-term effect on future social security benefit commitments. This calculation differs from that performed for the income tax in two respects. First, employer contributions for all employee benefits represent permanent reductions in the payroll tax base; even contributions to pension plans escape tax completely, since no payroll tax is levied on pension benefits in retirement. Second, revenue loss occurs on both the employee's and employer's sides of the transaction, since neither party is required to pay taxes on exempt employer-provided benefits. The calculations indicate that 1987 payroll tax receipts would have been $31 billion higher if employee benefits had been included in the tax base (Table 3).

The Outlook for Employee Benefits

In view of the enormous impact of nontaxable fringe benefits on both the payroll and income tax bases, it is obviously crucial to assess the future growth of this form of compensation. As noted above, the Social Security actuaries project that the ratio of wages to total compensation will decline by 0.2 percent annually, so that by the year 2025 noncash compensation will account for 23 percent of the total. Is this projection reasonable and, if so, where will the growth come from?

The Outlook for the Traditional Statutory Benefits

The outlook for future growth of the three traditional benefits—pensions, health insurance, and life insurance—offers a mixed picture.

[4] Data for this calculation were taken from the Board of Trustees of the OASDI Trust Fund's *1988 Annual Report*, Table 84. For a detailed description of the process and an analysis using earlier assumptions, see Social Security Administration, Office of the Actuary (1982).

TABLE 3
Immediate Revenue Effects under the Payroll Tax from "Agreed-Upon" Employee Benefits, 1950-87

Benefits	1950	1960	1970	1980	1987
			Billions		
Group Health Insurance	a	−$0.2	−$0.9	−$6.5	−$14.9
Group Life Insurance	a	a	−0.2	−0.5	−1.0
Pension & Profit Sharing					
Private Plans	a	−0.2	−1.0	−5.9	−6.7
Government Plans[b]	a	−0.2	−0.8	−4.4	−8.4
Total Revenue Effect	−$0.1	−0.6	−2.9	−17.3	−31.0
Addendum					
Revenue Loss as a Percent of Payroll Tax Contributions	3.7%	5.1%	7.3%	12.3%	11.0%

Source: See note to Table 2.

[a] Less than $500 million.

[b] Includes federal civilian retirement systems, the Railroad Retirement System, the Military Retirement System, and state and local retirement systems.

Although coverage for these benefits is unlikely to expand, and pension contributions are expected to stabilize overall, rapidly increasing health care costs will force employers to increase significantly their expenditures for health insurance.

Contributions for health insurance will probably continue to increase as a percentage of total compensation.[5] The development of sophisticated and expensive technologies makes it almost inevitable that medical costs will increase at a more rapid pace than the general price level. As long as the full value of employer-provided health insurance is tax exempt, this benefit will be the source of increasing erosion of both the payroll and income tax bases. Moreover, this erosion will not be stopped by employer efforts to shift a portion of the rapidly rising costs to employees through premium sharing: under current law employees can finance their health insurance with pretax dollars by having their employer pay their share of the premium through a cafeteria plan.

In summary, then, despite the projected stabilization in pension contributions as a percentage of compensation and a similar outlook for group life insurance, the traditional benefits will continue to grow in importance because of outlays for health insurance.

[5] See EBRI (1986).

The Outlook for New Types of Benefits

The major source of growth in nontaxable employer-provided benefits will probably come from new types of plans. Between 1974 and 1984, a host of tax-favored employee benefit provisions were introduced and other benefits shifted from the realm of administrative ruling to statutory standing. Despite some efforts since 1984 to cut back on the generosity of these new provisions, the potential for future erosion of the tax base is significant.

ESOPs. A major expansion of statutory benefits occurred when the Tax Reduction Act of 1975 instituted a special tax credit for Employee Stock Ownership Plans (ESOPs). The tax advantages of ESOPs for both the employee and employer are substantial. ESOPs share all the attractive deferral features of private pension plans from the employee's perspective. On the employer's side, ESOPs are even more appealing than ordinary pension plans, because if the ESOP borrows money to purchase employer securities, the company can take a tax deduction for the repayment of principal as well as interest on loans made from the trust, an option not available in conventional financing.

Special Tax-Free Services. The second major development was an increase in the list of services that could be provided tax free by employers for their employees.[6] These include prepaid legal services (1976), educational assistance (up to a current limit of $5,250) for tuition, books, and supplies (1978), dependent care assistance (up to a current limit of $5,000) for children and incapacitated adults (1981), and tuition reductions for families of employees of educational institutions (1984). The only requirement is that these benefits be provided on a nondiscriminatory basis that does not favor officers, shareholders, or highly compensated employees.

Cafeteria Plans. A third innovation has been the encouragement under Section 125 of the Internal Revenue Code (1978) of so-called "cafeteria" plans that allow employees to select from a menu of benefits and salary packages with a variety of health, vacation, insurance, retirement, and other benefits.

401(k) Plans. The Tax Reform Act of 1978 also authorized so-called section 401(k) plans that allowed employees to reduce their salary by up to 15 percent of compensation and invest the money tax free in a special account. As in the case of pension plans, interest is also allowed to accumulate tax free until the funds are distributed. The Miscellaneous Revenue Act of 1980 encouraged the use of 401(k) plans by

[6] See U.S. Congress, Joint Committee on Taxation (1983 and 1984).

making them the only type of deferred compensation program that may be included in a cafeteria plan. In 1986, however, Congress sharply curtailed the potential use of 401(k) plans by placing a $7,000 annual limit on employee contributions to any kind of salary reduction plan.

Fringe Benefits. In addition to introducing new statutory employee benefits, Congress also in 1984 awarded statutory standing to a list of benefits that had generally been viewed as tax-exempt by the public, including employee discounts for goods and services sold by the employer and exemptions for employee cafeterias, parking, and athletic facilities.

Outlook. Recent surveys indicate a dramatic expansion of 401(k) plans and substantial interest in cafeteria plans; enthusiasm for the newly legitimized fringe benefits was also demonstrated by the lobbying efforts conducted on their behalf. Clearly, expanding the list of statutory benefits together with adding cafeteria plans and 401(k) plans is going to contribute to an increasing ratio of benefits to compensation over time.[7]

Options for Reform

A projected increase in the ratio of benefits to compensation highlights the necessity for making some changes in the tax treatment of employer-provided fringe benefits. Failure to do so will result in lower tax revenues, which are sorely needed to help reduce the deficit, and serious inequities between those persons paid in taxable cash wages and those who receive extensive nontaxable fringe benefits.

The Pure Solution

The theoretically pure solution to the problems associated with the erosion of the tax base and the inequities among individuals would be to establish a comprehensive definition of compensation for both income and payroll tax purposes. Under such a definition, the value of the employer's contributions for health and life insurance and the increase in the value of accrued pension benefits would be included in the employee's income.[8] Employer contributions for dependent care,

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[7] For discussions on other factors that have affected the growth of nonwage compensation in the past and may continue doing so, see Woodbury (1983), Lester (1967), Freeman (1981), Feldstein (1973), Munnell (1984), Skolnick (1985), and Turner (1987).

[8] Alternative solutions were developed in *Blueprints for Basic Tax Reform* (Bradford, 1984), *Treasury I* (U.S. Department of the Treasury, Office of the Secretary, 1984), and *Treasury II* (President of the United States, 1985).

legal services, and educational assistance would also be included in income, and salary reduction schemes, such as 401(k) plans, would be repealed.

Including the full value of fringe benefits in the tax base would save an additional $80 billion under the personal income tax and $37 billion under the payroll tax in 1989 (U.S. Congress, Joint Committee on Taxation 1988, Table 1). Revenues would increase rapidly thereafter.

Partial Solutions

While such a dramatic restructuring of the tax code is perfectly feasible, it might have some undesirable economic consequences. The basic statutory benefits have been awarded preferential status under the tax code precisely because it was deemed desirable to encourage certain types of activities. Because the precise role played by tax preferences in the growth of the basic statutory benefits is unknown, it may be unwise to dramatically alter the current treatment and include the full value of these benefits in the tax base for income tax purposes. On the other hand, it does seem both desirable and feasible to include all fringe benefits in the definition of taxable wages under the payroll tax.

Full Coverage Under the Payroll Tax. Although policymakers generally assume that the income and payroll tax bases are identical and that reform must be directed at both taxes simultaneously, such is not the case. A precedent exists for treating fringe benefits differently under the two taxes. The codification of the Rowan decision, which took place in connection with changes made in the tax code as part of the 1983 Social Security Amendments, provided that an exclusion of income from income tax withholding shall not affect the treatment of income for payroll tax purposes. The first application of the new provision was the inclusion of employee contributions to 401(k) plans in the payroll tax base even though they are deductible under the income tax. With the framework in place to treat employee benefits differently under the two taxes, the possibility exists to include all non-taxable benefits in the payroll tax base immediately and to approach the income tax reform benefit by benefit.

Income Tax Options for Pensions. One option for eliminating the tax expenditure associated with pensions under the personal income tax is to adopt the treatment currently applicable to those plans that fail to meet the IRS nondiscrimination, participation, or vesting requirements. In the case of these "nonqualified" plans, an employer may deduct pension contributions only in the year that they are included in the employee's taxable income. In addition, investment income of nonqualified trusts is not tax exempt. While treating all pensions as nonqualified plans would not eliminate the inequities between those individuals with and without pension coverage, it is a workable approach that would restore forgone revenues.

Another option for pensions is to calculate the annual value of the deferral under the personal income tax and attempt to recoup this amount by applying an excise tax to pension assets. Given that pension assets exceed $1 trillion (Board of Governors of the Federal Reserve System, 1988), a rate of less than 5 percent would produce approximately the appropriate amount of additional revenues to offset the effect of deferring taxes on accrued pension benefits.

An Income Tax Option for Health Insurance. A good option for employer-provided health insurance is the Reagan administration's proposal to place a ceiling on the amount of subsidized premiums that employees may exclude from their taxable income (U.S. Office of Management and Budget, 1983, pp. 4–15 and 1984, pp. 4–12). Specifically, employees could be required to pay income taxes on employer-paid health insurance premiums in excess of $225 per month for a family plan, and in excess of $90 per month for a single-person plan. Employer-paid health insurance premiums below these amounts would still be excluded from taxation. The $225 and $90 amounts would be indexed to rise with inflation. This proposal would produce $3.5 billion in the first year and more than $30 billion over a five-year period.

An Aggregate Approach

Two factors, however, argue against reforming the treatment of employee benefits on an item-by-item basis. First, each fringe benefit has a strong constituency that resists any change in a particular provision. Second, an attempt to limit one benefit often produces new approaches for accomplishing the same goal. Therefore, a preferable approach might be one that treats all employee benefits in the aggregate and establishes a limit on the portion of total compensation that any employer can provide in tax-free benefits. Contributions above that amount would be included in the employer's payroll tax base and in the employee's earnings for both income and payroll tax purposes.

The task would be to select a level that will restrain the erosion of the tax base, without subjecting most of the workforce to an immediate increase in their tax liability. The number should certainly be above the 9.2 percent national average for agreed-upon benefits in

1987 and probably higher than the 10.9 percent in manufacturing. Perhaps, 15 percent of total compensation might be reasonable if a single figure had to be selected. A preferable approach, however, would be to allow a generous amount of nontaxable benefits as a percentage of compensation at lower income levels and reduce the percentage as income increases. For example, nontaxable benefits could account for 25 percent of the first $40,000 of compensation, 15 percent of the next $40,000, and 5 percent of anything over $80,000.

Although this proposal would have little immediate impact on revenues, the distribution of the tax burden, or the structure of employee benefit plans, it would force employees and employers in the future to compare carefully the advantages of alternatives, such as defined benefit pension plans or 401(k) salary reduction plans, rather than simply piling one benefit on top of another. In the long run, this change would slow the expansion in the noncash component of compensation, cap the growth of the nontaxable employee benefits, and prevent the continued erosion of the tax base.

Conclusion

The major conclusion that emerges from the analysis of the expansion of noncash compensation is that, in the absence of restrictions to curb the growth, this component will continue to account for an increasing percentage of total compensation. While coverage for the major statutory benefits is unlikely to expand at this point, many avenues still exist by which noncash compensation can grow as a percentage of total compensation, and substantial interest exists in taking advantage of these opportunities.

For those who support the concept of using a comprehensive measure of economic well-being as an index of taxpaying capacity, the treatment of employee benefits under the payroll and income taxes is disconcerting. The employer-provided benefits clearly furnish recipients with an increment to their economic well-being, by excluding the value of these benefits from the tax base or deferring taxation until retirement, the current tax structure distributes the tax burden inequitably. If these generous provisions are continued for the growing array of employee benefits, both the payroll and the income tax bases will be reduced to the point where they can no longer be considered even approximations of ability to pay.

In addition to undermining the equity inherent in a comprehensive definition of income, the expansion of nontaxable compensation has serious implications for federal tax receipts. In an era when federal deficits are the primary concern of economic policymakers, the 1989 budget included $68 billion in revenue loss due to the net exclusion of employer contributions for group health and life insurance and pension benefits. In addition, payroll tax receipts were an estimated $31 billion lower due to the preferential treatment of agreed-upon employee benefits. Moreover, the revenue losses associated with employer-provided benefits are projected to grow substantially, amounting to $171 billion by fiscal 1993.

This type of erosion of the income and payroll tax bases is simply not acceptable. At a minimum, a limit should be established on the aggregate amount that employees can receive tax free. More extensive reform, however, is certainly desirable on both equity and revenue grounds.

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The Incidence of Health Insurance Costs: Is Everyone Out of Step But Economists?

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The great bulk of private insurance coverage in the United States is provided as a fringe benefit. Because of the tax laws, and because of the administrative requirements of typical programs, the employer usually pays for at least part of the cost of this insurance before cash wages are paid to employees. Under a wide variety of assumptions about labor market functioning, economic models suggest that at least some, and probably most, of the cost of this employer-paid benefit will ultimately fall on employees in the form of lower cash wages. The intuitive argument for a conclusion of heavy incidence on workers is strong. Given profit maximization as a firm objective and given some type of labor supply schedule to the market which is not perfectly elastic, the decision to offer an employer-paid fringe benefit must reduce the equilibrium cash wage the employer offers, other things equal. Somewhat less well investigated is the analogous question of whether exogenous changes in health insurance costs paid by the employer, whether resulting from changes in the cost of medical care or from mandated additions to the package of benefits, have their primary and major incidence on the employee. Nevertheless, the economic model would also seem to suggest here as well that the answer is affirmative.

When one compares this reasonably well-settled discussion in economic theory with the typical analysis of the policy implications of rising health care costs or mandated benefits, the contrast could hardly be more stark. Most policy discussions assume that the employer pays for employer-provided benefits; that is why small employers who are thought to be unable to "afford" such costs need special attention. Sometimes it is imagined that costs will be automatically shifted

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forward to consumers in the form of higher product prices; that is presumably why "we" would be concerned that Chrysler spends more on employee benefits per car than on steel. The thought that it is actually employees who end up paying is utterly foreign to this discussion; indeed, employers are regularly chastised for not being willing to give better fringe benefits to their workers, and employers vigorously defend themselves by arguing that there is only so much they can afford. Benefits managers regularly blame rising health care cost for their firms' difficulties with foreign competition. And security analysts frequently point to an especially attractive managed care program as a way of increasing profits.

Are these common sense perceptions about this important matter so at variance with what actually happens? Or could economic theory be so seriously wrong? Can we construct a rationale for misperception on the part of intelligent noneconomists? Or do our theoretical models need rethinking? Someone is out of step, conceptually speaking, but who is it?

Why Facts Won't Settle Things

The simplest way to resolve this paradox would be by recourse not to theory but to facts. If easily available data showed that employees who get more generous health insurance and other fringe benefits have lower take-home pay, it would be simple to convince policy people that "employer payment" is a fiction. If simple before-and-after data showed that imposition of mandated benefits forced down wages, theory would be unnecessary.

The problem is that the data will not cooperate. The simple correlation between the presence of insurance coverage and/or the generosity of insurance coverage and money wages is strongly positive. Regression analysis gets the same results—even controlling for other observable characteristics of worker, firm, and labor market, those employees who receive health insurance benefits also get higher wages (Smith and Ehrenberg, 1983; Monheit et al., 1985).

As we will see presently, the theoretical case for at least some incidence on employees is so strong that one must first think that there may well be something wrong with the empirical analytic technique. What could be wrong?

The most likely answer involves the endogeneity of employment-based insurance coverage—both the decision to offer coverage and the decision on the extent of coverage. Suppose, for instance, that workers differ in quality and productivity, and that some firms find it more profitable to hire higher quality workers than do other firms. A positive income effect on demand for insurance alone would suggest that higher productivity workers, even after adjustments for observable characteristics, should obtain both higher money wages and higher fringe benefits. Regression of fringe benefits on average wage would therefore display a positive sign.

A somewhat more tractable type of simultaneity occurs when labor markets differ in the level of the market clearing compensation for labor; in such cases both fringes and money wages will be positively correlated across markets—but an analysis of wage-fringe relationships *within* markets would still reveal the expected tradeoff. But, in general, unbiased estimation would seem to require treating the level of health insurance—and other fringe benefits—as endogenous.

There is a problem in doing so, however. What are the identifying variables, variables which cause the desired level of fringe benefits to differ but which are not related to the supply and demand for labor per se? The variable traditionally used to predict the demand for health insurance is the loading or administrative cost. There may indeed be cross-firm variation in loading which can help to shift the quantity of health insurance demanded and yet which is not likely to be correlated with other labor market or labor quality variables. The major empirical difficulty has been the absence of direct measures of loading. The conventional proxy is firm size, but even instrumental variables approaches have not been successful. A possible explanation is that firm size does more than just change the cost of health insurance. Larger firms appear to pay higher wages, and higher levels of total compensation. Whatever the reason for this phenomenon—a production function that requires higher quality labor, or lower labor turnover—firm size alone may not be a suitable identifying variable.

In principle, loading can still vary with firm size held constant. We can therefore offer reasons to explain why the data do not cooperate. Nevertheless, the failure to point to strong and intuitively convincing empirical evidence surely explains part of the reason for the conventional belief that higher health insurance benefits do not cost the employee money wages.

While there is no direct evidence that money wages offset fringe benefits costs, there is circumstantial evidence. A number of studies (Taylor and Wilensky, 1982; Long and Scott, 1982; Woodbury, 1983) have estimated models of the choice of levels of health insurance and other fringe benefits in the employee group in which measures of the price of fringes relative to other goods bought with post-tax money income were found to be significant. Such a conclusion is completely consistent with a model in which fringe benefits cost employees money wages. Moreover, at least some of the significant variables (worker income, marginal tax rates) are *not* costs to the employer, and so should not affect what the employer can "afford." They only make sense in a world in which choices are being made as if higher fringes reduce wages. This evidence is not, however, the kind of smoking gun that would be most persuasive in policy circles.

In the Short Run, We Are All Victims of a Fallacy of Composition, Especially If Money Wages Are Sticky

An alternative explanation points out that there are two cases in which costs mandated on employers do fall on employers. One case is that of a firm-specific change, while the other deals with a shorter run than is envisioned in the standard economic story.

Suppose that a single employer were required to provide an additional health insurance benefit, but no other firms were under such a requirement. Then that firm would simply see its costs rise. It would face a reduction in profits, would react to the higher labor cost by reducing employment, and might have to go out of business. This is the full catalog of possible effects in the conventional view of mandated benefits, and the conclusion would be valid.

The conventional view of coverage mandated on all employers may be based on this single-firm conclusion. However, this view fails to take into account the fact that all other employers, who compete for labor, are being subject to the same requirements. That is, there is a fallacy of composition, a failure to see that the situation can be quite different for employers in general, as a result of a requirement in general, as compared to the experience of a single firm which is singled out for mandated benefits or rising cost (Pauly, 1988a).

The main reason for the difference in the general case, of course, is that when all firms react to higher labor costs by cutting their employment, the result is downward pressure on money wages, and a consequent decline in those wages. There *is* therefore a stage in which all firms are suffering reduced profits and reducing employment, but it does not last. It is not an equilibrium. The more flexible are labor markets, and the more rapidly money wages adjust, the more quickly the market returns to full employment with lower wages.

This is the standard economic model of labor markets. In profit-maximizing equilibrium, all firms hire workers up to the point at which the addition to revenues from the additional output that worker produces equals the total cost, salary plus fringes, for one more worker. Rising health care costs, or mandated benefits, do not make workers any more productive, or add to the price that can be charged for output. So the only way a given number of workers can continue to be hired is if money wages fall by the amount of the extra benefit costs.

If the number of people willing to work changes as a result of benefits and wages adjustment, this conclusion does not necessarily hold. *How* the supply of labor might be affected by mandated benefits or higher health care costs is not so obvious. Higher benefits presumably attract workers to work, but if the benefits were valued enough to offset the cost they would already have been offered. Since they were not, in the mandated benefits case, the presumption is that the value of the total compensation package is reduced by mandated benefits, and the amount of labor supplied may fall. In the case of an increase in medical care prices, the alternative to insurance coverage is to take the risk of out-of-pocket payment, so it is even possible that the quantity of labor supplied will be increased because insurance, though more costly, has become more valuable. Either way, for primary full-time workers the labor supply effect is thought to be small, and the resulting incidence for the most part on workers.

Another way of explaining why employers think that they pay for benefits is to note that, even if the employer recognizes that some part of any medical cost or mandated benefit increase is borne by all workers, the amount that can be shifted back to workers is the amount that is common to all workers. This common amount represents the increase in benefit cost at competing firms; this is the amount by which wages can be reduced without losing workers to competitors. But the firm with rising benefits costs does not know at the time how much costs are rising elsewhere. If they could be rising less, then the firm *would* lose profits. Conversely, if the firm could somehow hold down *its* costs, even while others' rise, then it could add to profits.

The message here is that situations in which firms *know* that their competitors are being subject to similar pressures (e.g., the mandated benefits approach) should be regarded as less of a problem than if something occurred such as rising benefits costs because of medical technical change—which might or might not be general, as far as employers know at the time. Paradoxically, the politically-oriented increase will be resisted less strongly than the one due to haphazard events beyond anyone's control.

If money wages are sticky, and especially if they are sticky downward, it may take longer to reach the final equilibrium than economists typically suppose. There will be fairly permanent price increases, layoffs, and loss of market share until wages fall. What is required for this to happen is that employment be reduced on a much faster timetable than that applied to money wages. Perhaps this is not realistic. For most firms the adjustment in money wages probably does not require an actual reduction in cash wages; it only requires a smaller set of raises for the next time period.

It is therefore not obvious that, in this aspect, the real world is so much slower or so much different than the economic model. It is, however, surely the case that the absence of a specific linkage between money wage growth and the growth in fringe benefit costs makes life more difficult than it needs to be. Avoiding having to trim future raises—likely to be the most visible part of the total compensation package to employees—may be what most employers seek.

The current tendency to shift more of the health insurance premium onto the employee probably has a partial explanation of this sort. Especially if the employee can be subjected to any additional premium beyond what the employer budgeted, then there is no need to adjust money wages. There is, however, a price for this flexibility, in the form of a loss in some tax advantages that could otherwise have been achieved. Some flexible spending plans may permit these tax advantages to be retained.

Heterogeneity of demand for insurance among employees may explain an employer's decision to charge for a plan. If the employee can earn more by dropping coverage, those with very low demands for coverage would prefer to do so. In general, however, the only reason to shift *more* of the premium cost onto the workers would be because there was an increase in heterogeneity of preferences for insurance. Rising health care cost, in itself, is *not* a reason to shift the premium to workers.

Could Economics Be Wrong?

Are there circumstances in which the conclusion that the bulk of the cost of mandated benefits falls on money wages ever be wrong?

The simplest case to think of, but the hardest to carry further, is one that tries to account for oligopolistic features in labor and/or final product markets. Briefly, if employers react to a mandate by using it as a signal to raise final product prices, the incidence of cost could end up on consumers, not just on workers. Some early stories about the incidence of the corporation income tax found evidence of such forward shifting, but otherwise it appears to be fairly rare.

However, most of the firms that would be affected by mandated minimum benefits would not be large oligopolistic firms. Though there might still be some local market power, it is difficult to tell a product market oligopoly story in any convincing way.

It is true that the prices of products or services produced by workers most likely to be affected by mandated benefits laws will rise relative to prices of other products. Those products include primarily those produced by small firms, for whom insurance costs for a given level of coverage are somewhat higher than for other firms. Recent evidence suggests that the cost advantages of size may top out at a fairly small firm size, perhaps 100 workers, but for very small firms there are likely to be what Danzon (1989) has labelled "excise effects."

How serious should be the level of public policy concern about such relative price effects? It is true that the workers for whom labor demand will decline will tend to be lower income workers, while those firms whose workers will benefit from mandated benefits laws will be the better-paid employees of larger firms. Thus we might still be concerned, in some imprecise equity sense, though it is surely not true that all affected workers would be low-wage workers, and it is even less true that they would all be in low-income families.

Would excise effects shift costs onto workers in general if the aggregate supply of labor is perfectly inelastic? Consider first the case in which firms are of similar sizes (possibly producing different products). Then mandated benefits would, in the limit, make workers with low taste for insurance indifferent between all firms. In the aggregate, the number of workers willing to work at the formerly low-benefit firms would be the same as before. If those low-benefit firms were concentrated in some products, the relative price of the products would not change. All that would happen is that wages in low-benefit firms would fall by the amount of the mandated coverage cost. Excise effects require that optimal firm size, a proxy for the cost of insurance, vary across industries or products.

Health Insurance, Cash Wages, and Employee/Union Reactions

A given health insurance policy, with a given set of benefits, will experience an increase in cost roughly proportional to the growth in overall health care costs. This means that if such coverage is in the compensation package, and if it is a defined benefit, its rate of increase in value from year to year is less subject to employer control than is the rate of growth in cash wages. Indeed, some employers have been trying to move toward "defined contribution" health insurance payments and away from "defined benefits."

One reason why a firm may think it needs to control its health benefits cost is therefore to avoid cutting nominal benefits—even though money health insurance benefits actually rise when health care costs grow. The economic theory of compensation suggests, however, that this concern is misplaced. Given some increment in employee compensation that a firm intends to offer in the next period, the firm would have no preferences of its own concerning how that increment is divided between higher health insurance premiums and cash wages. Should the increase in health benefits costs exceed the value of the increment in compensation, money wages would actually have to fall, which might be undesirable, but most firms will not be in this situation. The employer, in short, should only want to divide this increment in compensation in the way employees prefer. It would, therefore, be incorrect to say that there is some valued benefit that would need to be cut, just because the employer cannot "afford" it. If the benefit really is valued by employees at more than its cost, they should be happy to take a smaller cash raise rather than sacrifice the benefit.

Strictly speaking, the employer is not entirely indifferent about the division of compensation in the economic theory. Rather, given some total increment, the profit-maximizing employer prefers to spend on health insurance in the way that is preferred by the *marginal* employee, the one the firm is just trying to hire or keep from departing. In contrast, a union may represent the preferences of the type of employee who dominates the union—perhaps the middle-aged worker who is most vocal and active in union affairs—and who may have different preferences from those of the marginal worker (Goldstein and Pauly, 1976).

The main point, however, is that getting a generous nominal health insurance benefit package is no bargain for workers if employers are pressured by rising costs to make drastic cuts in actual benefits, and having health insurance in the package is not likely to force employers to increase total compensation more than they would have in the absence of such coverage—since total compensation is ultimately determined by total productivity. A "two-step" process in which the total compensation increase is determined first and then is split between cash and fringes would be a more rational way of determining things.

This is the way economists would think about such matters, but it probably is not the way benefits managers think, either in collective bargaining or nonunionized settings. The employer who does behave "rationally" should do better than the one who pretends that health benefits take away *his* (rather than the workers') money, so perhaps a survivorship or "as if" theory will suffice to describe long-run equilibrium.

Mandated Benefits, the "Employer Pays" Fiction, and Public Policy

The fiction that the employer pays for additional health insurance benefits is at the heart of recent proposals to use mandates to expand insurance coverage. Why politicians like such devices is obvious: As James Buchanan (1968) has noted, the greater the uncertainty attached to the incidence of a tax (and a mandation is a tax, defined as the levying of a compulsory payment for public purposes, unrelated to the value of benefits received by the payer), the less likely it is to lead to rational political decisions, but the more likely politicians are to prefer it. An ideal tax from a politician's point of view is one that everyone thinks that the other guy probably pays. Mandation of employee benefits does not quite fall in this category, since many currently are sure that the employer pays, but there is enough uncertainty, and the group of affected employers is small enough, that "making the employer give benefits" can be an apparently attractive option.

The economic approach, if taken seriously, says that mandating benefits is really like imposing a head tax or a poll tax for public purposes. That is, it represents a tax which is constant regardless of the wealth of the person who pays it. From an economic efficiency point of view, such a tax is a reasonably good tax. It may discourage employment, but, beyond that, has few distortive effects. While Mrs. Thatcher's government has recently rediscovered the head tax, it usually gets bad marks on equity grounds, because it is not based on wealth or ability to pay (Pauly, 1988b). Mandating benefits for some workers that other workers already pay for is not quite as clear a call, since equity across workers would seem to require that all pay in the same way. Using an income-related tax for the erstwhile uninsured, while those who did choose to work for firms with benefits are still taking an income-independent reduction in money wages, is not obviously fair either—but subsidizing all workers' health insurance coverage on an income-related basis would represent an enormous increase in the tax burden.

At this point about the only novel counsel that economics can offer is that those who propose mandated benefits would assist in rational political decision-making if they made their proposals in a more explicit form. Rather than pretend that the employer pays, it would be more sensible in the first instance to require that anyone who works get health insurance coverage somehow, with a lump sum tax to pay for that coverage as the default option. Workers whose employers do provide coverage would be free of the tax, and the obligation to pay the tax would presumably spur many employers to work out with their employees the money wage reductions needed to make group insurance feasible. (Reducing money wages below the minimum wage level in return for greater benefits would need to be permitted.)

It is then the political process, rather than economic theory, which would judge whether imposing a new $1,500 head tax on someone earning $15,000 a year—which is what mandated coverage really does—is politically feasible. Making the ultimate burden of the new tax more obvious would also limit the likelihood of an excessively lavish mandated package. This might be the most lasting contribution of economics to health care cost containment.

Conclusion

The audacity of the modest proposal just made points up again the stark contrast between the economic view of the world and the common-sense view. I have found no persuasive reason to dismiss the economic view—though I must confess that the main reason to need to believe the economic view is that, if it is false, most of microeconomics is false. That is, the argument is one from logical consistency rather than from empirical facts. It goes without saying, but is worth saying nevertheless, that better empirical validation of the economic view is needed. In the meantime, trying to get the rest of the world in step may actually reduce the net amount of confusion.

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Pension Policy and Small Employers

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Small employers are much less likely to sponsor retirement plans than are large employers. Policy proposals to increase pension coverage among small employers range from mandated pensions to incentives for voluntary expansion. Through the use of economic analysis and its application to a unique small-employer data set, this paper provides preliminary estimates of the number of new employees expected to be covered by pension plans as a direct result of proposed legislation to grant a tax credit for plan contributions. The empirical results extend our knowledge about the determinants of pension coverage and provide policy-makers with quantitative estimates of the impact of pending legislation.

Many recent proposals to expand pension coverage encourage new types of plans or change the regulatory requirements to which small plans are subject. While many of the congressional bills are not amenable to quantitative analysis, one provision of the Small Business Retirement and Benefit Extension Act (S. 1426 and H.R. 2694) can be empirically analyzed to determine its impact on employees. In part, the bill directly reduces the pension costs of small employers by providing a tax credit equal to 14 percent of plan contributions on behalf of non-highly compensated employees. (The tax credit reaches a maximum of $3,000 for defined contribution plans and $4,500 for defined benefit plans phasing out for businesses with 50 to 100 employees.)[1]

A tax credit effectively lowers the administrative costs of small employers. Its impact can be estimated using an economic model of pension coverage. The coverage gains estimated using this model demonstrate how policy forecasts can be developed to evaluate proposed employee-benefits legislation.

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[1] Most small employers with pension plans provide defined contribution plans. Unlike defined benefit plans, these plans do not promise a fixed monthly pension upon retirement, but instead provide a specific annual contribution to each plan participant's account. Since many observers consider that future pension-coverage expansion will be through defined contribution plans, the present study focuses exclusively on this type of pension plan.

The Model

The model developed to estimate the effect of a change in administrative costs on plan sponsorship assumes that employers weigh the costs of plan sponsorship against its benefits. Should the benefits outweigh the costs, the employer will sponsor a pension plan. The new pension economics suggests that pensions are part of a long-term implicit employment contract (Kotlikoff and Wise, 1985). Empirical evidence of implicit contracting is evident in the relationship between pensions and job tenure and in the effect of pensions on retirement. Implicit contracts also may be used as a substitute for supervision to ensure that workers caught shirking pay a penalty upon dismissal (Lazear, 1983). Larger firms are more likely to use wage premiums for that purpose (Brown and Medoff, 1986) and, by extension, larger employers are also more likely to offer a pension plan. Employers may also use implicit contracts if firm-specific training increases productivity (Allen and Clark, 1987). By extension, the output of skilled workers with complex duties would be harder to monitor than the output of unskilled workers (Hutchens, 1987). As a consequence, employers paying higher salaries in more capital-intensive industries would be more likely to be plan sponsors. Their workers would face higher marginal tax rates and would be more likely to demand a pension plan (Woodbury, 1983).

Other studies have shown that annual administrative costs are higher for smaller plans due to economies of scale (Mitchell and Andrews, 1981; Pope, 1986). Plans also face substantial start-up costs that must be amortized over the life of the plan. More profitable companies would be more likely to start a plan if they expect to be in business on an ongoing basis.

A model of plan coverage can be stipulated in which

$$\text{Coverage} = f\,(\text{salaries, capital-labor ratio, profits, firm size, administrative costs}) \tag{1}$$

Increases in the first four variables are expected to increase the likelihood of a pension-plan sponsorship. In contrast, increased costs would lower coverage.

To estimate the coverage equation, administrative costs must be forecast for firms that are not plan sponsors as only employers with pension plans incur these expenses. Administrative costs are related to investment activities and services to participants in the plan. The number of plan participants and the plan assets under management are proxies for these variables.

(2) Administrative costs = f(participants, assets)

To simulate administrative costs for firms that do not sponsor a pension plan, participants and assets also must be projected since employers who do not provide a pension plan do not have plan participants or assets. Current characteristics of the firm can be used to determine these factors for nonsponsors, however, assuming that administrative costs were lowered. Two simple equations can be used to forecast plan participants and assets:

(3) Participants = f(firm size, salaries)

(4) Assets = f(firm size, salaries, type of plan)

The NFIB Data

A unique data set, collected by the National Federation of Independent Businesses (NFIB) from a survey of their membership of small employers, was used to estimate the forecasting model. The survey response rate was 19 percent, 11 percentage points lower than other NFIB surveys (Dennis, 1985). While response rates from this type of survey tend to be low, possible biases from a lower than normal response need to be considered. The NFIB report, in considering the question of bias, indicated that the industrial distribution of the NFIB respondents was similar to that of all small businesses, but that firms with fewer than five employees may have been underrepresented. Other types of sample biases might not have been evident. Based on nationally representative pension coveragerates from the May 1983 CPS pension supplement, firms responding to the NFIB survey were more likely than all small employers to sponsor a pension plan. Nonetheless, no other data set is appropriate for this analysis.

The NFIB survey includes theoretically appropriate variables for estimating the pension coverage model, including data on pension sponsorship, payroll per employee, and total employment. While data on the firm's assets and profits are not provided, sales were used as a combined proxy for the profit rate and the capital-labor ratio. After controlling for employment and payroll, sales are related to profits and capital expenses in accounting terms.

The survey provided information on administrative costs, the number of participants in the plan, and the firm's annual contribution to the pension fund. Because data on the plan's total assets were not available, the annual contribution to the pension fund had to be used as an imperfect proxy for total assets.

Empirical Findings

Equation (2) was estimated in log form for plan sponsors (Table 1).

TABLE 1

Administrative Expense Equation in Log Form
(Dependent Variable: Administrative Expenses)

Variable	Coefficient	t-Statistic
Participants	.4059452	4.687
Fund contribution	.3471544	4.524
Constant	2.341679	3.576
Adj. R^2	.4148	
Number of observations	146	

A log-log equation provides direct estimates of the cost-function elasticities. Scale economies were found for both variables. Increasing the proportion of participants at the same benefit level by 1 percent increases costs by almost 0.8 percent (derived by summing the two coefficients).

Equations in log form were also used to estimate the number of participants and fund contributions for plan participants (Tables 2 and 3). A percentage increase in the number of employees increases the number of participants by less than 1 percent. Similarly, a percentage increase in the number of employees increases fund contributions by less than 1 percent, ceteris paribus. Fund contributions tended to be lower for firms in retail sales and nonprofessional services, suggesting that firms in those industries provide less generous pensions. These equations were used to forecast participants and fund contributions. Forecasts of participants and fund contributions for all employers were used in equation (2) to forecast administrative costs.

TABLE 2

Participant Equation in Log Form
(Dependent Variable: Participants)

Variable	Coefficient	t-Statistic
Total employment	.9061295	26.672
Payroll per employee	.2471572	3.989
Constant	−2.557697	−4.408
Adj. R^2	.7576	
Number of observations	236	

TABLE 3

Fund Contribution Equation in Log Form
(Dependent Variable: Annual Fund Contribution)

Variable	Coefficient	t-Statistic
Total employment	.6193338	10.055
Payroll per employee	.8473757	8.714
Nonprofessional services and retail sales	−.3598058	−2.481
Constant	−.1776449	−0.143
Adj. R^2	.4516	
Number of observations	201	

The likelihood of plan sponsorship was estimated using logit (Table 4). Information on total sales was used in the analysis as a

TABLE 4

Logit Coverage Equations

Variable	Coefficient	t-Statistic
Sales		
Under $100,000	.3518886	0.867
$100-199,999	−.8573997	−2.365
$200-499,999	−.5548816	−2.221
$1.5-2.9 million	.5550403	2.133
$3.0-10 million and over	.9108849	3.036
Industry		
Finance, insurance, etc.	.8451582	2.983
Nonprofessional services	−.6060147	−1.809
Payroll per worker	.0765743	5.641
Advisor		
Trade association	.7387071	2.574
Financial planner	1.080028	4.645
Other source	1.094563	4.166
Has health insurance	1.064234	3.738
Employment	.0150409	2.117
Admin. cost per worker	−.0061482	−1.289
Constant	−3.154396	−7.230
Likelihood ratio index	.2659	
Number of observations	939	

combined proxy for the profit rate and the capital-labor ratio. A series of dummy variables for gross sales showed that firms with less than $500,000 in annual sales were less likely to sponsor a pension plan (except for the smallest sales category) than other firms. Businesses with sales of $1.5 million and over were more likely to have a plan than those with annual sales between $500,000 and $1.5 million.

Firms in finance, insurance, real estate, and banking were more likely to have a pension plan than other small businesses. Those in nonprofessional services were less likely. Industry could be a proxy for profits and degree of capitalization that are not completely accounted for in the data on sales. Industry may also reflect the skill level of the workforce and their demand for pensions.

An increase in payroll per employee of $1,000 resulted in a 1.5 percentage point increase in the likelihood of pension sponsorship. Employers with health insurance were also more likely to provide a pension plan. Firms first institute health insurance, an annual commitment, and then a pension plan, a long-term obligation.

Employers who learned about pension plans from accountants and insurance agents were less likely to sponsor a plan than those who received advice from financial planners, trade associations, and other sources. These findings suggest that there may be imperfect information in the pension market. While most small employers use accountants and insurance, the other advisors are not necessarily a part of a small employer's ongoing business relationships.

Forecasts of administrative costs per employee for all employers were used in the plan-coverage equation. These forecasts purge the variable of its stochastic element.[2] The coefficient on estimated administrative costs per employee indicates that a $10 decrease in administrative costs per employee raises pension coverage by 1.3 percentage points.[3] A variable for total employment was also included since larger small firms could use pensions to improve supervisory control.[4]

The Forecasts

Administrative costs per employee were recalculated for each small business in the sample, taking account of the 14 percent tax credit on fund contributions proposed under the Small Business Retirement and Benefit Extension Act. The administrative expense forecasts were substituted in the logit coverage equation to simulate the likelihood of plan sponsorship with a 14 percent tax credit.

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[2] Other research suggests that selectivity bias may not be a problem (Andrews, 1989a).

[3] The coefficient of the administrative cost variable was significant at the 90 percent level according to a one-tailed t test. A one-tailed test is appropriate since the sign of the variable is theoretically determined to be negative.

[4] Another equation was estimated that excluded the number of employees. The coefficient on administrative costs per employee in that equation was more significant as collinearity with the firm size variable was no longer an issue. Nonetheless, the equation reported in Table 4 is preferred on theoretical grounds.

The percent of employees in the small-firm sample with pension coverage was calculated before and after the tax credit by weighting the predicted firm-specific coverage rates by the number of employees in each firm. Coverage rates before and after the tax credit were calculated for three specific firm-size categories—fewer than 5 employees, 5 to 24 employees, and 25 to 99 employees.

Changes in coverage based on the two smallest firm-size categories were applied to coverage rates for workers in firms with fewer than 25 employees and firms with 25 to 100 workers using the May 1983 CPS pension supplement. Coverage rates for smaller firms were applied to the CPS data because the NFIB pension coverage rates were higher than the CPS rates for the same firm-size groupings. Using coverage-rate forecasts that do not apply directly to the employment-size categories in question makes the behavioral responses less accurate than they would be if the NFIB sample were representative of all small employers. Directly using the rates forecast for the NFIB employers for correct employment-size categories would lead to less accurate forecasts, however, since groups with higher initial coverage rates are less likely to respond to tax incentives.

Coverage rates were calculated for firms paying income taxes. Updated to 1987, the simulated projections show that 3.9 million more workers would have been covered by a pension plan if a 14 percent tax credit had taken effect that year. The pension coverage rate among workers in firms with fewer than 100 workers would have been raised from 22 to 34 percent. Data difficulties notwithstanding, these estimates provide useful indicators for policy-makers to evaluate the impact of their proposal on pension coverage.[5]

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[5] Other policy simulations can be found in Andrews (1989b, forthcoming).

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DISCUSSION

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Professor Pauly and I are in complete agreement on most of what he has written, but I would go further and say that mandating health insurance and *most* other kinds of benefits for workers makes very little sense from any perspective except the political. We as a profession, particularly those of us who study these issues, have been remiss in not making this case more forcefully. Professor Pauly has, at last, done this and we should be grateful. Pauly concludes his thoughtful piece by arguing that mandated benefits are really like imposing a head tax on the workers who receive the benefits.

Pauly suggests that the conventional view—that mandating coverage will impose costs exclusively on employers—is based in part on a fallacy of composition, because if a single employer in isolation is required to provide benefits, the firm would see its costs rise, see a fall in profits and employment, and on the margin, cease to be in business. However, if all firms are required to pay, this will not be the case. Pauly does admit that "there is a stage at which all firms are suffering reduced profits and reducing employment but it does not last . . . ."

I propose that the common sense view of this matter and the economist's vision are really the same. Perhaps we are not out of step, just marching to different drummers. Pauly points to the key himself when he discusses the transition period. I suggest that transition costs to employers may be high and it is in fact these, in part, to which opponents and proponents of mandated benefits are reacting.

A few assumptions and a little arithmetic will make the point clear. Suppose that mandating health insurance will require covering an additional 25 percent of private-sector workers. This means that about 22.6 million workers will have to have coverage. Suppose their employers are required to purchase an average health insurance policy costing $1,500 per year per worker. Thus, the cost of this mandate will total approximately $34 billion per annum.

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In 1987 I estimate that (assuming a 20 percent average tax rate) proprietors' after-tax income was $191.2 billion and after-tax corporate profits were $137.1 billion. These total $328.3 billion. If we assume that these 25 percent of to-be-covered workers are employed by firms that account for say 20 percent of the profits (not an unreasonable assumption given that many of the firms in which they are likely employed are smaller, perhaps marginal firms), we can say that the firms in which these workers are employed account for about $66 billion in profits. Suppose that in the first year of the mandate employers can only pass on to workers 20 percent of the cost of mandated health insurance. They will be paying about $27 billion, or over 40 percent of their profits. Suppose that by year two they can pass on 50 percent of the cost. They will still be paying over 25 percent ($17 billion) of their profits. If employers end up finally paying 15 percent of the costs of the insurance in long-run equilibrium, their payments will have a present value of $64 billion or about one year's profits. If these approximations are anywhere near the mark, it is no wonder that a substantial number of employers do not want to vault this hurdle. Transition costs may be critical in understanding this issue. Even if employers recognize that they will ultimately be able to shift most of the burden of mandated benefits to workers, they also understand that they will have to pay substantial short-term costs.

Furthermore, if all firms are forced to provide coverage and the costs of coverage continue to rise at, say, 7 percent a year, they may be able to pass on only a fraction of this increase to employees in any given year. Suppose, for example, health insurance costs rise by $100 per year per worker, and in a given year they can pass on only $50 per year through forgone wage increases. If this situation is considered permanent—that is, firms are always $50 behind—the mandate of health insurance imposes a burden of $71 billion in present value terms on all firms.

Mandating benefits also brings on a risk of rising costs. While as Professor Pauly correctly points out, profits will rise in firms with relatively lower health care costs, most firms are in businesses other than health care cost containment. They are probably not good at cost containment and don't want to get experienced at it if they can avoid it.

Further, if we believe the standard model of employee benefits—that workers select firms along a wage-benefit continuum and some workers select firms with low benefit levels because it maximizes their utility to do so—forcing employers to provide and workers to accept benefits will lower some workers' utility. To the extent that this reduction is not the same for all firms' workers, and it should not be, some employers (the employers of workers who don't want benefits—and presumably don't have them now) will bear a larger share of the costs than others. The lack of knowledge of how these burdens will be distributed may cause all employers to balk at benefit mandates.

Two other points about the undesirability of mandated benefits should be added. First, while workers certainly pay a significant share of benefit costs, the actual incidence of those costs is an area of research that is relatively virgin. If past research on incidence of anything is a guide, research on the incidence of fringe benefit costs is bound to provide controversy aplenty. To mandate benefits without understanding who is to pay is, as Pauly points out, perfect for the politician and undesirable for the economist.

Second, and more importantly, mandating benefits almost certainly is not an efficient way to provide benefits to those who need them. To mandate benefits for all workers to provide the working poor with benefits doesn't make any sense. Furthermore, what of the nonworking poor? They would be, if anything, worse off than before, because mandating benefits is bound to give a kick to the costs of services in the areas mandated, making them even less accessible to those who do not have benefits. Rather than mandate benefits, a well-targeted program by family income strikes me as a better way to go all the way around.

To conclude, Professor Pauly has begun an intelligent discussion of mandated benefits. It is a discussion in which economists are obliged to participate. We should be grateful to him for this service. I suggest, however, that no one is out of step, but we are marching to different drummers with employers facing significant short-term costs and risks and employees who may not want benefits. This explains their resistance to mandated benefits and their insistence that they pay for them, which they will do in the short term. In addition to this issue, however, economists must also look at incidence of benefit costs as well as the efficiency of mandates as a policy tool.

Dr. Andrews in her paper has also initiated discussion of an important topic—the effects of tax credits on benefits—in this case, a bill that will reduce the pension costs of small employers by providing tax credits equal to 14 percent of plan contributions to non-highly compensated employees. To determine the impact of such tax subsidies is important, particularly when the government is tending toward policy schizophrenia by discussing subsidizing on one side and taxing on the other.

In order to simulate the effects of the tax law change, Dr. Andrews must predict what administrative costs of these funds would be if firms which currently do not have plans adopted them. To accomplish this, she must forecast both the number of participants and plan assets. She does this through a simultaneous system of equations. The final equation used to forecast the effects of the change in the tax law is a logit equation for plan coverage. Unfortunately, due to the paucity of data available, it is the difference in the functional form between this logit equation and the double logarithmic equations used to estimate assets, participants, and the annual fund contributions to the plan that serves to identify the system of equations. Functional form is a weak reed on which to base model identification. With the judicious use of data from outside the data set, I think that this problem can be minimized.

For example, the first equation forecasts pension fund assets as a function of firm size, salaries, and type of plan. Past research on fringes suggests that all sorts of other variables have impacts on pension fund assets, including the profitability of the firm, its sales, its location, its industry, and perhaps even its industry concentration ratio. These variables can be obtained at the three-digit SIC level and can be used to proxy the firm level data.

Likewise in the case of plan participants, Andrews's equation makes the number of participants a function of firm size and salaries. One would also want to include demographic variables (which could be added here at the industry level) and industry and location variables. Finally, in the administrative costs equation, Andrews has included estimated participants and assets from the previous two equations. One might include variables such as average age of the firm's workers, union status (unions almost certainly affect administrative costs of pensions), and industry and locational variables.

Then in the logit coverage equation she could include demographic variables, union status, industry, and locational variables.

Andrews argues that the coverage equation should include a proxy for skill levels, and she chooses as the proxy the capital-labor ratio. She also argues that profits should be included because more profitable firms would be more likely to start a plan if they expect to be in business on an ongoing basis. However, there appears to be a slip between cup and lip with the final equation containing sales as a proxy for both skill levels and profits. What might prove more effective would be to proxy skill level by the average ratio of leave to work time in the firm and/or average industry education level. In addition, industry-level proxies could be employed to measure the capital-labor ratio and profits. I think that using sales to proxy profits leaves something to be desired, and using it to proxy skill levels leaves too much to the imagination.

Expanding the model in these ways would have several advantages—not the least of which would be firmer identification. It would take into account more of the factors which we know affect pensions, and ultimately the model would predict more accurately.

The basis of Dr. Andrews's forecast comes from the coefficient on administrative cost per worker. This coefficient indicates that a $10 decrease in administrative costs raises the pension coverage by 1.3 percentage points. Unfortunately, this coefficient is significant only at the 80 percent level with a t-statistic of -1.289. Since this is the basis of the forecast estimates, it is difficult to be very confident of the results.

In general, this paper is a useful addition to our knowledge about the effects of tax law on pensions. It offers an important first step that needs to be refined and expanded to make it even more helpful to policy-makers interested in these issues. However, if the coefficient on the operational variable—administrative costs per worker—could be estimated with more precision, the conclusion of the paper could be greatly strengthened and it would carry greater impact.

XVI. EMPLOYMENT SECURITY: MANAGEMENT, UNION, AND GOVERNMENT PERSPECTIVES

Employment Security: Developments in the Nonunion Sector

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There is a spectrum of company commitment to employment security, ranging from companies whose workforce fluctuates with production needs to those that guarantee a job to all regular employees. In between these extremes are companies that over the years have exhibited a tradition of concern for employment security, as well as those with strategies and planning processes to help assure employment for all members of the regular workforce. Two representative approaches to employment security are illustrated by what John Welch and John Akers, the chairmen of GE and IBM, respectively, wrote about employment security in their 1986 letters to shareholders:

> We reduced our workforce by more than 100,000, but the strength of our balance sheet allowed us to do so in ways that were fair and compassionate to those involved. Lengthy notification periods, equitable severance packages, retraining and placement centers were used wherever business realities caused us to close a plant or exit a business.
>
> John F. Welch, Jr.

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> During 1986, we took actions to further reduce costs, expense and unneeded capacity. At the same time, and with the essential cooperation of IBM employees, we continued to maintain our tradition of full employment.
>
> John F. Akers

Employment Security

In a recent publication by Jerome M. Rosow and Robert Zager, (1988) employment security is defined as "not laying employees off (temporary) or dismissing them (permanent) until all practical alternatives have been exhausted; and, when dismissal is unavoidable, it means helping them find suitable jobs in other firms" (p. 193). Under this definition, many companies, both union and nonunion, are committed to employment security.

A stricter interpretation would label businesses as full employment companies only if they have no-layoff policies for their regular employees. Under such a definition, there are approximately 30 companies in the United States that practice employment security. Some have done so for over 50 years. The best known of these companies are Delta Airlines, Digital Equipment, Eli Lilly, Federal Express, HP, IBM, Lincoln Electric, and Motorola.

But even at so-called full employment companies, employment security has different meanings. Some of these companies do not put their policies in writing or even call them policies; instead, they are simply accepted practice or tradition. Employment guarantees, too, do not always extend to everyone, for protection may depend on position, seniority, or location. And while some companies promise full pay and hours (Eli Lilly does so even if the employee is moved to a lower-level job), others utilize a work-sharing and pay-cut proviso. But what all these companies have in common is the avoidance of layoffs of regular employees because of lack of work.

Several large nonunion corporations have abandoned their historic commitment to no layoffs because of poor business conditions, an increasingly competitive situation, or a changed management philosophy. Such companies include Advanced Micro Devices, Bank of America, Data General, Eastman Kodak, Intel, and Polaroid.

At the same time that some companies have dropped full employment, others have been taking steps to preserve employment stability by increasing flexibility. The full-employment companies believe that with more flexibility they can maintain their historic commitment to no layoffs.

The remainder of this paper is devoted to a discussion and analysis of the principal means these large nonunion businesses are adopting to assure commitment to employment security. These new developments include: (1) increased use of supplemental or complementary workforces; (2) higher and more focused voluntary separation incentive programs; (3) aggressive redeployment of employees; (4) expanded personal leaves of absence programs; and (5) use of short-term compensation programs in states where they are available.

Increased Use of Supplemental or Complementary Workforces

Several companies are increasing the use of "supplementals" or complementary workforces. Complementary workforces or flexible workforces consist of either contract and/or temporary employees. Companies are not only raising the percentage of jobs that are filled by supplementals, but extending the period of time a temporary employee may be employed.

In 1988, for example, Hewlett-Packard adopted "Flex Force." Besides permitting the use of external temporary employees, the program introduced two new HP employment categories: "on-call" and "on contract" employees. These people do not have employment protection and receive only legally-mandated benefits. While on-call employees are used for short-term varying assignments, on-contract employees have one- to six-month contracts that can be renewed for work on the same project for up to two years.

In 1988 IBM doubled the length of time a temporary employee could be employed, from six to twelve months. At some other companies the period, with extensions, can be longer.

Separation Incentives

Recent years have also seen the development of more focused and more liberal voluntary separation incentives. These "window programs," sometimes called VSPs (voluntary separation programs) or voluntary early retirement programs, are designed to encourage employees in locations or functions where there are manpower excesses to leave the corporation voluntarily.

At certain plants owned by Digital, for example, employees were told that if they found another job in the community, they would be given 13 weeks of pay as a separation bonus. At some HP locations, management announced how many employees, by job category, it was hoping would leave and stated that volunteers, selected on the basis of seniority, would receive one year of pay and extended medical benefits. And when IBM closed its Greencastle plant, it offered twice the normal separation allowance (four weeks of pay for each year of pay instead of two weeks), $5,000 in retraining money, pay for a year's worth of additional commuting costs for employees who left and took a job farther away, educational expense reimbursement, and extended benefit coverage. Employees who did not volunteer were moved to jobs in other IBM locations.

When IBM announced the closing of its Boca Raton and Tucson plants in 1988, it set a new standard by offering certain employees who volunteered and were selected the following financial assistance programs:

- A one-time, lump-sum payment that was equal to twice their existing salary, and a number of programs aimed at assisting in the transition from IBM, including:
- A one-time special assistance payment of $25,000;
- Reimbursements of up to $2,500 for retraining for a two-year period after leaving IBM or until employed full time;
- Reimbursement of up to 24 months of medical and dental coverage for employees who were not eligible to retire (those of retiring age were covered by the IBM retiree medical/dental plan);
- Outplacement assistance provided by a third party.

IBM offered eligible headquarters employees who volunteered to participate a one-time, lump-sum separation payment of four weeks' salary for every year of service (up to a maximum of two years' salary), reimbursements, as described above, for retraining and medical and dental coverage, and outplacement assistance.

Aggressive Redeployment, With and Without Relocation and/or Training

Several companies make extraordinary efforts, at great cost, to redeploy surplus employees. These efforts may involve relocation at company expense, retraining, or both. The transition process at Digital from late 1983 to early 1985 has been well described by Kochan, MacDuffie, and Osterman of MIT (1988). Similarly, the story of how IBM retrained and redeployed over 20,000 employees from 1986 to 1988 is told, in case study form, by D. Quinn Mills at Harvard. Of 21,500 IBM employees who changed assignments, 9,000 were transferred from manufacturing and product development into sales, systems, and engineering; 7,600 left customer support, overhead, and headquarters assignments to return to the field to work directly with customers; and 4,000 moved to other locations in jobs similar to those they had been doing because the old location, division, or subsidiary had been closed or had its mission changed (Mills, 1988). As a study of the DEC and IBM experiences makes clear, employment security requires employees who are ready and willing to move, be trained or retrained, and accept different assignments.

Expanded Personal Leaves

Companies are also making the terms of their leave-of-absence policies more attractive. For example, in 1988 IBM extended to three years the maximum for its personal-leave program (from a previous maximum of one year). IBM employees receive company-paid benefits while on leave and are assured of a job upon returning. Although approval of a personal leave depends on its purpose and the company's business conditions, employees on leave may elect to work for IBM as part-time supplementals during the first year of leave. During the second and third years, they must be available to work part time depending upon the needs of the business.

When leave programs are well communicated, companies in some locations, especially where a high percentage of the workforce is female, find many applicants for such programs. This has been the experience at Delta Airlines, Eli Lilly in Indianapolis, and HP in Colorado and Oregon.

Use of Short-Term Compensation (Work-Sharing) Programs

Many companies are using the new STC (short-term compensation) programs in the dozen or so states where they have been enacted. Under such programs, employees who work four days per week can receive unemployment compensation from the state for the fifth unworked day of the week. Motorola is the largest user of STC in the United States.

A study of Motorola's experience in Arizona in 1982–83 concluded that use of STC was "extremely successful," resulting in sizable and quantifiable net savings compared to laying off employees (Burgoon and St. Louis, 1984, footnote). Moreover, the company believes that the true savings from STC are much higher if account is taken of advantages that are more difficult to quantify, such as higher morale in the absence of layoffs, the avoidance of bumping and other disruptions of the established manufacturing process, and the competitive advantage the company enjoys by being able to respond rapidly to pickup in demand during a recovery with a well-established, fully-trained workforce. It was also the case that a significant number of higher-paid Motorola employees did not file for unemployment compensation for the fifth unpaid day. With respect to the company's experience with work-sharing in Arizona, a company official wrote: "Worksharing has proved to be a 'Win-Win' concept for Motorola, its employees, and the community. Worksharing is solidly entrenched in Motorola's arsenal of recessionary strategies, and is a vital ingredient in the company's employment security program" (Koziul, 1985).

HP also has been a user of STC in states in which it has facilities.

Analysis and Discussion

In analyzing these developments in leading companies in the nonunion sector, I must make several observations. First, the creativity, energy, and resources that have been devoted to the preservation of employment security in so many large and leading nonunion companies are striking. Second, as companies take more steps to achieve flexible workforces by increasing the number of temporary, part-time, and contract employees, several societal issues arise, issues that may prove to hurt the companies themselves. Can secondary workers be loyal? Can companies and society live with more and more "second-class" citizens? Can the increased hiring, orientation, and training costs continue to be justified?

How these questions are resolved will in large part depend on who the temporary employees are and how they are managed. If companies hire many students and retirees as temporary employees, as IBM does, this is very different from hiring people who are seeking full-time work. At Federal Express, for example, the entire part-time workforce consists of students and those already employed full time elsewhere who wish to supplement their income. It is also important that companies give temporary employees realistic expectations from the start. Commenting on IBM's use of its buffer workforce, Mills (1988, p. 139) states:

> IBM maintains that it attempts to minimize hardships placed on non-regular employees. Non-regulars know the terms and conditions of their employment up front. Ordinarily, employment is for a period not to exceed six months, though in some instances, as in 1987–1988, the period is extended to one year.
>
> Generally, non-regulars complete their term of employment, so that the company does not simply dump these employees

unexpectedly when business collapses. The company staggers its hiring so that the reductions in force can be spread out over time while permitting non-regulars to serve their term.

Although the increased use of temporary, contract, and part-time employees does pose some risks, they can be minimized with proper management techniques.

While the costs of layoffs are significant, the direct and indirect costs of the full-employment policies and practices discussed are certainly substantial. I wonder whether the benefits of maintaining full employment will continue to justify the price and at what point the costs of these practices simply will be too high. This obviously is a decision that each firm must make, taking into consideration its own unique values and culture and strategic business factors.

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Collective Bargaining and Employment Security

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Employment security has emerged as the top collective bargaining priority of the UAW in the 1980s. The programs that have been negotiated provide a real measure of job security for workers in the auto industry and in certain other industries where the UAW has members. The benefits from these programs have already been substantial, and a solid foundation has been laid upon which future improvements can be negotiated. Like other innovative UAW collective bargaining gains, the job security programs are also useful and worthy as models for adaptation by employers and unions in other economic sectors.

These accomplishments have been all the more noteworthy in view of employer resistance to enhanced employment security and the difficulty of achieving advances in an unfavorable economic and public policy environment.

The union's long-term objective of employment security has been approached through other avenues besides the job security programs. Improvements in pension benefits have enhanced opportunities for early retirement and opened up jobs for the younger generation. Reducing the length of the work week and work year to increase employment and leisure time has been another long-standing goal. Early on, essential safeguards against arbitrary discharge for inadequate or improper cause were negotiated in the form of seniority clauses and grievance and arbitration procedures.

The purpose of this paper is to review the collective bargaining history of the UAW job security programs, describe how the programs

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work, and assess in a preliminary way their effects and their effectiveness in the context of U.S. corporate and public policy environments in which the programs must operate. Future directions for negotiated approaches to employment security and the likelihood of their diffusion will also be considered.

Collective Bargaining History

Beginning in 1979—against a backdrop of the traditionally low priority placed by U.S. auto management upon the security of their hourly employees' jobs—the interplay of a mature auto market, deep recession, and skyrocketing imports of finished vehicles and parts wreaked havoc with employment levels.

In 1984 the UAW Collective Bargaining Convention gave overwhelming approval to a proposed resolution to gain job security in upcoming negotiations. As stated in the resolution:

> Employment security is our highest priority goal.
>
> Workers should not have to worry that their jobs will disappear because of automation or other new technologies, international competition, or due to their employer's decision to outsource work or to close a facility. Nor should employers be able to use shortage of jobs as a tool, to induce workers to undercut each other's living standards and working conditions.
>
> Instead, by negotiating controls on such employer actions, by obtaining commitments regarding investment decisions, and by reducing work time, we can move toward our target of guaranteed lifetime employment.[1]

Later that year the UAW obtained a pioneering agreement with GM and Ford which precluded layoffs due to outsourcing, negotiated productivity improvements, or technological change; virtually the same agreement was reached with Chrysler in 1985. In 1987 the job security programs were improved and made less complex; job guarantees were tightened. Starting in 1986, programs with somewhat different provisions but designed to achieve the same goals were obtained at major UAW-organized farm implement, heavy truck, and construction equipment companies.

In the meantime the UAW and NUMMI, the GM-Toyota joint venture, negotiated their first collective bargaining contract in 1985.

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[1] *UAW Special Convention Resolution*, March 6-8. 1984, p. 20.

The union insisted on a strong job security clause. The UAW-NUMMI contract contains the following langauge:

> New United Motor Manufacturing, Inc., recognizes that job security is essential to an employee's well being and acknowledges that it has a responsibility, with the cooperation of the Union, to provide stable employment to its workers. . . . Hence, the Company agrees that it will not lay off employees unless compelled to do so by severe economic conditions that threaten the long term financial viability of the Company.
>
> The Company will take affirmative measures before laying off any employees, including such measures as the reduction of salaries of its officers and management, assigning previously subcontracted work to bargaining unit employees capable of performing this work, seeking voluntary layoffs, and other cost saving measures.
>
> In summary, the Parties to this Agreement recognize that job security for bargaining unit employees will help to ensure the company's growth and that the Company's growth will ensure job security.[2]

The UAW-Mazda Motors Manufacturing (USA) Corporation first agreement, concluded in March 1988, includes essentially similar job security language.

How the Programs Work

The typical programs in the auto industry establish an initial guaranteed employment number at each bargaining unit location which is essentially equal to the number of active employees. The company must maintain a number of employees at least equal to the initial guaranteed number at each location, except in certain market-related circumstances such as an economic downturn which causes a decline in sales. For every two attritions at each location, the guaranteed number decreases by one; the company is then required to recall a worker from layoff to fill the open slot. The guaranteed number increases as active workers gain one year of seniority or come back from layoff and work a predetermined number of weeks. Thus, the program assures workers that they can only be laid off when the company is able to demonstrate that layoffs are necessary because of

[2] *Agreement between New United Motor Manufacturing, Inc., and the UAW*, July 1, 1985. The same language is included in the 1988 contract.

declines in production volume triggered by market-driven factors or "acts of God." However, declines in production that can be traced to production or purchase arrangements of the company with any related or unrelated party are deemed not to be market-driven and are therefore not a permissible reason to lay people off.

Workers who are not directly needed in production because of company actions such as outsourcing or technological change are placed in "banks" or "pools"; they may fill in as vacation or absentee replacements, replace other workers who go into training, be trained themselves, or be assigned to nontraditional jobs. Under certain circumstances, "bank" workers must either take a job at another facility or opt to leave the program and take a regular layoff. The program thus provides management with increased flexibility in scheduling and deployment of workers, though union approval of specific assignments is required in order to prevent abuses.

The job security programs negotiated at the farm equipment, construction equipment, and heavy truck companies in 1987 and 1988, while similar to the automotive programs, extend job and income protection against any type of layoffs (including market-related events) to 100 percent of active workers in two of the companies, and the same full protection to over two-thirds of the active workforce in two others.

Building on the experience of jointly managed programs, authority in essentially all matters relating to job security rests with joint company-union committees at each location; these operate under the guidance of a national joint committee. No action is taken unless the union and the company reach agreement. Matters unresolved at the local level are discussed and finalized by the national committee.

Employment Security and Corporate Policy

Employment security has obvious benefits for workers, but it can also be in the interest of employers. It may be more difficult for managers to manage in a high employment security environment, but there are significant payoffs as well. If workers cannot be laid off at will, managers will be challenged to find ways to utilize those workers more effectively. Furthermore, a corporate commitment to provide job security will often be accompanied by greater willingness to invest in worker education and training, to the mutual benefit of workers and their employers.

A corporate commitment to job security can also remove traditional obstacles to substantial contributions by workers to the effectiveness of their employer's operations. When workers do not have to fear that tapping their ideas and input will cause the elimination of jobs, the potential for mutual benefits to workers and employers is great indeed. Employment security may not be a sufficient condition to unleash the contributions of workers to the efficiency of production, but it will often be a necessary condition.

Accordingly, some in the corporate world have recognized the importance of employment security.[3] Yet despite the fact that employment security is gaining growing recognition as an enlightened personnel practice, its implementation lags far behind. In the absence of a significant push from public policy or pressure from unions in collective bargaining or both, it is questionable how far most employers will be willing to travel down the road of providing employment security. Corporate management is accustomed to focusing on methods of cost reduction that center on the elimination of hourly labor—even if labor costs usually account for a modest fraction of total cost. The transition to viewing workers as a resource rather than as a cost to be minimized can be difficult.

Much the same can be said about the traditional fondness of so many U.S. managers for methods of managing that overlook the potential positive contribution of workers. Such methods include authoritarian management styles, top-heavy management structures, and Tayloristic methods of work organizations.

Employment security is also typically subordinated to the finance mentality that pervades and dominates corporate decision-making. Decisions to sell or close a plant or to outsource a component are often justified on the basis of short-term financial considerations which, on the surface at least, can be readily quantified; in such cases the resulting longer-term, harder-to-quantify erosion of worker loyalty and trust will often be ignored (Friedman, 1988).[4]

Consequences of Job Security: UAW Experience

The protection against layoff for almost any reason means that the companies where the UAW has negotiated job security programs now

[3] A good example of this recognition is provided in a recent paper of the Collective Bargaining Forum, a group of CEOs from major corporations and international union presidents. See U.S. Bureau of Labor Management Relations and Cooperative Programs (1988).

[4] Issues relating to the hidden costs of outsourcing are also discussed in Magaziner (undated); see also "The Hidden Costs of Outsourcing," *UAW Research Bulletin*, September 1987; McElroy (1988); Berg and Markides (1988); Quick, Finan and Associates (1987).

have a clear financial incentive to fully utilize their workforces on productive work, including those who would otherwise be laid off as a result of outsourcing, productivity improvements, and other actions. Doing "business as usual" has become increasingly expensive, while there is a real opportunity for management to seize on the positive elements of the job security program.

It is still too soon to determine all of the effects of the programs, but several trends are beginning to emerge. There are signs that companies are significantly cutting back their rates of outsourcing. Within the Big Three, GM has always operated with the highest rate of vertical integration, estimated as high as 72 percent. Before the 1987 contract with the UAW, it was reported that the company had the goal of building only half of its components in-house by 1992. According to a report in *Ward's Automotive Reports* (1988) the job security program changed that: "When GM's new president came in about a year ago he took a look at fixed costs and labor along with its new UAW contract and decided on an in-house strategy because to liquidate facilities and lay off workers under the contract would cost too much."

Statements of company officials, including those of GM's Vice-President for Industrial Relations Al Warren, further indicate that GM has halted its drive to buy more parts from outside suppliers. Contract commitments made to the UAW were cited as the reason.[5] Two examples of this shift are GM's Delco Moraine Division, which won a $100 million investment in braking systems, and a contract for truck axles which was shifted to GM's Saginaw Division.[6]

There is also evidence that the pace of automation is proceeding more moderately. That may be primarily the result of some of the companies' frustrations with earlier strategies, but it has doubtlessly been helped by union pressure through the job security provisions.

In the first wave of reaction to the auto crisis, some manufacturers saw automation on a massive scale as the answer to lagging U.S. productivity. Huge investments in expensive new equipment were launched; plant managers and engineers flocked to Japan to marvel at showcase, highly automated plants. However, in spite of its magnitude, the effort often fell short of yielding the rapid productivity growth it was intended to achieve. According to a 1987 article in

[5] "GM Parts Plan is No Change in Course, Stempel Says." *Detroit Free Press*, September 15, 1988, p. 5C.

[6] "GM Puts Curb on Outside Supplier." *Detroit Free Press*, September 11, 1988, p. IA.

Metalworking News: "Belief in high-technology-as-savior is fading. Some companies that turned to technology for help have come away disenchanted. Half of the flexible manufacturing systems (FMS) installed in U.S. manufacturing firms have been less than satisfactory, according to one report. Another . . . found 80% of people surveyed were dissatisfied with . . . their material requirements planning (MRP) systems."[7]

This expensive effort was directed primarily at casting off manpower. Commenting on the disappointing results of GM's $40 billion investment program, auto analyst Maryann Keller remarked: "The goal of all the technology push [at GM] has been to get rid of hourly workers. GM thought in terms of automation rather than replacing the current system with a better system."[8]

To the extent that job security programs discourage displacement of hourly labor, they force a shift in the focus of the effort to achieve a better system, from eliminating workers to involving them in the manufacturing process. Indeed, a careful look at the highly productive Japanese and Swedish manufacturing systems reveals that, although there are distinct differences between them, the way they are organized to make more effective use of workers by tapping their resourcefulness and experience is more important than advanced technology in achieving higher productivity and better quality.

The NUMMI Experience

The broad commitment to job security included in the UAW-NUMMI agreement has paved the way for a system of labor relations and manufacturing which makes NUMMI one of the most productive auto plants in the world, and has earned its products an excellent reputation in terms of quality.[9] During the recent changeover period to a new product and an earlier slowdown in production, NUMMI workers were kept on the payroll and participated in education programs and in activities designed to launch the planned new product under conditions that would maximize its quality.

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[7] Quoted in Peter Unterweger, "Let Workers Manage Automated Manufacturing." *Information Strategy: The Executive's Journal*, Fall 1988.

[8] "Auto Makers Discover Factory of the Future is Headache Just Now." *Wall Street Journal*, May 13, 1986, p. 1.

[9] The comparison of assembly plants undertaken by John Krafcik (1986) ranks the NUMMI plant first in productivity among all U.S. auto plants, and comparable to its sister plant in Japan. With respect to quality, the April 1988 issue of *Consumer Reports* includes the Chevrolet Nova produced by NUMMI in its "best-liked" list and gives it an excellent review. *Buying a Used Car Guide* also highlights the Nova among those cars deserving preference as a used car.

Training, Education, and "Bank" Workers

Training and education are critical, not only vis-à-vis the security of auto workers' current jobs, but also to enhance their options in the labor market. The job security programs provide a structure that facilitates training with minimum disruption in production. As explained earlier, a worker who would otherwise be displaced for reasons other than market conditions is placed in a "bank." According to explanatory language of the UAW-GM JOBS program: ". . . It is anticipated that a common type of jobs assignment for an employee in the Employee Development Bank would be to either replace an employee in the regular active workforce so that employee can be trained, or to train the Bank employee himself."[10] Occasionally an entire plant workforce needs to be trained for a new quality control or production system; the "bank" workers will then rotate among jobs until everybody in the workforce is trained. Given the mutual interest in quality improvement, training in quality control has been an extremely common assignment.

Nontraditional Jobs for "Bank" Workers

One fairly common type of assignment for a "bank" worker is a nontraditional job outside the bargaining unit helping detect quality problems. Some workers have been placed in auto dealerships, following up on consumer satisfaction with products and dealer service, investigating poor quality claims, and generally acting as a link between the plant and the consumer.

A "bank" worker may also be assigned to nontraditional work in the community. Typically, that involves a team of workers fixing up a public facility such as a park, baseball field, community building, driving a van for a "meals on wheels" service to shut-in people, etc. These tasks involve work that would not otherwise be done; moreover the union is mindful of not taking work traditionally done by other unions. Besides the intrinsic value of the job, these endeavors contribute to building good will between the community and the union.

Foreign Experience

Some of our most formidable industrial competitors internationally, in both Japan and Europe, have for many years provided a far

[10] *Job Opportunity Bank-Security Program*, General Motors Corporation and United Auto Workers, 1988, p. 5

higher degree of employment security to their workers than is customary in the United States. At the very least employment security commitments do not appear to have hampered their competitiveness; more likely, as is perhaps best illustrated by the example of Japan, a commitment to employment security has contributed to a level of corporate effectiveness that actually enhances competitiveness.

It has been contended that the ability of Japanese corporations to provide employment security is dependent upon continuation of strong economic growth, and that in view of the strength of Japan's economic growth the seriousness of the commitment to employment security has not really been put to the test. In reality, there is mounting evidence that employment security in Japan is not just a "fair weather" commitment.[11]

While Japan's system of employment security is generally viewed as a purely private-sector commitment, it is important to recognize that employment security depends in several crucial respects on appropriate, underlying public policies. Considerable subsidization of corporate diversification into traditional businesses can be provided, but that subsidization is available if and only if the corporation commits to provide in the process employment security for its workers and new jobs for dependent communities where its redundant facilities are located. The ability to identify promising new lines of business in which to invest also depends critically on Japan's renowned capability with respect to industrial policy and industrial planning.

Diffusion of Employment Security

The public policy environment in the U.S. contrasts sharply with that of Japan, as well as that of certain European countries that assure a high degree of employment security. Here, the "employment-at-will" doctrine is still the most widespread principle guiding management practices in unorganized workplaces. The U.S. government has failed to deliver full employment, or even a promise to pursue it as a high priority goal of economic policy. Despite the recent spread of negotiated job security programs among major employers in certain significant industries, the unfavorable U.S. public policy environment has made progress toward employment security much more difficult, and the overwhelming majority of American

[11] The current case of Nippon Steel is instructive in this regard. See "The Rhetoric and Reality of Lifetime Employment Opportunities in Japan . . ." (1988).

workers have limited employment security in any formal sense. Quite the contrary, the erosion of the nation's industrial base, the "hollowing out" of U.S. corporations as a result of offshore sourcing and investment, the tidal wave of mergers and acquisitions, and the post-deregulation restructuring of major industries including airlines and telecommunications—all due to a large extent to improper or inadequate government policies—have contributed to what undoubtedly has been a significant decline in employment security for many, if not most, American workers in recent years. Meanwhile, there has been tremendous growth in the so-called contingent workforce, as the numbers of temporary and part-time workers have increased sharply not only in absolute terms, but also as a proportion of total employment. In the labor market, these disturbing tendencies are manifested in the widening gulf between the shrinking number of workers who enjoy steady, secure, well-paid employment and the growing number who do not (Harrison and Bluestone, 1988; Mishel and Simon, 1988).

While such polarization understandably provides much of the impetus for worker and trade union demands for greater employment security, it must also be asked whether greater employment security for some workers is obtained at the expense of greater employment *insecurity* for others. If employers are compelled to provide security to one group of workers, is increased use of temporary, part-time, and other nonprotected contingent workers an inevitable consequence?

While the concern is a serious one, we believe the answer is no. Even apart from the possibility that the macro economic policy environment could be geared toward full employment, there is the option of doing training or deferred maintenance during slack periods rather than relying on contingent workers to carry the burden of fluctuation in output. It is certainly correct that in the absence of such arrangements there may be an unfortunate connection between employment security and contingent work, but that connection is not inevitable.

Whither Employment Security?

The UAW has traditionally followed the building-block approach in collective bargaining. The current job security programs negotiated in the auto industry and elsewhere are no exception. They represent the latest step in a march that has advanced gradually for the past three decades, starting with the negotiation of Supplemental Unemployment Benefit funds. Judging from the continuing concern of UAW members and its leadership about employment security, that march will continue. There are good reasons to expect renewed demands for reduced worktime as well, and particularly for an end to the abuse of overtime hours at a number of companies.

One key unknown is the extent to which employers will actually commit to employment security, not only as a collective bargaining obligation but as a sound element of corporate policy. Put differently, will employers move beyond the letter of collectively bargained commitments to job security and embrace the spirit of these commitments as well? The continuing prevalence of short-term corporate thinking and narrow finance-driven decision-making fosters concern in this regard.[12]

From the union's viewpoint, successful implementation of the job security program is a crucial test of management's commitment to improved relations with its hourly workforce. If employers approach collectively bargained job security simply as another constraint on their business, then they will squander a tremendous opportunity to convert employment security into a long-term business advantage. A short-term view will lead employers to respond to employment security commitments with increased use of overtime, contingent workers, and curbs on new hiring. A long-term view will require employers to consider employment security and planning for employment security as high priority corporate commitments. It will require employers to find ways to fully utilize their workforce, and to view that workforce, including workers hired in the future, as a valuable resource rather than as a cost to be minimized.

The foreign experience demonstrates convincingly that employment security commitments can be turned to employers' long-term advantage. It would be a tragedy if corporate America misses that opportunity. Corporate choices in this regard are of sufficient public importance that there is a clear role for public policy to encourage the diffusion of employment security, reinforcing and supporting the efforts of unions in collective bargaining.

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[12] Such concerns are raised, for example, by the following remarks of George Eads, Chief Economist of General Motors Corporation: "I know that at GM, the operating principle since we signed our new contract with the UAW is do not hire additional hourly workers. . . . But I can assure you that . . . there are still circumstances where hiring is desirable. The increased hiring cost represented by our new contract with the UAW has made it less likely that this hiring will occur." (*Proceedings* of the 40th Annual Meeting, Industrial Relations Research Association, December 1987, p. 69.) While the job security provisions represent a potential addition to the cost of a new hire, it would be unfortunate if U.S. management fails to perceive job security as an opportunity as so many of their successful foreign competitors have.

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Public Policy and Employment Security

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At a visceral level, the phrase "employment security" is likely to elicit unqualified enthusiasm, particularly in an employee whose job is under discussion. To that employee, the phrase probably connotes a strong concept of security: protection against losing one's current job. Competing for public policy emphasis against this strong meaning of employment security are the economic aims of flexibility and dynamism. The value of change can be stated fairly neutrally: "The U.S. economy is in a constant state of change. Its dynamic nature permits old goods and services and old production techniques to be replaced by new goods and services and new production techniques" (Secretary of Labor's Task Force, 1986). Or it can be stated provocatively: "Capitalism, then, is by nature a form or method of economic change and not only never is but never can be stationary. . . . This process of Creative Destruction is the essential fact about capitalism" (Schumpeter, 1950).

In one sense, then, the personal norm of security is set in opposition to the economic norms of change, flexibility, and even destruction. Yet, under certain conditions, these norms may be complementary, mutually reinforcing, or even mutually dependent. Moreover, the "strong" norm of job security in fact combines three distinct elements, various combinations of which are promoted by particular public policies. The first element is *income maintenance*. The second is an *economic station in society*, which is a clumsy way of saying someone has a job. I use this awkward diction only to emphasize the nonmonetary values we associate with work (self-respect, realization

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of one's work potential, contribution to society, etc.). The third element is *retention of a particular job*. Though logically a subset of access to an economic station, the policies associated with this goal may be quite distinct. It adds a sense of geographic and social continuity to the values associated with work in general. Note, however, that retention of one's job need not include full income maintenance, as under alternative compensation schemes that exchange relatively greater job security for relatively greater wage *in*security.

Out of the clashes and connections between the personal security and economic growth norms emerge specific public and private policies for employment security. In this paper I will review recent public initiatives, in an attempt to sketch out and evaluate the particular form of employment security to which these policies aspire.

Recent Public Policy Initiatives

The domestic agenda of the 100th Congress (1987-1988) was dominated by the twin deficits—budget and trade. The size and duration of the budget deficit meant that relatively little "new" money was appropriated. The size and duration of the trade deficit were widely understood within Congress not just as a result of bad macroeconomic policy, but also as a symptom of reduced American competitiveness in international markets. Concern over the twin deficits produced the Omnibus Trade and Competitiveness Act of 1988, which bundled trade, technology, education, intellectual property, and various regulatory provisions into one large package that authorized relatively little new spending.

The trade bill emphasized change and adjustment for American workers. The first version sent to the President, and vetoed by him, included three of the four most notable employment security measures enacted during this Congress—a major overhaul of the Trade Adjustment Assistance program (TAA), a complete reworking of the dislocated worker provisions of the Job Training Partnership Act (JTPA), and a requirement that employers give workers at least 60 days notice in advance of plant closings and mass layoffs. After the plant closing provision was removed, the trade bill was passed again and signed by the President. The plant closing provision was introduced as a free-standing measure, passed with greater than a two-thirds majority in both houses, and sent to the President, who allowed it to become law without his signature.

The TAA and JTPA initiatives were built on the assumption that permanent dislocation of experienced workers had become a significant problem which would continue more or less indefinitely. In a comprehensive study, the Office of Technology Assessment had concluded that the nation's labor market institutions were not prepared to assist effectively the 11 million workers who had permanently lost their jobs in the preceding five years (Office of Technology Assessment, 1986). A task force assembled by the Secretary of Labor linked the problems of American competitiveness and worker dislocation. The Task Force suggested that the pace of change from international market developments might well be accelerating, and proposed a series of improvements in public and private assistance to dislocated workers (Secretary of Labor's Task Force, 1986). Both studies foreshadowed the now common policy assumption that American competitiveness depends on more effective training policies for workers before they enter the workforce, while they are in it, and after they lose a particular job (Hudson Institute, 1987).

The emphasis in both these new programs is on facilitating the mobility of dislocated workers to new jobs—helping them find a new economic station rather than helping them keep their present jobs. Each emphasizes training for new careers. The new Title III of JTPA requires each state to establish "rapid response teams" to provide on-site adjustment assistance at the sites of major closings and layoffs. It further requires the designation of substate grantees to deliver counseling, job search, and training services throughout each state.

For all the publicity attending the plant closing provision, and for all the claims by business lobbyists that the provision would work dire consequences, this law is in fact quite consistent with the emphasis on finding new jobs. The law simply requires 60 days' or more notice before a closing or layoff that will result in job loss for specified numbers of people. By and large, an employer with at least 100 total employees must give notice before closing a facility with at least 50 or more employees. An employer generally must give notice if it will lay off one third or more of its workforce, so long as at least 50 people are affected. (If 500 people are laid off, notice must be given regardless of whether those laid off comprise one third of the workforce.) The stated justification of the law is twofold: (a) simple fairness to the employees and (b) facilitation of adjustment by those employees to new jobs, with incidental savings for government transfer payment programs. Although the original version of the legislation introduced in February 1987 contained requirements that employers share certain financial information and consult with employees before proceeding with closings or layoffs, these provisions were dropped before the bill was considered on either the House or Senate floor. What remains is a modest measure to allow increased time for finding a new economic station.

Income maintenance for those not at work has not been significantly broadened in the last few years. The details of the TAA and JTPA revisions reflect a public policy that increasingly restricts the income maintenance granted unemployed workers. Under the old TAA program, weekly cash benefits were in theory available to any trade-displaced worker, a feature which critics thought discouraged job search (Lawrence, 1984). While the new TAA program grants a training entitlement for trade-displaced workers, it has presumptively restricted weekly cash benefits to workers who have entered formal training programs. The new dislocated worker provisions of JTPA contain a similar requirement, in addition to a ceiling on the proportion of JTPA funds that may be spent on income maintenance and supportive services such as child care.

The emphasis on facilitating access to an economic station was mirrored in the welfare reform legislation signed into law by the President in October. Under the new law, every state is required to establish a Job Opportunities and Basic Skills program to provide welfare recipients with training and other assistance in obtaining jobs. At the same time the law creates certain "workfare" requirements for continued receipt of aid. These requirements have little to do with helping the recipient achieve an economic station in the marketplace, but are instead an expression of a social judgment that able-bodied people should not be able to collect public assistance while they are neither caring for children nor working.

It is also worth noting that the nation's unemployment insurance (UI) system now provides benefits to a smaller proportion of the unemployed than at any time since its establishment in 1935. By the end of 1987, the jobless beneficiary rate had fallen to 32 percent, meaning that fewer than one in three unemployed people was actually receiving any form of UI (Congressional Research Service, 1988). Whatever the cause of this trend—increases in the average duration of unemployment, fiscal constraints, or federal action designed to tighten eligibility—the result is the clearest symbol that employment security policy in the United States increasingly emphasizes worker mobility to new jobs and increasingly withholds income maintenance from those not occupying an economic station in society. Although efforts to increase the minimum wage for the first time in the 1980s failed in the waning days of the 100th Congress, even this controversial step would have increased income maintenance only for those already at work.

The one significant initiative during the 100th Congress specifically intended to increase security in a particular job was the Parental and Medical Leave Act, which succumbed to a filibuster late in the year. This bill, which is certain to be reintroduced in the 101st Congress, provided that an employer must permit an employee up to ten weeks of unpaid leave upon the birth, adoption, or serious illness of a child, or in case of the employee's own ill health. At the end of this period, the employee must be restored to the same job held before the leave, or to an equivalent position. The proposal was described by its sponsor as a step in the "long tradition of consensus labor standards which take broad societal concerns out of the competitive process by establishing a minimum national standard and a level playing field on which all businesses and states can play" (Dodd, 1988). Thus, like minimum wage and antidiscrimination laws, the family and medical leave initiative would add an implicit term to each worker's employment contract, written or unwritten.

One could similarly characterize judicial changes in the employment-at-will doctrine. In 46 states there are at least some exceptions to the doctrine that an employer may dismiss an employee at any time for any reason, unless there is a contractual term that states otherwise. In some cases judges have found in the written or oral statements of employers a promise of good faith and fair dealing in continuing the employment relationship. In other cases, notably where employees have been dismissed after reporting environmental or safety violations by their employers, judges have carved out public policy exceptions to the presumption. In still other cases judges have read into the employment contract an implicit promise of good faith and fair dealing even where there were no employer statements from which such a promise could reasonably have been inferred.

A number of commentators have, after examining these judicial tendencies, proclaimed the decline or even death of the employment-at-will doctrine (Leonard, 1988; Linzer, 1986). The number of lawsuits alleging wrongful discharge has increased dramatically in recent years, and plaintiffs are winning. State legislatures are now considering action to establish more predictable principles in the area. In 1987 Montana enacted a statute providing that an employee could be dismissed only for just cause. Wrongful discharge acts have been introduced in the legislatures of several large states, including

California, Illinois, and Michigan. And, in a development indicating that the wrongful discharge problem has truly come of legal age, the National Conference of Commissioners on Uniform State Laws has published a draft of a suggested Employment Termination Act, providing that employees cannot be discharged without just cause if they have been employed at least a year.

Both the Parental and Medical Leave bill and the incursions on the employment-at-will doctrine advance the norm that employees should not be subject to arbitrary treatment at the hands of their employers: You shouldn't lose your job because you want to take a couple of months off to care for your new baby. You shouldn't lose your job because a supervisor doesn't like your looks or your politics. While protection against arbitrary treatment of this sort is a component of employment security in the "strong" sense, it hardly establishes security in one's present job. Public policy in the United States is not generally directed towards the prevention of employment loss due to technological or economic developments.

Implications, Prescriptions, and Obstacles

The current public policy emphasis upon worker skills and mobility is a response to several developments: the continued integration of national markets into global markets, the relative decline of Taylorist work organization, the shortcomings of our public education system. There is widespread agreement—sometimes tacit and sometimes spoken—that American social and economic institutions are not adequate to ensure sustained and shared prosperity in the new economy. This argument has produced the laudable efforts to help workers dislocated by economic change to find satisfactory jobs elsewhere. It has also prompted renewed attention to programs for getting people on the margins of the economy into the workforce.

Yet the picture of the labor market that emerges from these initiatives is at best incomplete, and at worst rather dispiriting: People must acquire sound basic skills because they will be subject to a half dozen or more involuntary dislocations during their working lives. After these dislocations, they will be individually processed through a program that assesses their abilities, offers slots in retraining programs, and provides them information about job openings. Pressure to get a new job quickly exists because income maintenance in the form of UI or TAA is restricted or simply unavailable. The admittedly over-simplified picture is one in which the government greases the paths between jobs, but does little to strengthen the ties between employees on the one hand and employers or industries on the other. There are both social and economic reasons for public policy to support the retention of jobs by employees.

As a social matter, all the employment counseling and retraining programs imaginable cannot obscure the fact that involuntary job termination is a traumatic experience. Moreover, the impact of employment dislocation is likely magnified as the relative social roles of family, neighborhood, and ethnic group decline. Indeed, the diminishing significance of these institutions has a double effect—it both removes a set of social buffers against market disruptions and increases the importance of the workplace as a source of social identity.

As to economics, recent legislative and administrative initiatives have little relevance to the fact and potential of internal labor markets. Yet the stability and employment security within firms can have positive economic effects (Osterman, 1988). In fact, it is hard to imagine how, under current circumstances, productivity will be increased without some mutual commitment between workers and firms. It is unlikely that sophisticated production techniques will be achieved without workers who have received industry- or firm-specific training and who have learned from experiences in that industry or firm. Cultivating such workers requires time, investment, and commitment. By concentrating its efforts disproportionately on "greasing" programs, the government could perhaps be encouraging a model of employment policy that depends primarily on cost-cutting and employment reduction as a route to competitiveness, to the detriment of a model that relies significantly on investment in workers as a different route to competitiveness.

Seen from this perspective, the parental leave and wrongful discharge proposals are more than attempts to add nonwaivable terms to the employment contracts of all American workers. They are a very mild form of status right, reflecting the enhanced social and economic importance of one's status as an employee in a particular firm (Selznick, 1969). At the present time, a public policy for employment security that is worthy of a democracy and appropriate for a sophisticated technological age should do more to build upon the importance of institutional affiliation in economic life. The programmatic implications of this recognition are several.

First, policies designed to facilitate worker mobility among firms should be complemented with policies to promote the stability of employment within firms. Flexibility, after all, may be achieved by reallocating workers within firms as well as by moving resources to different firms. While guarantees of lifetime employment will remain the exception, greater commitments to workers by many firms are surely possible. In other words, the proclivity of a firm to lay off workers in the face of adverse market conditions can be somewhat reduced. One new policy toward this end would be the creative use of training monies to help leverage job upgrading within firms. Moreover, in some industries there may be ways to provide workers with greater employment security within industries, even if there cannot be more security within individual firms.

Second, the policies that do build upon an expectation of more rapid resource shifts among firms and industries should nurture links among firms, trade associations, unions, professional associations, and educational entities. Programs are important, but the labor market will operate best if there are self-sustaining institutions that provide systems of training, placement, and mobility. Such institutions will assure relevant expertise and responsiveness to market signals. They will also help internalize the costs and benefits of these services by providing a mechanism for reducing the free-rider concerns of firms that train workers who may then leave for higher-paying jobs in a similar firm. Thus, in general, the government's contribution should be limited to start-up funds and technical advice. These institutional links may also provide a mediating social institution with which individuals can identify throughout a significant part of their working lives.

Third, there must be policies to assure that worker interests are protected, both within the firm and in any new labor market institution. Particularly in hard times, the tendency among some firms and business groups will be to shift the burdens of dislocation and adjustment upon workers to as great a degree as possible. This tactic may be adopted in response to short-term cost pressures, even where it seems to harm longer-term social and economic interests. Whether through individual rights, collective rights, or some form of assured participation, public policy must act on behalf of working citizens.

In short, government must adopt a more entrepreneurial role in the labor market. Unfortunately, there are substantial political and practical obstacles to realizing this role. Politically, a Republican administration may find both this level of government activism and the extension of rights to workers ideologically unacceptable. Congress cannot effectively legislate a requirement of creativity and experimentation, and it can only occasionally muster the two-thirds majority necessary to override a veto. Practically, there are several administrative hurdles to a more activist role. It requires a familiarity with internal, industry, and regional labor markets that does not exist within the federal government. Moreover, after eight years of the Reagan administration, the Labor Department does not have much of a reservoir of institutional competence and experience in pursuing an active labor market policy. Finally, there is need for new methods of monitoring federal expenditures—whether for job training programs or institution building—to ensure that federal money is not wasted or substituted for private money, while not handcuffing the recipients of that money with bureaucratic requirements.

There is plenty of work to be done—intellectual and practical—if we are to develop labor market policies that encourage more commitment between workers and firms or industries. As I have tried briefly to suggest, this goal is important for social, political, and economic reasons. Whether, in the next four years, we stride forthrightly towards that goal remains to be seen.

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DISCUSSION

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Employment security is one of those concepts that sounds good until it has to be utilized. When workers feel the need for employment security, the circumstances are such that it is most difficult for an employer to provide this kind of assurance. The reverse is also true—during most of the 1950s, 1960s, and even into the 1970s not much attention was given to the subject, precisely because the economy was growing and involuntary separation on any kind of large scale was not present.

Another way to make the point is that employment security always presents a difficult tradeoff between the need or desirability for realizing this objective and the feasibility or practicality of providing it. The two papers that discuss the concept of employment security at the firm level, those by Friedman/Fischer and Foulkes attest to the premise that it is possible for the parties to handle this tradeoff in a creative fashion.

Let me first comment on the unionized sector that has been well analyzed by Friedman/Fischer. Touching first on the desirability side of employment security, it is clear that today workers place a very high priority on this goal. Also, companies realize that without some provision governing employment security it will be difficult to achieve the restructuring that is essential for dealing with competitive pressures.

Turning to the feasibility side, in many situations today it is possible to provide employment security because the workforce has been reduced to the point where any large additional reductions would be unlikely and hence a platform has developed for the provision of employment security.

With respect to the creative contributions of the parties in the unionized sector, let me offer several perspectives. As Friedman and Fischer note, when a firm commits to employment security it is

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committing to the career enhancement of its workforce. This means that there will be much more training and much more preparation of workers for new technologies and organizational arrangements. The outlook becomes much longer term, close to what we associate with the Japanese approach to workforce management. Osterman (1988) has used the concept of the salary system in his book on *Employment Futures* as another way to capture the essence of a system that is looking at the human resource as a key attribute of the firm over a long-term period.

The second point is that in many of the unionized firms employment security plays a key role in the evaluation of a new system of industrial relations that is characterized by flexible work systems, mutual commitment, and other practices that are associated with high performance systems. A distinctive attribute is increased access by unions to business decisions, especially those that affect the ability of the firm to deliver employment security over the long run. Thus, decisions to outsource, decisions regarding new products and new plants take on increased saliency once employment security is embraced as a mutual goal.

Turning to the Foulkes paper, we see here an enumeration of the many positive practices that large nonunion firms use to deliver employment security. Looking at the story from the desirability side I can attest (based on my own research [Greenhalgh, McKersie, and Gilkey, 1986]) to the benefits that accrue to a firm when it is in a position to offer employment security. In examining how IBM redeployed approximately 1000 workers at its plant in Burlington, Vermont, I was amazed at the willingness of substantial numbers of the workforce to respond to the company's statement that it had the need to rebalance the workforce, specifically, to take transfer to the West Coast and to shift from indirect work to direct work in manufacturing.

As Foulkes (1979) has demonstrated through his research over the past several decades, a number of large firms have used employment security as a cornerstone for their positive personnel program. What I find especially significant is the point of view that Foulkes takes toward the end of his paper about the costs that are inherent in a comprehensive program of employment security. In fact, one of the last sentences of the Foulkes paper states that ". . . the direct and indirect costs of the full-employment policies and practices are certainly substantial." A number of large companies that have historically followed a practice of employment security are working very hard today to deliver employment security in the face of substantial restructuring—but at the same time these firms are transmitting a message to their workforce that employment security is not something that can be guaranteed; rather, it must be grounded on the viability of the business.

In a very real sense we can observe convergence between the practices of nonunion and union firms. Most of the employment security programs that have been prominent over the past three or four decades occurred in large nonunion firms. In fact, Foulkes (1979) devotes a full chapter in his classic book to understanding this key component. However, recently a number of firms have had to abandon employment security—what Foulkes terms "fallen angels." On the other side of the ledger, historically unionized firms have never addressed employment security directly—the mechanism for the management of the internal workforce was layoff followed by recall (usually all of the workers). However, over the past decade more and more unionized firms have made employment security a very explicit objective. Given these opposite trends, large firms that practice employment security cannot be distinguished by their nonunion or union status.

In light of this convergence, a number of key principles have emerged with respect to employment security.

1. Workers should not be hurt by decisions that an employer can control. This is where the UAW has pioneered with its contracts in the automobile industry. Essentially the job bank and employment level concepts mean that workers will not be laid off when a firm chooses to subcontract, to bring in new technology, or to initiate other changes in the operation of the business that affect employment levels. Of course no company can guarantee against a drop in demand or a loss of market share, but it can phase in changes that it controls.

2. Workers who are at risk should be given an opportunity to influence strategic decisions of the business. The best example I have here is what has developed between Xerox and the Amalgamated Clothing and Textile Workers Union. Before work is moved out of a department, the workers in that department are given a chance to study the situation and make proposals with a view that the work can be retained at home (see Cutcher-Gershenfeld, 1988).

3. If workers are to be displaced, the ultimate test must be one of fairness. I chaired the New York State Continuity of Employment Committee and we developed the principle of the "reasonable alternative." A worker before being involuntarily laid off would be

offered an alternative to remain with the state (Greenhalgh and McKersie, 1984).

4. Finally, before a worker is laid off, a firm should accept some responsibility for helping the worker return in a state of readiness. This may mean training, counseling, and financial benefits to tide the worker over the transition period.

Turning now to the labor market level, and this brings me to the excellent paper by Dan Turillo, we can start with the useful definition of employment security that has been offered by Mac Lovell: "An economic state wherein an individual worker is able to have continuity of work opportunity throughout the career that he wishes to be employed."[1]

Some comments are in order about the four major segments of the labor market for which the attainment of employment security is a very challenging task. Considerable attention has been focused on *new entrants* and the inadequacy of our educational system to prepare young people for the requirements of employment in today's society. We know that programs like Head Start make a difference and a number of business groups, such as CED, have committed themselves to helping with the improvement of the quality of elementary education. A special challenge is how to facilitate the transition from school to work when most of the job openings are in the service sector and in small firms. We do not know yet how to put together the institutions that will help with the required programs of remediation and adjustment to employment.

A second target group has been called the *disadvantaged* workers, individuals who have never broken into the mainstream and remain at the periphery of the labor market. It is clear that the Job Corps works, but at a price tag of $15,000 per placement the resources are not available to deal with the millions of individuals who fall into this category. Reports also suggest that JTPA is only serving a small fraction of the workers who are truly disadvantaged.

The largest segment of all is the *current workforce* that needs to be upgraded to cope with new technology and new work systems. The private sector spends approximately $40 billion a year on training, and we know very little about what works and what does not work.

The final category has received considerable attention over the past decade, the *displaced*, approximately 2 million workers per year.

[1] Presented at the International Industrial Relations Conference, Quebec, Canada, August 1988.

Taken together, the Trade Act and JTPA provide about $1 billion for helping workers who are the casualties of restructuring.

Clearly, many challenges and unanswered questions exist, and we do not have a clear way of putting all of the pieces together. Let me offer several perspectives.

First, we have been living in a world of sustained job growth and it has been possible for most workers to find employment of some sort. If we should experience some type of severe recession, then the task of achieving employment security will become even more challenging.

Second, the implied social contract between firms and workers, especially those with long service, is being rewritten in light of changing economic circumstances. The fact that firms are offering early retirement incentives and a variety of inducements to thin out the number of long-service workers means that the basic notion of career employment and, indeed, employment security is changing in very fundamental ways.

Third, in any policy prescriptions concerning the operation of the labor market we need to be alert that those on the inside of the system are not being protected at the expense of those on the outside, the new entrants and the disadvantaged.

Finally, we need to learn much more about what works. In her presidential address, Phyllis Wallace has proposed the creation by the IRRA of a research center for understanding and disseminating knowledge about the important subject of training. The federal government is in an ideal position to involve itself with the sponsorship of an independent center. The Bureau of Labor Management Cooperation has pioneered in the dissemination of information about what is working with respect to new patterns of labor-management relations. Similarly, the Employment and Training Administration of DOL could spearhead a similar program of research and dissemination of information with respect to what works in achieving employment security at both the firm and labor market levels.

A question that needs to be asked is whether public policy should mandate some form of employment security. This suggestion has been advanced in the paper by Friedman and Fischer. It is true that firms in the United States tend to be preoccupied with short-run considerations. And we have seen in cases where unions have negotiated employment security and where nonunion firms have embraced the concept as part of comprehensive personnel policies that good things happen and the orientation of the firm becomes much longer run. But can employment security be legislated? I do not think so. Certainly, smaller steps can be taken such as recently has happened with respect to notice and the provision of information and the financing of training by the government.

Dan Turillo has advanced the concept of government in an entrepreneurial role and I fully subscribe to this creative function for government in making the labor market work more effectively and providing the right incentives for individual firms.

The subject of employment security continues to unfold and is becoming increasingly important with the current focus on the feasibility side of how to deliver it via training and the help of labor market institutions. The business community is clearly engaged. The plethora of studies over the past year attests to the awareness that has developed on the part of the business community to the importance of making it possible for all members of the workforce to enjoy continued employment and earnings. And unions are becoming more and more involved, especially at the firm level.

Clearly, the agenda for the future is to develop the partnerships of government, business, and labor with the spirit of innovation and entrepreneurship that members of this panel have called for so eloquently.

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XVII. DEVELOPMENTS IN INDUSTRIAL RELATIONS GRADUATE CURRICULA*

Is There a Pattern? A Report on a Survey of Graduate IR Curricula

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Even in a field long known for a certain fuzziness in its objectives (Heneman, 1958), it is worthy of note that, after more than 40 years of having formal programs of study, we are still asking whether they are characterized by a curricular pattern. This paper reports the results of a survey of master's degree curricula that attempts to answer this question.

IR Curricula—An Enduring Issue

In 1958, a little over a decade after the establishment of the first wave of formal academic graduate programs in industrial relations, the IRRA held a session on curricula in industrial relations. A survey by William G. Caples found 12 schools offering programs at the master's level (Caples, 1958). He reported that core concentrations appeared—personnel management, labor-management relations, and wage administration. Some schools emphasized labor relations and excluded personnel management, while others did the opposite. He concluded

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that "there is probably a consensus of sorts concerning the main topical areas in industrial relations, but little agreement as to the dimensions and borders of the constituent fields" (Caples, 1958, p. 225). He further found that 67 percent of the master's programs required a thesis, 17 percent required a foreign language, 75 percent required statistics, and 33 percent required a "tool subject," usually accounting.

Over the years since 1958 the numerous writings on the subject of IR curricula and the training of IR professionals have included several papers presented at IRRA meetings. A theme running through them is the tension between labor relations/collective bargaining and personnel/human resources emphases, and the related debate over "technical" versus "academic" orientation of the master's program (Sexton, 1975; Begin, 1987).

Present day brochures and other documents of the IR/HR master's programs describe the purposes of graduate education in this field in a variety of ways. They do, however, reflect the historic theme of tension between the academic and the technical, or professional. Brochures may speak of "the problems of labor in an industrial society" (Wisconsin), "employment relationships in an industrial economy" (Saint Francis College), or "policies and techniques for improving the effectiveness of human beings in their productive roles and for increasing the satisfaction that workers derive from those roles" (Ohio State). On the other hand, we find statements such as, "Students . . . acquire knowledge and learn skills which will prepare them for human resource management and labor relations careers" (Cincinnati), "preparing human resources professionals for both business and government agencies" (Rutgers), and "leads to careers in management, trade unions, and government" (Illinois). Many programs include both themes in their materials.

The UCIRHRP Survey

During the summer and fall of 1988, 45 members of the University Council of Industrial Relations and Human Resources Programs (UCIRHRP) were surveyed as to their curricula for master's degree programs. Responses were received from 36 such degree programs. This represents virtually the entire population of these programs in the United States, lacking at most two or three programs. The respondents included 26 IR or HR master's programs in the United States, four programs (both IR/HR and MBA) in Canada, and one in Australia. Responses were received from four MBA programs (including the non-US ones) and two Labor Studies.

Program Name

As to program name, the most common were Industrial Relations (28 percent) and Industrial and Labor Relations (25 percent), (N=36). The terms most commonly used in program names, which were often complex, were Industrial Relations (69 percent), Labor (36 percent), and Human Resources (28 percent). When asked what name they preferred, 58 percent of the respondents either said they preferred their present name or left the question blank. Of those who expressed a preference for a name other than the one they had, there was a wide variety of responses. The most common of these were Human Resources Management (N=7), Labor Relations (N=5), Employment Relations (N=3), and Industrial Relations (N=3). Perhaps the most interesting were Employment Science and Human Systems Support.

Required Courses

At the heart of our inquiry is the set of courses required by the various master's programs. One might argue that, whatever our discussions about the theoretical composition of the field, the empirical answer to the field's core and its boundaries lies in what we require of our graduate students in these flagship programs. The main findings in this regard are set out in Table 1.

The set of substantive courses most often required should come as no surprise. The heavy emphasis on Labor Relations/Collective Bargaining, Human Resources Management/Personnel, and Labor Economics/Markets is apparent when one looks either at all programs, or just the U.S. IR/HR programs. There does appear to be a reasonably consistent overall pattern for IR/HR programs, with very substantial areas of commonality among the programs.

When one compares IR programs and HR programs, at least as they have been classified by name for the purpose of this study, we do find that there is something in a name. We find dramatic differences between IR and HR programs in several areas. HRM/Personnel is required in 100 percent of the HR programs, and only 63 percent of the IR programs (two of the IR programs, however, require *either* HRM/Personnel or Organizational Behavior). Labor or Employment Law is required in 70 percent of the HR programs and only 44 percent of the IR programs. In the opposite direction, IR Systems/Theory is required in 50 percent of the IR programs as compared to only 20 percent of the HR programs. In addition, general business courses are required in only 6 percent of the IR programs, but in 60 percent of the

TABLE 1
Percentage of Master's Degree Programs in Industrial Relations/Human Resources Requiring Selected Courses[a]

Course	All Programs	US Programs		
		Overall[b]	IR[c]	HR[d]
Labor Relations/Collective Bargaining	75	92	88	100
Organizational Behavior	47	58	56	60
Human Resource Management/ Personnel	72	77	63	100
Labor Economics/Markets	58	77	75	80
IR Systems/Theory	39	38	50	20
Labor or Employment Law	47	54	44	70
General Business	31	27	6	60
Number of Programs	36	26	16	10

[a] Courses selected are the substantive courses most frequently required, N > 10.

[b] Does not include MBA or Labor Studies Programs.

[c] Programs without terms Personnel, Human Resources, or Employment Relations in title.

[d] Programs with term Personnel, Human Resources or Employment Relations in title.

HR programs. These results suggest that the IR programs may be both less "professional" than the HR programs, and also less concerned with the subject matter of HR. As one would expect, the MBA programs (not shown separately in Table 1) are more similar to the HR programs, while Labor Studies programs (also not shown separately) are more similar to the IR programs, although both are distinctive in their own rights.

In addition to looking at requirements of individual courses, it is also interesting to see if there are recurring patterns of combinations of required courses. The only combination occurring as much as 50 percent of the time among U.S. IR programs is a *two* course one of Labor Relations/Collective Bargaining and HRM/Personnel. Among the HR programs, this combination occurs 100 percent of the time, while 60 percent of the programs require both HRM/Personnel and business courses, and 80 percent require both Labor Relations/ Collective Bargaining and Labor Economics/Markets. Sixty percent of HR programs require *three* common courses—Labor Relations/

Collective Bargaining, Organizational Behavior, and HRM/Personnel. Fifty percent of HR programs require *four* courses—Labor Relations/ Collective Bargaining, Organizational Behavior, HRM/Personnel, and Labor Economics/Markets.

Looking across all 36 programs, other courses frequently required are skills courses in statistics (75 percent), research methods (58 percent), and computer skills (44 percent). In addition, many programs (25 percent) require micro economics, and a lesser number require macro economics or introductory economics, although these are usually required as a prerequisite. Several programs require Labor History (19 percent) and Dispute Settlement/Arbitration (17 percent).

Electives

A variety of electives is available in these programs. Dispute Settlement/Arbitration is either required or available as an elective in 75 percent of the programs, Compensation in 58 percent, International and Comparative Labor in 45 percent, Staffing, Training and Development in 42 percent, and Employee Benefits in 31 percent. Public Employee Collective Bargaining/Personnel is an elective in 36 percent of the programs.

Other Program Characteristics

Several program characteristics other than course requirements were inquired about. These have to do with program length, the existence of special courses for the program, and special requirements for the degree.

Program length is difficult to summarize. For those programs that are on the semester system, the average length is about four (3.9) semesters. Programs on the quarter system vary in length from 5 to 12 quarters. For both semester and quarter system programs there are prerequisite and internship requirements that make it nearly impossible to accurately gauge their real length. Special courses developed expressly for the program exist in 92 percent of the cases. Only one program requires work experience for admission.

The requirement of a thesis has become rather rare. Only 22 percent of the programs require a thesis, although it is an option in 47 percent of the programs and a thesis alternative exists in 58 percent. This compares to the 1958 survey that showed that 67 percent required a thesis. A comprehensive examination is required in only 25 percent of the programs. These data would seem to reflect an increasing professionalization of the degree.

One of the most frequently found observations in the literature on this subject is the need for a "real world" aspect to education in IR/HR. This appears to have been responded to by the master's program through the availability of internships. Internships are provided for in 86 percent of the programs, although only 8 percent require them. In 25 percent of the programs students are paid while on internship.

Conclusions

There is a pattern in IR/HR curricula. There are also sub-patterns. The principal pattern consists of a body of courses reflecting agreement on what Caples called the "main topical areas" of the field. Substantive courses covering the main *theoretical* bases of the field, organizational behavior and labor economics, are quite widely required. The chief areas of *practical* activity are commonly covered by courses in labor relations/collective bargaining, human resources/personnel, and law. Statistics, research methods, and computer skills also are a part of this agreed-upon pattern. So is the provision of electives in dispute settlement/arbitration, compensation, staffing, benefits, public employee collective bargaining/personnel, and international and comparative labor.

The sub-patterns are also quite interesting. Although it is apparent from the 1958 survey that it is nothing new to have some programs emphasize labor relations at the expense of human resources/personnel and vice versa, it is worth noting that there is, 30 years later, something of a distinctive pattern in this regard. Using a rough classification based upon program name, we find that what have been labeled IR programs are considerably less likely to require HRM/Personnel, Labor/Employment Law, and General Business courses, and more likely to require IR Systems/Theory. This reflects a tendency of these programs to require more theory and less education in practical areas. It also reflects the strong tendency of HR programs to require HR.

Both the commonalities and the differences are instructive. They show that as a field of instruction at the master's level we appear to be a single endeavor, but one with two aspects.

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Industrial Relations Programs in Economics Departments: The University of Cincinnati

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In addition to the traditional degrees of BA, MA, and PhD in Economics, the Department of Economics at the University of Cincinnati offers an MA degree in Labor and Employment Relations (LER). In offering an Industrial Relations (IR) degree through its economics department, the University of Cincinnati is unusual and perhaps unique.[1] Of the 53 members of the UCIRHRP in late 1988 the only other economics department represented is that of Princeton University, through its Industrial Relations Section (1988 UCIRHRP Membership Roster). But Princeton's Industrial Relations Section offers no separate IR degree.

It is likely that UCIRHRP members account for the large majority of IR graduate programs in the United States. Referring to master's degree programs offered by UCIRHRP members which were surveyed during 1988, Wheeler (1989) states that these represent ". . . virtually the entire population of these programs in the United States, lacking at most two or three programs." The rarity of graduate IR degree programs in economics departments was also indicated by conversations with colleagues at the University of Cincinnati and other schools which yielded no other examples. Thus, the discussion of graduate IR programs in departments of economics may refer to a population of one.

Establishment of the IR Program

Cincinnati's IR degree program, originally titled MA in Industrial Relations (MAIR), was established in 1968. It resulted from a

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[1] Some IR degree programs may have been offered by economics departments at one time, but were later transferred to other academic units. Such was the case, for example, at Purdue University (Dworkin, 1989).

favorable combination of circumstances in the Department of Economics and was based largely on courses which already existed. Over the years a number of popular graduate and undergraduate IR courses had become part of the economics curriculum at the University of Cincinnati.

During the late 1940s and early 1950s several institutionally oriented labor economists joined the Cincinnati faculty. In the tradition of the institutionalist school, they viewed industrial relations as an integral part of labor economics. Two of them had earned PhDs at the University of Wisconsin, where their graduate education had been significantly influenced by the tradition of Commons and Perlman. Both served terms as department head, one of them serving in this position when the MAIR program was established.

The 1967 merger of what had been two separate economics departments also contributed to the establishment of the MAIR program. Previously, the Colleges of Arts and Sciences and Business Administration had had their own departments of economics. The basis for this bifurcation was the different academic calendars under which the two colleges operated. But in 1962 a uniform calendar was implemented and the major justification for maintaining separate economics departments was eliminated. After a period of intraorganizational bargaining the departments were merged and placed in the College of Arts and Sciences. The merger facilitated an IR program in several ways. First, course duplication was eliminated, which resulted in economies in the utilization of faculty resources. Second, the IR course offerings of the merged department were more extensive than were those of either department separately. Third, the merger created within a single department a larger group of labor economists with strong interests in IR. This group comprised the "critical mass" which was instrumental in establishing the MAIR program.

The LER Program

We will now survey the administrative structure of the LER program within the Department of Economics, examine the curriculum, and make some broad comparisons with master's programs at other schools.

Decisions regarding curriculum, degree requirements, and admission requirements, as well as admission decisions, are made by the Faculty Committee on the LER Program. A Coordinator of LER Studies handles day-by-day administration. The Coordinator reports to the Director of Graduate Studies and the Department Head.

Historically, the Coordinator and the Faculty Committee have had considerable discretion in administering the LER program. There is a single budget for the entire department, and there is no distinction in faculty status between those who teach in the LER program and those who do not. All initial faculty appointments and subsequent decisions on reappointment, promotion, and tenure are made by the departmental faculty as a whole.

Although Cincinnati's LER program is unusual in being housed in an economics department, an examination of the relevant recent literature indicates that its development and content are generally consistent with the mainstream of IR programs.

Curriculum

A comparison with data from the 1988 survey of master's degree programs offered by UCIRHRP members indicates that Cincinnati's curriculum is similar to that of many other schools (Wheeler, 1989). Core courses oriented primarily toward human resources management (HRM) include Human Resource Management/Personnel, Employment Law, and Compensation; those oriented toward labor relations include Labor Relations/Collective Bargaining and Labor Law.[2] A two-quarter sequence in Labor Economics/Markets is also required. Two tool courses, Research Methods and Computer Application in IR, round out the core. Statistics is a prerequisite for the LER program, as are introductory courses in micro and macro economics (University of Cincinnati. *Graduate Study in Economics*, pp. 14-19). The Department of Economics offers the following electives: Dispute Settlement/Arbitration, Public Employee Collective Bargaining/Personnel, American Labor Unions, and Workplace Health and Safety. A number of courses offered by the College of Business Administration and the Departments of Psychology, Sociology, and Political Science are also approved electives for LER students. Every student must either complete an internship or write an extended research paper. Most students choose the internship option. No thesis or comprehensive examination is required (University of Cincinnati, *Graduate Studies in Economics*, pp. 14-19).

[2] Except as otherwise noted, LER courses are offered by the Department of Economics. Course nomenclature is that used in the 1988 survey or, where this is inadequate for describing LER courses, the nomenclature commonly used in IR programs. Actual catalogue titles at the University of Cincinnati differ somewhat in a number of cases.

A Change in Emphasis

The trend in curricula toward increasing emphasis on HRM has been noted and discussed frequently during recent years. (For a sampling of the literature see Begin, 1988; Franke, 1988; Fossum, 1988; Krislov and Mead, 1987; and Wheeler, 1989.)

Cincinnati is no exception to this trend. The original MAIR core was composed exclusively of labor relations/collective bargaining (LR/CB) courses plus a course in labor economics. Electives offered by the Department of Economics also consisted of LR/CB courses. Several HRM courses offered by the Management Department in the College of Business Administration were available as electives. All of the HRM courses now offered by the Department of Economics were added later. In addition, the Collective Bargaining sequence now views negotiation as a generalized process, which makes it more relevant to nonunion organizations. More infusions of HRM content into the curriculum are now under consideration.

As has happened elsewhere, changing emphasis in the curriculum and increasing concern over the public's perception of "industrial relations" prompted a review of the program title. There was dissatisfaction among some faculty members with the existing title, but no immediate consensus on a new one. After a period of debate, in 1986 the title of Cincinnati's program was changed from MA in Industrial Relations to MA in Labor and Employment Relations.[3]

An IR Program in a Department of Economics?

The LER Program at the University of Cincinnati is unusual in being housed in a department of economics; its curriculum and evolution, however, are within the mainstream of IR programs. It is difficult to identify any unique features which might be associated with its location in an economics department.

It has been shown that the establishment of Cincinnati's IR program was linked to the tradition of institutional labor economics. During recent decades labor economics has become increasingly integrated into mainstream microeconomics and has moved away from institutionalism.[4]

While the mainstream of labor economics was moving away from the institutionalist tradition, IR was branching out from its roots in

[3] For a discussion of the degree title issue, see Begin (1988, pp. 472-73) and Wheeler (1989).

[4] For a discussion of the historical development of labor economics, see Darity (1984), McNulty (1980), and Williams (1984).

institutional labor economics and becoming more interdisciplinary in scope. It is this interdisciplinary focus which sets IR apart as an academic discipline and provides the rationale for housing IR programs in separate academic units. The recent trend toward greater emphasis on HRM accentuates the interdisciplinary character of our field by expanding the role of content areas which traditionally have been the province of business schools.

These trends in labor economics and IR have decreased the likelihood that IR programs will be housed in economics departments. Data presented earlier regarding the organizational composition of UCIRHRP membership are consistent with this conclusion.

Does this mean that the position of Cincinnati's LER program in the Department of Economics is becoming untenable? The answer is clearly no. In the two decades since it was established, the program has become institutionalized as a part of the Department. Senior faculty members are accustomed to having IR as part of the Department's offerings, and most support or are at least tolerant of the LER program. Of the growing number of junior faculty, several teach IR courses. The others may think it unusual for an economics department to offer an IR degree, but they accept it as one of the established features of the University of Cincinnati.

In part, the institutionalization of the LER program in the Department of Economics is due to a high degree of departmental integration between faculty members who are involved in the LER program and those who are not. Three professors with extensive LER involvement have served as department head for one or more terms. Most faculty members who teach IR courses also teach other courses in the Department. Undergraduate IR courses are popular with economics majors and a large number of nonmajors who are serviced by the Economics Department. Faculty members who teach in the LER program chair a number of departmental committees, serve on most committees, and are generally active in the affairs of the Department. In short, the LER program and the faculty members who participate in it are very much a part of the Department of Economics at the University of Cincinnati.

One may speculate on circumstances which might reduce the receptiveness of the Department toward the LER program. Significant reductions in departmental resources and/or enrollment in LER courses might create tension between LER and the more traditional degree programs. Under conditions of intensified competition for resources, the traditional programs might have an advantage. IR programs housed in separate units also may face competition for resources, of course, but at a different level of organization. No attempt will be made to speculate on the relative advantages in competition for resources of being housed in a separate unit as compared to being part of a broader department.

Being housed in the Economics Department has implications for the hiring of faculty who will teach in the LER program. In general, it is easier to gain departmental approval for a candidate who has a strong background in economics. Programs housed in separate units may have more discretion in hiring faculty members who are specialized in areas important to contemporary IR.

A Look Toward the Future

What of the future relationship between economics and IR? Although a detailed examination of this topic is beyond the scope of this paper, one may speculate that the trend toward divergence may be in the process of being arrested and perhaps reversed. The following statements are suggestive of a potential for change:

> An increasing amount of research on the effects of industrial relations programs on firm performance is being reported or reviewed. . . . The economics of firm performance provides a new area in which industrial relations students need to gain competence if they are going to be perceived as contributing to the development and implementation of policies related to the use of labor within the organization. (Fossum, 1988, p. 488.)

It is significant that the 1987 IRRA research volume is titled *Human Resources and the Performance of the Firm* (Kleiner et al., 1987). Included in the program for the 1988 Annual Meeting are two sessions titled "The Economic Approach to Human Resource Management and Industrial Relations."

What all of this suggests is a possible convergence between IR and microeconomics. During an earlier era the main linkage between the two fields came from institutionally oriented labor economists whose interest in wage determination led them to focus on unions and collective bargaining. If we are indeed entering an era of renewed interaction between economics and IR, economists with a specialization in industrial organization may well join labor economists in developing them.

Would increasing linkages between economics and IR result in more economics departments offering IR degree programs? It is difficult to foresee this. There may be increasing mutual interests and interactions between scholars in IR and economics and greater incorporation of material from one discipline into the curriculum of the other. Given the institutional development of IR programs during the past four decades, however, it is likely that most of them will continue to be housed in separate units or in business schools. But increasing interaction between economics and IR would make the location of Cincinnati's LER program in the Department of Economics seem a bit more in step with contemporary trends in academia.

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IR Graduate Study in Business Schools: The Case of Purdue University

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When President Abraham Lincoln signed the Morrill Act on July 2, 1862, the mechanism by which the federal government would turn over public lands to any state for the purpose of maintaining a college to teach agriculture and the "mechanic arts" was established. The Indiana General Assembly decided in 1865 to participate in such a plan. With the aid of a $150,000 donation from Lafayette business and financial leader John Purdue, classes at Purdue University officially began on September 16, 1874, with an enrollment of 39 students and a faculty size of six (Topping, 1988).

While the original emphasis was placed on teaching in the areas of agriculture and the "mechanic arts," a perusal of the minutes of an early Board of Trustees meeting is instructive: "Resolved: That in the judgement of this Board the legitimate and proper work of Purdue University, is to furnish instruction of the highest order in those branches of sciences which pertain to any profession or industrial pursuit in life in preference to those branches pursued in High School, Academy or College" (Minutes of Board of Trustees, Purdue University, December 1, 1870, Topping, p. xvi).

These early trustees realized the need to expand areas of instruction beyond the narrow confines of agriculture and "mechanic arts" if Purdue was truly to become a world class university. In this paper I will discuss the development of one "branch of science" at Purdue University, namely, graduate study in the field of industrial relations. Most of my remarks will be focused at the master's level. I will, however, make a few comments on doctoral level studies where this is appropriate.

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Interdisciplinary Study

While the Graduate School at Purdue University was established in 1929, active graduate study in the field of IR did not commence until some 30 years later. On February 14, 1957, the Graduate Council at Purdue University formally approved a newly created PhD program in Industrial Relations (Graduate Council Minutes, February 14, 1957). Said program was housed in the Department of Economics and consisted of 48 hours of coursework, 24 hours of which were to be taken in Labor Economics and Economic Theory. Two minor areas of 12 hours each were to be selected from the related fields of Industrial Management, Industrial Engineering, Industrial Psychology, Industrial Sociology, History, Government and Philosophy, and Communications (Graduate Council Document No. 56-57).

Shortly thereafter Graduate School Dean E. C. Young appointed an interdisciplinary committee to "study the problem of graduate study in Industrial Relations (Graduate Council Document No. 57-21). The committee was composed of faculty members from the areas of economics, psychology, sociology, and communications. This committee recommended the establishment of an interdisciplinary graduate curriculum in Industrial Relations, with provision for granting both the PhD and MS degrees. The Graduate Council of Purdue University formally approved the plan of this interdisciplinary committee on May 9, 1957 (Graduate Council Minutes, May 9, 1957). Students were to be classified as being in the department where their major professor was located.

Curriculum Development Over Time

Several past authors have considered curriculum development in Industrial Relations programs (Wheeler, 1989; Caples, 1958; Yoder, 1963; Estey, 1961). Others have been concerned with the notion of where IR fits within the organizational structure of the university (Rezler, 1968; Krislov and Mead, 1987). Finally, several authors have offered their appraisals of the state of IR education and research (Heneman, 1959; Sexton, 1975; Tripp, 1964; Begin, 1988; Dworkin, Feuille, and Wolters, 1980; Franke, 1988; Fossum, 1988).

A review of curriculum development at Purdue in the IR area reveals a number of findings similar to those noted by Wheeler (1989). Table 1 presents a time series view of the major changes in Purdue's Master of Science in Industrial Relations program from 1957 through the end of 1988. Several points are worth noting:

TABLE 1
MS Study in Industrial Relations at Purdue

	Years			
	1957-66	1966-74	1974-86	1986-Present
Program name	MSIR	MSIR	MSIR	MSHR
Required Credits	27	36 (nonthesis) 27 (thesis)	42 (nonthesis) 33 (thesis)	55
Thesis	Required	Optional	Optional	No
Required courses	Labor Law Labor History Labor Econ. Industrial Psych. Industrial Trng.	Labor Law Personnel Collective Barg. Industrial Psych. Industrial Soc. Industrial Comm.	Personnel Manpower Res. Collective Barg. Industrial Psych. Industrial Soc. Industrial Comm.	34 required hours: Human Res. (11) Management (11) Interdisciplinary (12)
	plus	plus	plus	plus
	2 minors of six hours each	6 hrs. in Research Methods	9 hrs. in Res. Methods	12 hrs. in Statistics & Res. Methods
		plus	plus	plus
		12 Hrs. of electives	12 Hrs. of electives	9 hrs. of directed electives

1. Even though the program remained interdisciplinary in nature, as early as 1962 the MSIR program became administratively affiliated with the Krannert School of Industrial Management. Administratively, all incoming graduate students were placed in the School of Industrial Management.

2. The program's emphasis on research methods began as early as 1966.

3. The required number of credit hours grew steadily over time to the point where the current program requires more than twice the number of credit hours of the original program (55 vs. 27). Also, the required thesis of the early years gave way to an optional thesis and, finally, the current nonthesis program.

4. The name of the program was officially changed to Master of Science in Human Resource Management (MSHR). Also, the program ceased to be administered by the interdisciplinary committee as originally established. Rather, the program was formally transferred to the Krannert Graduate School of Management. Today, the MSHR degree program exists alongside of Krannert's other traditional graduate programs in management.

5. A core of required management courses was added to the curriculum in 1986. Table 2 presents a breakdown of the current course requirements for the MSHR degree at Purdue University.

TABLE 2

MSHR Current Course Requirements

A. *Human Resources Core* (11 hours)

Human Resource Management
Collective Bargaining
Government and Industrial Relations
Organizational Behavior

B. *Management Core* (11 hours)

Accounting for Managers
Marketing Plans and Decision Making
Financial Management
Strategic Management

C. *Research Methods* (12 hours)

Statistical Methods I
Statistical Methods II
Management Information Systems
Human Resource Research Methods

D. Interdisciplinary Core (12 hours)

Advanced Labor Economics
Analysis of Complex Organizations
Organizational Communication
Organizational Psychology

E. *Directed Electives* (9 hours)

Compensation/Reward Systems
or
Staffing and Selection
Human Resource Planning
or
Collective Bargaining Theory and Research
Organizational Change and Development
or
Consultation for Research and Organizational Effectiveness

Discussion

The initial description of the Master's curriculum in industrial relations at Purdue University advertised the program as being ". . . primarily designed to provide training for persons who plan to work in business or industry in such functions as labor relations, other phases of personnel administration (such as placement and recruiting) or labor relations research" (Graduate School Bulletin 1959-60, p. 152).

Although the original program had a heavy labor relations orientation, it is interesting to note that some mention was given to careers in personnel administration.

Over time, the emphasis has changed dramatically. The most recent literature describing Purdue's MSHR programs states that:

> The goal of the Master of Science program in human resources management is to train human resource managers who can adapt to the changing needs of the modern-day organization. This goal is attained in several ways. First, students are required to expand their horizons beyond those of the typical human resource manager. To accomplish this goal, the program stresses course work in management as well as several related disciplines such as psychology and economics. Second, the program focuses on analyzing strategic human resource problems. (Graduate School Bulletin, 1988-90, pp. 271–72.)

While core courses in collective bargaining and government and industrial relations are still required, the shift in emphasis is readily apparent from an inspection of the curriculum content presented in Table 2.

There are other interesting comparisons between Tables 1 and 2 and Wheeler's description of the results of the UCIRHRP survey. First, as noted in Table 1, Purdue's program has recently undergone a name change from Industrial Relations to Human Resource Management. Second, in the area of curriculum, the MSHR program does require coursework in six of the seven core areas listed in Wheeler's Table 1 (Wheeler, 1989). The only core area that the MSHR program at Purdue does not include is a course in IR Systems/Theory. This is consistent with what other HR programs seem to be doing. In fact, the IR Systems/Theory area was found to be required in only 38 percent of all Master's degree programs in IR/HR combined.

More interesting are the UCIRHRP survey's findings with respect to required coursework in Organizational Behavior and General Business. Both of these core areas were required in 60 percent of the HR programs. This percentage is surprisingly low. At Purdue, faculty members in OB and HR have an integrated department within the Krannert Graduate School of Management. This department is named Organizational Behavior and Human Resource Management. Given the intertwined nature of OB and HR, I am surprised that 40 percent of the HR programs don't require students to enroll in a core OB course. Our faculty seems to be moving in the opposite direction—that is, to offer and require MSHR students to enroll in additional OB courses beyond the core requirement. Such courses might be in the areas of motivation, leadership, conflict and negotiations, and organizational change, to name just a few. I predict that other HR programs in Business Schools will move in this direction in the near future.

The other puzzling result is the fact that only 60 percent of all HR programs have core requirements in General Business. As noted in Table 2, Purdue MSHR students are required to take 11 hours of management courses, including accounting, marketing, finance, and strategic management. They are also required to take management information systems, and frequently satisfy their two-course sequence in statistics from coursework offered in the Management School. There are several reasons for this heavy emphasis on management courses. First, being housed in an accredited Management School, the MSHR program must satisfy AACSB distribution requirements. But more importantly, today's HR manager has to be familiar with all aspects of the business operation to be successful. Thus, at Purdue we believe that a strong grounding in management coursework is an absolute necessity for the HR manager of today and tomorrow. Understood in this light, I find it very surprising that 40 percent of the programs with the title of Personnel, Human Resources, or Employment Relations have no general business course requirements. Similarly, a program employing the name Industrial Relations might be wise to consider the incorporation of required business courses into the curriculum. Even with a narrow IR program focused exclusively on the study of unions and collective bargaining, it seems that the marginal benefit to the student of a course in business would far exceed that of an additional IR class. Our graduates go to work in the business world. They need to know something about the operation of the typical business enterprise. To fail to prepare our students in this area is an oversight which should have been corrected a long time ago!

Turning to other matters, it seems as though Purdue's MSHR program is similar to many other programs in the survey. For example, we have followed the trend of eliminating the required thesis. Also, the MSHR program typically takes four semesters to complete, as is true of most such programs where schools are on the semester system. While we have no formal requirements for a summer internship, most MSHR students do take advantage of this opportunity to obtain a "real world" dimension to their graduate education. Finally, many of the skills courses required across IR/HR programs are mandatory at Purdue. For example, as shown in Table 2, MSHR students must take coursework in statistics, research methods, and management information systems.

To summarize, Purdue MSHR students take coursework in four core areas: (1) HR Core; (2) Management Core; (3) Research Methods Core; (4) Interdisciplinary Core. In addition, these students must take three other directed elective courses in advanced HR topic areas.

While I can't generalize to all such programs housed in business schools, it does seem apparent that certain differences in emphasis exist between programs such as Purdue's MSHR program and the traditional IR Master's degree operation in an Industrial Relations Center. The biggest difference in philosophy is in the area of required management core courses. I also suspect, given the quantitative nature of Purdue University, that the MSHR requirement of 12 hours of research methods and statistics exceeds the requirement of most, if not all, traditional IR programs. Other than these two major differences, the remaining coursework in the IR core area, interdisciplinary areas, and advanced HR areas is quite consistent with many other programs of the IR/HR ilk.

Two other matters need to be briefly discussed before closing. First, I should point out that Purdue University no longer offers a PhD degree in Industrial Relations. Said program was terminated in 1967 upon recommendation of the interdisciplinary Industrial Relations Committee (Graduate Council Minutes, December 14, 1967). This recommendation was based upon the feeling that there weren't enough faculty members from the various departments who were strongly committed to the program as a major interest (Graduate Council Document 67-66). The news, however, is not all bad. The Krannert Graduate School of Management does offer the PhD degree in Organizational Behavior and Human Resource Management. Students interested in studying traditional industrial relations topics can mold a program which suits their needs through the OBHR PhD route.

The final thing I would like to comment upon is the difference between the MSHR degree at Purdue and a traditional MBA-type degree with an IR/HR option area. At Purdue we have these two degrees operating side-by-side. I am often asked by graduate students which program would be the best for them, the MSHR or the Master of Science in Management (MSM) program with an OBHR option. My answer is that they should pursue the MSHR route if they are certain that it is a career in human resource management that they want to enter. Alternatively, if they are also very interested in other areas within management, I advise them to enter the more general MSM track with an HR option. In terms of coursework, the MSM student would *not* take the interdisciplinary core, the directed electives, or the capstone research methods course required of all MSHR students. These MSM students are required to take a limited number of core courses to declare an HR option. In place of the other required courses on the MSHR track, MSM students take a variety of courses in advanced management areas. In my opinion, both programs "work well" and turn out graduates ready to enter the HR labor market. To put it bluntly, MSHR graduates come out of their program knowing more about specific human resource issues and the contributions of related disciplines such as sociology and psychology. MSM graduates come through with more knowledge of all of the functional areas of management with the lone exception of human resource management. Despite these relative strengths and weaknesses, recent labor market data would seem to clearly indicate that students earning either the MSHR or the MSM degree have "cleared the bar" in terms of acceptability for employment in the human resource management field.

Conclusion

I found Professor Wheeler's paper to be very interesting. I agree with his conclusion that an examination of commonalities and differences across IR/HR programs is very enlightening. I have tried to show how the evolution of Purdue's program from the MSIR stage to the present MSHR status has been consistent with some of the trends in the UCIRHRP survey while very different in other areas. If our field of instruction at the master's level is really a single endeavor with two primary branches, the Purdue experience may be seen as an interesting example of a metamorphosis from the labor relations branch to the human resources branch of our field. While there seems to be some curricular pattern across all of our IR/HR programs, I suspect that some large curricular differences will persist due to the variance in program placement within the organizational structure of our many universities.

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Labor Studies Curricula: The Development of the Professional Labor Specialist

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Labor Studies has been defined in many ways. The best—and most succinct—was that developed in a Graduate Program Review in 1976. It states, in part, that "Labor Studies is the academic examination of problems which confront people in the pursuit of their needs for rewarding employment."[1] What this essentially says is that while Human Resource Management and Industrial Relations look to the firm as the basis of their being, Labor Studies looks to individuals at the workplace for its existence as an academic discipline. Labor Studies generally looks to the protection of workers' interests while management, industrial relations, and human resource management generally feel their responsibility is to the employer.

The Survey of Graduate IR Curricula raises some interesting points from the perspective of *Labor Studies* graduate curricula. Most industrial relations programs purport to train students for labor union and government positions. However, in those programs the study of labor movements, the workers in an industrial society, and the role of government in monitoring industrial relations has generally been established at the undergraduate level.

Most graduate programs in Labor Studies are characterized by being part-time with late afternoon or evening courses taken by students already in or near the labor studies field. My response comes from what may be the only full-time, daytime program—albeit one which has relatively few students (normally around 36). Forty percent of the graduates of this program eventually work with unions, 30 percent go into government at the state and federal levels, 15 percent are involved in further education—generally either in law or in

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[1] Visitation Committee Report, M.S. in Labor Studies Program, University of Massachusetts (1976), p. 1.

academic fields such as industrial relations, communications, economics, or sociology. The remaining 15 percent are employed in miscellaneous areas including industry and business.

While the report before us refers to the IRRA papers delivered by Caples (1959), Sexton (1975), and Begin (1988), it does not refer to either the paper delivered by Gray (1975) on the same panel as Sexton's, nor the Greenbaum (1975) discussion of those papers. Greenbaum suggests, in her summation, that "labor still is suspicious of intellectuals and does not look outside of its ranks for leaders or specialists (except for labor attorneys)" (p. 485).

I suggest that the world has changed since 1975 when Gray, Sexton, and Greenbaum addressed the IRRA Spring Meeting in Hartford. Unions are now hiring and promoting well-trained specialists with advanced degrees. The world of the union headquarters is full of not just lawyers, but academically trained economists, public policy analysts, political specialists, public relations experts, and computer specialists.

It is interesting to note that George Meany, the plumber, has been succeeded by Lane Kirkland, the college graduate. And the position of William Schnitzler, the first secretary-treasurer of the AFL-CIO and a baker, is now held by Tom Donahue, the lawyer. While I cannot suggest that lawyers are necessarily the most successful labor leaders—although Jack Sheinkman, the president of the Amalgamated Clothing and Textile Workers Union, certainly is one—the advanced *professional* degree seems to be taking hold in the ranks of leaders of American trade unions.

Since Labor Studies programs are geared to produce labor union specialists and government practitioners, does the Wheeler study of IR and HR programs indicate something qualitatively and quantitatively different in the preparation received by students in the various programs before us? What are the "value" courses and what are the "skills" courses that each program offers? We can examine these questions by comparing the "overall" figures in Wheeler's Table 1 with an ideal (at least from my point of view) labor studies curriculum.

Labor Relations/Collective Bargaining—only 75 percent of all programs surveyed in the report utilize this course. Yet in Labor Studies this is the absolute base of the entire program. Indeed, in addition to the required courses, a highly recommended elective is the course Collective Bargaining in the Public Sector. Other courses more and more in demand by both labor studies students and students in other disciplines who have an interest in our field are Collective

Bargaining in Education, Collective Bargaining in Higher Education, and Collective Bargaining in the Health Care Field. Each of these also would include some basic labor economics so that Labor Economics is sometimes not utilized as a course itself but is incorporated in others. (Attracting students from other fields is, I submit, a responsibility for all of us.)

The next most common course noted in the Wheeler report is the one that completely distinguishes both Industrial Relations and Human Resource Management from Labor Studies. The Human Resource Management and Personnel courses mentioned in Table 1 are rarely contained in a Labor Studies curriculum. It is possible that Personnel Management might be taken as a nondesignated (not attributed to a specialization) course for students who are hedging their bets in terms of jobs, but it will not be taught by a Labor Studies faculty member.

Labor Economics and Labor Market Theory are offered in Labor Studies as electives, although frequently Labor Economics or Labor Problems may be required as a prerequisite to entrance to the graduate program for students who are also more heavily into economics as such.

Organizational Behavior, Workplace Democracy, or Complex Organizations are all courses that are offered for students participating in the LS field of study, but are not required. This is also true of IR Systems and Theory which is normally taught in Labor Studies under the title Labor Theory and Ideology.

Now we come to the major differences—Labor History, Labor Law, and Research Methods. It seems to be that this is where the road or roads divide. While it may be that Labor History and Research Methods are taught in all HR programs as either required courses or electives, the report does not indicate that. Certainly Labor History, both as a required course and, in its advanced form, as an elective, is a *must* for any person going into union work. It should also be a required course for any person who will be dealing with unions in one form or another. Santayana's well-known adjuration should be noted here. And if the technical approach is not one that appeals to a student, history as a humanity should be taught if only to lay ethical bases for the oncoming decisions during any of the careers that our students pursue.

A knowledge of Labor Law is also mandated for any student graduating with a master's degree in Labor Studies. A survey course which brings to the surface everything from a basic acquaintance with the Labor Relations Acts to OSHA to ERISA to the Fair Labor Standards Act to Public Sector Law is a requirement. Advanced courses dealing in depth with Equal Employment Law, Employee Relations Law, and, in some cases, Public Sector Law give a graduate a platform necessary for accomplishing his/her goals. And with so many students either coming in with a legal background or going on to further legal education, this is a bridge of great value.

Lastly, the fastest growing area of study for Labor Studies graduates and for graduates in many other fields is the course in our house entitled Practicum in Research Methods. Students with qualifications in this area need not do much searching for jobs. Unions and government agencies are looking for these graduates. We are now offering an advanced course in Research Methods. With the growth of computer usage and the availability of noncredit but advanced courses in computers, the basic and advanced courses allow us to produce graduates that are much more in demand.

Like IR and HR, Labor Studies does not offer and does not accept general business courses. The MBA, I am sure, does, as some of my colleagues on this panel have noted.

The MS in Labor Studies degree requires five basic courses. They are Labor History, Collective Bargaining, a Practicum in Labor Research, a course in Labor Law, and what is known as the Wrap-up Seminar. In addition, three graduate courses are also required in one of four areas of concentration. These areas are Public Sector Collective Bargaining, Private Sector Collective Bargaining, History and Comparative Labor Movements, and Labor Education, Law and Theory.

In addition to these required courses, five generally and three in specialties, there are six electives that may be picked up from a wide variety of courses including Comparative Labor Movements, Government of Unions, Labor Dispute Settlements, American Economic History, Economics of Health, Industrial Sociology, Labor Arbitration, Occupational Safety and Health, Public Administration, Public Finance, Public Personnel Administration, Social Gerontology, Social Stratification, Complex Organizations, Political Sociology, Urban Sociology, Wages and Salary Administration, and one of the new and most important courses—Women and Work. This new (within the past ten years) course attracts not only graduate students from our program, but also graduate students from other parts of the campus. In reviewing the courses, there are certainly some significant differences amongst the various programs, but more often than not in

IR, HR, and LS, the courses appear to be essentially the same in substance if different in terms of where they fit in a program.

In Labor Studies, the thesis is not required. What is required is an internship, in most cases a paid internship. Unions and government agencies provide enough of a salary so as to allow the person to live in the community where he or she is assigned. Most of these internships are used in the summer between the two years that are normally required for the academic part of the program. Occasionally a student will ask to do a thesis which can take the place of an internship. This is normally requested by foreign students who wish to bring something back to show what they have accomplished in the United States. A comprehensive examination is not required.

The course mentioned earlier, the so-called Wrap-up Seminar which serves as a "bringing together" of most aspects of the program, also becomes more and more important. It is the last course taken. Each student in a seminar presents the results of an in-depth research exercise in which the student either researches an idea in depth which has been covered lightly in another course or takes on something completely new and different and presents it to the class. Occasionally those presentations include areas that were explored on the scene in an internship and now require a more in-depth examination.

We probably would agree that the best graduates of master's programs of all kinds are those who have a solid base in academic programs "combined with some technical orientation" (Greenbaum, 1975, p. 485).

The pattern of Labor Studies curricula supports both the comment and note in the first paragraph of this discussion, that is, that "Labor Studies is an *academic* examination . . ." and the point that it is a *professional* program. And perhaps it is best summed up by the statement that it is like the great majority of industrial relations and human resource management programs—a mixture of the most important elements of the academic and professional areas of concentration.

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The Industrial Relations (IR) Content of MBA Degree Programs in the U.S.

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Professor Hoyt Wheeler has documented some of the characteristics of and changes in industrial relations/human resource management (IR/HRM) degree programs in certain U.S. colleges and universities. Wheeler's focus is largely on such programs in free-standing schools, departments, institutes, and centers of IR/HRM studies. Professor James Dworkin has documented the shift in emphasis from IR to HRM in Purdue University's master's curriculum. These instructive reports as well as others prepared for this session serve as a backdrop for the discussion to follow in this paper of "The IR Content of MBA Degree Programs in the U.S."

The MBA Degree Program in Concept

The concept underlying MBA degree programs is that of producing professional managers who are able to apply analytical tools to and systematically use a variety of information for organizational decision-making—in other words, to carry out the administrative function reflected in the "A" component of the MBA designation. The "B" component of this designation indicates that holders of the MBA degree will be applying their skills to business organizations. As to the "M" component of the MBA degree title, it implies mastery of the tools of professional management sufficient to qualify the degree holders as general managers who will be responsible for the stewardship of business enterprises.

How is the overall MBA degree concept and its main components operationalized in U.S. colleges and universities? The standard way, indeed virtually without exception, is to designate a core curriculum within the MBA degree program which encompasses a set of courses taken by every student in the program (the matter of core course

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exemptions will not be taken up here). In addition, the "standard" MBA program requires a student to concentrate in a specialty area—for example, accounting, marketing, or finance—and also to select elective courses which, in combination with the core and concentration courses, will constitute the minimum number of courses required to qualify for receipt of the degree.

It should be recognized that this conceptual standardization of U.S. MBA programs is of relatively recent origin. Little more than a decade ago, for example, some MBA programs permitted or required a student to take a comprehensive examination in a specialty area in order to qualify for the degree, and some programs permitted or required a student to write a thesis in order to qualify for the degree. Today these arrangements or requirements are virtually unknown. A further impetus to MBA program standardization comes from the American Association of Collegiate Schools of Business (AACSB), the body which issues (or withholds issuance of) accreditation of business and management degree programs in U.S. colleges and universities.

The MBA Degree Program in Practice

What is the significance of these developments for the IR or IR/HRM content of MBA programs? It is as follows: IR or IR/HRM is rarely a component of the core curriculum of MBA programs—that is, it is rarely a required area of coverage. This is in striking contrast to such areas as accounting, statistics, economics, and organizational behavior which are virtually universal to MBA core curricula, and it is also in contrast to such areas as marketing, finance, and operations, which apparently are part of the core curriculum of a majority of MBA programs. In other words, while most MBA programs require students to take a combination of tool and functional courses, most programs do not include IR or IR/HRM in this complement of courses. What this means, in turn, is that it is not only possible but likely that most graduates of U.S. MBA programs—the future managers of business enterprises—will not have been systematically exposed to the analytics of and tools for managing the employment relationship! In this regard, it should be especially noted that the AACSB does not include IR/HRM as a required area of coverage for a school to receive accreditation of its MBA degree program.

Does this mean that U.S. MBA programs uniformly fail to provide courses and instruction in IR/HRM? No, it doesn't (as the salaried employment of many of the people in this room attests to), but this underscores a main point of this paper, namely, that instruction in and student exposure to IR/HRM in U.S. MBA programs varies substantially—and probably nonrandomly. As a result, there are several—many?—different examples, perhaps even patterns, of IR/HRM "offerings" in U.S. MBA programs, including the following:

1. *Organizational Behavior (OB) as IR/HRM*. An OB course (often with a different title) typically is part of an MBA core curriculum, and sometimes certain aspects of IR/HRM are included in such a course. This depends almost entirely on the predilection and training of the instructor. Since most OB instructors have been trained in the behavioral sciences, they will, if they decide to treat IR/HRM at all, focus on employee motivation and attitudes. Only rarely will the OB course deal explicitly with labor unions, strikes, workplace dispute resolution, collective bargaining, or other aspects of IR. In other words and where an OB core course treats some aspects of IR/HRM, it is far more likely to focus on HRM than IR.

2. *IR/HRM as a Required Course*. As noted earlier, only a few MBA programs require an IR/HRM course. However, equally notable, the emphasis and content of such required courses may vary markedly. For example, at the University of Chicago the required Human Resource Management (formerly "Labor") course in the MBA program focuses largely on labor economics and takes up agency theory, implicit contracting, and shirking models, among other topics. At the Harvard Business School, the required Human Resource Management course in the MBA program is "sandwiched" between two required OB courses (modules). Surprisingly, perhaps, this course does cover collective bargaining and union-management relations more broadly, while giving relatively little attention to personnel selection, career planning, and other HRM-type topics, and virtually no attention to implicit contracting, shirking models, or labor economics more broadly. At certain other institutions—for example, Berkeley and MIT—the required IR/HRM course treats selected aspects of IR and HRM within a more macroeconomic, macrosocial, or public policy context. In a nutshell, there is no standard model of the IR/HRM core course even in those MBA programs that require such a course.

3. *Breadth Requirements*. In some MBA programs certain areas are combined for the purpose of establishing breadth requirements. In this type of program design, the student selects one or two courses from each (combined) area to satisfy specific breadth of coverage requirements. UCLA's MBA program provides an example of this type of structure. In particular, the areas of behavioral science,

organization studies, and IR/HRM are combined to form one area (among several) of breadth requirements, and each student selects two courses from this area to satisfy the requirement. Of course this type of arrangement permits the student to escape exposure to IR/HRM altogether or, as illustrated in points #1 and #2 above, to be exposed to very selective aspects of IR/HRM.

4. *Totally Optional.* This arrangement, which appears to be the most common among MBA programs (or, more accurately, among MBA programs where IR/HRM exists), leaves it entirely to the student to decide whether or not to take an IR/HRM course. This "free market" approach, which is followed for example in Columbia University's MBA program, usually produces a course which gives relatively more emphasis to HRM than to IR—probably on the ground that such an emphasis will be relatively more appealing to prospective business managers. What this is likely to mean, however, and more fundamentally, is that most MBA students will not be exposed to IR/HRM despite the best efforts of IR/HRM faculty to appeal to a wide audience.

5. *No Offering.* There are, to be sure, MBA programs that provide no offerings at all in IR/HRM. Specific examples include the MBA programs at Yale and Rochester, and there is anecdotal evidence to suggest that the proportion of such "no offering" curricula is on the rise. In these programs it is not a matter of choosing between a labor economics or an OB emphasis or between an HRM or an IR emphasis; there are no such choices. And, while it is easy to ignore these types of MBA programs, the fact is that such programs produce graduates who have no systematic exposure to the management of the employment relationship.

Conclusions and Commentary

This paper has dealt with the issue of the IR/HRM content of U.S. MBA programs. (Note that Canadian MBA programs, which have been excluded from this discussion, appear to give relatively more emphasis to the area of IR/HRM.) Generally speaking, IR/HRM is not a required or core area in these programs, especially when compared with certain other tool and functional areas. Further, where IR/HRM has a presence in an MBA program, the emphasis and content of the course(s) vary substantially; there is no "standardized" format. (Also note that we have not examined the IR/HRM concentration in those MBA programs which offer such a concentration.) Perhaps most unsettling, certain MBA programs, including several prominent ones, have no IR/HRM offerings at all.

These characteristics of the IR/HRM content and offerings of U.S. MBA programs are perhaps especially notable, even disturbing, in an era when both popular and scholarly claims abound that within human resource management lies the key to businesses regaining their competitive edge. While such claims may be overstated or insufficiently supported by theory and evidence, IR/HRM scholars would seem to have a central interest in this debate. Certainly such scholars are better positioned than most other faculty to provide "instruction" to aspiring managers (and others) about the role, function, and consequences of the human resource and IR institutions in the enterprise and in the economy and society. Yet, as has been suggested here, U.S. MBA programs provide only an ancillary place for IR/HRM studies, and even this ancillary position is undergoing some erosion.

Consequently, IR/HRM scholars may want to assert themselves—that is, may want to take a leadership position in critiquing and recommending major changes in U.S. MBA programs. They may want to do this by working in concert, perhaps through the IRRA, to produce a major "position paper" on this subject. Instead or in addition, they may attempt to influence the AACSB to alter its accreditation requirements such that an IR/HRM course or curriculum is required for an MBA program to receive accreditation. Perhaps most fundamental and in recognition of the dominance of finance and its associated portfolio theory in most MBA (not to mention undergraduate business) programs, IR/HRM scholars may want to give organized, large-scale attention to the critical research question, "What difference do IR/HRM policies and practices make to business performance?" In other words, recognition of and debate about the relatively limited role of IR/HRM studies in MBA curricula may spur IR/HRM researchers to tackle bigger, more outcome-oriented research than they typically have heretofore. Such research, in turn, should strengthen the arguments favoring a more central, less ancillary role for IR/HRM in U.S. MBA programs.

XVIII. DISSERTATION SESSION

Do Union Organizers Matter? Individual Characteristics, Campaign Practices, and Representation Election Outcomes

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A substantial body of research has been published on the determinants of the outcomes of union representation elections (Heneman and Sandver, 1983). None of this research, however, has taken into account the role played by the union organizer. This omission is problematic because the organizer is the individual who delivers the union message to potential members and otherwise mediates between the union and workers, government officials, and managers. This paper reports some of the results of a dissertation that sought to answer two questions: First, do union organizers help to determine the outcome of representation elections? Second, what characteristics of organizers are associated with organizing performance?

Literature Review and Hypotheses

A review of the literature on union organizers and labor leaders identified a set of competencies and characteristics thought to be

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associated with successful organizing. Brooks (1937), for example, argued that "the success of the organizer depends upon his ability to adapt the form of his appeal to the circumstances in which he operates" (p. 26). Ginsberg (1948) identified five attributes of successful labor leaders: the need for power, an inordinate capacity for work, the possession of oratory skills, the ability to talk to different types of groups, and self-absorption in the work (pp. 3–12). Other authors noted similar competencies and characteristics believed to be associated with organizing success, but these, too, were based on anecdotal evidence rather than a study of organizers from a variety of unions.

Since there has been little research on union organizers, the literature did not provide enough information to develop a model of the relationship between organizer characteristics and performance. Consequently field research, in the form of lengthy interviews (2.5–4 hours) with the director of organizing of eight unions, was conducted to obtain additional information about union organizers and organizing.

The union organizer is engaged in at least three roles that influence the employee's decision whether or not to vote for unionization. First, the organizer is an *educator*, one who provides information to workers on the benefits of unionism, the traditions of the labor movement, the firm's competitive position in the industry, and the protection provided to workers by federal labor law. Second, the organizer is a *persuader*, one who engages in polemics to convince workers to vote for unionization, challenges statements and accusations made by management during a campaign, and uses symbolic action to enact the environment in which the campaign is conducted. Third, the organizer *supports and empowers* others to engage in individual and collective action to change the conditions of their employment relationship. Two important questions to be explored are: What are the competencies required by individuals to perform these organizing roles? And what personal characteristics are associated with these competencies?

Organizer Characteristics

Space limitations prevent the development of the model and hypotheses.[1] However, the following hypotheses are offered: (1) Organizers who exhibit greater *Faith in People* will be more successful than organizers who have less faith in others. (2) At low to moderately high levels of *Self-Esteem*, increasing self-esteem will be associated

[1] Interested readers may contact the author for a copy of a detailed working paper.

with increasing performance; at extremely high levels of self-esteem, however, increasing self-esteem will be associated with declining performance. (3) The less *Rigid* an organizer is, the more successful he will be since he will be better able to adapt his tactics to the particular organizing context. (4) At low to moderately high levels of *Machiavellianism*, there will be a negative relationship between increasing Machiavellianism and performance; at extemely high levels of Machiavellianism, increasing Machiavellianism will be associated with increasing performance. (5) Organizers with an internal *Locus of Control* orientation will be more successful than organizers with an external locus of control orientation. (6) High *Desire for Control* organizers will be more successful than low DC organizers. (7) High *Self-Monitors* will be more successful in organizing than low self-monitors. (8) Organizers who have experienced *Social Mobility* will be more successful than organizers who have not experienced social mobility.

Methods, Variables, and Estimation Procedures

Eight unions, employing 229 international organizers, participated in the study.[2] Two types of surveys were sent to the sample of organizers. The Union Organizer Survey elicited information on organizers' personal and demographic characteristics; 187 of 229 surveys were returned, for a response rate of 82 percent. The Organizing Campaign Survey elicited information on each organizing campaign managed by the organizer for the years 1982 through 1986. Four hundred and thirty-five Organizing Campaign Surveys were returned by 64 organizers (mean = 6.87; $s^2 = 7.96$). Forty-two organizers were ineligible to return the Campaign Surveys because they had not directed campaigns, but instead had served as assistants. Therefore, the response rate for the Campaign Surveys was 44 percent. Seventy-one percent of the returned campaign surveys were elections, with the remaining campaigns being voluntary recognitions or abandoned campaigns.

The organizer personality characteristics were measured on 7-point scales (except the Locus of Control, which asks the respondent to choose one of two statements with which he or she most agrees) as

[2] The participating unions are the Graphic Communications International Union, the International Brotherhood of Electrical Workers, the United Mine Workers Union, the United Steel Workers Union, the Service Employees International Union, the New York State Nurses Association, the International Brotherhood of Teamsters, and the Hotel and Restaurant Employees Union.

follows: *Faith in People* was measured with Rosenberg's (1957) 5-item Faith in People Scale (Cronbach's alpha = .63); *Self-Esteem* was measured with Rosenberg's (1965) 10-item Self-Esteem Scale (alpha = .73); *Rigidity* was measured with 39 items from Wesley's (1953) Rigidity Scale (alpha = .79); *Machiavellianism* was measured with Christie's (1968) 20-item Mach IV Scale (alpha = .66); *Desire for Control* was measured with Burger and Cooper's (1979) 20-item Desire for Control Scale (alpha = .77); *Self-Monitoring* was measured with the 25-item Self-Monitoring Scale developed by Snyder (1974) (alpha = .73); *Locus of Control* was measured with 18 items from Gurin et al.'s (1969) Multidimensional IE Scale (alpha = .77); *Social Mobility* was measured through a coding system that employs categories found in the *Job Classification Guide* of the U.S. Equal Employment Opportunity Commission. Two variables were created to assess social mobility: *Upward Mobility* is set equal to 1 if the respondent's occupation prior to becoming an organizer was of a higher status than his father's occupation; *Downward Mobility* is set equal to 1 if the respondent's occupation prior to becoming an organizer was of a lower status than his father's occupation.

Control Variables

If this research is to correctly determine whether organizers matter in representation campaigns, and which organizer characteristics and tactics are associated with successful organizing, then variables other than the organizer that may affect election outcomes must be taken into account statistically. A review of the research on the determinants of representation election outcomes suggested six factors that affect election outcomes: environment, work group characteristics, firm characteristics, managerial campaign behaviors, organizer campaign behaviors, and union characteristics. Variables drawn from the literature that tap five of these constructs were used as control variables in this study. (Firm financial data were not available because fewer than 50 of the campaigns were held in firms contained in the Compustat file.) Additional control variables included the organizer's age, sex, race, years of organizing experience, education, and proportion of week spent organizing.

The model was tested with a weighted least squares estimator with the log of the odds ratio of the proportion of pro-union votes as the dependent variable.

Results

Space limitations prevent the presentation of the descriptive statistics. The results from the regression analysis are reported in Table 1. Only the results for organizer characteristics are reported, although the equation contains the control variables discussed above. The coefficient on Faith in People is significant, but with an unexpected negative sign. This suggests that organizers who are generally less trusting of others have greater success. Self-Esteem is related to support for the union in a nonlinear fashion. As expected, there is a positive relationship between the variable and support for the union at low to moderately high levels of Self-Esteem, but the relationship becomes negative at extremely high levels of Self-Esteem. This indicates that organizers with extremely high scores on the Self-Esteem scale are associated with campaigns that achieve fewer votes for the union.

The coefficients on Machiavellianism and its square are significant and in the predicted direction. The signs indicate that organizers who score either extremely low or extremely high on the scale perform better than those organizers who attain more moderate scores. Locus of Control appears to be an important organizer characteristic, although the sign is opposite of what had been predicted. This estimated parameter suggests that organizers with an external locus of control perform better than those with an internal locus of control.

As predicted, organizers with a high Desire for Control performed better than organizers with low Desire for Control. The significant coefficient on Self-Monitoring suggests that low Self-Monitors may be better organizers than high ones, an unexpected result. Organizers who experienced social mobility performed better than those who did not experience mobility; both Upwardly Mobile and Downwardly Mobile coefficients are positive and significant.

Many other organizer variables were important. Performance appears to increase as Age increases, but older organizers appear to suffer a decline in performance. The positive coefficient on the Sex variable suggests that female organizers may be more successful than male organizers, although the coefficient is not significant at conventional levels. Performance increases as Education increases, but extremely well-educated organizers appear to be less successful. A nonlinear relationship also exists between Organizing Experience and performance: the relationship is negative at fairly low levels of experience (perhaps reflecting that organizers take on increasingly difficult campaigns as they gain experience), but the relationship turns positive at higher levels of experience. Finally, the results suggest that

TABLE 1

Weighted Least Squares Regressions of Organizing Performance on Organizer Characteristics
(Campaign control variables not reported in table)

Variable	Coefficient (Standard Error)
Faith in People	−.03511** (.01774)
Self-Esteem	.78473*** (.32493)
(Self-Esteem)^2	−.00716 (.00268)
Rigidity	−.00182 (.00533)
Machiavellianism	−.12299*** (.05191)
(Machiavellianism)^2	.00072** (.00035)
Desire for Control	.03981*** (.01356)
Locus of Control	−.09682**** (.02608)
Self-Monitoring	−.01606** (.00823)
Upwardly Mobile	.44295** (.21237)
Downwardly Mobile	1.51627**** (.38562)
Age	.30638** (.13229)
(Age)^2	−.00334** (.00154)
Sex	.64852* (.35396)
Race	−.26757 (.32543)
Education	1.75733*** (.53093)
(Education)^2	−.06564**** (.01780)
Organizing Experience	−.12315** (.05464)
(Organizing Experience)^2	.00595** (.00251)
Union Experience	.02957 (.02766)

TABLE 1 (*Continued*)

Variable		Coefficient (Standard Error)
(Union Experience)^2		−.00099 (.00077)
Rank-and-File		1.69120*** (.60650)
F-Ratio	6.255****	
R^2	.75	
Adjusted R^2	.63	

* Significant at the .10 level.

** Significant at the .05 level.

*** Significant at the .01 level.

**** Significant at the .001 level.

Note: Tests on theoretically important variables are one-tailed; tests on control variables are two-tailed.

organizers who were *not* former rank-and-file union members are more successful than those who were former union members.

Discussion

The relationship between union organizer characteristics and representation election outcomes has not been the focus of previous research. This paper reports the results of a dissertation that tested a model relating union organizer characteristics to organizing performance. Empirical support was found for some of the hypotheses concerning organizer characteristics. The results suggest that union organizers play an important role in determining the outcome of representation elections. A number of personal and demographic characteristics are important correlates of union organizing success, while controlling for other variables known to affect representation compaign outcomes.

This study suggests that labor unions should place increased emphasis on recruiting and selecting individuals for organizer positions. Many U.S. labor unions have provisions in their constitutions that prohibit the hiring of a permanent staff member who has not been a bona fide union member for some specified period of time, usually three to five years. This study indicates that individuals who have not been union members in the past can be successful organizers; in fact, these results provide evidence that these individuals may be more successful than former rank-and-file union members. This study also suggests that women may be better organizers than men, holding constant all the other factors included in the model. Although the race coefficient was not significant, there is no evidence to suggest that white organizers are more effective than minority ones.

Finally, these results indicate that certain personality characteristics may be important determinants of an organizer's effectiveness. The usefulness of personality tests in personnel selection has been hotly debated over the years (Reilly and Chao, 1982), with testing being a good predictor of success in certain occupations (e.g., sales, police, managers) but not in others. These results suggest that personality tests may be an effective personnel selection tool for unions hiring organizers.

There are certain limitations in this study, however, that should be considered. First, the sample of organizers from the eight unions is probably not representative of all U.S. organizers. The sample is heavily dominated by industrial unions and has only limited representation by craft unions and professional associations. Second, although this study has reduced the potential specification error found in earlier representation election studies by including organizer variables, two classes of variables are still not well represented in this study: firm characteristics and union characteristics. Since only 50 firms in my sample of campaigns were contained in the Compustat data file, I was not able to use firm financial data as controls in this study. A number of industry-level controls, including industry profitability, were explored, but the results were not changed. Of course, this potential specification error creates problems only to the extent that the missing variables are correlated with the included organizer variables. Last, there is an unequal number of elections across the organizer sample. Some organizers managed only a few campaigns, while others ran many more. In order to explore whether the results were sensitive to the unequal number of elections per organizer, I reestimated the WLS equation limiting the sample of elections to five, seven, and ten per organizer. These results were generally consistent with the equation without restrictions, although some of the variables lost significance. This is not unexpected, however, since the resulting sample sizes were small relative to the model size.

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An Exploratory Study of Two-Tier Labor Contracts in the Retail Food Industry

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Two-tier labor contracts are those concessionary collective bargaining agreements in which employees hired after a specific date are treated differently from those employees hired earlier. Newspapers and magazines recount the adoption of these contracts and speculate about the potential outcomes while several scholarly articles (Jacoby and Mitchell, 1986; Martin and Peterson, 1985) focus on specific elements of two-tier contracts, but no comprehensive study of the topic has been conducted.

In an effort to add to the body of knowledge, an exploratory study of the characteristics and performance of two-tier labor contracts in a single industry was designed to provide comprehensive information about the nature of two-tier contracts, the forces precipitating their enactment, and the behavioral and economic consequences of their adoption. The retail food industry was selected for study. Content analysis and elite interviewing provided the methodology. The entire population of large-unit collective bargaining agreements in the retail food industry on file at the Bureau of Labor Statistics Collective Bargaining file was analyzed to determine the incidence of two-tier provisions and to determine the nature of those provisions. At the conclusion of the content analysis, a series of elite interviews was undertaken to explore the views of management representatives, labor leaders, and neutrals.

It was found that two-tier labor provisions dominate collective bargaining agreements in the retail food industry. Ninety-one percent

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[1] This study included all 101 retail food contracts (covering 400,400 employees) in the BLS Collective Bargaining file. This file (mandated by the Labor Management Relations Act of 1947) includes virtually all collective bargaining agreements in the United States which cover 1,000 or more workers.

of large unit retail food contracts contain wage tiers in one or more job classifications, and 88 percent of those tiered wage provisions are permanent.[2] One or more benefit tiers, which apply to all "new hires" regardless of job classification, appear in 86.5 percent of the contracts, with 73 percent of these provisions being permanent. One or more work rules contain tiers in 61.8 percent of the collective bargaining agreements that were examined, and all of these work rules represent permanent changes.

In an effort to determine whether most contracts were two-tier or multi-tier, a record was kept of the dates on which each tier provision in a contract was predicated. This summary was then examined to determine the incidence of tier provisions as well as the period of time that tiers have impacted retail food industry contracts. Eighty-two percent of large unit retail food contracts contain two or more dates on which tier provisions are included in the contract language, and more than 56 percent of the agreements contain three or more tiers. It is essential to note that this does not simply represent dates on which tiers had been implemented, but rather that these dates represent valid tier operators still in effect in the current collective bargaining population. Thus, it can be said with assurance that the vast majority of large-unit retail food industry contracts are multi-tier rather than two-tier.

It is also significant to note that these currently valid tier provisions in the retail food industry span a 25-year period from 1962 to 1987. Figure 1 displays the incidence of tier provisions in collective bargaining agreements and also displays these provisions increasing in the 1970s and 1980s. The older manifestations of tiered provisions appear to be concentrated in the benefit and work-rule sectors of the contracts.

Content analysis also demonstrated that approximately 20 percent of the job classes with wage tiers are multi-tiered. It appears that wage tiers, once articulated, appear to last. Thus, although the rate of new adoptions of two-tier wage provisions may be lessening, two-tier provisions still permeate wages in the retail food industry.

The content analysis of the collective bargaining agreements demonstrates that all of the job classifications in a retail food store can be, and are subject to, wage tiers. However, wage tiers are most likely

[2] An employee is considered to be working under a permanent wage tier when he/she is hired at a different rate and is never scheduled to achieve parity with the upper-tier worker. A tiered provision is considered to be temporary when the employee can eventually expect to achieve the same pay rates (or benefits) as those employees who had been hired prior to the date(s) specified in the collective bargaining agreement.

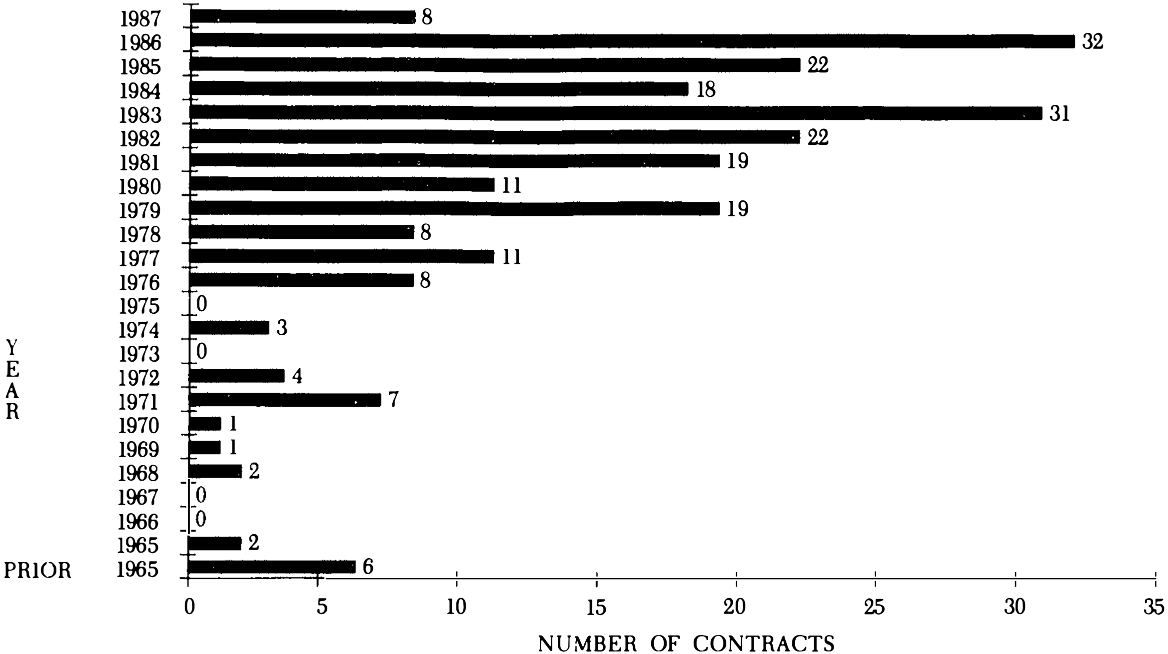

FIGURE 1

TIER LABOR PROVISIONS
OPERATIVE IN CURRENT CONTRACTS

to be found among those job classifications with the highest populations in a retail food store. These job classes include clerks, general merchandise (or nonfood) clerks, meat clerks, and courtesy clerks. Wage tiers are less likely to occur among head clerks and journeyman meatcutters. If a contract differentiates between the wages of full-time and part-time workers, it is more likely that part-time workers will experience tiers rather than full-time workers.

Wage progressions represent a ubiquitous feature of job classifications in retail food contracts. As such they are frequently modified to accommodate wage tiers. More than 55 percent of the contracts with progressions and wage tiers extend the progressions for lower-tier employees. An overwhelming 84.6 percent of those contracts with progressions and tiers that have been classified as temporary utilize extended progressions to effect those tiers. Table 1 delineates one contract's method of utilizing extended progressions.

TABLE 1

Temporary Wage Tier Extended Progressions: Phoenix Area Retail Food Agreement

Hired Before September 22, 1986		Hired After September 22, 1986	
Wages	Hours	Wages	Hours
$ 6.58	0-1040	$ 4.50	0- 780
7.65	1041-2080	5.00	781-1560
8.72	2081-3120	6.00	1561-2340
10.87	3121 & on	7.61	2341-3120
		8.15	3121-3900
		8.57	3901-4680
		9.23	4681-5460
		10.87	5461 & on

Source: Phoenix Area Retail Food Agreement: UFCW Local 99R and Safeway (September 19, 1983 to September 21, 1986), p. 42; and Memorandum of Agreement: UFCW Local 99R and Abco, Fry's and Safeway (September 22, 1986 to September 16, 1989), p. 6.

Although wage tiers apply to specific job classifications, benefit tiers apply to all employees in a bargaining unit who are hired after a specific date. Premium pay for work on Sunday is the single benefit most frequently subject to a tier arrangement. Thirty-five percent of all the contracts examined provided date-of-hire differentiations in Sunday pay, and 90 percent of these tiers were designed to be permanent. Table 2 presents a tabulation of tier provisions in employee benefits.

TABLE 2

Frequency and Permanence of Two-Tier Benefit Provisions in Retail Food Contracts

Provision	Percent Frequency	Percent Permanent
"Early Out"	11.2	100.0
Health	29.2	50.0
Number of holidays	20.2	44.4
Holiday pay	21.4	94.8
Night pay premium	25.8	95.6
Pension	28.1	64.0
Personal leave	32.6	66.0
Severance pay	11.2	100.0
Sick leave/pay	12.4	45.4
Sunday pay	34.8	90.3
Vacation	20.2	66.7

Data on lump-sum payments were also included in the analysis of benefits. The content analysis shows that lump-sum payment provisions (sometimes structured as bonuses), which were frequently negotiated in lieu of wage increases for existing upper-tier employees, appeared in 48 percent of all the retail food contracts. Although 11 percent of these lump-sum payments went to all the employees, almost 63 percent of these payments were predicated solely on date of hire.

More than 61 percent of the contracts contain modifications of work rules which are based upon date of hire. These modifications, as epitomized by the two most common work-rule tiers (standard workday and job security) are designed to permit increased management responsiveness to customer purchasing patterns, while providing some security for senior workers. All the work-rule tiers represent permanent change for the employees affected.

An overwhelming 96.5 percent of all the contracts examined contain wage tiers, benefit tiers, or work-rule tiers. It is exceedingly important to note that once a decision has been reached to negotiate a tiered contract, it is likely that the tiered features will be throughout the contract. This is reflected in the fact that 82 percent of contracts contain wage tiers for one or more job classifications while also specifying tiered benefits. Even more striking is that 56.2 percent of the contracts contain wage tiers, benefit tiers, and tiers in work rules.

A series of interviews revealed that "two-tier" labor contracts reflect a pragmatic response to a different evolving environment in the retail food industry.[3] Societal change is influencing the way Americans eat and shop, technology is contributing to the "deskilling" of jobs throughout today's supermarket, and nonunion competition is impacting the industry. In endeavoring to survive these pressures, today's retail food stores are expanding into new markets,[4] and seeking a "competitive" labor cost position in collective bargaining negotiations. There is a strongly held belief that labor costs represent the prime variable in operating costs, and the companies have therefore sought "comparative parity" through collective bargaining concessions.

There is unanimity that two-tier labor contracts have helped management to be more competitive, and more profitable. Union jobs have been saved and some expansion has been fueled by these economic outcomes. There is less unanimity among the respondents about behavioral outcomes. Although there are no clear-cut productivity measures, the labor cost figures developed by each company would indicate that employees' work-related behaviors have not been impacted. There is no reported increase in absenteeism, tardiness, or sick leave. In addition, there are no reports of increased grievances, and no grievances have been filed that focus on two-tier provisions. Legal challenges do not appear to be viable. However, turnover is more than twice as high as the historical rate has been.

The extraordinarily high rate of turnover reported by all the elites goes beyond the complaints about the decline of the work ethic and extend beyond the highly competitive labor market. The turnover appears to indicate that equity theory (Jaques, 1961; Patchen, 1961) is functioning in a classical sense. Thus, when wages fall below that which workers perceive to be fair or equitable (either in their own firm or in their labor market), they seek other employment opportunities. However, since management does not appear to be unduly alarmed about the rate of turnover (except in specific markets), two-tier provisions will probably continue.

There are potential problems with two-tier wages, however. If the current labor situation changes so that employees feel unable to move

[3] Fifteen interviews were conducted with 16 different elites. These included seven representatives of management, three UFCW leaders, two neutrals, two attorneys, and two academics.

[4] Retail food stores are adding floral shops, soup and salad bars, prepared foods, health and beauty aids, expanded fish departments, and full-service delicatessens to take advantage of Americans' desire to minimize shopping time and to stem the flow of customers to competitors.

to another job when they desire, labor unrest will probably rise. There will probably be an increase in grievances and other signs of employee disaffection. Performance may decline also if the worker is unable to "move with his feet" and therefore feels trapped.

In the absence of such labor market changes, two-tier contracts will probably remain in effect. Two-tier labor contracts represent more than a temporary effort. There may be modifications in the appearance of the tiers, especially in the form of lump-sum payments to upper-tier employees and continued use of extended progressions. There will also be expanded use of tier provisions in benefits. In short, two-tier labor contracts appear to represent a restructuring of the total wage package in the retail food industry—one that will continue into the immediate future. Tiers have effectively capped the upward climb of wages and benefits and are permitting retail food merchants to more effectively compete in a changing environment.

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Labor Market Discrimination: An Asymmetric Information Theory and New Empirical Estimates

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Economic theory predicts that in a competitive labor market equally productive workers with comparable skills will receive equal pay. Contrary to this prediction, discriminatory wage differentials between blacks and whites, males and females, and disabled and nondisabled workers have persisted despite changes in social attitudes and strenuous attempts to outlaw labor market discrimination. Researchers have failed to produce a satisfactory theory of persistent discrimination.

This dissertation proposes an explanation for the persistence of majority-minority wage differentials that is based upon employer uncertainty regarding the productivity of individual workers. It also estimates discriminatory wage differentials from a current data set. The empirical results show that employer discrimination against blacks, and particularly black females, has declined in recent years, while substantial discrimination against females and disabled workers persists.

This paper summarizes the dissertation's important findings. It is presented in two parts. The first part briefly reviews existing theories of labor market discrimination and sets forth my new approach. The second part presents new estimates of wage discrimination against blacks and females.

Theoretical Insights

Becker (1971) provided the seminal work in the development of a theory of labor market discrimination. His approach is based upon individual "tastes" for discrimination. In this view, an economic agent

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has a taste for discrimination if he acts as if he were willing to pay to associate with members of one group rather than another. In Becker's most well-known model, discriminating employers are willing to forgo profits in order to avoid employing minority workers. A major criticism of Becker's model has been the apparent failure of its prediction that discrimination resulting from employers' tastes should be eliminated in time by market competition.

An alternative explanation is offered by theories of statistical discrimination. Theories of statistical discrimination assume that majority-minority wage differentials are caused by informational problems in the labor market (e.g., Phelps, 1972; Arrow, 1973; Aigner and Cain, 1977). Individual productivity is unobservable by employers, but employers have preconceptions of differences in the distribution of productivities for different groups of workers. Unfortunately, the statistical theories can explain the persistence of discrimination only if one assumes that employers persistently misjudge the average productivity of minority workers. Aigner and Cain (1977, p. 177) conclude, "a theory of discrimination based on employers' mistakes is even harder to accept than the explanation based on employers' 'tastes for discrimination'. . . ."

A new approach is adopted in this dissertation. It develops a theory in which labor market discrimination is the result of employers' uncertainty in predicting the productivity of minority workers. Within this framework, wage differentials are the price that employers extract from minority workers to compensate for greater uncertainty in hiring them.

To put this approach in perspective, note that in standard neoclassical theory, the firm, with perfect information, selects the most productive workers from its pool of job applicants. Because employers know the productivity of each potential employee, workers are hired whenever their marginal revenue product exceeds their cost (wage). A more realistic model of the labor market allows for uncertainty in this process, specifically for asymmetric information. In such a model, job-applicants have distinguishing characteristics that employers cannot observe. Thus, firms are not perfectly informed of individual productivities and hiring mistakes may occur.

Employers have incentives to minimize mistakes in the process of hiring and determining job assignments because mistakes are costly. For example, expenditures for orientation and training may be incurred before it is discovered that a worker is unsatisfactory. Even then it may be difficult or unpleasant to remove the employee from his job.

It follows that employers will use all available information that can be secured at reasonable cost to minimize errors. The information that is likely to be available includes information supplied by the applicant or by prior employers (e.g., age, experience, education) and subjective information observed by the employer (e.g., appearance, poise, interest). Some of this information directly measures worker productivity, while some is a signal to the employer regarding the applicant's probable productivity but does not directly affect his ability to perform on the job (Spence, 1973). Viewed in this manner, hiring decisions result from an interaction between the distribution of abilities among job applicants and the employer's ability to select qualified workers from that distribution.

Numerous studies of personnel practices support the hypothesis that employers experience more uncertainty hiring minority workers. These studies show that in the absence of specific job-related information, negative stereotypes dominate hiring and promotion decisions involving minority workers (Gerdes and Garber, 1983; Heilman, 1984). Furthermore, employers adopt different questioning strategies and obtain different kinds of information in interviews with minority workers than in interviews with majority workers (Binning et al., 1988). Finally, employers attempt to evaluate more variables when selecting workers from minority groups (Chusmir and Durand, 1987).

Therefore, when the labor force consists of two easily distinguishable groups of workers, the feature that identifies the minority group acts as a signal to the employer regarding his ability to select qualified workers from that group. Although majority and minority workers are known to be equally productive on average, employers have greater difficulty selecting qualified workers from the minority group.

In my model, the preferences of the firm are assumed to satisfy von Neumann-Morgenstern axioms which allow a utility function to be defined on those preferences over profits.[1] Employers select workers from two distinct groups knowing the average productivity of workers in each group, but uncertain of the actual productivity of individual labor inputs.

Placing specific restrictions on the production function, I show that with this uncertainty the risk-neutral firm hires fewer inputs or pays a

[1] Refer to Hey (1979, pp. 26–37) for a discussion of the von Neumann-Morgenstern axioms and utility theory under uncertainty.

lower wage than the firm operating with perfect information.[2] Moreover, the group of workers with greater observed variability of productivity is paid less and its members are less likely to be hired. Resulting wage differentials can persist over time because they reflect real differences in the employer's ability to select from sample distributions.

Typically, studies of the firm under uncertainty take output price as the uncertain variable. An exception is a study by Ratti and Ullah (1976) that examines a model of the firm that is uncertain of the day-to-day productivity of its inputs. My theory benefits greatly from their work. However, my model is unique in that it examines a firm under uncertainty hiring from two distinct groups of labor and utilizes the results to offer a new explanation of labor market discrimination.

While it is essential to develop theories to explain the causes of labor market discrimination, it is also important to obtain accurate measures of the extent of employer discrimination against various minority groups. The empirical sections of my dissertation present new estimates of wage discrimination against women, blacks, and disabled workers.

Empirical Insights

The customary approach for measuring employer discrimination was introduced by Oaxaca (1973). Oaxaca estimates wage equations for male and female workers and then utilizes the estimated coefficients to decompose observed wage differentials into a part resulting from differences in human capital characteristics and a part resulting from discrimination. Reimers (1983) extends Oaxaca's method to correct for sample selection bias. That is also the approach taken in this study.

The data for this study come from Wave III of the 1984 Survey of Income and Program Participation (SIPP). The SIPP is the most recent Census Bureau survey containing detailed information regarding respondents' income sources and work history. The sample population is representative of all noninstitutionalized residents of the United States (excluding persons living in army barracks or in Alaska), hence the survey is ideal for studying discrimination against both blacks and females. In addition, the topical module that supplements the third wave provides data on respondents' health status and functional

[2] The restrictions apply to the elasticity of the marginal product curve of factor services and the signs of the third derivatives of the production function. For further elaboration refer to Baldwin (1988).

limitations. Therefore, it is possible to estimate discrimination against disabled workers from the same data set.

For my study the sample population consists of 24,044 individuals between 16 and 64 years old. Mean hourly wages are \$10.40 for white males, \$7.90 for nonwhite males, \$6.76 for white females, and \$6.71 for nonwhite females. Estimates of discrimination are derived from a Oaxaca decomposition of weighted least squares estimates of the parameters of selection-bias-corrected wage equations. The measures of employer discrimination against nonwhites and females are reported in Table 1.[3]

TABLE 1

Decomposition of Wage Differentials[a]

	Racial		Gender	
	Male	Female	White	Nonwhite
Wage differential[b]	2.50	0.05	3.64	1.19
Difference in log wages	0.239	0.023	0.418	0.203
Difference in offer wages	0.237	0.088	0.485	0.336
Components of the differential				
Health factors	0.002	0.003	0.001	0.002
Education	0.145	−0.181	0.125	−0.199
Experience	0.059	0.031	0.103	0.089
Occupation	−0.029	−0.025	0.004	0.010
Union	−0.004	−0.000	−0.001	0.002
Public sector	−0.025	−0.009	−0.003	0.018
Part-time	−0.005	0.003	−0.030	−0.018
Capital intensive industry	−0.009	−0.000	−0.016	−0.008
Disability	−0.001	0.001	0.001	0.003
Intercept	0.009	0.247	0.162	0.401
Discrimination effect	0.142	0.070	0.346	0.299
Offer wage differential not attributable to discrimination	0.095	0.018	0.140	0.037

[a] Components may not sum exactly because of rounding.

[b] In dollars.

One of the most important findings of this study is that nonwhite women have effectively closed the wage gap between themselves and

[3] The components of the differential are calculated as follows: the difference between the parameters of the wage equation for the majority and minority groups is evaluated at a weighted mean value of the corresponding independent variable. Similar estimates of wage discrimination against disabled persons are reported in my dissertation.

white women.[4] Observed nonwhite-white wage ratios are 0.99 for females, but only 0.76 for males.[5] Employer discrimination accounts for 59.5 percent of the offer wage differential for nonwhite males and 79.5 percent of the offer wage differential for nonwhite females. Differences in returns to education account for the largest portion of the discriminatory component for males, followed by differences in returns to experience. Nonwhite women, on the other hand, earn higher returns to education than their white counterparts. Differential returns to experience and to the residual factors in the constant term explain most of the discriminatory component for females.

Similarly, this study finds substantial employer discrimination against white women in comparison with white men and against nonwhite women in comparison with nonwhite men. Nevertheless, nonwhite women have narrowed the gender wage gap considerably in the last two decades, while the female-male wage ratio for whites has remained static. For this sample the female-male wage ratio is 0.65 for whites, but 0.85 for nonwhites. The decline in the gender wage differential for nonwhites appears to be largely the result of the relative wage gains of more highly educated black females. These results raise an important question: What factors enable nonwhite women to obtain favorable returns to their investments in education that are not shared by other minority groups (white women and nonwhite men)?

This study also gives some insight into the extent to which other factors represented by the independent variables contribute to or combat employer discrimination. The effects of union status and public-sector employment on labor market discrimination are of particular interest for the formation of public policy.[6] In general, my results indicate that minority groups benefit from public-sector employment to a greater extent than do majority group members. That is, most minority group members encounter less discrimination in public employment. Nonwhite males, in particular, have a substantial advantage in government jobs over their counterparts employed in the private sector. The only minority group that does not benefit from

[4] Blau (1984) has previously reported this trend.

[5] Wage ratios are computed from the mean hourly wages reported in the text. For example, the nonwhite/white wage ratio for females is calculated as follows: 6.71/6.76 = 0.99.

[6] In this study union membership is a dichotomous variable that equals one if the individual's wages are determined by a union contract. Similarly, public sector is a dichotomous variable that equals one if the individual is employed by a federal, state, or local government.

employment in the public sector is nonwhite females in comparison with nonwhite males. This may indicate that rewards for nonwhite females in the private sector are increasing. The evidence suggests that union contracts reduce wage differentials between white and nonwhite males. However, nonwhite females covered by a union contract appear to encounter more employer discrimination than do their nonunion counterparts.

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DISCUSSION

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The paper by Thomas Reed addresses two questions concerning union organizing campaigns: "Do organizer characteristics matter?" and "If so, which characteristics enhance or diminish organizing success?" This paper is perhaps of greatest value for the questions it addresses and the means by which it proposes to answer them, rather than for the specific answers suggested in its regression results.

My point is that Reed tackles the very important issue of how and to what extent organizers influence election results which has heretofore been assessed only through anecdotes and impressionistic analyses. Our "HR" colleagues have long maintained and recently begun to document that employee selection has an important impact on company performance. The notion that union organizers play a comparable critical role in an important element of union performance, winning representation elections, seems abundantly plausible. Not only has the elections literature for too long treated unions as interchangeable homogeneous entities (Maranto and Fiorito, 1987), but it also needs to take the further step represented by Reed's work. That is, we need to get to the next level of refinement, recognizing not only that unions differ from one another but also that intra-union differences (e.g., among organizers) matter as well.

I've indicated some skepticism about the particulars in Reed's results. It stems from a number of sources. First, based on the employee selection literature, the personality-type characteristics so prominent in Reed's analysis appear unlikely to hold great promise as predictors of organizer performance. Admittedly, they "explain" variance in election results, although often with the "wrong" sign. The contrariness and the selection literature lead me to suggest that perhaps the personality measures proxy abilities which may be more important causal factors. On the other hand, organizing is a relatively unique sort of occupation, and somewhat similar to sales work, where

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personality factors do seem to be valid predictors. Better ability measures would help to clarify matters.

Second, there is the matter of control variables. Reed claims to have reviewed the literature and identified six main categories of election influences, but conspicuously absent are job satisfaction and union instrumentality perceptions. Of course, both of these (and especially the latter) may be functions of the organizer. Even within the categories identified and used, however, there are weaknesses. For example, Reed's "union characteristics" control variables consist of one dummy variable indicating whether or not the union is the Teamsters. True union characteristics may indeed correlate with organizer characteristics, raising a strong possibility of omitted variables bias for the organizer characteristics measured.

Finally, there is a sort of technical problem in that Reed's estimates are based on a rather high parameter-to-cases ratio as evidenced by the substantial shrinkage between the R^2 and $\bar{R}^2$. Schmidt (1971) shows that regression coefficients can be rather unstable under such circumstances.

For these reasons I am reluctant to place great faith in the particular results from Reed's analysis. Nevertheless, his conclusion that organizer characteristics matter for election results seems tenable, and some or even all of his particular results may be borne out in replication and extensions. I commend him on his topic choice and approach, and hope that he and others will follow up this study with further analyses along these lines. As a final note, given that business schools may be unenthusiastic about supporting such studies, I hope that unions will take note of the potential value of this research and attempt to encourage it through their cooperation if not through financial support.

The paper by Marjorie Baldwin actually embodies two distinct topics. One is a theoretical approach to labor market (wage) discrimination against minorities, women, and disabled persons. As Baldwin notes, there is a need for further theorizing insofar as previous theories appear unable to offer an explanation for the persistence of discrimination in more or less competitive labor markets. Her approach to the problem stresses the role of uncertainty in selection decisions, citing previous research that seems to indicate that such decisions do not reflect an ideal situation in which standardized types of information such as valid test scores are available for all candidates and are interpreted consistently without regard to gender, race, and disability. From this premise, Baldwin derives the possibility of persistent wage differentials. Her arguments seem plausible and their implication of persistent discrimination seems consistent with the real world. Unfortunately, the paper provides no empirical test of the model, but I suspect this is something Baldwin is pursuing.

The second topic in Baldwin's paper is an empirical analysis of the extent of wage discrimination and a decomposition of wage differentials into nondiscriminatory (e.g., due to differences in attributes such as education level) and discriminatory (essentially unexplained) components. This is a fairly standard approach and, like its predecessors, suffers from the need to equate discrimination with otherwise unexplained group differences. Still, as Baldwin suggests, it is useful to provide updated information on discriminatory differentials defined in this manner in order to determine what progress, if any, is being made in reducing discrimination. Her results suggest that while women have made significant progress, blacks have not, and, as she suggests, this pattern merits further investigation. I would speculate that occupational segregation changes (by gender) coupled with differential occupational growth rates need to be examined.

In any case, both of Baldwin's topics are worthwhile subjects which she has addressed in a competent manner. My main regret is that her worthwhile theoretical and empirical analyses are virtually independent. I would particularly like to see an empirical test of the theoretical model she develops.

Celeste Sichenze's paper makes two main points, I think. First, toward its explicit aims, it provides interesting information about a relatively recent development—two-tier labor contracts in a major component of the increasingly important retail sector. Sichenze provides a thorough descriptive account of two-tier arrangements based on her contract analysis of collective bargaining agreements and interviews with the parties. From it we learn that two-tier arrangements are widespread in retailing, involve nonwage issues such as work rules as well as wage rates, that these arrangements tend to be "permanent," that they have the desired effect on labor costs from the employer's perspective, and that they have surprisingly little effect on behaviors other than turnover, which Sichenze reports is "more than twice as high as the historical rate."

Second, Sichenze's paper serves a presumably unintended aim in demonstrating that mathematical modeling, and regression analysis or more exotic statistical methods, are not necessarily prerequisites for worthwhile research. There are still opportunities to make useful contributions to the field of industrial relations through methods used by the Webbs and Perlman many years ago—e.g., through content analysis of the collective agreements upon which the parties themselves focus their attention. Although this was almost certainly not the point Sichenze set out to make, it is one worth making. In industrial relations and even more in related fields, there continues a tendency to put rigor ahead of relevance. This paper presents a good counter-example to those favoring this tendency.

This is not to say that a rigorous analysis could not or should not be applied to Sichenze's topic. On the contrary, her work seems to provide a solid base upon which to build more rigorous analyses. For example, Sichenze's observation concerning increased turnover deserves more careful scrutiny. Is this a two-tier effect per se, or a coincidence due to the tightening of the youth labor market? Multivariate statistical analysis might shed light on this issue. Similarly, there are other issues raised by Sichenze's analysis which lend themselves to "more rigorous" statistical and analytical approaches, and I hope she and others will pursue them.

As a final comment, I would like to note that these three papers were selected from over a dozen submissions, and that there was a fairly high degree of consensus among the referees as to which papers should be presented at this session. I think that speaks well of our presenters and they deserve our congratulations. At the same time, there were appealing aspects that one or more of the referees perceived in most of the papers *not* selected, which dealt with a wide variety of interesting issues ranging from technological change to foreign ownership of firms and their effects on industrial relations. The referees were constrained to selecting three papers, but the quality of submissions as a whole is encouraging.

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DISCUSSION

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Celeste Sichenze's dissertation, "An Exploratory Study of Two-Tier Labor Contracts in the Retail Food Industry," describes the content of 35 two-tier contracts in the retail food industry. Although the focus on a single industry limits the generalizability of her findings, the richly detailed portrayal of two-tier provisions provided by this study should be useful both to practitioners and as a foundation for future studies of such provisions.

Several of her findings were especially noteworthy and suggestive of questions that would be useful to explore in future research. In particular, her finding that 88 percent of the two-tier wage provisions were permanent was somewhat surprising since we know that two-tier wage provisions in some industries (e.g., airlines) have often been temporary. Future exploration of why some parties choose permanent two-tier structures and others adopt such structures on a temporary basis might be fruitful. Also noteworthy were Sichenze's findings that two-tier benefit and rule provisions were widespread and that not all two-tier arrangements were adopted during the recent era of concession bargaining. Both the incidence of two-tier nonwage provisions and the timing of the adoption of two-tier provisions merit further research attention using larger, more comprehensive data bases.

Although Sichenze's small sample size does not permit her to conduct hypothesis tests regarding the causes and consequences of the adoption of two-tier provisions, she does provide some impressionistic evidence pertaining to such relationships based upon interviews with representatives of management and labor in the industry. It would be useful to explore more systematically the causal connection between the adoption of two-tier provisions and turnover that was widely reported by the practitioners interviewed for this study. In addition, it would be useful to know whether the observed increase in turnover associated with the adoption of such procedures results from increases

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in voluntary or involuntary turnover, or both. For example, does the evidence suggest that management, following the adoption of a two-tier system, then attempts to get rid of more costly senior employees, or are the less senior employees with less favorable terms and conditions of employment more likely to quit?

Thomas Reed's dissertation, "Do Union Organizers Matter? Individual Characteristics, Campaign Practices, and Representation Election Outcomes," breaks new ground both in the use of original data obtained from surveys of union organizers and in its focus on the personal traits of organizers as determinants of the outcome of union certification elections. The primary focus of the analysis is on the effects of the organizer's personality traits, with controls included for demographic characteristics of the organizer and a parsimonious set of exogenous variables found to have an influence on election outcomes in prior studies.

Reed finds that several of the organizer personality trait measures significantly affect election outcomes in the predicted direction. Several of the control variables also have a significant effect. On the other hand, three key variables, "faith in people," "locus of control," and "self-monitoring," appear to affect election outcomes in the opposite direction from that predicted by Reed. While one could probably posit several possible explanations for such unexpected results, one possibility that must be considered is a lack of construct validity. Although I generally question whether self-reported information is likely to produce valid measures of individual personality traits, the strength of Reed's results is undeniable. A follow-up study using alternative behavior-based measures of the personality traits of interest would be a useful extension.

Reed's finding that women organizers are "more successful" than men also merits further investigation. In particular, it would be important to explore whether this relationship is still observed when controls are included for the degree to which the demographic traits "match" the demographic composition of the workers in the unit being organized.

Marjorie Baldwin's dissertation, "Labor Market Discrimination: An Asymmetric Information Theory and New Empirical Estimates," makes two important contributions to the literature on discrimination in employment. First, Baldwin provides new estimates of discriminatory wage differentials by race and gender using more recent data than have been used in prior studies. Her empirical findings, when compared with those of prior studies, provides a useful gauge of the progress that has been made in reducing discriminatory wage differentials.

Baldwin also develops an alternative theory of discrimination that attributes persistent discriminatory wage differentials between groups to greater employer uncertainty regarding the productivity of minority group workers. This theoretical approach has considerable intuitive appeal, in part because it is based on what is known about actual recruiting and hiring practices from the empirical literature in human resources. It does, however, rely on the assumption that employers feel less able to predict the productivity of minority workers than that of nonminority workers, which forces one to ask why this might be true. As Baldwin suggests, this would be likely if productivity is more variable in the minority population than in the nonminority population, even if both groups have the same means, which might be true if there is premarket discrimination. A persuasive explanation for the existence and persistence of premarket discrimination would add to the strength of her model.

Baldwin's model has not yet been tested empirically. Although evidence of male-female and white-nonwhite wage differentials from her own and other empirical studies is consistent with this theory, it is also consistent with other theories of discrimination. Baldwin's formulation of a new theoretical explanation for discrimination underscores the need for further research that would provide an empirical basis of support for one theory of discrimination while at the same time refuting others.

The dissertations described in this session investigate three very different topics relying on diverse theoretical paradigms and methodological techniques. Each study makes a unique and significant contribution to an important body of literature. It is perhaps even more encouraging to note, however, that in each of the studies the author also lays a foundation for future research that will further the contributions of his or her current work.

XIX. CONTRIBUTED PAPERS: INDUSTRIAL RELATIONS: THE OLD AND THE NEW

The Emerging Critical Paradigm in Industrial Relations

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At the moment the dominant practice in traditional industrial relations theory has been to imitate the methods of the natural sciences, or rather a narrow conception thereof, in search of a higher degree of objectivity and rigor. This prevailing approach presents at least two serious problems. First, the increasing elaboration of the individual disciplines within industrial relations has led to separatism, claims of superiority, and duplication of efforts across various subjects. Second, and more fundamentally, the adoption of a scientific outlook has resulted in a lack of reflection upon the subjective viewpoint of the researchers which necessarily shapes the concepts and values of any inquiry, in the belief that social reality is merely "given" and readily accessible to standard empirical procedures.[1]

At the same time, alternative paradigms are available within each of the constituent disciplines of industrial relations which offer potential solutions to the limited viewpoints and parochialism of prevailing approaches, and which together may result in a unified vision within the field. Figure 1 defines the disciplines or levels of analysis in industrial relations as the economic, social, legal, and historical. The two columns of the matrix depict the traditional or

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[1] For a discussion of the unreflective nature of positivistic science from the standpoint of critical theory, see Habermas (1971).

FIGURE 1
Industrial Relations Paradigms

Level of Analysis	Traditional	Critical
Economic	Institutionalism Neoclassicism	Institutionalism Post-Keynesianism Marxism
Social	Systems Theory Pluralism Behavioralism	Structuralism Critical Theory
Legal	Legal Realism Law and Economics	Critical Legal Studies
Historical	Wisconsin School	Social History Labor Process

prevailing paradigm, and what may be called the critical paradigm emerging as a result of the development of alternative approaches within each discipline.

Economic Theory

With the establishment of neoclassical hegemony, labor economics has become, largely by definition, critical of unionism. Despite extensive evidence that the labor market does not conform to a price-auction model (e.g., Thurow, 1983; Dunlop, 1988), orthodox economists persist in seeking the inefficiencies of unions. Often such criticisms rest on circular arguments, as when nonunion wages are equated with efficiency wages. More broadly, by establishing efficiency as a singular social goal, neoclassicism does not explain the role of distribution and effective demand in a dynamic economy.

Contemporary post-Keynesian economists such as Eichner and Kregel (1975) recognize these macro issues and also view economics in the context of social classes and historical time. Theories of labor market segmentation (e.g., Kalleberg and Sorenson, 1979) have examined the structured and endogenous nature of labor supply. By indicating the similarly conditional quality of technology, Rosenberg (1969) and contemporary Marxists have begun to elucidate the process of production, in contrast to the neoclassical reduction of social relations to exchange.[2] Clearly such approaches would also encourage increased institutional knowledge rather than abstract from such

[2] Even neoclassical theories of implicit contracting generally refer to abstract maximizing individuals.

material and would allow for a more realistic view of industrial relations.[3]

Social Theory

A critique of "economic man" was part of the Human Relations school and industrial sociology, both of which were instrumental in the formation of contemporary industrial relations theory. The classical statement by Dunlop (1958) adopted a functionalist systems perspective which presented a very general, static picture of society minimizing the importance of conflict and change. However, even this limited social vision was lost in subsequent years as the focus of research narrowed to the level of organizations and behavior.[4]

The recent effort by Kochan, Katz, and McKersie (1986) to present a comprehensive framework for industrial relations theory exhibits the limitations of this approach. Social actors exist at the micro level, obeying psychological laws loosely connected if at all to any larger social context.[5] Because the environment remains abstract, it takes on a reified, deterministic quality in the form of competitive or technological imperatives.[6] Thus, Kochan et al. adopt managerial definitions of firm performance or the world market rather than investigate the strategic action of dominant coalitions capable of shaping the environment, as developed by Child (1972).

Contemporary neoclassical and behavioral research contrasts sharply with institutional and sociological studies of earlier decades, which were rooted more firmly in observation and experience "from within." One possible corrective to adopting the assumption of dominant coalitions would be to examine more closely the viewpoints of such groups as the union rank and file (e.g., Slaughter, 1983; Parker and Slaughter, 1988).

Legal Doctrine

The establishment of labor rights resulted from the victory of legal realism over the laissez-faire principles of 19th century courts. More recently, however, proponents of the "law and economics" school such

[3] See Turnbull (1988) for a useful critique of neoclassical labor economics.

[4] Valuable critiques of organizational theory are presented by Silverman (1971) and Salaman (1984).

[5] See Strauss (1979) for a critique of the psychological approach. One good example of the reductionist tendency is Wheeler (1985), who bases industrial conflict on "sociobiological" drives.

[6] This is also true for Piore and Sabel (1984), who postulate a new era of "flexible specialization" to which work relations must adapt.

as Posner (1986) have sought to reinstate the legal formalism of the pre-NLRA era by applying neoclassical theory to judicial decision-making.[7] Another effort to introduce "science" into lawmaking was the use of a survey by Getman, Goldberg, and Herman (1976), praised by behavioral scientists such as Kochan (1977), to promote the deregulation of union representation elections. The haste to put these tentative findings into practice exhibits a viewpoint which inadequately reflects upon questions of rights, values, and power.[8]

Even aside from these attempts to transform labor law into a technical problem, the limitations of mainstream doctrine have been criticized by legal scholars such as Klare (1981), Stone (1981), and Atleson (1983). This work centers on the role of private property in the definition and limitation of workers' rights in such areas as subjects of bargaining, the right to strike, and authority in the workplace.

Perhaps the most important source of parochialism in the legal area is the professional autonomy of advocates and neutrals, rather than any academic boundaries. It would be useful to pay more attention to the role and interests of legal professionals in molding and perpetuating the industrial relations regime.

Labor History

In their depiction of labor history, Commons and Perlman stressed the role of the market in union growth, either through the extension of competition or the consciousness of scarcity. Labor history in recent decades has studied the workplace and the sphere of production. The analysis of Braverman (1974) and of historians such as Montgomery (1979) has generated a large literature on the labor process (see Littler [1982] for an overview) which focuses on struggles for pay and control of the workplace, past and present.

It is unfortunate that most contemporary industrial relations research remains ahistorical even in the face of such a vital body of scholarship. Even the descriptive studies of Katz (1985) and Piore and Sabel (1984) identify collective bargaining as a factor which has crippled American manufacturing, an interpretation which misreads the significance of deskilling and the limited nature of labor's contractual protection (see, e.g., Gartman, 1987). Furthermore, the call

[7] This school's criticisms of unionism contrast strongly with its sympathy for product market monopoly. Mitchell (1986) has also proposed deleting the Keynesian reference to "purchasing power" in Section 1 of the NLRA.

[8] Compare the approach of Weiler (1983), who proposed to solve the problem of representation elections by further empowering workers.

by these and other authors for decentralized bargaining reverses the traditional labor strategy to "take wages out of competition" which the Wisconsin scholars described.

Conclusion

The future direction of industrial relations research is unclear. Its various disciplines are pulling in opposite directions, and the concern with technical rigor appears to have taken on a life of its own. In general, there has been a diminished concern for the expansion of industrial democracy, of the control by working men and women of their productive lives.

This paper has sought to reveal the subjective dimension of social science, and to suggest an alternative perspective in which the disciplines of industrial relations can join in productive cooperation. Equally important is a coherent social vision to guide research, such as the goal of democracy at work outlined by Summers (1979). The purpose of this piece has been merely to argue that a sound basis exists for another path.

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Organizing Activity Among University Clerical Workers

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As union membership has declined and blue-collar employment has contracted, union organizers have shifted their attention to white-collar workers in the largely nonunion service sector. Interviews with union organizers indicate that a disproportionate share of this organizing activity has been aimed at college and university clerical employees. In order to gain a better understanding of this activity, two avenues of inquiry were pursued. Interviews were conducted with 48 union officials who have been involved in university clerical organizing. In addition, a questionnaire concerning the unionization of clerical workers was mailed in 1986 to personnel directors of all colleges and universities in New England with accredited bachelor's degree programs.[1]

This paper summarizes the interviews with union officials, focusing on factors which influence organizing success among university clericals. The hypotheses which are developed are then subjected to econometric analysis using data from the survey of personnel directors and other sources.

The Organizing Environment on Campus[2]

The geographic stability of universities helps make them attractive organizing targets. There is little chance that management will relocate work under the threat of unionization. This stability is important because organizing typically proceeds slowly with clerical workers (Hurd and McElwain, 1988). Employees of universities traditionally

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[1] Copies of the interview schedule and questionnaire are available from the authors on request.

[2] Except where noted, this summary is based on the organizer interviews. A complete list of union officials, their affiliations, and the dates of the interviews is available on request.

have freedom to communicate on the job. This facilitates the organizing process by allowing union supporters to keep in touch with each other and to talk about the union in the office with their co-workers. Furthermore, most campuses are open to the public, allowing union organizers greater access to workers than they have in nonuniversity campaigns.

As is true with clericals in other settings, organizing is easier where the workers are familiar with unions. The familiarity may be present because unions are well established in the broader community, because family members or friends belong to unions, or because other university employees in the area are unionized. In some cases prior existence of a staff association on campus is helpful, particularly if the officers of the association feel frustrated due to lack of influence and support the organizing effort. Based on the interviews we can also deduce that the presence of a faculty union would be particularly beneficial.

Organizers agree that faculty play an influential role. Most university clericals have few problems with their immediate supervisors. In fact, they take pride in their association with faculty members, particularly those who publish articles or are otherwise professionally active outside of the university. Some organizers complain that the prestige associated with university employment creates a barrier to organizing. Other organizers believe that the prestige issue can be used as an organizing tool—the clericals work closely with respected professionals, and yet clericals themselves are accorded neither notice nor compensating monetary rewards.

On a related point, university clericals who seek union representation often complain of lack of dignity, lack of respect, or being treated like second-class citizens. These feelings are often crystallized as women's issues, with attention drawn to pay inequity, lack of upward occupational mobility, and problems with day care. The importance of women's issues in university campaigns differs from the prominence of traditional trade union issues in other clerical organizing (Hurd and McElwain, 1988).

Public universities are easier to organize because they do not resist organizing as vigorously as private universities. Furthermore, organizers have easy access to lists of employees and to financial and budgetary data, and can sometimes exert political pressure.

This overview of the organizing environment on campus has highlighted some of the key factors which might affect both the attractiveness of a particular university to union organizers and the potential for success where a campaign is initiated. In the following section the influence of several of these factors is subjected to statistical analysis.

Empirical Model

The statistical analysis focuses on the 124 four-year colleges and universities in New England which had enrollments of 500 students or more in 1986.[3] Three alternative dependent variables are defined: UNION, which takes on a value of one if the clerical workers at the university are represented by a union, zero otherwise; SUCCESS/FAILURE OF AN ORGANIZING CAMPAIGN, which is defined to be equal to one where clerical workers are unionized, zero otherwise (this variable is defined only for the subset of 55 universities which experienced an organizing campaign between 1970 and 1986); ORGANIZING CAMPAIGN, which takes on a value of one if there was an organizing campaign, successful or unsuccessful, among the clerical workers at the university, zero otherwise.

Each of these dependent variables is dichotomous and its relationship to the independent variables is modeled as a logit binary choice model.[4] For the dependent variable UNION, the logistic model assumes the form:

$$\text{Prob(UNION)} = F(x_i'\beta) = \frac{1}{1 + \exp(-x_i'\beta)}$$

where F( ) is the logistic cumulative distribution function, x_i' is a vector of independent variables, and β is a vector of unknown coefficients. Maximum likelihood estimation techniques are used to estimate the β vector.

Our interviews and prior research suggest several independent variables:

1. *Whether or not the university is a PUBLIC institution.* Our interviews and descriptive statistics based on a nationwide survey of large universities regarding unionization of clerical workers (Hurd and Woodhead, 1987) suggest a positive relationship between PUBLIC and all three specifications of the dependent variable.

2. *The number of clerical workers, which is proxied by the ENROLLMENT of the school.* Previous research has consistently

[3] There were 125 accredited colleges and universities in New England with enrollments of 500 or more in 1986 (Harris, 1987). Of these, usable data were obtained for 124 from the mail questionnaire and other sources.

[4] For a more detailed discussion of the logistic model, see Judge et al. (1982, Ch. 19).

found a negative relationship between unit size and the percentage of workers voting for union representation (Heneman and Sandver, 1983). We hypothesize a negative coefficient on ENROLLMENT in the success/failure specification of the dependent variable. On the other hand, a positive sign on ENROLLMENT is hypothesized in the ORGANIZING CAMPAIGN equation. This reflects the presumption that organizers' targeting decisions are positively influenced by the potential number of new union members. Finally, the sign on the coefficient in the UNION specification is indeterminant since it incorporates both the positive impact of ENROLLMENT on targeting activities and the negative impact on union victory.

3. *The existence of a faculty union.* Separate dummy variables are defined for three faculty bargaining agents: American Association of University Professors (AAUP), National Education Association (NEA), and American Federation of Teachers (AFT). Hurd and Woodhead (1987) find that faculty and clerical workers are either both union or both nonunion on 76 percent of large campuses nationwide. A positive coefficient on each dummy variable is hypothesized.

4. *The level of unionization in the area, as measured by the STATE UNIONIZATION LEVEL.* Our interviews and prior research on National Labor Relations Board (NLRB) elections (Seeber and Cooke, 1983; Hurd and McElwain, 1988) suggest a positive relationship between unionization level and all specifications of the dependent variable.

5. *The issue of prestige as measured by the STATUS of the college or university.* This variable takes on a value of one for schools with selective admission standards and doctoral programs and is otherwise equal to zero. Our interviews suggest that the coefficients on STATUS could be either positive or negative.

Results and Conclusions

Table 1 contains the results for four specifications of the logit model. Specifications 1 and 2 use the dependent variables UNION and SUCCESS/FAILURE OF AN ORGANIZING CAMPAIGN. Specification 3 also uses the SUCCESS/FAILURE dependent variable but omits PUBLIC as an explanatory variable. The fourth specification uses ORGANIZING CAMPAIGN as the dependent variable and also omits PUBLIC. Attempts to estimate the fourth specification with PUBLIC included were unsuccessful due to the limited variation in that variable for different values of the dependent variable, and due to the patterns of correlations among several of the

TABLE 1

Maximum Likelihood Logit Estimates: New England Colleges and Universities with Enrollments over 500

	Dependent Variables			
Independent Variables	Union (1)	Success/Failure of Organizing Campaign (2)	Success/Failure of Organizing Campaign (3)	Organizing Campaign (4)
PUBLIC	4.028°°° (1.149) [0.457]	2.062° (1.319) [0.276]		.
ENROLL-MENT	0.003 (0.006) [0.0003]	−0.003 (0.007) [−0.0004]	−0.003 (0.006) [−0.0005]	0.032°°° (0.011) [0.008]
AAUP	3.108°° (1.528) [0.350]	3.089°° (1.768) [0.414]	3.089°°° (1.547) [0.587]	2.412°°° (0.891) [0.599]
NEA	4.353°°° (1.545) [0.494]	3.687°° (1.763) [0.518]	4.687°°° (1.513) [0.709]	4.983°°° (1.152) [1.237]
AFT	4.926°°° (1.514) [0.557]	4.761°°° (1.991) [0.638]	4.828°°° (1.859) [0.713]	2.395°°° (0.819) [0.595]
STATE UNION-IZATION LEVEL, 1980	0.515°°° (0.201) [0.058]	0.491°° (0.224) [0.066]	0.318°° (0.191) [0.048]	−0.135 (0.100) [−0.336]
STATUS	3.885+++ (2.456) [0.440]	2.963+ (1.652) [0.397]	2.376+ (1.344) [0.360]	1.161 (0.775) [0.400]
INTERCEPT	−14.798	−11.738	−7.712	−0.459
MODEL X^2	105.11	32.96	30.47	83.61
PSEUDO R^2	0.68	0.50	0.46	0.49
# OF OBSERV.	124	55	55	124

Notes: Standard errors in parentheses; $\partial P/\partial x$ in brackets.

° Significant at .10 level, °° significant at .05 level, °°° significant at .01 level (one-tailed test).

+ Significant at .10 level, ++ significant at .05 level, +++ significant at .01 level (two-tailed test).

More specific variable definitions are available on request.

independent variables. So that we might still be able to examine the impact of the other variables on ORGANIZING CAMPAIGN, PUBLIC was omitted in specification 4. Specification 3 is included for purposes of comparison.

The model chi-square statistics indicate a significant relationship between our set of independent variables and each of the dependent variables. The maximum likelihood equivalent to the R^2, the pseudo R^2, ranges from 0.46 to 0.68. These values are quite large relative to the R^2 in the literature on cross-sectional analysis of the determinants of unionization.

The hypotheses are generally substantiated by the results. PUBLIC has the predicted impact on the UNION and SUCCESS/FAILURE dependent variables. The signs of the coefficients on ENROLLMENT support our hypotheses, but the magnitudes of these coefficients in specifications 1, 2, and 3 are very small and not significantly different from zero.

As expected, the presence of a faculty union has a significant positive impact on clerical organizing success. Furthermore, the magnitude of the impact varies depending on the faculty bargaining agent, in the following descending order: AFT, NEA, AAUP. This order is consistent with the styles of these three organizations (union versus professional association) and their degree of integration with the broader labor movement. Further analysis indicates that the relationship between faculty unions and clerical unions has two distinctive components. The *prior* existence of a faculty union facilitates clerical organizing by providing a supportive environment. In addition, general conditions on a specific campus may be conducive to *both* clerical and faculty unionization.[5]

STATE UNIONIZATION LEVEL has the hypothesized positive impact on the UNION and SUCCESS/FAILURE dependent variables and this relationship is significant in specifications 1, 2, and 3. Our hypothesis about the sign of a coefficient is not supported in only one case: the targeting activity of unions is not positively influenced by the level of unionization in the state.

Results for specifications 1, 2, and 3 indicate that higher status universities are more likely to have successful organizing campaigns and clerical unions. We should note that STATUS captures the relative prestige of employment at some universities compared to others, rather than the prestige of university clerical employment relative to other clerical employment. The significant positive impact of STATUS on university clerical organizing deserves further explanation. One organizer currently involved in several university clerical campaigns offered an intriguing interpretation. On more prestigious campuses, there is often a core of well-educated, politically astute

[5] Analytical details will be provided by the authors on request.

clericals who have a strong attraction to the university because of the challenging work which goes on there. Their expectations are higher than typical university clericals, and they are particularly frustrated by the limitations of their jobs. These workers often become involved in union organizing campaigns and make for a committed, high quality, independent organizing committee (Schaffer, 1988).

A comparison of specifications 3 and 4 indicates that union targeting is not totally consistent with factors which influence success. The size of a university has a significant positive impact on targeting, but no impact on success. The level of unionization in a state has a significant positive impact on success, but a negative (though insignificant) impact on targeting. Although STATUS has a positive impact on both targeting and success, the impact on targeting is insignificant while the magnitude of the impact on success is larger and the relationship is significant. These results suggest that organizing success might increase if unions place less emphasis on the size of the university and concentrate more on prestigious institutions in states with relatively high levels of unionization. In fairness to union organizers, we should qualify these suggestions by noting that of the campuses in New England where clerical organizing campaigns were conducted during the 1970-1986 period, 71 percent were unionized in 1986.

We caution that our research is based on regional data and should be subjected to further testing using a national sample. We do not address nonenvironmental issues which might affect the outcome of specific campaigns, such as organizing tactics or resistance strategies. We believe, however, that our analysis provides a useful framework for future research.

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Strategic Planning in U.S. Labor Unions

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Strategic planning is gaining recognition in the industrial relations literature, starting with a 1984 article by Kochan, McKersie, and Cappelli on strategic choice and industrial relations theory. While their piece focused on management theory, the role of union leaders was also acknowledged. A year later, the AFL-CIO Committee on the Evolution of Work issued a report calling for unions to pursue various strategies in an effort to renew and regenerate the labor movement. As such, union leaders are being encouraged to become active participants in strategic decision-making.

While the concept of union strategy is beginning to be addressed in the literature, a question remains as to whether union leaders actually engage in formal strategic planning. The purpose of this research is to investigate: (1) to what extent unions conduct formal strategic planning; (2) the relationship of planning to changes in individual union membership; and (3) whether the effort and resources devoted to different activities vary based on the existence of formal strategic planning.

Strategic Planning and Union Activities

Strategic planning has been defined as a systematic process of determining an organization's objectives, and then developing strategies that will govern resources to achieve these objectives (Kudla, 1980). Strategic planning has been viewed as important in improving organizational performance (Chandler, 1962), but most of the vast strategic planning literature has focused on business. Some

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union leaders, however, are recognizing the need to engage in systematic planning if they are to achieve their objectives. For most unions, one common objective is to achieve organizational growth. Therefore, those union leaders who are engaging in strategic planning typically include strategies intended to enhance their membership base either through growth activities or through modifying their environment (Hamilton, 1987).

There seem to be three basic types of strategies available to either enhance membership or create an environment more conducive to unionism: (1) proactive/growth strategies; (2) reactive/defensive strategies; and (3) environmental modification, or "change the game" strategies.

Proactive/growth strategies are designed to increase membership of a union. For example, the leaders might choose to strengthen organizing efforts in a union's traditional jurisdiction, thus enhancing growth. Additionally, some unions are choosing to attempt organizing in new jurisdictions in order to expand their boundaries and areas of expertise. Boundaries may also be expanded through the implementation of contractual affiliations with independent employee unions or associations.

Reactive/defensive strategies attempt to preserve labor's present position. One example of this type of strategy is an effort to maintain an adequate level of services to members to prevent dissatisfaction and subsequent decertifications. A second reactive/defensive strategy is to pursue a merger with another organization. If a union is experiencing a drastic decline in membership, the leaders may choose to join forces with another union to gain the necessary resources for survival.

The third strategy is to attempt to modify the environment, or "change the game." Some union leaders are choosing to change their traditional adversarial relationship with management and are pursuing a positive approach through participating in labor-management cooperative campaigns (McKersie, 1986; Talmadge, 1986). Another way to change the game, in direct contrast to the cooperative approach, is the use of corporate campaigns. The corporate campaign is designed to apply secondary pressure to points of vulnerability in a company's political and economic relationships, thus providing the union with more leverage power (Perry, 1987). The third strategy for modifying the environment is to change public policy through lobbying and PAC contributions. Many union leaders are choosing to devote resources to an effort to elect sympathetic lawmakers and to achieve favorable legislation, thus changing the environment in which they must operate.

In sum, union leaders who engage in strategic planning have alternative courses of action from which to choose in order to strengthen their membership and the labor movement. The extent of planning and the resources devoted to each of these strategies, however, is unknown. Therefore, in the next section we will present the results of an empirical analysis of union strategic planning and choice of strategy.

Research Propositions

An initial question is whether or not large unions are more likely than small unions to engage in strategic planning. The larger unions might be expected to have more staff and financial resources to apply toward planning, as well as a need to exert more systematic control over activities. However, planning is not necessarily resource intensive or restricted to large organizations. Consequently, this question will be analyzed.

The first research proposition is that pursuit of proactive/growth strategies will be associated with unions that engage in formal strategic planning. This proposition assumes that planning is a proactive process and is less likely to be employed by reactive organizations.

The second research proposition is that attempts to change the game will also be associated with unions that engage in strategic planning. Activities designed to modify the environment or change relationships entail deliberate actions by the union leadership and would not be expected to occur without careful, systematic planning.

The third proposition is that formal strategic planners are more likely to exhibit a trend of increasing membership. Given the assumption of a planning-performance link, strategic planning should be positively related to increasing membership.

Research Design

Sample and Method

The sample for the study consisted of all national and international unions, both independent and AFL-CIO affiliated. To identify potential respondents, union presidents were asked to provide the name of the most appropriate contact person within the union. These individuals were mailed a survey, accompanied by a letter from the Washington State Labor Council encouraging their participation. A total of 208 surveys were distributed. Of the replies, 114 were usable, resulting in a usable response rate of 56 percent. Of these, 78 (69 percent) were affiliated with the AFL-CIO, and 36 (31 percent) were independent; 51 (45 percent) described their union as representing workers in the goods-producing employment sector, 39 (34 percent) stated their union primarily represented the service/public sector, and 24 (21 percent) had a fairly even mix of both sectors.

Survey Measures

Respondents were asked to indicate the total number of dues-paying members as of January 1, 1988. Based on these responses, a bivariate classification for size was created, with unions categorized as either membership under 100,000 or over 100,000. The figure 100,000 was chosen based on the AFL-CIO report (1985) which stated that unions with fewer than 100,000 members have been the hardest hit by adverse environmental conditions and are suffering a reduced capacity to service their members. Of the 114 respondents, 82 (71 percent) had under 100,000 members, while 32 (29 percent) listed a membership of over 100,000. To check for possibilities of a sampling bias due to nonrespondents, chi square tests were conducted comparing the 1987 AFL-CIO membership figures for all affiliates (expected frequencies) with respondent membership figures (observed frequencies). No significant differences were found.

Respondents were next asked to state whether the change in the number of dues-paying members in the past five years could be best characterized as high growth, moderate growth, no change, moderate decline, or high decline. This measure was used to classify unions according to membership change trends. Of the responses, 7 (6 percent) are in a trend of high growth, 37 (33 percent) listed moderate growth, 18 (16 percent) listed no change, 36 (32 percent) are in a moderate decline, and 14 (13 percent) stated a condition of high decline. Again, observed responses were compared to AFL-CIO membership statistics for the past five years, and the mix seemed fairly representative.

For strategic planning measures, unions were classified on a dimension of formal planning. Respondents were first asked to indicate whether or not their union has a written, formal long-range plan for future activities which extends three years into the future. Next, they were asked to indicate if the union has a formal plan which includes: (1) goals and objectives, and (2) specific action plans to achieve the goals and objectives. Based on Kudla's (1980) planning classes, the unions were divided into three categories: (1) Nonplanners, or no formal long-range planning process; (2) Incomplete Planners, or written plans with goals and objectives but no specific action plans; and (3) Complete Planners, or written plans with goals and objectives plus specific action plans. After classifying the respondents, however, the number of incomplete planners was limited. Therefore, the categories of incomplete and complete planners were collapsed, resulting in a bivariate classification of planners and nonplanners similar to the operational definition used for past strategic planning research (e.g., Robinson and Pearce, 1983). Of the responses, 74 (65 percent) were categorized as nonplanners and 40 (35 percent) as planners.

To measure the effort and resources expanded in the past five years on each union strategy, a 5-point Likert scale was used (5 = substantial resources and effort; 1 = no resources and effort). Operational definitions pertaining to the variables included in the analysis are provided in Table 1.

TABLE 1
Variable Definitions

Variable	Definition
ORGSAME	Organizing new units in same jurisdiction
ORGDIFF	Organizing new units in different jurisdiction
AFFIL	Pursuing affiliations with independent unions
DECERT	Preventing unit decertifications
MERGE	Pursuing a merger with another union
CORPCAM	Implementing corporate campaigns
PAC	Lobbying and political action
LMPRO	Cooperative labor-management programs
MEMCH	Change in members in past five years

Results

The initial question addressed the issue of whether large unions are more likely to plan than are small unions. Results revealed that 27 of the 82 unions (33 percent) with memberships under 100,000 and 13 of the 32 unions (41 percent) reporting memberships over 100,000 engage in formal planning. Analysis of these data using a chi-square statistic yielded no significant differences based on size. Consequently, strategic planning does not appear to be limited to unions with a large membership base.

The first proposition theorized that pursuit of proactive/growth strategies is more likely to be associated with unions that engage in strategic planning. Table 2 presents the results of a statistical analysis of variance for the data, indicating partial support for this proposition. Unions that are formal strategic planners devote more effort and resources to organizing in the same and in different jurisdictions than do nonplanners, while the strategy of affiliation yielded no significant differences.

TABLE 2

Means and Main Effect of Statistics
N = 114

Variable	Nonplanners	Planners	F[a]
Proactive/Growth Strategies			
ORGSAME	3.061	3.686	4.827°
ORGDIFF	1.859	2.625	7.984°°
AFFIL	2.047	2.206	.328
Reactive/Defensive Strategies			
DECERT	2.429	2.559	.215
MERGE	2.269	1.912	1.317
Change the Game Strategies			
CORPCAM	1.969	2.710	6.747°
PAC	3.406	4.059	6.268°
LMPRO	2.508	3.000	3.596

[a] df = 1, 111.

° $p < .05$.

°° $p < .01$.

Table 2 also presents the results for the second proposition, which stated that strategies designed to change the game are more likely to be pursued by planners. Again, analysis of variance provided partial support for the proposition, as planners devote more effort and resources to implementing corporate campaigns and lobbying/PAC. Additionally, while the pursuit of labor-management cooperative programs was not significant at the .05 level ($p = .063$), the analysis does indicate that this strategy is more likely to be associated with formal strategic planners.

The third proposition theorized that unions that engage in formal strategic planning are more likely to exhibit a membership trend of increasing growth. Table 3 presents the results of the analysis of variance for these data, indicating strong support for this proposition.

TABLE 3
Means and Main Effect Statistics
N = 114

Variable	Nonplanners	Planners	F[a]
MEMCH	2.603	3.417	11.951***

[a] df = 1, 111.
*** $p < .001$.

Discussion

The extent of formal strategic planning among unions appears to be minimal, as 74 (65 percent) of the respondents stated that they have no formal, written plans. However, some unions do seem to be formulating strategic plans in an attempt to achieve their goals. Since only cross-sectional data were collected, it is uncertain if this is a recent development on the part of those unions that are planning.

Furthermore, it seems that the size of a union has little bearing on whether or not strategic planning exists. What is interesting is that more unions that engage in strategic planning, regardless of size, report their membership base is increasing. One interpretation of this is that a possible outcome of planning may be organizational growth. While it could be interpreted that increasing membership may influence the extent of planning, this seems less likely given the results that size is not correlated with the existence of strategic planning. Future research should explore the direction of causality on this dimension.

The data on the differences in strategies reveal that planners devote more effort and resources to four of the eight activities. First, planners are more likely to pursue the proactive/growth strategies. This result is consistent with the finding that planners are more likely to have an increasing membership. If a union devotes more resources and effort to organizing activities, then it is likely that membership will exhibit an upward trend. Second, planners devote more effort and resources to a strategy of attempting to change the game by implementing corporate campaigns and lobbying/PAC. One explanation for this difference could be that both corporate campaigns and lobbying/political action require extensive time and planning if they are to be effective.

Efforts and resources devoted to the reactive/defensive strategies of decertification prevention and merger are not significantly different for planners and nonplanners. However, one interesting observation is that the only activity where nonplanners have a higher mean than do planners is that of pursuing a merger with another union. This result corresponds with the finding that nonplanners are more likely to have a declining membership. If a union is experiencing a high decline in members, then it is more likely that the officers will be seeking to merge with another union in an effort to survive.

One possible limitation of the research is that self-report measures on membership numbers and trends were necessary in order to assure anonymity of the survey. For planning and union activities, the data were not available elsewhere, so self-report measures were also required for these variables. There is some concern in regard to the reliability of such measures, but a crosscheck of responses given on a pilot test of the survey (N = 8) with AFL-CIO reporting data indicated that all eight gave accurate information.

Another limitation is that only one measure was used for determining the effort and resources expended on union activities. An attempt was made to obtain objective data, such as actual financial expenditures from LM2 forms and from union officers, but it seems that most unions do not break down their expenditures by the strategic activities defined in this paper.

Finally, as with research on the effect of formal strategic planning on firm effectiveness, the planning-performance link is tenuous and difficult to measure directly (Pearce, Freeman, and Robinson, 1987). Further, little is known as to who is involved in the planning and what actually occurs in the decision process. Regardless of these limitations, the study should nonetheless contribute to the literature by providing an initial exploratory analysis of union formal strategic planning.

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DISCUSSION

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My role today involves commenting on three contributed papers. Professor Schwochau fulfills a similar role. To avoid excessive duplication, we divide our comments into two main areas. My remarks concentrate on putting the research into perspective, showing how it both manifests and explicates the theme of this session. Professor Schwochau provides a more detailed critique of the papers themselves. The papers are Richard W. Kalwa, "The Emerging Critical Paradigm in Industrial Relations"; Richard W. Hurd and Adrienne M. McElwain, "Organizing Activity Among University Clerical Workers"; and Kay Stratton and Robert B. Brown, "Strategic Planning in U.S. Labor Unions."

The Industrial Relations Research Association offers the theme "Industrial Relations: The Old and the New" for this session of contributed papers. The theme implies more than a change in time, a gradual progression of events within and around the industrial relations system. It suggests something of a more profound order, a significant alteration in the nature of the relationships between the principals and their environs. This spirit serves as a lodestone for my discussion.

The Transformation

Although change occurs naturally and inevitably, it nonetheless may significantly transform conditions. Kochan and Piore (1985, p. 2) identify the "decline in union and collective bargaining coverage in the private sector" as the most significant change in the industrial relations system in recent decades. Representing what J. M. Keynes might classify as "progressive violent change," the proportion of the organized nonagricultural workforce stands at less than 18 percent today in comparison with nearly 35 percent three decades ago. More striking, the proportion of unionized private-sector workers is roughly one-third of what it was then.

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Several factors at least partially explain this profound transformation in the representation and, impliedly, the strength of the labor movement, and they provide a basis for putting the papers into perspective. At the risk of some oversimplification, the factors fall into three categories: structural, legal, and attitudinal. Researchers and practitioners observe that major structural changes have occurred in the American economy, producing untoward results for labor. The growing "Sun Belt" population, the shrinking manufacturing base and burgeoning service sector, and the changing demographic composition of the workforce provide some explanation for the decline, but these structural developments cannot account for all of the change. Some point to the inadequacies in labor relations law which make organizing comparatively difficult and to "hostile" decisions made by the Reagan administration and its NLRB as further reasons for the erosion of labor's position. A simple decline in the preference for unions among workers may provide another viable explanation.

Whatever the reasons, organized labor finds itself in a difficult and challenging time. Although nothing new (Eugene Debs wrote in 1894 that "Ten thousand times has the labor movement stumbled and bruised itself."), it provides cause for investigation. The AFL-CIO (1985) recognizes this, having made an "effort to assess the significance of changes in the work environment" in order to come up with recommendations that "will enable unions to remain the authentic voice of workers and their chosen vehicle for expressing their will" (pp. 5, 7). As noted, the three papers presented here both manifest and explicate the transformation from the old to the new.

The paper by Stratton and Brown reflects the perceived and real need by some in organized labor to take a more strategic approach to bolstering membership. The authors, who have extended the work of Kochan, McKersie, and Cappelli (1984), identify three strategic options (proactive, reactive, and "change the game") and classify unions as planners and nonplanners based on responses to questionnaires sent to national and international unions. They then compare planners and nonplanners in terms of the resources devoted to particular strategies. Stratton and Brown find that planning unions devote more resources to proactive organizing strategies.

Without commenting on the merits of the research per se (I see simultaneity, measurement, and interpretation flaws), the paper underscores the practical need to devote more attention to organizing the workforce if unions are serious about reversing declining trends in recent decades. The importance of strategy or strategic planning appears nowhere greater than in the federal sector (an area in which I have had research interests). The American Federation of Government Employees faces a merger with AFSCME if it cannot solve its enormous "free-riding" problems, and the National Treasury Employees Union is planning to attack AFGE units in several key areas in order to expand its membership. More broadly, understanding the strategic "choices" available to unions and the likely impacts of those choices constitutes an important area in which future research in industrial relations could be directed.

The Hurd and McElwain paper mirrors the inevitability of making the unionization of clerical workers a key part of a union-revitalization strategy. A sizable portion of this growing sector exists in a university setting, which, as the authors point out, is somewhat attractive from a union's perspective because of its geographical stability. The paper builds hypotheses from interviews conducted with 48 union officials involved in university organizing campaigns, and tests hypotheses using data collected from questionnaires distributed to personnel directors in colleges and universities in New England.

In at least one respect, the empirical results highlight the "catch-22" in which organized labor finds itself. That is, capacity to organize—and organize successfully—depends on its extant penetration of the surrounding workforce. As its existing base shrinks, organizing becomes more difficult. A "strategic" option unions might consider to offset this secular disadvantage is to target university clerical units in which there is geographically close representation of cognate employees and in which there is a match between the already recognized union and the union seeking recognition.

The nonempirical paper by Kalwa criticizes what I have termed the atomization of the field of industrial relations. The author specifically criticizes the trend in research to separate disciplines, ignore subjective biases, and isolate empirical investigations from the broader economic, political, and social issues raised by the role of trade unions in society. He proposes exploring "alternative paradigms" within the disciplines that feed into industrial relations—economic, social, legal, and historical. This paper testifies to the need among researchers and practitioners alike to see how labor relates to the broader environment. How is labor affected by changes in the political environment, the culture of a society, the distribution of economic power among classes?

More specifically, there needs to be a better appreciation of the "macro" consequences of changes in the state of organized labor. For instance, what is the relationship between the decline of unions and industrial democracy in the workplace? Further, what is the relationship between industrial democracy and external political democracy? These are the kinds of "for what?" questions implied by the author. Why are we, as researchers, concerned about unionization, about certification, about organizing strategies? It relates to our assessment—objective and subjective—of the import of unions in society.

In conclusion, these papers represent nicely the changing order of industrial relations. They reflect the necessity of strategically assessing the organizational opportunities for unions, the unavoidability of availing organizing options in the clerical sector, and the broader reason to be concerned about the plight of unions in society. In the final analysis, however, the "new" industrial relations is not new in the sense that it presents the same basic questions raised in the old. What is the condition of unionism? What affects this condition? What can unions do about the situation? Are unions "good" or "bad" institutions?

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DISCUSSION

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I would like to focus my comments not only on specific aspects of the papers presented here, but also on which directions future research may take. As Professor Masters's comments suggest, from one perspective these papers can be seen as raising "old" industrial relations questions in "new" areas. For example, in focusing on clerical organizing in universities, Hurd and McElwain continue their contributions to the understanding of union organizing in "nontraditional" areas. The very interesting questions regarding the relationship between faculty unionization and clerical organizing raised in this paper serve as fruitful topics of subsequent research.

First, however, some methodological issues should be addressed. Measures of faculty unionization should reflect whether or not faculty were organized prior to an attempt to organize clericals. A footnote suggests information to do this was available. I would have preferred to see the results using the "previously organized" variables.

In general, the fact that the independent variables are measured in 1980 or 1986, when clericals could have organized much earlier, causes problems for each of the models. In using these data, the authors assume that the independent variables are constant over time. However, it is likely that enrollment, prestige, state unionization, and faculty organization substantially changed between 1970 and 1986. Thus, we have an unclear picture of how these variables influence the probability that an organizing attempt was made and whether or not it was successful. In order to fully understand how these factors affect the success or failure of an organizing attempt, for example, it is necessary to analyze the environment that existed at the time of the campaign.

Were these changes to be made, they would likely have little effect on the positive relationship found between faculty and clerical organization. Questions regarding this relationship that future research can provide answers to include whether or not factors which influence

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faculty organization also affect clerical organization. The authors suggest, for example, that university prestige influences each, and may in fact have opposing effects on faculty and clerical organization. If this is the case, a method such as the instrumental variables approach may be needed to isolate the influences of these types of variables on clerical organizing. Future research can also examine the effects decisions that made public-sector faculty managers under the law (such as that recently handed down in Pennsylvania) may have on future clerical organizing attempts.

Stratton and Brown's work falls within the relatively new "strategy" literature and the even newer "union strategy" literature. It too provides a base on which future research can build. This exploratory work suggests what types of strategies are undertaken by unions that engage in formal planning. I do have some questions about why some of the strategies are categorized as they are. For example, I would suspect that research and effort being put into labor-management cooperation efforts can only be part of a "change the game" strategy if the union initiates the move away from an adversarial approach. If management has "imposed" cooperation by implicitly threatening plant closure, this may be more indicative of a "reactive strategy."

The next step in this line of research is to examine, through the use of multivariate procedures, how planning unions differ from nonplanners. What are the characteristics of unions that have formal plans? The authors have done some initial investigation in this area in examining differences by union size. Data were also collected on the types of workers the unions surveyed represented. I would have liked to see if planners were primarily goods-producing or service unions, or unions that represented a mixture of workers.

One question that came to my mind was whether the development of a formal plan was itself evidence of a proactive or a reactive strategy. In what way does the environment the union faces contribute to its decision to engage in formal planning processes? This leads me to a problem that I believe future research in this area will need to grapple with—the relationship between planning activities and union growth. It may also be argued that growing unions are more likely to be those that plan, given the availability of financial resources and therefore the ability to take a proactive stance. Thus, causality may be reversed. Future research, in dealing with this issue, can give us additional information on the factors associated with union planning activities.

Kalwa's paper presents what may be termed the "theses" and "antitheses" in four disciplines of industrial relations. He argues that our research would benefit from attention to such factors as power, class, and history and how they shape IR. I fully agree that more attention needs to be paid to how the parties interact with and, indeed, shape their environment.

However, perhaps because of the page limitations we face here, much research which I believe attempts to do what Kalwa proposes is not considered. An example is organizational economics, which sees a beneficial role unions can play in an organization (see Barney and Ouchi, 1986). Also a vast body of research which takes factors, like power, into account has also been ignored.

Finally, Kalwa argues that there should be a reconciliation of the paradigms he identifies. It can be argued that a reconciliation, or synthesis, is inevitable. However, in calling for more integration of theory or for a shift toward inductive research, we must also recognize that barriers to these types of changes exist. These barriers include not only the fact that as researchers, we are educated in specific "schools of thought," but that we are also often rewarded on the basis of becoming known for particular theories, frameworks, and research streams. Young academics may be taught to integrate paradigms, to use models from various disciplines, and to appreciate the inductive method of research. They must also recognize, however, that they will be ultimately judged not only on quality, but also on quantity. This constitutes another barrier.

I believe that researchers need to be more aware of alternative views and methods of investigating the questions we are interested in. Kalwa's paper, by identifying these paradigms, helps us in this regard. However, the barriers to adoption of these alternatives are such that we are not likely to see substantial change in the near future.

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XX. CONTRIBUTED PAPERS: LABOR ECONOMICS

Measuring Wage Dispersion: An Application of Entropy Measures to Analyze the Former Bell System's Pay Structure

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In contemporary labor market analysis there has developed a renewed interest in understanding and measuring wage differentials. Theoretical advances in efficiency wages and compensating wage differentials have focused attention on the sources of variation in wage differentials. The public policy debate on comparable worth has brought economists and others into conflict over the measurable basis of current wage differentials between traditionally male and female occupations. Current research on the distributive consequences of unionism has demonstrated that unions reduce earnings inequality through wage rate standardization (Freeman, 1982). Earlier institutional studies found that the main source of occupational wage compression was the uniform pay increase,[1] whether it be for basic wages, cost-of-living adjustments (COLA), or fringe benefits (for example, Reynolds and Taft, 1956, p. 185). These results have been replicated in recent studies of COLA clauses that require uniform increases (Mitchell, 1980).

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[1] A uniform pay increase raises all employee earnings by the same dollar amount and therefore reduces the relative differential.

This paper evaluates alternative methods of measuring wage dispersion and seeks to answer the following question: Does the method of wage dispersion measurement influence our understanding about changes in the pay structure? Applying and comparing several methods for measuring wage dispersion, this study reports on historical changes in the former Bell System's nonmanagerial pay structure. The results show that the Bell System's pay structure compressed during the period 1953-1980 and that the rate of this compression accelerated beginning in the late 1960s. All methods for evaluating wage dispersion find that the pay structure compressed, but differ in the magnitude of the compression.

Measuring Inequality

To accurately measure wage dispersion several theoretical and practical issues need to be settled. Prior studies of earnings dispersion have used a variety of methods to measure the inequality of earnings. Some of the simple and inappropriate measures that have been utilized include: measuring wages as a percent of the lowest wages, the variance of the wage, the index of dispersion, or the variance of the log of wages (Hirsch, 1982; Freeman, 1980, 1982).[2] More appropriate measures have been used, such as the coefficient of variation (Barsky and Personick, 1981) and the Gini coefficient (Hirsch, 1982; Hyclak, 1979, 1980; Quan, 1984). This study proposes the application of entropy measures to analyze wage dispersion.

Why use the entropy measure on earnings dispersion? Other measures of earnings dispersion are inferior when compared to the entropy indices for several reasons. (1) The variance fails because it is not earnings scale independent. Earnings scale independence requires that if all earnings are doubled, the index should remain unchanged since all rankings remain unchanged. (2) The variance of the log fails the criterion of the weak principle of transfers.[3] The weak principle of transfers requires that if a transfer should occur from richer to poorer individuals, where the transfer is not so large that they change

[2] Appropriate measures of inequality must conform to the weak principles of transfers and scale independence.

[3] When the poorer individual has at least 2.72 times the mean wage, a transfer from richer to this poorer individual increases inequality (Cowell, 1977, pp. 31 and 163 for a proof). However, this suggests that if the wage structure under study does not have any or many individuals with wages 2.72 times greater than the mean wage, the log of the variance should be an acceptable measure of inequality.

positions, then a measure of inequality should show a reduction in inequality. (3) The Gini coefficient is not fully additively decomposable; Gini decompositions usually include an interaction or residual term which is difficult to interpret. (4) Atkinson (1970) has shown that underlying any measure of inequality is a social welfare function that reflects a certain degree of aversion to inequality. The generalized entropy measures can accommodate various preferences toward inequality aversion.

Foster (1983, p. 106) has demonstrated that when the property of simple decomposability is added to the basic properties of scale independence and the weak principle of transfers, then an entropy measure of inequality has been selected as the preferred measure of inequality. The essential justification for using an entropy measure over any other reasonable alternative rests on the desirability and usefulness of the decomposition property.[4]

Decomposability: Is It Necessary?

Given that pay structures in large firms are the outcomes of complex administrative procedures and adjustments, a measure should be able to reflect both within job-grade dispersion and between job-grade differentials in order to analyze the pay system. For example, two firms with the same basic pay structure can have two very different approaches to pay grades and pay ranges. One firm could have a few pay grades and wide pay ranges and another firm could have many pay grades and narrow pay ranges, both having the same basic pay structure. A decomposable measure can identify these different approaches toward pay structure and, concomitantly, indicate whether the resulting compensation distributions are similar or dissimilar.

The Class of Entropy Measures

Theil (1967) proposed that the entropy concept provides a useful device for inequality measurement. If n is the number of people in the

[4] Of all the measures used in prior wage dispersion studies, only one meets this criterion, the coefficient of variation. The coefficient of variation can be obtained from an entropy equation. The coefficient of variation is particularly good at capturing inequality among high incomes, but may be of more limited use in reflecting inequality elsewhere in the wage distribution (Cowell, 1977, p. 29). The notion of distance implied by coefficient of variation is the same as the variance, that is, the notion of distance equals the absolute distance between income shares (p. 68), whereas the Theil measure implies proportional distance.

population, μ is mean income, and y_i is the income of person i, he proposed the following inequality measure:

(1) $\text{Index}_1 = 1/n\ \Sigma\ y_i/\mu \log (y_i/\mu)$

This is Theil's entropy index weighted by income share. If n_g represents the number of individuals in subgroup g, with mean income μ_g, the index can be decomposed into a between-group and within-group inequality measure:

(2) $\text{Index}_1 = \Sigma_g \mu_n n_g/n\mu \log (\mu_g/\mu)$

-------between -------

$+\Sigma_g n_g/n\mu\ \Sigma_i (y_i \mu_g) \log (y_i/\mu_g)\ c = 1$

------------------within ------------------

Another entropy index proposed by Theil is weighted by population share:

(3) $\text{Index}_0 = 1/n\ \Sigma \log \mu/y_i$

Index_0 can be decomposed, as well, into a between- and within-group inequality measure:

(4) $\text{Index}_0 = \Sigma_g\ n_g/n \log (\mu/\mu_g) \qquad +1/n\ \Sigma_g\ \Sigma_i \log(\mu_g/y_i)\ c = 0$

-----between ----- --------------within--------------

The class of generalized entropy measures is given by the following equation:

(5) $\text{Index}_c = 1/(n\, c(c-1)) \quad [(y_i/\mu)^c - 1]\ c = 0, 1$

The parameter c reflects different perceptions of inequality with lower values indicating a higher degree of inequality aversion (Mookherjee and Shorrocks, 1982). For example, the square of the coefficient of variation is $c = 2$. The generalized entropy equation also can be decomposed into between-group and within-group contributions to inequality. However, apart from the two measures proposed by Theil, the decomposition coefficients are not independent of the between-group contribution. For example, the coefficient of variation decomposition exhibits a dependence of the within-group term on the between-group term.

Mookherjee and Shorrocks (1982) have proposed a trend decomposition analysis of the population share entropy equation which permits the identification of the influence of changes in population shares and subgroup wage means on changes in wage dispersion. Using the trend decomposition, changes in wage dispersion can be separately attributed to changes in staffing policies and to changes in pay structure or policy.

In this paper the two measures proposed by Theil, one weighted by population share and the other by income share, are used to analyze departmental wage dispersion in the Bell System. In addition, the variance of the log of wages, the coefficient of variation, and a generalized entropy equation ($c = 2$) are computed and compared.

Factors Influencing Pay Dispersion in the Bell System

Compensation practices were established through collective bargaining in the former Bell System. Three unions negotiated with the Bell Companies—the Communications Workers of America (CWA), the International Brotherhood of Electrical Workers (IBEW), and the Telephone Independent Union (TIU), the largest representative being CWA with over 500,000 Bell System employees as members. There are several practices linked to collective bargaining that may have reduced wage dispersion: (1) the AT&T-CWA agreements made special periodic wage adjustments in traditionally female jobs in 1971, 1974, and 1980; (2) the introduction of the COLA provision in 1971, which had a uniform-cents-per-hour escalator combined with a percentage change, both based on the movement of the CPI; (3) the CWA bargained reductions in the length of time it takes a worker to reach top pay from 8 to 10 years in the late 1940s to 4 or 5 years in 1980; (4) the steady improvement in health benefits and the introduction of dental and vision care plans, which were uniformly available to all employees. Working in the opposite direction, however, has been the CWA wage policy of putting wage increases "on top" of the progression, which resulted in steeper wage progressions, probably increasing dispersion.

Operating in conjunction with collectively bargained compensation, technological change, EEO, and demographic shifts in the labor force may have contributed to pay compression. During the postwar period, new switching technologies dramatically reduced the demand for operators, the lowest paid occupation in the telephone industry, from 40 percent of the nonmanagement labor force in 1950 to 15.7 percent in 1980. Since 1973 technological change combined with deregulation has reduced the number of telephone installation and repair personnel, a top paid occupation. The redistribution of the workforce away from the lowest and highest paying occupations should reduce wage dispersion between occupational groups in the Bell System. Furthermore, any changes in the distribution of employee seniority could result in a change in wage dispersion. An increase in the number of employees with less than five years service, which would place them in steep wage progressions, could contribute to wage dispersion. One would expect that this distribution should change over the business cycle, as the Bell System adjusted to changes in business activity.[5]

The Equal Pay Act requirements of the AT&T-EEO Consent Decree caused a shift away from departmental seniority to company-wide seniority as the basis for wage progression. Also, the EEO litigation may have made the company more receptive to special upgrades for traditionally female occupations, which may partly explain the upgrading of many clerical jobs during the 1970s. The availability of a more educated labor force also may have reduced the need for large wage differentials in the craft and technical occupations. On the other hand, the geographical redistribution of the labor force toward lower wage areas of the country may have increased wage dispersion when evaluated at an aggregated national level. Since the mid-1960s most adjustments in the compensation and promotional wage practices probably have contributed to compensation compression. On the other hand, there have been very few practices that would have increased wage dispersion.

Data

The Bureau of Labor Statistics *Industry Wage Survey: Communications* is used to analyze wage dispersion.[6] The industry wage survey data impose some serious limitations on the analysis of pay structures, since the data provide information by department.[7]

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[5] Given the limitations of the data, this study cannot control for changes in the distribution of seniority. Seniority distributional changes are captured in the intra-department component of the decomposition.

[6] The *Industry Wage Survey: Communication October-December* has provided the data for this study. The summary data on employment and hourly pay rates are based on annual reports filed with the Federal Communications Commission (FCC) by the telephone companies, as required by the Communications Act of 1934. Under a cooperative arrangement, BLS tabulates and publishes the data which the FCC collects as part of a broader survey which it publishes in the *FCC Common Carrier Statistics.* This program was discontinued in 1981. Summary statistics are reported in Appendix B.

[7] Departments and Occupations: Business Office and Sales, Clerical Workers, Operators, Central Office Technicians, Installation and Repair Technicians, Cable Technicians, and Service Employees (supply, motor vehicles, and buildings). Foremen and supervisors have been excluded from the calculations.

Analysis of Wage Variance

The five different measures of wage dispersion for selected years between 1953 and 1980 are reported in Table 1. Four of these estimates are from the entropy class: the population share weighted measure, the income share weighted measure, a general measure with $c = 2$, and the coefficient of variation. Also included is the variance of the log of wages. These results suggest that a structural change in earnings dispersion occurred between 1968 and 1974. When the average earnings dispersion of the 1950s and 1960s is compared with the average earnings dispersion of the 1970s and 1980, a significant reduction in dispersion can be observed, regardless of the measure used. The reported results, however, indicate that the selection of an inequality measure for an earnings dispersion study can be of considerable importance.[8] Table 1 coefficients suggest that the more an inequality measure weight changes in the top of the distribution, the greater the reported reduction in inequality in the Bell System.

TABLE 1
Measures of Total Wage Dispersion

	Pop Entropy c = 0	Inc Entropy c = 1	Gen Entropy c = 2	Log Variance	Coeff. of Var.
53	0.505	0.511	0.533	0.986	0.730
58	0.413	0.413	0.425	0.822	0.652
63	0.441	0.437	0.443	0.883	0.666
68	0.461	0.462	0.476	0.927	0.690
74	0.323	0.319	0.322	0.652	0.567
76	0.271	0.264	0.262	0.554	0.512
78	0.376	0.351	0.340	0.794	0.583
80	0.348	0.321	0.304	0.744	0.550

Does the Selection of the Inequality Measure Matter?

Tables 2 and 3 compare the results of the application of five decomposable inequality measures when measuring wage dispersion between and within the Bell System's departments. The total earnings dispersion of the seven major nonmanagement departmental groups were decomposed into inequality attributable to inter-departmental and intra-departmental differences in pay. The inter-departmental

[8] As a descriptive statistic, the selection of an inequality measure appears to be of considerable importance. As a dependent variable in a regression framework, the selection of an index may be of considerably less importance. The high correlation among indices (not reported) indicates that research using invalid dispersion measures may still provide reliable results.

TABLE 2

Measures of Inter-departmental Wage Dispersion

	Pop Entropy c = 0	Inc Entropy c = 1	Gen Entropy c = 2	Log Variance	Coeff. of Var.
53	0.219	0.232	0.248	0.416	0.498
58	0.202	0.207	0.215	0.394	0.464
63	0.237	0.242	0.250	0.467	0.500
68	0.221	0.223	0.228	0.439	0.477
74	0.149	0.147	0.146	0.302	0.382
76	0.122	0.120	0.118	0.251	0.344
78	0.136	0.133	0.130	0.281	0.361
80	0.111	0.109	0.107	0.228	0.327

TABLE 3

Measures of Intra-departmental Wage Dispersion

	Pop Entropy c = 0	Inc Entropy c = 1	Gen Entropy c = 2	Log Variance	Coeff. of Var.
53	0.286	0.279	0.285	0.571	0.534
58	0.211	0.206	0.209	0.428	0.457
63	0.204	0.195	0.193	0.416	0.439
68	0.241	0.239	0.248	0.488	0.496
74	0.175	0.172	0.176	0.349	0.420
76	0.149	0.144	0.144	0.303	0.379
78	0.239	0.219	0.209	0.512	0.457
80	0.236	0.196	0.198	0.517	0.443

measures reveal a steady reduction in inter-departmental compensation dispersion. Table 2 reports a substantial wage compression between the seven departmental groups in the Bell System. Again, the selection of the measure affects the magnitude of the results; however, it does not impact on the direction of the change. All measures suggest that wage dispersion between departments was reduced during the period. The intra-departmental measures reported in Table 3 demonstrate no historical trend. However, the peak intra-departmental dispersion years are closely associated with cyclical peaks and may be strongly related to pro-cyclical hiring practices. The magnitude and direction of the intra-departmental measures of change, however, vary depending upon the measure selected. Those measures that more heavily weight changes in the upper end of the income distribution indicate that intra-departmental wage dispersion decreased, while those focusing on the middle or lower end of the earnings distribution show an increase in dispersion. It may be fair to conclude from these results that there was not a significant change in the direction of the intra-departmental dispersion of wages, and that the reduction of wage dispersion reported in Table 1 is principally attributable to the reduction in the dispersion among departmental average wages.

Sources of Compensation Compression

By using the trend decomposition, the influence of changes in relative compensation and changes in departmental staffing can be identified. Table 4 reveals that the primary impetus for compensation compression came from changes in compensation practices, not from a redistribution of the labor force. Except for the 1976-1978 period,[9] differences in inter-departmental relative compensation was steadily reduced beginning in the mid-1960s. The only factor increasing dispersion was the population shares for the intra-departmental component. However, the main finding is unambiguous: there was considerable compensation compression, primarily due to changes in compensation practices. The sources of the compensation compression cannot be evaluated given the limitations of the data.

TABLE 4
Trend Decomposition — Inter-departmental — Intra-departmental

	Total Change	Relative Share	Mean Population Change	Compensation Share	Population Change
53-58	−0.092	−0.034	0.0173	−0.072	−0.003
58-63	0.028	0.032	0.0038	−0.006	−0.001
63-68	0.020	−0.018	0.0013	0.038	−0.001
68-74	−0.138	−0.065	−0.0065	−0.068	0.002
74-76	−0.051	−0.020	−0.0061	−0.027	0.001
76-78	0.104	0.022	−0.0077	0.087	0.003
78-80	−0.027	−0.016	−0.0084	−0.005	0.002

This study demonstrates that the selection of a measure of inequality could have important consequences for measuring the magnitude of pay dispersion. The trend decompositions reveal that a reduction in relative inter-departmental compensation means has been primarily responsible for the observed compression. This result suggests that changes in compensation practices have been the primary mechanism for producing wage compression. Variations in intra-departmental wage dispersion appear to be associated with the

[9] The break in the trend indicated by the 1976-1978 decomposition may be due to an internal reorganization and reclassification that was occurring during that period.

business cycle. This finding suggests that cross-sectional relative pay comparisons may be sensitive to when they are made during the course of business cycles.

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Marital Status, Children, and Female Quitting

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This study investigates the effects of marital status, births, and the number and ages of children on female job quitting. Viscusi (1980) found that both marriage and the number of children reduces female quit probabilities, whereas Blau and Kahn (1981) found that both factors increased female quitting. In both studies only the marital status effects were significant. Differences in the age of sample members, the models, and the definitions of some variables may have contributed to this surprising difference.

The present study explores female quitting in more depth. Rather than the panel data used in the aforementioned studies, this research utilizes the detailed personnel records of a major U.S. manufacturing firm. These data contain birth dates of each employee's children, permitting better estimation of the effects of child bearing and children's ages on quitting. Long and Jones (1980) found that births decrease married female labor force participation. These data allow estimation of similar effects on quitting (which may include job changes as well as leaving the labor force). The impacts of marital status and children are derived from traditional labor supply theory, with an extension to consider quitting for another job. The quit model also includes human capital and job-related factors that are expected to affect quit behavior.

In addition to the more detailed data regarding children, the use of firm-specific data has another advantage. To the extent that individuals with inherent low quit propensities choose to work for firms that foster long-term employment opportunities, estimates from

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panel data will be subject to selection bias. Although generalization from a single firm may be risky, the problem of inter-firm variance in employment policies and practices is eliminated.

A Quit Model

The quit model used here is based on the model developed for firm-specific data by Weiss (1984) and further refined for application to heterogeneous professional and managerial employees by Solnick (1988). The basic framework is the standard utility maximization model, extended to incorporate the impacts of marriage and children.

In the basic model, an individual quits if the (discounted) expected utility of any alternative, including not working, exceeds the expected utility of the present job plus the cost of quitting. In symbols,

$$
\begin{aligned}
(1) \qquad & Q = 1 \text{ if } V(U_j) > V(U_o) + C \text{ [Quits]} \\
& Q = 0 \text{ if } V(U_j) \leq V(U_o) + C \text{ [Stays]}
\end{aligned}
$$

where $V(U_j)$ = discounted expected utility of alternate activities j, $j = 1, ..., n$; $V(U_o)$ = discounted expected utility of current job, and C = cost of quitting.

Generally, neither the utilities nor the cost of quitting are directly observable, so proxies are used. The utility of the best alternative is proxied by human capital variables (assumed to determine market wage) and level of family responsibility (i.e., marital status and children).[1] The utility of the present job $V(U_o)$ is represented by job-related variables, including salary grade, performance ratings, functional division within the firm, and whether recently promoted.[2] These variables represent both the employee's present position and her future expectations within the firm (performance ratings and recent promotions are management signals regarding future advancement). The cost of quitting is assumed to depend on length of service with the firm (a proxy for lost pension benefits and the psychic cost of separation).[3]

What is unique in this study is the focus on the effects on female quit probabilities of marital status, children, and births. In discussing the impact of marriage and children on female quitting, it is useful to

[1] The human capital variables include dummies for highest degree and for major field of study, and years of experience prior to working for the subject firm.

[2] Solnick (1988) has shown that the latter two factors significantly affected the quit rates of male professionals and managers.

[3] For a discussion of fringes and labor mobility, see Mitchell (1982).

distinguish between quitting to leave the labor force and quitting to take or find another job.[4] The standard argument is that married females are more likely than single females to leave the labor force, and thus also more likely to quit their jobs. Even without children, the value of their services in the home is higher, raising their reservation wage. In addition, the income of the husband is unearned income to the wife, which in conventional labor supply analysis implies reduced work effort. However, Viscusi has argued that single females are prone to quitting prior to their marriage, the married females thus being less likely to quit. This follows because the females who do not quit prior to marriage have a lower quit propensity, perhaps the result of a stronger career commitment. This argument has particular appeal for this sample of professionals and managers, all of whom have at least a bachelor's degree.

If we consider quitting to take or search for another job, there are also conflicting factors. Single females may be more ambitious, work being their only source of income, and thus more likely to quit to obtain higher pay. On the other hand, married females may be forced to quit if their husband takes a job that necessitates relocation. In addition, married females have a reduced cost of quitting since they are generally the second wage earner. In summary, no clear hypothesis about the impact of marital status emerges from this discussion.

The effects of children on female quitting is more complex than the models of Viscusi and Blau and Kahn. They measured only the number of children (Viscusi) or dependents (Blau and Kahn). The absence of significant effects in either study may reflect the failure to consider the ages of the children, and births. Long and Jones found that births significantly increased the probability that married women will exit the labor force, whereas the effect of number of children was also positive, but not significant. Using British data, Layard et al. (1980) found that number of children *increased* the labor force participation of married women. However, their model also included dummy variables for the age of the youngest child. The dummies reveal a clear pattern: women with young children (under 14) are significantly less likely to be in the labor force, with the effects being largest for pre-school children.

This study incorporates the ideas of Layard et al., which produced results consistent with the labor supply theory. The ages of children

[4] Neither Viscusi, Blau and Kahn, nor Weiss make this distinction. Unfortunately, the data used in this study do not identify the type of quit.

are important because the value of the time a woman spends in home production varies inversely with those ages. Thus, births and the presence of pre-school children should increase quitting. The effects of older children are ambiguous, because of income and substitution effects. More children increase the value of time at home, but also reduce per capita family income. In the traditional labor supply model, that income reduction increases labor supply. Thus, the expected effects of increasing numbers and ages of children on female quitting to leave the labor force are unclear. Theory suggests that quitting for another job may increase with the number of children, since only the income effect is relevant (assuming that the new job increases income). In the following section several specifications are estimated to identify the impact on female quitting of marital status, ages and numbers of children, and births.

Model Estimation

The quit model is tested on a sample of over 1400 females in professional and managerial positions. Two statistical approaches are taken. First, a traditional cross-sectional quit probability model is estimated. Recent works by Weiss and others argue that length of service with the firm is endogenous to a quit model, and thus causes biased parameter estimates.[5] Therefore, a pooled cohort model, which holds constant length of service by sample design, is also estimated. All equations reported below were estimated using a logistic regression procedure, which provides consistent and asymptotically efficient parameter estimates for binary dependent variable models.

Table 1 presents the parameter estimates of the models. The first four columns refer to quitting in 1982. The sample includes all white, female employees in "exempt" jobs, with at least a bachelor's degree, who had at least one year of service as of January 1, 1982. A quit is defined as a termination during 1982.[6] The restriction on length of service permits calculation of the prior promotion variable, and also eliminates much of the quitting due to obvious job mismatches.[7] The year was chosen because within the period of available quit data (1977-1983), it had the highest quit rate (9.1 percent). This is important because the variance of the dependent variable is largest, which is desirable for model estimation.

[5] The most quit prone workers leave with short service. Those remaining are thus less likely to leave, ceteris paribus.

[6] Involuntary separations were eliminated by deleting employees with very low performance ratings.

[7] For a discussion of quitting and job match theory, see Jovanovic (1979).

TABLE 1

Logit Estimates of Quit Probability in 1982 and in 2nd Year of Employment

Variables[a]	(1) B/(s.e.)	(2) B/(s.e.)	(3) B/(s.e.)	(4) B/(s.e.)	(5) B/(s.e.)	(6) B/(s.e.)
Married	−.406°	−.415°	−.580°°	−.569°°	−.651°°	−.687°°
	(.239)	(.241)	(.271)	(.272)	(.246)	(.251)
No. Children	.092		.224		−.009	
	(.200)		(.226)		(.272)	
Children ≤ 5		.386		.133		1.052
		(.430)		(.559)		(.658)
Children 6-16		−.343		−.168		−.922
		(.420)		(.529)		(.667)
Children >16		.389		.566		.614
		(.348)		(.395)		(.466)
Births	−.287	−.573	−.279	−.178	2.422°°	2.206°
	(1.081)	(1.161)	(1.096)	(1.227)	(1.222)	(1.199)
Prev. Experience	.139	.143	.069	.068	.134°	.161°°
	(.090)	(.089)	(.216)	(.217)	(.080)	(.082)
Prev. Exp.^{2}	−.008	−.008	−.001	−.001	−.004	−.005
	(.007)	(.006)	(.036)	(.036)	(.004)	(.004)
Years with Firm	−.153°°	−.151°°	.122	.115		
	(.061)	(.061)	(.299)	(.298)		
Years^2	.005°°	.005°°	−.020	−.018		
	(.001)	(.001)	(.033)	(.032)		
Master's Degree	−.043	−.039	−.272	−.257	−.110	−.091
	(.308)	(.310)	(.364)	(.366)	(.403)	(.403)
Doctorate	−1.208	1.310	−.853	−.878	−.636	−.742
	(.829)	(.838)	(.928)	(.930)	(.795)	(.797)
Promoted	−.741°°	−.741°°	−.685°°	−.676°°	−1.401°°	−1.416°°
	(.240)	(.260)	(.305)	(.307)	(.298)	(.298)
Salary Grade	−.291°°	−.294°°	−.339°°	−.339°°	−.315°°	−.334°°
	(.102)	(.102)	(.159)	(.160)	(.157)	(.157)
Top Performance Rating	−.239	−.242	−.360	−.372	−2.942°°	−3.003°°
	(.427)	(.427)	(.470)	(.472)	(1.050)	(1.052)
2nd " "	−.888°°	−.887°°	−.927°°	−.917°°	−1.134°°	−1.131°°
	(.368)	(.367)	(.416)	(.416)	(.352)	(.354)
3rd " "	−.371	−.390	−.659	−.664	−.557°	.568°
	(.343)	(.343)	(.406)	(.406)	(.327)	(.329)
Sample Size	1098	1098	834	834	1437	1437
Percent Quit	9.11	9.11	9.11	9.11	6.33	6.33

[a] The complete model includes dummy variables for functional division of firm (viz. manufacturing, marketing, research, personnel and financial control), for major field of study in school, and for the pooled cohort sample year hired (1977-1983). Complete results are available upon request from the author.

° = significant at .10 level, two-tailed test.

°° = significant at .05 level, two-tailed test.

The first column of Table 1 presents a model in which the family variables are specified as in Viscusi and Blau and Kahn (i.e., marital status and number of children), but also includes a variable for births.[8]

[8] The same model was estimated without births, but was essentially unchanged. Space constraints limit discussion of the effects of the other variables.

Marital status decreases the quit probability among these females, although it is significant only at the 10 percent level, in a two-tailed test. The coefficients of number of children and births are smaller than their standard errors, and thus exhibit no relationship with quitting. The second column of Table 1 represents the numbers of children with three variables: those up to age 5, ages 6 to 16, over age 16. Marital status has essentially the same impact in this model as in the first model. The child variables are all nonsignificant, the coefficients being positive, negative, and positive, respectively, for the three age groups.

The third and fourth columns of Table 1 present estimates of the two models just described, but for a smaller sample of employees who had completed their education in 1972 or later. This group thus has no more than ten years of labor force activity since receiving their highest degree.[9] Younger women may be less invested in their careers, and thus more readily affected by child bearing and rearing.

The results in columns (3) and (4) are similar to those in columns (1) and (2). However, the effect of marital status is more than 40 percent greater, and is significant at better than the .05 level. The coefficients of the children and birth variables are nonsignificant in this sample as well.

With respect to the other variables in the model, all four equations reveal that a recent promotion, higher salary grade, and the second highest performance rating significantly reduce quitting.[10] Note also the highly significant impact of years of service with the firm in columns (1) and (2). The coefficients imply a sharply declining quit rate until 15 years of service, after which it begins to rise. The rise may be due to early retirements, the end of child-rearing, or some other reason. In the shorter service sample (columns 3 and 4), years of service does not significantly affect quitting.

The fifth and sixth columns of Table 1 present the parameter estimates for a pooled cohort in their second year of employment. Since employees in this sample were hired between 1976 and 1982, the equations include a set of dummy variables for year hired, to account for possible cohort differences in quitting. This sample compares more closely to the shorter service group discussed above, whose

[9] Selection by age is more desirable, but unfortunately not possible with these data.

[10] The smaller coefficient and nonsignificance of the top performance rating variable may reflect the mobility of the best females, who presumably attract many good offers from competitors.

average length of service was 3.5 years (compared with 6.7 years for the larger sample above).

The fifth column of Table 1 is the Viscusi/Blau and Kahn type specification, with the "births" variable added. Marital status has a strong negative association with quitting, whereas births significantly increase quitting. The number of children is unrelated to female quitting in this model.

The sixth column of the table shows similar results for marital status and births, and an interesting pattern for the "children" variables. Having children up to age 5 appears to increase female quitting, although the coefficient just fails statistical significance at the .10 level ($t = 1.60$) in a two-tailed test. The results suggest that having children age 6 through 16 decreases quits, whereas children over 16 increase quits, although these results are statistically weak. Layard et al. found that participation rates and hours of work increased monotonically with the ages of the children until age 13, after which there was no significant effect. The more complex pattern observed here may be due to the inclusion of quits to take or search for other jobs, as well as to leave the labor force.

The cohort models also show that being promoted, in a higher salary grade, or having any of the top three performance ratings significantly reduces quitting. For this sample the best performers are the least likely to quit, perhaps because their careers are yet too brief to attract the attention of competitors.

Conclusions

The empirical evidence presented here strongly supports Viscusi's finding that married women are less likely to quit than single women. The parameter estimates translate into quit probability differences of 3.4 to 4.7 percent for the cross-sectional models, and about 4 percent for the pooled cohort model. Since the mean quit probabilities are only 9.1 and 6.3 percent for the two samples, respectively, these are large differences.

With respect to child-rearing the results are less clear, except for the conclusion that the single variable measuring number of children is inadequate. The results suggest a pattern in which pre-school age children and children over age 16 increase female quitting, whereas children in the mandatory schooling age group tend to decrease quitting. These results are strongest for the sample with only one year of job tenure, although they are still not statistically significant at conventionally acceptable probability levels. The absence of significance may be due to the combining of married and single females, although the number of single females with children is rather small in these data. The labor market effects of children are surely much stronger among married women since single women (with or without children) are assumed to be self-supporting. The equations reported here were also estimated for married women only, but the reduced sample size (about half) resulted in statistically unreliable estimates.

With respect to births, the cohort models show a large increase in quitting among short-service employees who give birth during their second year of employment.[11] The cross-sectional results indicate no relationship between births and quitting.

In summary, the quit behavior of professional and managerial women has been found to be sensitive to marital status and, among very short-service employees, the birth of a child. The presence of pre-school children, and children over 16, may tend to increase quitting. Future research in this area might consider two directions: obtaining a larger sample of married women, and developing and estimating a model that distinguishes quits to take another job from quits to leave the labor force.[12]

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Race and Gender Differences in Private-Sector Training for Young Workers

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While there have been numerous studies devoted to examining the impact of governmental training programs on workers who have experienced difficulties in the labor market, there has been remarkably little research on the actual occurrence and consequences of training provided by the private sector. Apart from the difficulty of measuring exactly how much is spent each year by firms on training, we know little about who receives training, what types of training programs are provided and where, the degree of firm specificity and portability of firm-provided training, and the impact of training on the productivity and consequently on the wages and wage growth of workers. Due to the lack of appropriate data, few researchers have been able to examine directly the characteristics of private-sector training and many have had to infer the impact of this source of human capital from the shape of wage profiles. Given the potential long-term consequences of training (or lack thereof) in the early years of a worker's labor market experience, this paper focuses on the early training experience of young workers and the impact of this on their productivity and wages. In particular, this study examines how the experience with private-sector training varies by race and gender and how this may explain the persistent wage gap between blacks and whites and males and females.

Some of the few empirical studies on the returns to private-sector training using actual measures of training rather than inferring training

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from the shapes of wage profiles include Duncan and Hoffman (1979), Mincer (1988), Brown (1983), Lillard and Tan (1986), Pergamit and Shack-Marquez (1986), and Barron et al. (1987). Unfortunately, each of these studies is subject to different limitations. Some of the more critical issues include the lack of complete employment, training, and schooling histories on individuals in the various surveys, difficulties in actually measuring the amount of private-sector training the respondent received, and problems in distinguishing firm-specific from general types of training. Few of the surveys used for the analyses actually asked about the training the respondent had acquired on current or past jobs. For example, the question from the Panel Study of Income Dynamics (PSID) on training is how long it took the "average" person to become qualified. In the older National Longitudinal Survey (NLS) cohorts, training is measured as training received or *used* on the current job; therefore one is not able to observe when the training actually took place or other types of training undertaken by the respondent.

It is possible to overcome many of these problems and gain new insights into training in the U.S. using data from the new NLS youth cohort. These data allow one to reconstruct the entire training history for each individual, including the occurrence and length of each training spell. Moreover, the data are particularly useful in distinguishing between different sources of private-sector training (on-the-job training, training received outside the firms or off-the-job training, and apprenticeships). This paper analyzes how personal characteristics, including employment histories and local demand conditions, determine the probability of receiving training and its effects on wages and wage growth of young workers. More specifically, this paper focuses on the existence of differentials in the private-sector training experience by race and gender.

The Theoretical Framework

In order to measure the true impact of training on wages of young workers, it is necessary to first examine the characteristics of those individuals who actually receive training. It is unlikely that individuals are randomly assigned to training. The decision as to whether or not to acquire training by an individual worker or to place a worker in a firm-provided training program can be described in terms of an index function. Let NB_i be an index of net benefits to the appropriate decision-maker (the individual worker or the firm) of either OJT, off-the-job training, or an apprenticeship:

$$(1) \qquad NB_i = Z'_i\theta + V_i$$

where Z' is a vector of individual characteristics. An individual experiences training if $NB_i > 0$, otherwise there will be no investment in training. There are a variety of factors which might influence an individual's probability of having some training, such as their work experience and educational background. For firm-specific training it is more likely that a firm will invest in those individuals who appear more attached to the workforce and the firm. Therefore, tenure on the job, total work experience, and demographic factors may be expected to influence the firm's decision on training.

The impact of on-the-job training on wages has been examined in the context of black/white wage differentials by both Duncan and Hoffman (1979) and Lazear (1979). The narrowing of the black/white and male/female differentials since the passage of affirmative action legislation has been especially true for young workers. But as Lazear (1979) discussed, employers may have responded to affirmative action legislation by paying higher wages to women and blacks while reducing the amount of on-the-job training provided these groups. In Lazear's model there is an assumption that employers may have been discriminating in wages before affirmative action legislation, but not in training, so that when the legislation is passed they "switch" the discrimination from wages to training. It may be possible, however, that the employers were discriminating in both wages and training before affirmative action legislation so that what we observe after the legislation is similar starting wages for blacks and whites and males and females, but a widening gap in earnings as the groups are given training at different rates. If employers refuse to invest in certain groups of workers because they believe these groups are less attached to their jobs, this differential pattern in human capital investment becomes very important in explaining long-term black/white and male/female earnings differences. In addition, women and blacks may have responded to not receiving on-the-job training by obtaining "visible off-the-job" training to improve their productivity and to signal their commitment to the workplace. There is certainly some evidence of this type of behavior in the schooling decisions of blacks (see Lang and Ruud, 1986). All of this implies that we might observe women and blacks receiving less on-the-job training or apprenticeships but perhaps more off-the-job training than white males.

After examining the patterns of acquisition of training it is then possible to analyze the impact of training on wages and wage growth. As a worker acquires more training there should be an increase in the individual's productivity and consequently in their earnings. If there is no explanation for wage growth other than productivity-enhancing training, then tenure on the job should have little impact on wages once training has been controlled for. If, instead, there are other factors which influence the growth of wages, then tenure will continue to be significant even after including training. One straightforward way to specify a wage equation to take these various factors into account and to examine the impact of race is as follows:

$$\text{(2)} \qquad \text{Log } w_t = X'_tB + T'_t\lambda + a_1S_t + a_2EXP_t + a_3tenure + a_4race + a_5gender$$

where X'_t is a vector of individual characteristics and local demand conditions, T' is a vector containing information on the occurrence and total number of weeks of different types of training received from the private sector, S is the highest grade of schooling completed, EXP is total work experience, and tenure is total work experience with the current employer.

Given the detailed nature of the training data used in this paper, the vector of training variables T' contains information on on-the-job training (OJT), training received outside the firm or "off-the-job" training (OFF), and apprenticeships (APPT). The specification of equation 2 allows for each of these three types of training to have different returns. Since the data are also longitudinal, it is also possible to distinguish between spells of training in each of these categories received during employment with a previous employer and spells received during current employment. This means that the training vector T' will include:

(3) T = [Time in OJT, OFF, and APPT in previous employment, Time in spells of OJT, OFF, and APPT from current employer, DOFF, DOJT, DAPPT]

All of these variables are measured in weeks with the exception of the last three dummy variables that are equal to 1 if the individual ever had the particular type of training and 0 otherwise.

The Data

The NLS youth cohort of 12,686 males and females (who were 14 to 21 years of age at the end of 1978) contains some of the most comprehensive data available on private-sector training. Some of the questions respondents were asked included what types of training they had received over the survey year (they were asked about all spells, not just the longest), and dates of training periods by source. The training spells had to be at least four weeks in length to be included. Potential sources of training included business college, nurses programs, apprenticeships, vocational and technical institutes, barber or beauty school, a correspondence course, and company training. All of these sources exclude training received through regular schooling programs. However, given the way in which the questions are asked, it may be possible that the respondents are giving information only on formal training spells rather than more informal on-the-job training. For this reason, the tenure variable may be picking up both nontraining-related returns to seniority and returns to informal training.

Using a constructed weekly event history of private-sector training, employment, and schooling, it is possible to examine the patterns and outcomes of training for young U.S. workers. For the analysis presented in this paper, a subsample of the 12,686 respondents has been selected. This sample is composed of individuals who had completed their schooling by the 1980 interview date and who were not in the military. In addition, these individuals had to have wage observations at both the 1980 and 1983 interview dates. This restriction does not imply that the respondent had to be working at the interview date since these wage data are wages in current or last job over the survey year.

For the empirical work, the training data have been separated into three categories—company training, apprenticeships, and training obtained outside the firm. Training outside the firm or "off-the-job" training includes training from business colleges, barber or beauty schools, nurses programs, vocational and technical institutes, and correspondence courses. The major source of training for the sample comes from "off-the-job" in terms of both the percentage of the sample (15 percent) who have experienced this type of training and the amount of time spent in this training (average number of weeks of training is 40). This is particularly true for women and nonwhites since approximately 80 percent of the women and nonwhites who had training had it in the form of off-the-job training, while only 60 percent of the white males had their training off-the-job. The number of women and nonwhites who are in apprenticeship programs is small and this needs to be kept in mind when interpreting some of the results in the next section.

TABLE 1

Determinants of the Probability of Receiving Training by Type by 1983 (*t*-statistics in parentheses)

Variable	Off-the-Job Training Probit	On-the-Job Training Probit	Apprenticeship Probit
Constant	−2.11 (−3.91)	−5.98 (−5.53)	−8.08 −(4.84)
Male	−0.33 (−2.75)	0.62 (2.69)	0.52 (1.27)
Nonwhite	−0.08 (−0.61)	−0.61 (−2.10)	−1.07 (−1.98)
Tenure	−0.002 (−2.50)	−0.002 (−1.68)	−0.001 (−0.40)
Work experience	0.002 (2.00)	0.006 (2.72)	0.004 (1.33)
School	0.001 (0.02)	0.06 (1.00)	0.06 (0.60)
Union	0.07 (0.50)	0.75 (3.50)	0.96 (3.00)
Unemployment rate	0.02 (1.71)	−0.04 (−1.33)	0.008 (0.20)
Marry	0.06 (0.05)	0.35 (1.84)	−0.09 (−0.28)
Turnover	0.001 (0.05)	0.03 (0.88)	0.10 (2.14)
Industry dummies	yes	yes	yes
Occupation dummies	yes	yes	yes
Log likelihood	−1289.62	−497.71	−226.26
Number of observations = 3183			

Results

Estimates of the probabilities of an individual receiving each of the three types of training are presented in Table 1. Differentiating among these types of training reveals some interesting patterns, especially by race and gender. The probability of investing on off-the-job training is lower if the youth is male and has longer tenure on the job. On the other hand, company-provided on-the-job training is concentrated among white married unionized males with greater work experience. The most important determinants for participating in an apprenticeship are being white and unionized. These findings suggest that women and nonwhites are less likely to receive on-the-job training, and women appear to respond to this by acquiring more off-the-job training. These results also show how racial and gender differences in the probability of receiving different types of training persist even after controlling for industry and occupation. The industry most likely to provide OJT is manufacturing and the occupations most likely to have OJT include managers, sales workers, clerical workers, and craftsmen.

Keeping these differential patterns in the acquisition of training in mind, I now examine how these three types of training affect the wages of young workers. The determinants of the log wages of young workers will include factors such as race, gender, training, total work experience, tenure, schooling, the local unemployment rate, the number of jobs held since finishing school, whether or not the respondent lives in a city, marital status, whether or not they are covered by a collective agreement, health, and industry and occupation of employment. Only the coefficients on the race, gender, tenure, work experience, training, and schooling variables are presented. (A complete listing of the estimated coefficients is available from the author.) I estimate a wage equation for hourly wages at the 1980 interview date and at the 1983 interview date. The 1980 wages are very close to starting wages for most of the respondents in the sample. These results are reported in Table 2.

Equation 2 of Table 2 shows the significant role that training plays in wage determination for this sample by 1983. The size of the training effect is much larger than the size of the tenure effect. Periods of off-the-job training and apprenticeship training acquired before the current employer raise wages significantly. Weeks of on-the-job training with the current employer also raise wages.

The tenure variable is always significant and there are many factors which it may be capturing. Since the measures of training in the NLS are more likely to miss spells of informal training, the tenure variable will pick up not only a "tenure" effect, but also this informal training. Tenure could also represent job-match quality or reflect incentives provided to reduce shirking and/or turnover.

Nonwhites and women earn significantly less per hour than white males. This is true for both starting wages at 1980 and wages at 1983. The wage gap between nonwhites and whites and males and females widens over the 1980–1983 period. Given the high return to training and the low probability of women and nonwhites receiving training on the job, this widening gap may not be so surprising. Using the

TABLE 2

Determinants of Log Wages at 1980 and 1983 Interview Dates (N = 3183)

Variable	Equation 1 1980 Wages	Equation 2 1983 Wages
Male	0.12 (8.54)	0.13 (8.55)
Nonwhite	−0.04 (−2.86)	−0.08 (−4.81)
Tenure (weeks)	0.0008 (3.99)	0.0006 (5.58)
Work experience (weeks)	0.002 (8.36)	0.001 (10.04)
School	0.02 (4.85)	0.03 (7.21)
Previous off-job training (weeks)	0.0002 (0.26)	0.002 (3.16)
Previous on-job training (weeks)	−0.002 (−0.96)	−0.0002 (−0.13)
Previous apprenticeship (weeks)	0.001 (0.40)	0.003 (2.28)
Current off-job training (weeks)	−0.0008 (−0.59)	−0.0002 (−0.23)
Current on-job training (weeks)	−0.0005 (−0.21)	0.002 (1.87)
Current apprenticeship (weeks)	0.002 (0.89)	0.001 (1.06)
R^2	0.27	0.34

Note: Other variables included in this estimation—constant, local unemployment rate, number of job changes, and dummies for SMSA, health, marital status, union, industry, occupation, and dummy variables for the occurrence of OJT, off-the-job training, and apprenticeship.

estimated coefficients from equation 2 in Table 2, it is possible to calculate hourly wage rates for different characteristics of the sample. The average hourly wage of a typical white male with no training is \$5.88 an hour. If this male is nonwhite, the wage drops to \$5.43. However, if the white male has a spell of on-the-job training, his hourly wage rises to \$6.69, representing a wage differential of 19 percent over the nonwhite male. The wage differential between a white male with training and a white female with no training is 28 percent; for nonwhite females it is 31 percent.

Before reaching any final conclusions on the basis of the results presented in Table 2, it is necessary to discuss possible sources of bias in the training estimates due to self-selection. Employers may place in training programs only employees who have some observable characteristics, "trainability"; individuals who are more motivated would be more likely to pursue off-the-job training. In either case the estimated coefficient on the various training variables will be biased upward (i.e., a "treatment" selection problem). A formal treatment of this selection along the lines suggested by Heckman and Robb (1986), using a two-step estimator (see Lynch, 1988, for a discussion of this) was done and no results changed. The problem of treatment selection, therefore, may not be as critical for young workers receiving private-sector training as it is for older workers or those in government training programs.

Conclusions

This paper has shown that private-sector training plays a significant role in the wage determination and career patterns of young workers in the U.S. Specifically, when the probability of receiving private-sector training is analyzed by different types (on-the-job, off-the-job, and apprenticeships), some very different patterns emerge, especially by race and gender. Women and nonwhites are much less likely to receive training within a firm, through either an apprenticeship or other forms of on-the-job training. When an equation is estimated for the determinants of hourly wages, it is shown that training from the private sector raises wages significantly. However, since women and nonwhites are much less likely to receive training, especially on the job, their wages are much lower. This differential pattern in the acquisition of training by race and gender may be a partial explanation of the persistent wage gap between males and females and whites and nonwhites.

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XXI. CONTRIBUTED PAPERS: HUMAN RESOURCES AND ORGANIZATIONAL BEHAVIOR

Are Older Workers Absent Longer Than Younger Workers? A Meta-Analytic Reconciliation and Implications for Practice

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The need to study how absence varies with age has never been greater. As the babyboom cohort ages and the effects of enacted legislation raising mandatory retirement to age 70 become evident, organizational researchers and practitioners will have to deal with a workforce radically different in age structure (Ahlburg and Kimmel, 1986; Rhodes, 1983) and the implications of a generally older workforce (Ahlburg and Kimmel, 1986; Yolles et al., 1984).

Involuntary absenteeism, as measured by the Time Lost Index (Chadwick-Jones et al., 1971), is associated with advancing age (e.g., Cooper and Payne, 1965; Taylor, 1967). Charatan (1984) indicates that older individuals become more susceptible to illnesses that are longer in duration than younger individuals. Evidence indicates that health tends to deteriorate and tolerance for stress diminishes with age (Barrett, 1972; Cole, 1974; Yolles, Carone, and Krinsky, 1975; Yolles et al., 1984). Recently, Ivancevich (1986) found significantly positive relationships between the frequency and intensity of stressful life events and absenteeism.

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A key problem with current thought in the absence literature is evident. Rhodes (1983), in a recent qualitative review of studies examining the relationship between age and absenteeism, found that no logical age-absence pattern exists for involuntary absenteeism. She concluded that the relation between age and involuntary absenteeism may depend on whether the job is physically demanding and the employee's sex.

In addition to Rhodes's (1983) review, Porter and Steers's (1973) review of the absence literature concluded that "absenteeism may well be directly related to [age], although . . . relationships are probably weak" (pp. 164–65). Porter and Steers's (1973) conclusion was based on only three empirical studies: two relating the age and absence of male employees longitudinally, and one looking cross-sectionally at female age-absence relationships. Porter and Steers (1973) suggested that, in order to establish the empirical status of the age-absence relationship, it would be necessary to distinguish between such studies by sex of sample and type of absence measure.

Job demand is important because evidence exists showing that physical capacity and tolerance for stress diminish with age (Yolles et al., 1984). In addition, older workers, when injured, usually have a longer recovery period than do younger workers (Root, 1981). This increased incapacity associated with age may be a more salient factor among physically demanding jobs in terms of meeting job demands. The implication is that the magnitude of the relationship for physically demanding jobs should be greater than for nonphysically demanding jobs.

Sex differences in the age-involuntary absence relationship may be due to differences in domestic responsibility. For females, one might expect an inverted-U relationship (Steers and Rhodes, 1978). For example, during their late twenties through early forties, females are likely to have child-raising responsibilities that may result in higher absence than when there are no children or when children have become self-sufficient. For males, one might expect decreased absenteeism because of traditional male roles as the primary income producer for their families (Steers and Rhodes, 1978).

Although nature of the job and employee sex have been noted as important factors related to the age-absence relationship, mixed results are evident. The purpose of this study is to use meta-analysis (Hunter, Schmidt, and Jackson, 1982) to quantitatively synthesize individual effect sizes of the age-involuntary absence relationship based on time lost absence as well as to explore the effects of job demand and employee sex as they relate to the age-absence relationship. Meta-analysis is used to overcome imprecise interpretations of the literature associated with qualitative reviews (Cooper and Rosenthal, 1980), providing more precise interpretations of the literature by statistically correcting for artifactual variance. This meta-analysis (Hunter et al., 1982) involves estimating the age-absence relationship correcting for the effects of sampling error and measurement unreliability.

Method: Study Selection and Analysis

The goal of the literature search was to identify all published studies relating employee age and employee absenteeism. Seventeen studies were identified for inclusion in the meta-analyses (Appendix). Of the 17 studies included in the meta-analyses, absence data for a total of 6,507 employees were collected. Twenty-nine independent samples were included within these studies. Sample sizes ranged from 20 to 2,487. The analysis was based on Hunter et al. (1982).

Results

Tables 1 and 2 show the number of samples, sample size, the mean weighted correlation, the standard deviation for the mean weighted correlation, corrected *r* (i.e., the average weighted correlation corrected for error of measurement in the absence indexes), the standard deviation for corrected *r*, percentage of variance due to sampling error, percentage of variance due to unreliability of the absence measure, and percentage of unexplained variance.

Second-order sampling error was an issue for the Time Lost Index in this meta-analysis. Second-order sampling error affects the outcome of meta-analysis, reflecting the problem of a small number of effect sizes (Schmidt et al., 1985). Because observed study variance may be randomly smaller than the predicted sampling error variance, the percentage of variance due to sampling error may exceed 100 percent and, therefore, unexplained variance will be negative. Even though unexplained variance for the Time Lost Index was less than 25 percent, moderator analyses were conducted based on expectations in the literature that sex and job demand moderate this relationship.

Table 1 indicates that absence as measured by the Time Lost Index decreases with age (corrected $r = -.11$). The 95 percent confidence interval ($-.18 \leq -.11 \leq -.04$) for the time lost-age relationship excluded zero. Unexplained variance was negative (−4.21 percent), indicating an issue of second-order sampling error.

Table 2 shows that the age-time lost relationships for nonphysically demanding jobs (corrected $r = -.11$) and physically demanding jobs (corrected $r = -.13$) were negative. The 95 percent confidence interval for nonphysically demanding jobs was $(-.17 \leq -.11 \leq -.05)$. For physically demanding jobs, the 95 percent confidence interval was $(-.23 \leq -.13 \leq -.03)$. Job demand did not moderate the age-time lost relationship as evidenced by the similarity in sign and magnitude of the subgroup correlations. Both confidence intervals excluded zero which suggests that the age-absence relationship is likely nonzero.

Table 2 shows that the age-time lost relationships for both females (corrected $r = -.07$) and for males (corrected $r = -.11$) were negative. Sex did not moderate the age-time lost relationship as evidenced by similarity in sign and magnitude of the subgroup correlations. The 95 percent confidence interval for females was $(-.15 \leq -.07 \leq -.01)$. For males, the 95 percent confidence interval was $(-.17 \leq -.11 \leq -.05)$. For females, the confidence interval included zero which suggests that the population age and time lost absence relationship may be unrelated or nonlinearly related. For males, the confidence interval excluded zero.

Discussion and Conclusions: Implications for Research and Practice

There is a belief that age is positively related to time lost absenteeism, as many researchers have posited and demonstrated empirically. Unfortunately, empirical evidence has been mixed. Consequently, the nature of the relationship remains uncertain. The purpose of this study was to clarify the relationship between age and time lost absence and to test whether this relationship is moderated by job demand and sex as is suggested in the literature.

Although empirical research (Chadwick-Jones, Nicholson, and Brown, 1982; Hackett and Guion, 1985) suggests that the Time Lost Index is a measure of involuntary absenteeism, their research does not directly show whether cognitions or intentions preceded behavior. Furthermore, despite appealing logic that involuntary absenteeism will be longer in duration than voluntary absenteeism (Fox and Scott, 1948), it is plausible that the Time Lost Index is not a "true" measure of involuntary absenteeism.

TABLE 1

Summary of Meta-Analysis Results of Age-Absence Correlations

k	N	r	SD r	Corrected r	SD Corrected	Sampling Error Variance	Variation to Reliability	Unexplained Variance
				Time Lost Index				
29	6507	−.09	.07	−.11	nr[a]	94.16%	10.05%	−4.21%

TABLE 2

Summary of Moderator Analysis Results for Age-Absence Correlations

	k	N	r	SD r	Corrected r	SD Corrected	Sampling Error Variance	Variation to Reliability	Unexplained Variance
					Time Lost Index				
Work demand									
Nonphysical	18	5438	−.08	.06	−.11	nr[a]	89.05%	110.58%	−0.62%
Physical	10	869	−.10	.10	−.13	nr[a]	104.35	5.61	−9.69
Sex									
Female	9	1396	−.06	.09	−.07	.05	78.35	2.33	19.31
Male	15	4067	−.09	.06	−.11	nr[a]	118.50	15.59	−34.09

Note: k is the number of samples upon which calculations are based; N is the total number of subjects across k samples; r is the average weighted correlation; SD r is the standard deviation for r; Corrected r is the average weighted correlation corrected for error of measurement in the absence measures; SD Corrected is the standard deviation for the estimated corrected r.

[a] nr = not reported. Value not computable due to second-order sampling error.

One explanation of the inverse age-absence relationship may be grounded in interactional psychology (Bowers, 1973). The interactionist perspective maintains that situations are as much a function of a person's behavior as a person's behavior is a function of the situation. Schneider (1983) suggests that people tend to proactively choose to locate themselves in environments that are compatible with their own behavior tendencies. Therefore, to the extent that absence is conceptualized in terms of a form of withdrawal from an unsatisfactory work situation, one would expect less absence as a person-situation fit is developed over time. The implication is that persons will select themselves out of situations where there is no fit between themselves and the situation.

Job demand and sex were tested as moderators of the age and time lost absence relationship. Contrary to empirical evidence and conceptual thought highlighted in this study, sex and job demand did not moderate the age and time lost absence relationship. Of noteworthy interest, the female age-absence confidence interval was near zero which raises the question about whether these relationships for females are nonlinear or whether age and absenteeism for females are unrelated.

Because the chronological age variable is not a psychological construct, it does not directly enable researchers to make psychology-based explanations of human behavior. Although age may be related to psychological constructs, career stage theory (Super, 1957) suggests age alone as a variable is uninformative. What may be needed is a conceptual model developed from career theories or further research into age-related differences in norms (Lawrence, 1988).

There are also implications for human resource professionals from this study. Contrary to the belief that time lost absence increases with age, it is possible that older workers may be more able to meet job requirements than originally believed. Instead, greater attention to the absence behavior of younger employees is necessary because the results suggest that younger workers generally tend to exhibit greater time lost absence. While this meta-analysis does not directly provide reasons, career stage theory (Super, 1957), for example, suggests that absence of younger workers may be due to role conflict or uncertainty of what they believe is the most suitable work role for themselves. Career stage theory also suggests that absence behavior of older workers may not have to be monitored as closely because they have developed a greater degree of job commitment and sense of responsibility.

Human resource practitioners should be especially resistant to promoting stereotypes about absenteeism or accepting stereotypes offered by line managers as to which workers abuse company attendance rules and policies. Finger-pointing at younger workers, older workers, women, and minorities may meet the needs of some managers for scapegoating, but cannot be supported by this research. Instead, contextual features such as the development of an absence culture (Nicholson and Johns, 1985) or an attendance culture may affect all categories of employees at a worksite. Getting past stereotypes requires specific absenteeism policies, definitions of legitimate and nonlegitimate reasons for not coming to work, and enhanced absence reporting systems which make accurate reporting and summary reports a certainty. Unfortunately, absenteeism still tends to be approached as a nuisance subject to exhortations and gimmicks rather than as the basis for all employee productivity and thus deserving of the best management thinking, monitoring, and technology.

Union leaders recognize that improved attendance provides a higher quality of worklife by reducing accidents and stress stemming from understaffed work crews and temporary workers filling in for the shift. This research supports the position of dealing with absenteeism in terms of all workers rather than in perpetuating images of high absenteeism as a characteristic of any employee group. In a manner parallel to that of human resource professionals, our findings imply that union leaders should stay alert to developments in absenteeism research, prediction, and designs for absence control programs. As absence measures improve and larger data bases are subjected to longitudinal and time series analyses, understanding of absenteeism phenomena can be expected to improve in the future.

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Employee Assistance Programs: Vehicle for Integrative Labor-Management Behavior

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Employee assistance programs (EAP) are job-based strategies for the identification, motivation, and treatment of bio-medical conditions not limited to, but usually including alcohol and drug abuse/addiction, mental health problems, and adjustment problems (Sonnenstuhl and Trice, 1986). Such programs usually take one of two general forms: the broad brush approach, which works with all types of employee problems, and the alcohol-only program, which works with problem-drinking only. Increasingly, EAPs are tending to be broad brush as alcohol-only programs are too narrow today to meet the needs of the "total employee." A critical characteristic of EAPs is the concept of constructive confrontation. This is necessary to break through the pattern of denial that characterizes addictive behavior and to motivate the worker to change in behavior. This also refers to the worker's deteriorating job performance being called into question by the supervisor. This is the one legitimate reason that employers have for intervening in the personal lives of employees (Elkouri and Elkouri, 1985).

Deteriorating job performance is not indicated, however, solely by the official performance appraisal system, but by constant interaction with the supervisor. Absenteeism as well as the quantity and quality of output are critical indicators. EAPs offer the employee an opportunity

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to receive help in dealing with his or her personal problems that may be affecting job performance by accepting help and changing work performance, rather than being terminated (or transferred, often only to continue reduced performance levels in the domain of another supervisor). Therefore, one of the major issues in EAP plans often is the training of supervisors in recognizing early indicators of deteriorating work performance and how to engage the employee in constructive confrontation.

There are two traditions out of which most EAPs have evolved. It is, in part, this historical difference that led to this present investigation to inquire if any differences could be identified between such programs initiated by the union in contrast to those which were employer initiated. The earlier tradition emerged from within the union movement itself. There is a tradition of self-help and worker improvement within the American labor movement that may be traced to its roots.

The history of "formal" union-run social services can be traced to the 1940s. Unions provided social services to workers during this time period and, indeed, provided treatment for such problems as alcoholism and drug abuse. The tradition continues now as several unions do in fact provide social services to their members at the work location or nearby. Three unions make up the bulk of such union-sponsored EAPs: clothing and textiles (ACTWU); local and state government (AFSCME); and auto workers (UAW) (Martin, 1985). Unions have tended to become active with EAPs for one or more of three reasons: (1) as a way of maintaining membership loyalty, (2) to compete with employer-sponsored QWL programs, and (3) to compete with other employee organizations.

Employer-sponsored EAP programs developed as early as 1917 with Northern State Power Co. in Minneapolis and two years later when Metropolitan Life Insurance Company started providing counseling (LeRoux, 1982). However, EAPs for most organizations are relatively new. The Business Periodical Index did not contain an entry for EAP until its 1981 edition. The rapid development of EAPs in the 1970s may be traced to at least six factors: (1) it became socially evident that treatment for alcohol/drug addiction was in fact practical and possible; (2) business became more concerned about the cost of losing senior employees; (3) the social responsibility movement and the emphasis on individual rights; (4) the urging of mental health officials for a more effective treatment by intervention; (5) growth of employee benefits; and (6) the sudden development of more positive personnel policies. At the beginning of the decade about 25 percent of the Fortune 500 companies reported an EAP; by decade's end that number had more than doubled to 57 percent (Meyers, 1983).

Most EAP studies have been general investigations of operation and philosophy. Rarely can a study be found which considers worker perception of EAPs, how EAPs are treated in the collective bargaining process, the differing perception of employer- and union-sponsored EAPs, and the union leader perception of drug and alcohol problems in the workplace. Although no comprehensive statistics are available on the coverage of EAPs in collective bargaining agreements, the Bureau of National Affairs indicates that most joint EAPs were arrived at in a more informal manner (BNA, 1987). Some union officials have argued that management may have used cooperative programs as a tool to reduce employee commitment to the union in an effort to transfer such to the company (Kochan, Katz, and Mowrer, 1984). Union leaders have traditionally feared that the inclusive nature of a mental health diagnosis would allow management to discipline any union member who challenged management, although no empirical data have been developed in this area (Roman, 1981). A review of the late 1970s did identify four types of union reaction at that time to EAPs (Trice, Hunt, and Beyer, 1977). The present study utilizes a similar approach.

Methodology

A questionnaire was administered to a sample of union leaders who were attending a week-long union-sponsored summer school in 1987 on a university campus. The attendees represented seven southeastern states and a diversity of leadership roles within the union as well as some nonelected leaders who reported themselves as "member." The group, to have been elected to be away from the job for a week "on the clock," no doubt consisted of the power brokers within the local union setting.

Each respondent represented a different work environment, although some larger locals did have more than one representative present. The questionnaires were administered in a classroom setting in the middle of the leadership program, before any mention was made of drug/alcohol problems or of EAPs. Complete demographic information was developed on the respondents and data collection continued after the program in an effort to pursue additional issues further.

Findings

Slightly more than 57 percent of the respondents worked in a setting with an EAP. Of the 46 worksites with an EAP, the average length of operation was 6.71 years (s.d. 5.84). However, 85 percent of the EAPs had been in operation less than 10 years.

Eleven worksites (15 percent) had a union-sponsored EAP, with an average length of operation of almost 8 years. Thus, the average EAP in this group of respondents, company- or union-sponsored, appears to fall within the parameters discussed in the EAP literature.

The seriousness of the drug and alcohol problem nationally was generally viewed as alarming; however, the local worksite scene was less so (see Table 1).

TABLE 1
Seriousness of Drug/Alcohol Problem in U.S. and at Worksite Level (N = 80)

	Very Serious	Serious	Not Serious	No Problem
Seriousness in the U.S.	57 (70.4%)	21 (25.9%)	3 (3.7%)	0
Seriousness at local worksite	6 (7.5%)	23 (29.8%)	42 (52.5%)	9 (11.3%)

The union leaders were asked to consider the training they received in the use of the EAP. The majority (82 percent) indicated they had received no training about the EAP, either as worker or as a union leader. Six people (7.7 percent) reported they had received training from the company; five (6.4 percent) reported the union as a training source; and three (3.9 percent) reported training from both the union and the company.

One of the usual channels for communication about an EAP, regardless of the sponsorship of the program, is with brochures or other written material. Table 2 indicates the usage of such written material on the EAP.

A major variable in the success of an EAP is the ability of the supervisor to use the program properly. Over 50 percent of the supervisors were rated quite low in their use of the EAP; 53.3 percent rated the supervisor poor or below average in EAP usage; 35 percent were rated as average, while 11.7 percent rated the supervisor as above average.

TABLE 2
Use of Brochures as EAP Communication Tool

Material Source	Usage Rate
Employer originated	18.75%
Union originated	10.00
Both employer and union sources	8.75
No written communication	62.50

Table 3 indicates the relative satisfaction of the respondents with the EAP plan sponsored by the employer as contrasted with the satisfaction with the plan sponsored by a union. In the same vein, respondents were asked about whether management designed the EAP to weaken the employees' support for the union. Of those with employer-sponsored EAPs, 32.3 percent indicated some agreement, although only less than 10 percent of that group felt strongly on the issue; 42 percent had strong disagreement with that perception. This is perhaps the most revealing finding of the study and will be discussed below.

TABLE 3
Satisfaction with EAP by Sponsorship of Plan

Satisfaction Rating	Employer Sponsored	Union Sponsored
Good	16 (30.8%)	10 (38.5%)
Adequate	23 (44.2%)	11 (42.3%)
Less than adequate	2 (3.8%)	4 (15.4%)
Poor	8 (15.4%)	1 (3.8%)
No response (5)		

Note: Twenty-eight respondents (36.4 percent) reported no company-sponsored plan.

Another finding in this same stream was that the vast majority (83.8 percent) of the respondents felt that the most successful approach for assisting problem drinkers or drug users was with cooperative company and union action. Only 7.5 percent indicated that the problem worker should seek assistance on his/her own.

Another relevant finding here relates to the preference for sponsorship of the EAP. Those favoring a company-based EAP accounted for 50.68 percent of the respondents, while the remainder wanted a union-based EAP. Of those wishing a union-based EAP, only 35.6 percent were willing to offer strong support that employees or the union should finance the program, however.

What about the impact of the company-sponsored EAP on the loyalty to the union? Thirty percent of the respondents felt that such a company EAP would damage the union. The vast majority did not perceive damage to the union from the company-based EAP.

Discussion

Today there is much said by the leading writers in the employment relations field about a transformation in the relationship between labor and management. The call from many quarters is for more cooperative efforts. Yet many labor leaders have been reluctant to become involved in such joint programs for fear that the union may become co-opted.

One vehicle for the initialization of a cooperative relationship—an integrative bargaining effort, as contrasted to a distributive effort—may well be an Employee Assistance Program, based upon the preliminary findings of this study of local union leaders in seven southeastern states. The leaders feel there is a problem of drugs and alcohol that is quite serious in the nation as a whole, although they do not feel that the same intensity of the problem exists in their workplaces. Yet the majority approve of the concept of an EAP. They did identify, however, that their existing EAPs were not functioning as well as they might based on two significant shortcomings: inadequate training for supervisors, probably in the confrontative skills, coupled with a dearth of printed information to inform them about EAP operation or even existence.

In addition, the leaders seem to have no great preference as to whether such a program should be company- or union-sponsored; in fact, a majority would not be willing to fund a union-sponsored program. In dealing with alcohol or drug problems, the vast majority appear to favor a joint approach on the shop floor.

Thus, based on these data of 70 worksites in seven states, the union leadership may well be giving recognition to the keys to the transformation concept: an issue which is important to the leaders, a cooperative vehicle which appears nonthreatening, plus an ever increasing youth of union leadership. This may well be the recipe for a greater integrative bargaining relationship in the future. The second step of this study will be to survey both employers and members of the unions in this study before moving to a national study of leadership in this same union during 1989-90.

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Intention to Quit Career or to Quit Company: Evidence from a Survey of Packaging Professionals

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Intention to quit is one of the most common responses exhibited by workers in employment situations. It is a manifestation of job dissatisfaction. It also reflects employees' perception of alternative opportunities (Morishima, 1985). Job satisfaction and intention to quit, while being the subject of an extensive sociology and industrial psychology literature, has received little attention in the voluminous economic literature on labor turnover. This neglect stems from professional suspicion of any nonstandard economic variable that depends on psychological and subjective factors. It is preferable to study a "realization" variable, which is observable and objectively measurable, than an "intention" variable. While there are good reasons to treat a subjective variable with caution, "the answers to questions about how people feel toward their job are not meaningless but rather convey useful information about economic life that should not be ignored" (Freeman, 1978).

The purpose of this paper is to provide a systematic empirical analysis of intentions to quit professions and to quit current company. Using a newly available survey data set, we examine the determinants of packaging professionals' responses to the two intentions to quit questions. The subsequent section describes the data set. The third section presents the empirical analysis of the two intention to quit responses. Summary and conclusions follow.

The Sample

The data analyzed in this paper are taken from the 1986 survey conducted by the School of Packaging at Michigan State University of

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its alumni and members of the Institute of Food Technologist's Food Packaging Division. The questionnaire addressed issues pertaining to their education, training, opinion about packaging discipline, employment characteristics, and other aspects of their professional experiences. Out of slightly more than 4,000 people contacted, 814 persons, in all positions and all segments of packaging, responded. The return rate was over 20 percent.

The average age of the respondents was 36, and 77 percent of them were male. Whites constituted the vast majority (91 percent), followed by blacks (8 percent). Seventy-five percent held B.S. degrees, and significant numbers (20 percent) had master degrees. Fifty-two percent of the respondents had worked in the field of packaging for at least six years. Overall, packaging jobs were well paid, with an average salary of $45,000 in 1986. (See Huang et al., 1988, for a detailed analysis of the packaging "industry" and the profession.)

Information on the respondents' intention to quit is obtained from their answers to the following questions: "Are you seriously thinking of giving up your packaging career for other non-packaging work?" and "Are you seriously thinking of staying in packaging but changing companies?" Ten choices were available for respondents which range from 1 (not seriously) to 10 (very seriously) in integers. The mean responses for both questions were 4.56 and 4.30, respectively, which seem to indicate that the respondents were generally satisfied with their careers and companies and not seriously thinking about quitting. The magnitude of both standard deviations (3.29 and 3.13, respectively), however, suggests wide variations in opinions. For instance, while about 51 percent of the respondents indicated that their intentions to quit career or to quit company were less than 4, another significant proportion of them registered their seriousness to be at least 8 in either intention to quit career or to quit company (25 and 23 percent, respectively).

Empirical Analysis of Quit Intentions

Conceptual Framework and Empirical Specification

It can be conceptualized that intention to quit is formed by job satisfaction and perceived benefits and costs of quitting. Job satisfaction, as argued widely in the psychological literature (Mattaz and Potts, 1986), is determined jointly by (1) perceived work characteristics, which represent work rewards, and (2) work values, which represent what a person desires or seeks to attain from work. The former consists of both intrinsic and extrinsic rewards. Intrinsic rewards are those directly associated with "doing the job" (i.e., the content of task), which are administered by the individual through performance and accomplishment of a task. Extrinsic rewards, on the other hand, are mediated by an agent other than the individual contingent on performance and accomplishment of a task. This includes social rewards such as respect and supportive co-workers and supervisors, and organizational rewards such as a salary raise, promotion, and fringe benefits. Based on this framework and information available in the survey, several variables were included in the estimation equation. Demographic characteristics (e.g., race, age, and sex) may form different work values and receive different work rewards (e.g., discrimination), resulting in different extent of satisfaction. They will also provide differential opportunities for alternative jobs (e.g., labor market segmentation), leading to different evaluations of the benefits and costs of quitting. Likewise, human capital characteristics such as education, experience, and tenure could conceivably affect quit intention through their influence on the formation of job satisfaction and on the cost-benefit calculation of quitting.

The salary and benefit variables are included as direct measures of the extrinsic rewards in the job satisfaction framework. Also included is a set of dummy variables classifying the job functions performed by the individuals in the firm. They may capture the aspect of intrinsic task rewards in the job satisfaction framework. In addition, dummy variables like ROOM, MAIN, and RECOMMEND (defined in the following subsection) are included as they are involved in the cognitive process of forming satisfaction and quit intention.

Two multiple regression equations were specified with intention to quit career and to quit company as the dependent variables and the aforementioned variables as explanatory variables. We first simply used the original index variable as dependent variable in linear regressions and interpret the estimates as the effect of various factors on the seriousness of quit intention. Being concerned about the econometric problems posed by the nature of such dependent variables, we then invoked a SAS LOGIST procedure, which fits the logistic multiple regression model to an ordinal dependent variable.

Discussion of Estimation Results

Results of four regression equations are given in Table 1. Columns 2 and 3 record the OLS coefficient estimates with the associated *t*

TABLE 1

Determinants of Intention to Quit Career or to Quit Company

	OLS Results		Logistic Regression Results	
Variable	Change Career	Change Company	Change Career	Change Company
AGE	0.01406	−0.08963*	0.01487	−0.06518*
	(0.457)	(2.858)	(0.49)	(10.68)
MALE	0.07553	1.13589*	−0.00269	0.89968*
	(0.201)	(2.960)	(0.00)	(13.63)
WHITE	−0.36903	−1.03067*	−0.09472	−0.72187*
	(0.745)	(2.041)	(0.09)	(5.28)
LBS	0.55010	1.50046	0.15062	1.21436
	(0.503)	(1.346)	(0.04)	(2.16)
MS	0.79347*	−0.32041	0.36050**	−0.05754
	(2.291)	(0.907)	(2.71)	(0.07)
PHD	−0.20149	0.44881	−0.45755	0.27960
	(0.212)	(0.464)	(0.58)	(0.18)
PKG EXPR	−0.12295*	−0.02040	−0.10134*	−0.00009
	(3.433)	(0.559)	(17.09)	(0.00)
TENURE	0.01356	−0.00447	0.00041	−0.01135
	(0.556)	(0.180)	(0.00)	(0.52)
JOB CHSD	1.03863*	−1.25177*	0.55176**	−0.78818*
	(2.357)	(2.808)	(3.21)	(6.86)
SALARY	0.00001	−0.00001	0.00001**	−0.00001
	(0.824)	(1.125)	(2.91)	(2.18)
BENEFIT	0.006513	−0.02296	0.00166	10.01056**
	(0.663)	(2.293)	(0.07)	(2.98)
PKG EMPSD	−1.00495*	−0.08291	−0.80296*	−0.23884
	(2.366)	(0.191)	(8.77)	(0.72)
ADMINITR	0.47741	0.31541	0.18321	0.31621
	(0.799)	(0.517)	(0.21)	(0.68)
CONSULT	0.05402	1.23791**	−0.20255	0.83878**
	(0.074)	(1.668)	(0.19)	(3.06)
DSNGRPH	−0.43045	0.82239	−0.39496	0.68991*
	(0.753)	(1.410)	(1.08)	(3.67)
PLANTOPR	1.28655**	0.14299	0.61086	0.31031
	(1.812)	(0.197)	(1.81)	(0.47)
PURCHASE	−1.20146	0.84981	−0.59346	0.54390
	(1.367)	(0.948)	(1.11)	(0.95)
QC	0.84485	−0.52938	0.23708	0.10939
	(0.952)	(0.585)	(0.19)	(0.04)
R & D	−0.44204	0.52447	−0.40410	0.56639
	(0.760)	(0.884)	(1.13)	(2.35)
SALES MKT	−0.39639	0.80357	−0.35546	0.77115**
	(0.636)	(1.263)	(0.74)	(3.66)

TABLE 1—(*Continued*)
Determinants of Intention to Quit Career or to Quit Company

Variable	OLS Results: Change Career	OLS Results: Change Company	Logistic Regression Results: Change Career	Logistic Regression Results: Change Company
TEACH	−0.90984 (0.410)	4.28783** (1.892)	−0.13344 (0.01)	3.35159** (3.16)
MAIN	−0.73793 (2.208)	−0.20812 (0.611)	−0.56370* (7.33)	−0.10790 (0.25)
RECOMMEND	−0.89354* (2.239)	−0.30837 (0.757)	−0.55820* (4.64)	−0.23923 (0.87)
ROOM	−0.43119 (1.433)	−1.16912* (3.809)	−0.27833 (2.21)	−0.68771* (12.45)
R^2 *or* −2 log L	0.2348	0.2146	1833.28	1821.10

statistics in parentheses, and Columns 4 and 5 list the logistic coefficient estimates with the chi-square statistics in parentheses, for career change and company change intentions, respectively. The last row gives the fit of the equations in terms of adjusted R-square and −2 of the log likelihood function, respectively. Single asterisk indicates that the coefficient is significant at the 5 percent level, and double asterisks at the 10 percent level.

First, we find no contradictions between the OLS and logistic estimates, rendering us confident that the OLS regressions on the ordinal dependent variables do not generate serious estimation bias. It is also instructive to note that the numerical effect and statistical significance of the independent variables are quite sensitive to dependent variable used. This suggests that an individual's intentions to quit career and company are formulated through distinctively different psychological processes. In fact, the low and insignificant Pearson correlation coefficient between the dependent variable (−0.023) also supports the same conjecture. This view will be upheld below in our attempt to interpret and understand the findings on the effect of each explanatory variable.

There is no significant bearing between intention to change profession and being old or young, male or female, and white or nonwhite. Nonetheless, demographic factors play significant roles in motivating company changes. Again, this demonstrates the different nature of the two mobility considerations. The negative impact of AGE on firm separation is widely observed in the literature of labor turnover, given that older workers expect a shorter period to collect returns on the move. The positive impact of MALE and negative effect of WHITE and their magnitudes indicate that white females have less and black males more intentions to change companies. This finding does not lend itself to intuitive economic explanations. Assuming equal alternative opportunities, the opposite responses between them are perhaps due to different work satisfaction generated through inherently different perceptions about job rewards and job values.

In the aspect of career separation, master degree holders, relative to B.S. holders (the omitted category), appear to be more inclined to move out of the packaging field. This may be attributed to the fact that about half of the master degree holders indicated that they are MBAs (although mostly with a B.S. degree in packaging). This presumably broadened their career opportunities and motivated them to grow (or be promoted) out of the packaging field. Packaging experience has a negative and significant impact on the intention to change career, but is not a significant deterrent to the intention to change company. One possible explanation is that the packaging-specific human capital accumulated through professional experience is transferable from company to company if the individual stays in the field, but not from packaging to nonpackaging work. Hence, with more professional experience it is more costly to change career than to change company, thereby reducing the propensity to quit the career.

Tenure has no influence on the intention to change career. This is expected since it is not obvious why there would be any relationship between tenure and the intention to change career. Nonetheless, tenure is expected to negatively influence the intention to quit the current firm, since longer tenure would make leaving current company more costly. Although the coefficient of TENURE is indeed negative, it is numerically insubstantial and statistically insignificant. This may be due to selectivity bias as a result of treating tenure as an exogenous variable in the equation (Weiss, 1984). Since tenure is actually an endogenous variable and is affected by variables that also affect quit propensity, the correlation between the error terms in the tenure and quit intention equations is probably high, producing bias in the estimate of TENURE here. In connection with TENURE, the number of job changes standardized by years of experience, JOBCHSD, is fairly significant in both quit equations but with opposing signs. Although it demonstrates again that the two intention responses result from quite different evaluation processes, it is not clear what caused such drastically different responses. It might be speculated that when it comes to consideration of changing companies, a frequent JOBCHSD implies more information about the packaging job market and a more effective match between the individual and the firm, and therefore more company satisfaction and less intention to quit. Although relatively frequent job changes *within* the packaging field do not directly affect profession satisfaction, it may well reveal an individual's personal trait to be more "loose footed" (or risk prone) and more likely to venture into different fields.

Salary and benefits have the expected negative effects on interfirm mobility decisions, as they represent extrinsic rewards that will boost satisfaction with the firm. But their effects are small and only BENEFIT is significant. Neither has a significant effect on the propensity of occupational turnover, as they are more firm-oriented than occupation-oriented. By way of contrast, PKGEMPSD, the proportion of employees involved in the packaging function within a firm, is more packaging-career-oriented. It may capture the aspect of extrinsic social rewards to packaging expertise and contribute to higher occupational satisfaction. The results show that it has a negative and highly significant impact on the intention to change career, but not on intention to change firm.

Most of the job function dummy variables do not have a significant effect on quit intention responses. The most noticeable is that those who perform teaching functions show the strongest desire to quit the firm of employment but to stay in packaging. This may indicate that those who teach packaging in educational institutions are more inclined to leave the "firm" (university) and get a more rewarding packaging job in the industry. The fact that those engaged in consulting are rather inclined to change company is in line with the notion that the consultants are more responsive to the prospect of adding (changing) clients.

Finally, MAIN and RECOMMEND have a significant impact on individuals' career change intentions but not on company change intentions. Clearly an individual must be satisfied with his profession if he is willing to RECOMMEND others to study packaging; hence he has less intention to quit the career. By the same token, the individual must be obtaining enjoyment (intrinsic task rewards) from working on his specialty if he considers that expertise to be a subject of major concern to corporate management (MAIN). These two dimensions pertain more to career than to place of employment. Hence their effects on the intention to change company are not as significant. On the other hand, ROOM is significant in affecting the intention to quit the firm, but not on the intention to quit the career, since whether the firm's packaging organization allows sufficient ROOM for professional growth is really a concern about the firm's policy toward packaging employees and not about the packaging career per se. In a sense, ROOM captures extrinsic rewards aspects of firm satisfaction, but not career satisfaction.

Summary and Conclusions

This paper presented an empirical analysis of packaging professionals' intentions to leave the occupation or to leave the firm of employment. The analysis is based on the 1986 survey of packaging professionals by the School of Packaging at Michigan State University. The survey shows that, on average, packaging specialists were generally satisfied with their jobs and companies, and not seriously thinking about quitting. The survey also shows tremendous variations in the responses, making generalization of the average response difficult.

The major empirical finding is that there are sizable differences in the determinants of the two responses, suggesting that an individual's intentions to quit career and/or companies are formulated through distinctively different psychological processes. Specifically, age, race, sex, compensation on the job, and perception about a company's treatment of the packaging unit significantly affect the intention to change company, but not the intention to leave the profession. In contrast, packaging experience, holding a graduate degree, the relative size of the packaging group in the firm, and the enthusiasm of recommending the study of packaging all play important roles in encouraging or deterring the intention to quit the career, but not the intention to change firms. Most of these differences can be understood in terms of the conceptual framework drawn from the literature and posited in this paper.

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DISCUSSION

JACQUES ROJOT
INSEAD/CEDEP

The most relevant contribution to the session on the part of this discussant will probably be to bring some elements of a European view to the topics addressed by the papers.

The three papers presented deal with very different issues, although they each raise a point relevant to IR research. Therefore I shall comment on them one after another, in the order they were received, somewhat disturbed by a one-month mail strike in France—a fact that underlines the importance of the industrial relations content of the session.

The first paper deals with absenteeism of older workers. It brings new methodologies to the study of this subject—ones that have often been used in the field of personnel psychology, but not as often in industrial relations—namely, meta-theory.

A major merit of this paper is to remind us that we know very little about absenteeism. This in itself makes comparisons very difficult. Several studies were carried out in Europe relatively recently and have been the subject of heated controversy. In particular, one of these studies in France ten years ago estimated the percentage of GNP lost because of absenteeism. The problem of definition was central to the debate, and obviously the results were not neutral as they have been used inconclusively by both management and labor for different ends because of this problem.

Also, the controversy around absenteeism due to sickness ties into the dispute about the economic weight and cost of the comprehensive social security system. Some of the available statistics actually come from the National Sickness Insurance System.

In France some interesting data have been obtained through the analysis by the National Institute for Economic Studies (INSEE, 1984 and 1985) of a survey on the structure of wages in October 1978 and a Ministry of Labor survey for 1979. The INSEE studies demonstrate that, independent of age and across all age ranges, seniority and skill

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level had a negative influence on absenteeism and size of the undertaking had a positive influence. If skill level can be considered a proxy for job demands, the results differ from those of the meta-analysis.

The overall conclusion is probably that a subject which may seem to be already well researched in fact demands much additional work. This is especially the case before we are able to reach policy decisions and prescriptive provisions to offer to human resources management professionals. This should be kept in mind particularly as it regards the link between old age and absenteeism, and we must recall the comments presented at an earlier session devoted to the labor market and older workers. This is a domain where we should beware of stereotypes, as the present paper reminds us.

The second paper deals with employee assistance programs and their potential for integrating labor and management behavior. The research methodology is simpler, using descriptive statistics.

The paper raises two issues. First, are the results controversial? Second, how extensively can such a program be used to initiate a transformation of labor-management relations to a more cooperative status?

As regards the first question, it is not totally surprising that 82 percent of the respondents had not received training in the use of existing employee assistance programs. As is often the case with an employee involvement program, once it is decided upon and installed, it is left up to the individuals as to whether or not to take advantage of it. In addition, implementation is often not carefully monitored once the decision has been made to proceed.

The fact that the overall rate of satisfaction with the program is high must be mediated by the finding that most of the respondents thought that the local problem with drugs and alcohol was moderate. The degree of satisfaction might have been lower if the problem had been considered urgent and immediate.

It is perhaps more surprising that 83.8 percent of the respondents thought that a successful approach for helping employees was a company and union cooperative joint action. In the sample the vast majority did not perceive a threat to the union in a company-sponsored program. This correlates with the fact that 50 percent favored a company-based employee assistance program.

However, can we imply from these findings that such programs may be the foundation stone for promoting a more integrative relationship between the company and the union? To some extent, indeed, here they share the same goal—to help the employee with a problem, and they may hold common views on the ways to achieve that goal. However, this leaves open the question of moving jointly into other and perhaps new areas of cooperation where the incentive toward joint action might be less obvious.

Here also we probably need additional research in different settings.

The third paper deals with the intentions to quit a career and to quit a current job. The main finding is that different psychological processes lead to each of these decisions in a given field. Here also questions are raised for future research when a comparison is made with a European case.

First, would the same results apply to nonprofessional employees? There is no doubt that the authors' sample of packaging employees have a set of specific characteristics: 75 percent hold a B.S. degree, 20 percent an M.A., and the average wage is $45,000.

In many European countries criteria such as these would place these employees in a special legal category, with special status, treatment, and benefits (such as the cadres in France).

There is presently some degree of controversy regarding the question of whether these employees actually constitute a group with different attitudes and expectations than lower-ranking white-collar employees.

Second, it can be noted that the impact of age on firm separation and change of firm would probably be even more marked in some European countries because of their higher unemployment rates. It is widely accepted in many quarters that a professional employee or a manager who loses his job after age 45 or 50 will experience significant problems in finding new employment, sometimes even at the price of a large pay cut.

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XXII. POSTER SESSION I

The Effect of Organizational Symbols on Attitudes and Performance

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Purdue University Calumet

This paper tests Pfeffer's theory of management as symbolic action. Symbolic action is defined to include material, verbal, and action symbols. Using 195 worker-subjects, an experiment was devised using a 2 (symbol type) × 2 (management type) × 2 (gender) × 3 (time) completely cross repeated measures factorial design. Time was the repeated measure. The data confirm that a symbolically enriched management approach causes workers to be more productive, job-satisfied, motivated, generally satisfied, and committed than a nonenriched approach. The effects of symbolic action are unrelated to gender and endure over time. This study has implications for practicing managers and researchers exploring the world of organizational symbolism.

The Unfair Labor Practice Filing Behavior of Labor Organizations

KAREN E. BOROFF
Columbia University

A comprehensive model of the probability of a labor organization to file an unfair labor practice charge in the course of a representation election is developed. The research focuses on union ULP filing patterns from 1979 through 1986 and analyzes experiences from both NLRB region and industry-wide perspectives. This research extends existing knowledge of ULP filings by examining the impact that context characteristics, union characteristics, and employer characteristics have on the probability of a union's filing a ULP. In addition, insights from unions on their motivations to file ULPs as well as employers' beliefs about why unions file ULPs are investigated.

The Employment of Professional Staff Among American Unions: Changes, Trends, and Implications

Paul F. Clark
Penn State University

This paper examines the substantial growth in the number of professional, technical, and administrative personnel employed by American unions during the period 1961 to 1985. The study explores this phenomenon by focusing on the employment levels of professional staff among 30 of the largest national unions in the American labor movement. The findings indicate that, from 1961 to 1985, the number of professional staff rose, relative to membership levels, for the large majority of the unions examined. The paper concludes with a brief discussion of the implications this trend has for the future of American unions.

The Predominance of Academic Freedom as a Bargaining Issue Among Unionized Professors: Some Evidence from Michigan

Sahab Dayal
Wright State University

In recent years there has been a significant increase in union membership and collective bargaining among academic professionals. Using a well-known public university as a sample, this study found considerable support for the proposition that unionized professionals' concerns go beyond the traditional "bread and butter" issues. While several professional issues seem to be important in the arena of bargaining priorities and goals in the 1980s, the issues of academic freedom and personnel decision-making stand out as the most prominent.

An Experimental Study of the Effects of Age on Reduction in Force Rankings

David E. Drehner and Cosimo A. Carlucci
DePaul University

James E. Bordieri
Southern Illinois University

A laboratory experiment tested the hypothesis that age and simulated performance descriptions affected RIF rankings made by managers and technical specialists. A Latin square design eliminated the confounding of age and age-related characteristics and maintained control not possible in field research. Chronological age effects on performance ranking were not found; a significant employee effect was found demonstrating rater reliability using the performance descriptions. Statistically removing the effects defined by rated performance attributes from rankings also yielded no age effect. ADEA litigants need to rethink whether age alone or other age-related characteristics give rise to unfair discrimination.

Labor Organization and the Rate of Technological Change: A Case Study of Indiana Newspapers

Christopher Ezell
Vincennes University

The rate of technological change is often assumed to be affected by a firm's labor organization. Based on a comparative case study of two Indiana newspapers, my analysis centers on the effects of labor organization on the rate of technological change in the newspaper industry. Contrary to the general consensus, this research suggests that unionization may actually encourage a relatively rapid pace of technological change because of initial labor opposition. If workers are fairly certain that their jobs are secure and wages are not likely to suffer, then the acceptance of new technology is increased.

Dual Commitment in Japan: Preliminary Observations

DANIEL G. GALLAGHER
James Madison University

JACK FIORITO, PAUL JARLEY, YEON-ANG JEONG
University of Iowa

MITSURU WAKABAYASHI
Nagoya University

This paper examines the phenomenon of dual commitment in unionized employment relationships in Japan. Conceptual and operational issues involving dual commitment are discussed in the context of previous research and the unique Japanese setting. Hypotheses are developed and empirically assessed using conventional and novel conceptions of dual commitment. Not surprisingly, a key finding in the context of enterprise unionism is a high degree of dual commitment. Perhaps more startling is the degree to which company and union commitment share common determinants and the extent to which conventional correlation measures of dual commitment can be misleading. (The authors wish to thank Mamoru Sano for his invaluable assistance in making the data available for this study.)

Economic Outcomes for Dislocated Older Workers

CHRISTOPHER A. GOHRBAND, KAREN YAMAKAWA, AND JEANNE PRIAL GORDUS
University of Michigan

Results from a 1987 survey of hourly workers permanently dislocated in the automobile industry are focused on the 25 percent of the respondents who are over 40 years old. Lower educational attainment, minority status, and female gender were more heavily represented among the older displaced workers. All these factors were barriers to successful adjustment. Older reemployed workers reported lower levels of satisfaction with new physical working conditions, personal health, and family well-being than younger workers. There was, however, no statistically significant difference between younger and older workers in participation in adjustment programs.

Predicting Support for Unionization: Part-Time v. Full-Time Workers and Professional/Technical v. Blue-Collar Workers

TIMOTHY J. KEAVENY
Marquette University

JOSEPH ROSSE
University of Colorado

JOHN FOSSUM
University of Minnesota

Full-time and part-time workers as well as professional/technical and blue-collar workers were compared with respect to variables associated with support for unionization in 12 union certification elections. Full-time and part-time workers are quite similar with regard to variables associated with intent to vote for a union. However, different variables are significantly related to self-reported vote among these workers. Although some similarities are observed among professional/technical and blue-collar workers, it appears that extrinsic job satisfaction is more closely related to support for unionization among blue-collar workers, while feelings of powerlessness are more closely related to support for unionization among professional/technical workers.

A Content Analysis of Published Research in Industrial Relations Journals During the 1980s

NICHOLAS J. MATHYS AND WAYNE HOCHWARTER
DePaul University

This analysis focused on articles that appeared in 18 of the top industrial relations journals from 1980 to 1987. Altogether 621 articles were abstracted and a content analysis was done. This research was undertaken for the following reasons: (a) to determine trends occurring in industrial relations research, (b) to determine methodologies being used in IR research, and (c) to aid authors when submitting research to various industrial relations journals. Most of the IR journals studied do not have a stipulated publication policy that identifies specifically the type of research issues desired or the research methodologies favored. Therefore, authors would be well advised to consider the results of our analysis before choosing to submit articles to specific IR journals.

Information Sharing and Firm Performance in Japan: Do Joint Consultation Committees Help?

MOTOHIRO MORISHIMA
Simon Fraser University

In Japan, a firm's sharing of private business information with its union and employees is a labor relations practice that is much more widely institutionalized than in North America. In this study, using a survey on information-sharing activities in Japanese joint consultation committees and publicly available business data, the author examines the effects of information sharing on a firm's profitability, productivity, and labor cost. Despite the theoretical predictions suggesting effects in both negative and positive directions, the results generally showed a positive association of information sharing with profitability and productivity and a negative association with labor cost. These results were opposite to those previously found in the United States.

Strategies and Tactics in Union Organizing Campaigns: A Field Test

RICHARD B. PETERSON, THOMAS LEE, AND BARBARA FINNEGAN
University of Washington

The study focused on the role of employer strategies and tactics, and their association with election outcomes based on responses from the union organizing staff of one large AFL-CIO international union. The first hypothesis was largely supported in that employers who used more pro-active and aggressive tactics were more likely to win the election. There was only limited support for the second hypothesis—that unions using more pro-active tactics were more likely to win the election and have a higher percentage of pro-union votes than their more conservative counterparts. Some organizing tactics were found to be dysfunctional for both unions and employers in that they decreased the favorable percentage of vote for the side using the tactic.

Determinants of the Change in the Bargaining Structure in Construction

Kathryn M. Rayner
Pennsylvania State University-Erie

Marcus Hart Sandver
Ohio State University

This study is concerned with the changing economic and organizational factors associated with employer demand for single-employer as opposed to multi-employer bargaining in the construction industry in Ohio. The employers examined in the sample represent all eight Metropolitan Statistical Areas in Ohio, and bargain with locals affiliated with 13 national construction and trade unions. The same cross-section of union/employer agreements were examined at two different points in time: 1979-81 and 1982-84. The research design incorporates environmental and organizational characteristics in a predictive model. The homogeneity of association was found to be consistently related to maintenance of employer membership in an employers' association over time.

The Human Resource Function in Foreign-Owned Firms: The Implications for Union Organizing

Rajib N. Sanyal
Trenton State College

Foreign-owned firms in the U.S. are often believed to be active practitioners of positive human resource management which would preempt workers' need for union affiliation. This study suggests that union inability to win representation elections in such firms has less to do with their introduction of innovative practices but is due to the structure and staffing patterns typical of foreign multinational enterprises and old-fashioned union avoidance techniques. Through survey findings and interviews, it appears that such firms are unlikely to implement innovative human resource practices in the American work setting. Personnel practices in these firms tend toward reinforcing traditional industrial relations practices vis-à-vis unions.

Differences in Job Satisfaction Among International Employees

Zhuang Yang
Columbia University

This study focuses on organizational factors that influence job satisfaction among 1538 United Nations employees from offices located in 61 countries throughout the world. Results show that respondents from offices located in developed countries, particularly in the headquarters in New York, feel less satisfied relative to those from offices located in developing countries, professional staff are likely to have higher levels of job satisfaction relative to secretarial and clerical employees, and employees' perceptions of major human resources policies are important factors influencing employee job attitudes.

Other Poster Papers

Understanding the Causes of Differential Rates of Free-Riding in Federal-Sector Unions

Robert S. Atkin and Marick F. Masters
University of Pittsburgh

Determinants of Union Representation Election Outcomes: Finally, Evidence from the Public Sector

Hugh D. Hindman
Appalachian State University

Unions and the U.S. Comparative Advantage

Thomas Karier
Eastern Washington University

New Technology and Workplace Industrial Relations: The British Metal-Working Sector in Comparative Perspective

EDWARD H. LORENZ
University of Notre Dame

The Union Wage Impact: A Comparison of Cross-Sectional and Longitudinal Estimates

MARIE BELL SICKMEIER
Kent State University

XXIII. POSTER SESSION II

Compensation for Work Disability: The Cost of Alternative Systems

William P. Curington
University of Arkansas

Permanent partial disability claims, while comprising only about 25 percent of the claims, account for over 60 percent of the income replacement benefits and a very high percentage of cases involving controversy in state Workers' Compensation systems. Most states use a benefit structure in which compensation is not dependent on absence from work. Problems and inequities in the system have spurred reconsideration of the objectives of compensation for permanent disability and a number of proposals for changes in the benefit structure. Comparisons are made of the benefits received by a set of New York claimants under the current benefit structure and several proposed alternatives.

Commuting Patterns and the Relevant Labor Markets

Jane K. Giacobbe and Kenneth G. Wheeler
University of Texas-Arlington

Individual willingness to commute to work is a critical factor in determining the relevant labor market in which the employer competes for labor. Theory suggests that occupation, gender, age, education, and "personal situational" variables influence commuting patterns. This field study of 595 employees in three organizations reveals that personal tastes for commuting, the presence of children, and marital status predicted current commuting times. Occupation and gender were significantly correlated with commuting times, but were not significant in the regression analysis.

Sources of Pay Satisfaction: A Career Stages Perspective

EDWARD J. INDERRIEDEN, JOHN COTTON, AND PAUL SWEENEY
Marquette University

Previous theory and research has demonstrated that satisfaction with pay is influenced by perceptions of relative deprivation. Relative deprivation, in turn, is determined by a variety of factors. We predicted that support for a relative deprivation model of pay satisfaction would vary across career steps. Data from a national probability sample of American workers are used to test predictions. The results showed that the impact of relative deprivation predictors is mediated by the career stages.

Labor and the Strategy of Mandated Health Benefits

DAVID C. JACOBS
American University

The labor movement has long been identified with the cause of national health insurance. More recently, leaders of the United Auto Workers and other unions have provided considerable support for a new initiative for health care reform, mandated employer-provided health benefits. While innovation in social programs has been stalled by the burgeoning federal deficit and Reaganism, the need for health care reform has become more urgent. Congressional strategists framed the mandated health benefits initiative so as to win support from employers, doctors, and deficit-conscious policy-makers. This initiative may serve as a model for new approaches to employee representation.

Union Members' Perceptions of Job Insecurity

NANCY BROWN JOHNSON, PHILIP BOBKO, AND LINDA HARTENIAN
University of Kentucky

Early labor theorists such as Commons and Tannenbaum felt that increasing workers' job security was an important function of labor unions. More recent studies have provided evidence that union workers do place a high value on job security. However, job insecurity

is a perception. Little is known about what influences these perceptions and, in particular, how unions may affect them. This paper attempts to bridge that gap through the development and analysis of a job insecurity measure based on responses from a sample of union members. Overall, the results indicate that more satisfied union members are generally more secure—although actual contract clauses had little relationship with perceptions of insecurity.

Organizational Effectiveness and Human Resource Evaluation: A Three Tier Approach

DANIEL KOYS
Marquette University

STEVEN BRIGGS
DePaul University

STEVEN ROSS
Montana State University

A survey of Human Resource managers in 82 Fortune 500 corporations was conducted to explore the relationship between organizational effectiveness and the importance of human resource (HR) evaluation. Results indicate significant, positive relationships between organizational effectiveness and the importance of evaluating human resources management from a top (strategic) tier and between organizational effectiveness and evaluating from a middle (functional) tier. We found no significant relationship between organizational effectiveness and evaluating HR from the bottom (workplace) tier.

Analysis of Arbitrated Public Employee Discipline Cases for Infringement of Employee Rights

HELEN LAVAN
DePaul University

This study is an analysis of arbitrated cases of public-sector employees, 50 percent blue-collar, who had been disciplined primarily

(85 percent) for on-the-job behavior. Age or race was involved in only 6 percent of the cases and sex discrimination or sexual harassment in only 3 percent. Six percent of the cases involved harassment for union activity. The right to freedom of speech was an issue in 10 percent of the cases and the right to privacy in 16 percent. Unlawful possession of drugs was a concern in 10 percent of the cases. Thirty-nine percent of the cases resulted in no discipline, 20 percent in suspension, and 22 percent in discharge.

Employee Attitudes Toward Lump-Sum Payments

James E. Martin and Nanette Des Noyer
Wayne State University

The purpose of this paper was to examine employee views toward lump-sum payments applying both a raise and a concession model. Using regression analysis, differences were found in employee attitudes based on both the amount and the receipt of a lump-sum payment. Contrary to the researchers' predictions, the results indicated more overall support for the raise model in explaining attitudes toward $300 lump-sum payments. Neither model significantly explained variance in attitudes toward $1,500 lump-sum payments. For both amounts, however, general attitudes toward lump-sum payments explained the greatest proportion of variance.

Strike Duration and the Complexity of Protocol Specification: Issues That Matter

Jan I. Ondrich and John F. Schnell
Syracuse University

This study tests the proposition that the costly specification of complex contractual protocols leads to longer strike durations. Using a continuous-time duration model estimated on a panel of contract strikes, we test the influence of two measures of the costs of specifying contractual protocols. Controlling for other factors that affect strike duration, our principal finding is that the more major issues that remain unsettled when a strike begins, the lower is the conditional settlement probability. The largest protocol specification effects are predicted for

strikes in nonmanufacturing industries: the third issue in three-issue strikes in nonmanufacturing adds more than 10 days on average to strike durations. We also find positive duration dependence.

Risk Return Tradeoffs in Compensation

Bonnie R. Rabin
University of Illinois at Urbana-Champaign

This paper develops the financial concept of risk return tradeoffs as applied to the theory and practice of strategic compensation management. The pay system is shown to be characterized by "risk," "return," and structure. Pay system risk is defined by the extent of the performance contingency of the pay system which involves the likelihood of receipt. The efficient frontier of risky assets, from financial theory, provides the basis for introducing the "pay arc." The pay arc illustrates the risk and return of any potential compensation system. The paper discusses potential practical and research implications of risk return in compensation systems, including the pay arc as a diagnostic aid to an overall strategic or contingency approach to compensation management.

A Comparative Analysis of Supervisor Attitudes in Union and Nonunion Workplaces

Peter A. Veglahn
James Madison University

Differences between union and nonunion companies are a consistent theme in the labor relations literature. This paper examines differences found between attitudes of unionized company and nonunion company first-line supervisors. The results are compared to expectations gleaned from the literature. Reasons for the success or failure of union organizing campaigns may also be seen in the results. There were relatively few areas where the supervisors in the sample had significant differences in their attitudes. Results support Foulkes's assertion that large nonunion companies resemble unionized companies in their personnel practices and supervision.

The Transition from Secondary to Primary Employment: Jobs and Workers in Ethnic Neighborhood Labor Markets

HOWARD WIAL
Carleton College

This qualitative study of the job mobility of young men in three ethnic neighborhoods of Boston draws on the results of open-ended interviews with workers, employers, and labor market intermediaries. It focuses on worker mobility from secondary to primary jobs in a segmented labor market. Neighborhood-specific, customary linkages exist between particular neighborhoods and particular groups of primary jobs. These linkages, which consist of information, attitudes, and beliefs, general skills, and personal ties to primary-sector workers, reflect the job structures and hiring practices of particular primary employers and are reproduced through socialization into neighborhood-based social groups.

The Consistency and Predictability of Grievance Arbitration Awards

PERRY A. ZIRKEL AND ROBERT J. THORNTON
Lehigh University

A random, national sample of 177 arbitrators and 188 advocates decided or predicted, respectively, the awards for abbreviated grievance cases. The results for the arbitrators revealed a substantial degree of inconsistency (or inter-arbitrator variation). This inconsistency was not significantly related to the age, academic degree, sex, or experience of the arbitrators. The results for the advocates revealed a modest degree of predictability on the part of the management representatives, but not on the part of the union representatives.

Other Poster Papers

Gender Bias in Grievance Outcomes: A Field Assessment

DAN R. DALTON AND DEBRA J. MESCH
Indiana University

On the Outcomes of Grievances Filed 'In the Name of the Union': Multiple Field Assessments

Debra J. Mesch and Dan R. Dalton
Indiana University

Determinants of Employee Termination Policies in Organizations

Robert G. Sheets and Yuan Ting
Northern Illinois University

Determinants of Outcomes of Federal Services Impasses Panel Decisions: 1978-87

Charles G. Smith and Marcus Hart Sandver
Ohio State University

An Application of Relative Deprivation Theory to Understanding Pay Satisfaction

Paul D. Sweeney, Dean B. McFarlin, and Edward J. Inderrieden
Marquette University

Unions' Effect on Interrater Agreement of Job Characteristics

Robert B. Tiegs and Yitzhak Fried
Wayne State University

XXIV. ANNUAL REPORTS

IRRA EXECUTIVE BOARD SPRING MEETING
March 23, 1988, Cincinnati

The meeting was called to order at 3:15 p.m. by President Phyllis A. Wallace. Present were: President-Elect Joyce D. Miller, Past President Michael H. Moskow, and Board Members Janice R. Bellace, John F. Burton, Jr., Steven J. Hendrickson, Eileen B. Hoffman, Mark L. Kahn, David Lewin, Janet L. Norwood, Ernest J. Savoie, and Paula B. Voos. Board members absent were Francine D. Blau, Harry R. Gudenberg, Leslie E. Nulty, and William M. Vaughn.

Others present were: David R. Zimmerman, IRRA Secretary-Treasurer; Barbara D. Dennis, IRRA Editor; Charles T. Schmidt, Jr., and Rachel Grenier, Newsletter Co-Editors; Marion Leifer, Executive Assistant, Larry Leifer and Ruth Cook, Staff Assistants, all of the IRRA National Office; Mary L. Yunt, representing the Orange County (California) Chapter, hosts for the 1989 Spring Meeting; Louis J. Machise, Thomas M. Sheeran, and Donald M. Standriff, representing the host Cincinnati Chapter; and Robert B. McKersie, presidential candidate for 1990.

Following a motion by Ernest Savoie, the minutes of the December 1987 Board meeting were approved.

The Cincinnati Chapter representatives reported that all programs and arrangements for the meeting were on target. Excellent cooperation had been forthcoming from neighboring chapters as well as from the National Office staff. They expressed particular appreciation to the law firms listed on the program for their generous support of the Chapter reception to be held at the Contemporary Arts Center. President Wallace expressed the appreciation of the Board for the excellent program and the meeting arrangements.

Mary Yunt, Orange County chapter, provided copies of a preliminary program outline for the 1989 Spring Meeting, April 5-7, in Anaheim, and commented on a number of aspects of it. Suggestions and comments by various Board members were noted and will be given due consideration. Hotel accommodations at the Inn at the Park have been confirmed. The nearby chapters of San Diego, Southern California, and Inland Empire (California) are cooperating in planning the meeting. President Wallace thanked Mary Yunt for attending the meeting and presenting the report.

President Wallace reported that the December 1988 New York program is nearly complete with the only vacant spot being that of the Distinguished Speaker. Daniel J.B. Mitchell, Robert B. McKersie, and David R. Zimmerman were asked to provide recommendations on the speaker. President Wallace said that, in lieu of a Distinguished Speaker address, a status report to the entire membership by the three Working Groups might be beneficial. She then discussed the 1988 program highlights and the method by which programs are developed. One source of papers to be investigated is that of economists in Labor Economics. President Wallace noted that she had to return about 50 papers in the Labor Economics area, sent to her by Dr. Joseph Pechman, President of the AEA, that had been submitted to him for inclusion in the AEA meetings. A review committee consisting of Daniel J.B. Mitchell, Francine D. Blau, and Paula B. Voos was appointed to work with Dr. Pechman to see if some mechanism could be developed to review and recommend some of these papers for inclusion in future IRRA programs.

Committee on Relations with Other Academic Organizations. David Lewin reported that one of the sessions at the December New York meeting is being co-sponsored by the IRRA and the Academy of Management. The subject is "Dual Commitment of Employees to Union and Employer." Also contemplated is a joint session at the Academy of Management meeting in Anaheim in August. A further joint session is being discussed with the American Political Science Association in 1989. If all of these sessions materialize, there will have been, over a four-year period, some joint activity with the historians, sociologists, psychologists, political scientists, and the Academy of Management.

Comprehensive Review Committee Report. President Wallace reported on the meeting of the Comprehensive Review Committee in San Francisco on March 5, 1988. She noted that the future visibility of the IRRA was linked to the implementation of recommendations from the report. She then summarized the report. A major theme of the San Francisco meeting was to reach out to young professionals. Further comments were made by all members of the Executive Board.

After an extended discussion, the following resolution, proposed by Janet Norwood, was seconded and passed: "Resolved, that President Wallace thank the Comprehensive Review Committee for its efforts, inform the Committee that the Executive Board has begun consideration of the report, that the three Working Groups recommended therein have been appointed (namely, Relations with Local Chapters, Winter and Spring Meetings and Programs, and Research Publications), and that a summary of the report will be published in the May Newsletter." All members of the Executive Board volunteered to serve on a Working Group.

The Working Groups and their members are as follows:

LOCAL CHAPTER RELATIONS: Chair, F. D. (Don) O'Brien, Member, Comprehensive Review Committee, and member, Chicago chapter; Maggie Jacobsen, President, San Francisco chapter; Norman Weintraub, President, Washington, D.C. chapter; Janice Bellace, Vice President, Philadelphia chapter; Edward Pereles, member, Philadelphia chapter; IRRA Board members Steven J. Hendrickson and Mark L. Kahn; and David R. Zimmerman, IRRA Secretary-Treasurer.

WINTER AND SPRING MEETINGS AND PROGRAMS: Co-Chairs Ernest J. Savoie, IRRA Board member, and Lawrence M. Kahn, University of Illinois; Trevor Bain, University of Alabama and Alabama IRRA chapter; Teresa Ghilarducci, University of Notre Dame; Daniel J.B. Mitchell, University of California, Los Angeles; Richard M. Prosten, Industrial Union Department, AFL-CIO; IRRA Board members Eileen B. Hoffman, Harry R. Gudenberg, David Lewin, Leslie E. Nulty, and Janet L. Norwood; and David R. Zimmerman, IRRA Secretary-Treasurer.

RESEARCH PUBLICATIONS: Chair, John F. Burton, Jr., IRRA Board member; Thomas Balanoff, Service Employees International Union; Jean Boivin, Laval University; John Boudreau, Cornell University; Peter Cappelli, University of Pennsylvania; Lisa Lynch, Massachusetts Institute of Technology; Lawrence M. Mishel, Economic Policy Institute; Hoyt N. Wheeler, University of South Carolina; IRRA Board members Francine D. Blau, William M. Vaughn, and Paula Voos; IRRA Editor Barbara D. Dennis, and IRRA Secretary-Treasurer David R. Zimmerman; and liaison members David Lewin, Janice Bellace, and Daniel J.B. Mitchell.

These Working Groups, though operating separately, must coordinate with the other groups where their interests overlap. They are expected to operate as inexpensively as possible by having each member submit ideas by letter to the chairperson. If any meetings are held before the December meeting in New York, expenses will need to be cleared and approved in advance by President Wallace. Each group will be expected to submit a progress report at the December meeting. A copy of the Comprehensive Review Committee report will be sent immediately to each member of the Working Group who had not already received it. A motion approving the committees as listed, including necessary reimbursements of expenses as outlined above, was made by Mark Kahn, seconded, and passed.

The meeting recessed at 5:30 p.m. and reconvened at 7:00 p.m. for dinner and continuation of business, as follows:

Editor's Report. Barbara D. Dennis reported that the December *Proceedings* probably will be mailed in May. The *Spring Proceedings* will be in the August issue of *Labor Law Journal* and will be mailed to the membership in September. The 1989 research volume, *The Older Worker*, will have been printed by the end of the year for mailing early in 1989.

Newsletter Editors' Report. Charles T. Schmidt and Rachel Grenier reported that it had been necessary to cancel a scheduled visit to the National Office because of weather. They said that the May issue is proceeding on schedule, and they asked for news from local chapters to go into a column on local chapter activities.

Secretary-Treasurer's Report. David R. Zimmerman reported a total membership, as of March 20, of 5,241, an increase of about 6 percent from a year ago.

An unaudited financial statement shows a net loss for 1987 of $5,924. This is the first loss in five years and is due largely to unusual expenses such as $11,000 of Comprehensive Review Committee expenditures, and $6,400 for one-third of the cost of the *40th Anniversary Membership Directory*, which was printed in addition to, rather than in lieu of, a research volume. (Note: the cost of the Directory is amortized over a three-year period.) There also was a $11,500 decrease in the asset value of the major reserve fund in October 1988 due to the rising interest rates and the stock market "collapse." A dues increase was recommended because of expected increases in operating expenses in future years, including funding of expenses for the various Working Groups and the fact that dues had not been increased in six years.

Points made in the following discussion were that the IRRA dues are extremely low compared to similar organizations, that the major reserve fund should typically represent about 70 percent of the annual budget, and that increased staff may be necessary to back up the program of Chapter support and other potential recommendations of the Working Groups. A motion by Janet Norwood to increase a regular membership to $40.00 per year, and other classes of membership similarly, was passed.

David Zimmerman next announced the receipt of three invitations to host the 1990 Spring Meeting. They were from the Western New York (Buffalo), Gateway (St. Louis), and Maryland (Baltimore)-Washington, D.C., chapters. It was decided to accept the Buffalo chapter invitation after it was pointed out that the Association would meet in Washington (close to Baltimore) in December 1990 and that the Buffalo chapter had extended repeated invitations over recent years.

Research Volume Committee. Chair John Burton reported that the committee is in the midst of selecting the 1991 volume. Announcement of this will appear in the May Newsletter with a deadline for proposals by October 1988. A tentative selection will be made at the December 1988 meeting, allowing a year for modifications before the final selection in December 1989. Two subjects have already been identified: "Unionism in America" and "Collective Bargaining in America." Both would include Canada.

Newsletter Policies. A brief discussion as to policy regarding the printing of meeting announcements, etc., for other organizations resulted in the passage of a motion by Eileen B. Hoffman that the editors of other Newsletters be contacted to see what policies they follow, and report back in December. Regarding the advertising of films and books, the consensus was to use administrative discretion. Advertisements of products not offensive to members can be accepted and doubtful ones should be previewed.

Forkosh Proposal. It was decided that a committee be appointed by David R. Zimmerman to check out all ramifications of the proposal, and its possible effects, and report back at the December meeting.

The meeting adjourned at 10:00 p.m. following a motion for adjournment by Janet Norwood.

IRRA EXECUTIVE BOARD ANNUAL MEETING December 28, 1988, New York

The meeting was called to order at 6:40 p.m. by President Phyllis A. Wallace. Present were 1988 President-Elect Joyce D. Miller and

Board Members Janice R. Bellace, Francine D. Blau, John F. Burton, Jr., Harry Gudenberg, Steven J. Hendrickson, Eileen B. Hoffman, Mark L. Kahn, David Lewin, Janet L. Norwood, Ernest J. Savoie, and Paula B. Voos. Also present were 1989 President-Elect Robert B. McKersie; 1989 Board Members-Elect Leon E. Lunden, F. Donal O'Brien, Norman A. Weintraub, and Hoyt N. Wheeler; IRRA Secretary-Treasurer David R. Zimmerman; IRRA Editor Barbara D. Dennis; Newsletter Editors Charles T. Schmidt, Jr., and Rachel Grenier; and Marion and Larry Leifer of the IRRA National Office. Board members absent were Leslie E. Nulty and William M. Vaughn.

Guests at the meeting for the purpose of giving special reports were: New York Meeting Local Arrangements Chairperson Bruno Stein and New York IRRA Chapter President Joan Livicky; Orange County Chapter representatives reporting on the 1989 Spring Meeting in Anaheim, Mary Yunt and Jonathan Monat; Buffalo Chapter representatives reporting on the 1990 Spring Meeting, Eric Lawson and Howard Foster; Working Group 1 Co-Chairperson Lawrence M. Kahn; Joyce Najita, Chairperson of the Nominating Committee; and Paul Weinstein, Chairperson of the IRRA Statistical Committee.

President Wallace introduced the 1989 President-Elect and Board members, and expressed the appreciation of the entire Association for the service of the Board members whose terms were expiring: Eileen B. Hoffman, Mark L. Kahn, and William M. Vaughn.

New York Chapter representatives commented briefly on the difficulties of promoting a reception every three years. They were fortunate this year in obtaining sufficient contributions, jointly with the American Arbitration Association, to sponsor a reception to be held from 5:30 to 8:00 p.m. on December 29. IRRA members registered for the meetings will probably exceed 400. The Executive Board expressed its thanks to the New York Chapter for hosting the meeting.

Reporting on the 1989 Spring Meeting to be held at the Inn at the Park in Anaheim, California, on April 5, 6, and 7, Jonathan Monat briefly outlined the proposed program and meeting arrangements, including a locally sponsored reception.

The 1990 Spring Meeting to be held in Buffalo was next reported on by Buffalo Chapter representatives Eric Lawson, Arrangements Chairperson, and Howard Foster, Program Chairperson. The meeting will be May 3 and 4 at the Ramada Renaissance Hotel. The Syracuse, New York, and Hamilton, Ontario, chapters were being asked to assist with the program.

With modifications suggested by President Wallace, the minutes of the Spring Board meeting in Cincinnati were approved.

Because Ernest Savoie had to leave early and had asked if he might submit a proposal for the Board's consideration, he was called upon. His proposal was that a small committee be appointed to investigate the possibilities of putting all the past Proceedings and research volumes on compact disk/read-only-memory or the equivalent. A copy of his proposed outline was left with John Burton, Chair of the Committee on Research Volumes.

President Wallace commented that it will be necessary to set up a transition team to study the Savoie recommendation as well as many other recommendations of the various Working Groups to determine how best to implement them, perhaps over a period of five or more years and always with Board approval.

President-Elect Joyce Miller reported on the meeting of the Program Committee for the December 1989 meeting in Atlanta as follows: Thirty-five proposals were considered of which 14 invited sessions were approved. Also included will be contributed papers sessions, one or two dissertation sessions, a presidential address, a distinguished speaker address, the poster sessions, and a doctoral consortium.

The preliminary reports of the three Working Groups were then distributed and a few minutes allowed for Board members to scan them. President Wallace pointed out that these were status reports, not final, and that only a few points of clarification would be discussed at this meeting; a substantial amount of time for full discussion of the reports will be set aside at the next Board meeting in Anaheim. Because of their interim status, the reports will not be distributed to the membership at this time. Some of the committees might need to meet again. She also recommended that serious consideration be given to obtaining funding to at least partially cover expenses of Board members who are invited to attend local chapter meetings.

Working Group Reports (copies of reports attached to permanent minutes):

WINTER AND SPRING PROGRAMS: Ernest Savoie and Lawrence Kahn, co-chairs: Larry Kahn touched briefly on the highlights of their committee recommendations and the reasons for them. He then responded to questions by Board Members.

LOCAL CHAPTER RELATIONS: Important features of the report of the committee were pointed out by its chairperson, F. Donal

O'Brien, and its recommendations explained. Don O'Brien called particular attention to the fact that approximately 7,400 members of local chapters are not also members of the National IRRA and approximately 3,200 National members do not belong to a local chapter. At the conclusion of his report, a motion by Hoyt Wheeler was seconded and approved, accepting the reports of both the Local Chapter Relations and the Winter and Spring Programs committees.

RESEARCH PUBLICATIONS: The preliminary report of the committee meeting held on November 29 and 30 was interpreted by John Burton, committee chairperson. During discussion of the recommendation regarding occasional papers, it was announced that the Proceedings of this year's sessions would include a listing of the titles, authors, and a 100-word abstract of the poster session papers. There was objection to providing reprints of anything submitted without screening. A proposal by John Burton that for this year, as a pilot project, Timothy Keaveny and his Poster Session committee, select between five and ten of the best poster session papers to be made available, at the cost of reprinting, to all who order copies. His committee is to review the process and report to the next Spring or Winter meeting. Mark Kahn moved that the proposal be accepted; it was seconded and passed. A motion to accept the Research Publications Committee report was also passed.

Newsletter Editors Charles Schmidt and Rachel Grenier indicated that their concerns are pretty well included in the various Working Group reports and that they will continue to work with Group chairpersons.

A motion was then requested by President Wallace to the effect that the chairpersons of the Working Groups work with Joyce Miller and Robert McKersie to begin the task of implementing the various recommendations by submitting to the Board realistic estimates of the funding required to implement them. The motion was seconded and passed.

The Research Volume Selection Committee chairperson, John Burton, announced that a tentative selection for the 1991 volume was made at the committee's December meeting. The editors are to be Daniel Gallagher, Jack Fiorito, and George Strauss and the subject is to be "The State of the Unions." Suggestions by the committee to the editors are being made and the committee will make a report at the Spring meeting.

Editor's Report. Barbara Dennis reported that the 1989 research volume, *The Older Worker*, is printed and will be distributed to the membership in mid-January. The volume *Industrial Relations in a Decade of Economic Change* has been sold out. The volume *Human Resources and the Performance of the Firm* is selling very well. The 1990 volume on "Training" is proceeding on schedule.

Nominating Committee: Joyce Najita, chairperson, announced that James L. Stern of the University of Wisconsin was recommended as the candidate for 1990 President-Elect. Candidates for the Executive Board will be listed in the May Newsletter. A motion by Leon Lunden to accept the report of the Nominating Committee was seconded and passed.

Statistical Committee: Chairperson Paul Weinstein referred to a letter from Richard Rockwell of COPFAS to Phyllis Wallace, copies of which were distributed to Board members. He reported a recommendation of the Statistical Committee to increase the IRRA contribution to COPFAS from $1000 to $1200 in 1989. A motion to that effect by Norman Weintraub was passed.

Secretary-Treasurer's Report: David Zimmerman reported a net membership increase of about 200 over the past year, to a total of approximately 5400.

Financially, he anticipates a break-even situation for 1988. With the dues increase becoming effective, the situation for 1989 should be better unless there are unexpected costs due to the implementation of recommendations made by the Working Groups.

A formal request from the Southwestern Ohio chapter for affiliation with the National IRRA was presented to the Board. David Lewin's motion to approve the affiliation was seconded and passed.

After a brief discussion concerning the 1990 Membership Directory, a motion by Mark Kahn was passed authorizing the publication of the Directory in 1990.

Following an executive session of the Board to consider matters affecting the National Office personnel and the honorariums for the Secretary-Treasurer and Editor, the Board resumed its deliberations and turned its attention to the potential financial implications of the Working Group reports for the Association. After some discussion a motion was made, seconded, and passed unanimously that an ad hoc committee be established to consider what potential cost implications of the Working Groups' recommendations would have for the Association, ways to implement the recommendations and handle existing operational expenditures in the most efficient way possible, and alternative ways of increasing revenues for the Association. The committee will work with the Secretary-Treasurer to propose plans in each of these areas. Incoming President Miller will appoint the committee members.

Mark Kahn moved that the meeting be adjourned.

IRRA GENERAL MEMBERSHIP MEETING
December 29, 1988, New York

President Phyllis A. Wallace called the meeting to order at 4:45 p.m. She briefly outlined the history and work of the IRRA Comprehensive Review Committee and the three Working Groups that are carrying on its reviews and formulating recommendations. Dr. Solomon Barkin asked for an opportunity to express his objections to some of the findings and recommendations of the Committee. After some discussion, President Wallace agreed to hear his remarks after the regular agenda of the meeting had been completed.

She then called upon Lawrence Kahn who summarized the deliberations of the Working Group on Winter and Spring Programs.

Next F. Donal O'Brien reported on the findings and recommendations of the Working Group on Local Chapter Relations.

John Burton spoke briefly on the history behind the formation of the Research Volume Selection Committee and its functions. He then reported on the findings and tentative decisions of the Working Group on Research Publications.

IRRA Editor Barbara Dennis announced the imminent release of the 1989 research volume, *The Older Worker*, and gave a progress report on the 1990 volume, "New Developments in Worker Training: A Legacy for the 1990s."

IRRA Secretary-Treasurer David Zimmerman reported continuing gradual increases in membership, an anticipated break-even condition financially for 1988, and probably an improved status for 1989 when the dues increase takes effect. He announced locations of future meetings as follows: April 5–7, 1989, in Anaheim, California; December 28–30, 1989, in Atlanta, Georgia; May 2-4, 1990, in Buffalo, New York; December 28–30, 1990, in Washington, D.C.

The approval of the IRRA Board of the request for affiliation with the National IRRA of the Southwest Ohio chapter brings the total number of affiliated chapters back up to 59.

He also announced that a Membership Directory would be published in 1990.

President Wallace then announced that the candidate for President-Elect in 1990 is Professor James L. Stern of the University of Wisconsin. She then gave the floor to Dr. Barkin.

Dr. Barkin summarized the major items in his 12-page written statement and announced that his entire statement could be obtained by writing to him at the University of Massachusetts, Amherst. President Wallace thanked Dr. Barkin for his comments and encouraged others to send their views to the IRRA Executive Board for consideration at the Spring Meeting in Anaheim.

President Wallace then relinquished the presidency of the Association to Joyce Miller. President Miller, after a motion that was seconded and passed, adjourned the meeting.

AUDITED FINANCIAL STATEMENTS
December 31, 1988 and 1987

We have audited the balance sheets of the Industrial Relations Research Association, as of December 31, 1988 and 1987, and the related statements of support and revenue and expenses, statements of changes in fund balances, statements of changes in financial position, and supporting schedules for the years then ended. These financial statements are the responsibility of the Association'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 the Industrial Relations Research Association, as of December 31, 1988 and 1987, and the results of its operations and the changes in its financial position for the years then ended, in conformity with generally accepted accounting principles.

Stotlar & Stotlar, S.C.

February 23, 1989

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Balance Sheets
December 31,

	1988	*1987*
ASSETS		
Current assets:		
Petty cash	$ 50	$ 50
Cash—checking	4,594	7,556
Cash—money market	66,481	58,719
Other investments	71,396	95,038
Accounts receivable (Less allowance for doubtful accounts of $75 in 1988 and 1987)	14,297	7,409
Prepaid expenses	17,937	18,568
Inventory	9,906	11,294
Total current assets	$184,661	$198,634
Property, plant and equipment:		
Equipment	$ 14,845	$ 13,445
Accumulated depreciation	6,503	4,025
Net property, plant and equipment	8,342	9,420
Total Assets	$193,003	$208,054
LIABILITIES AND FUND BALANCE		
Current liabilities:		
Accounts payable	$ 17,601	$ 27,122
Payroll taxes payable	18	15
Dues collected in advance	103,495	94,032
Subscriptions collected in advance	13,036	12,056
Total Liabilities	$134,150	$133,225
Restricted fund balance	$ 5,000	$ 5,000
Unrestricted fund balance	53,853	69,829
Total fund balance	58,853	74,829
Total Liabilities and Fund Balance	$193,003	$208,054

(The accompanying notes are an integral part of the statements)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Income Statements
For the Years Ended December 31,

	1988	*1987*
Income		
Income from operations		
Membership dues	$146,312	$139,147
Subscriptions	15,553	13,680
Chapter fees	5,265	4,681
Book sales, net of refunds	7,320	5,349
Royalties	1,864	1,852
Newsletter advertising	2,268	2,093
Mailing list rental	10,730	6,796
Meetings	15,924	17,698
ASSA refunds	8,091	6,100
Total operating income	$213,327	$197,396
Expenses		
Compensation		
Salaries	$ 58,781	$ 54,911
Payroll taxes	4,611	4,051
Contract services	2,320	2,040
Officer honorariums	14,000	12,000
Total compensation expense	$ 79,712	$ 73,002
Publications		
Proceedings	$ 31,983	$ 26,793
Spring proceedings	5,819	6,221
Research volume	30,658	17,124
Newsletter	12,273	11,978
Directory	9,181	6,390
Total publication expense	$ 89,914	$ 68,506
Meetings		
General expenses		
Spring		
Meals	$ 4,762	$ 5,967
Travel	3,148	1,597
Miscellaneous	3,192	5,786
Total spring meeting	$ 11,102	$ 13,350
Annual		
Meals	$ 6,594	$ 3,876
Travel	2,078	786
Miscellaneous	577	2,081
Total annual meeting	$ 9,249	$ 6,743
Total general expenses	$ 20,351	$ 20,093
National expenses		
Spring		
General	$ 852	$ 783
Hospitality	793	1,023
Total spring meeting	$ 1,645	$ 1,806
Annual		
General	$ 2,577	$ 1,757
Hospitality	4,690	3,507
Total annual meeting	$ 7,267	$ 5,264
Total national expenses	$ 8,912	$ 7,070
Total meetings expense	$ 29,263	$ 27,183
Review committee	$ 7,764	$ 10,138
Membership promotions	$ 7,227	$ 5,456
Office and general expenses		
Computer and label costs	$ 1,140	$ 1,342
Office supplies	3,404	2,569
Postage and freight	7,977	5,554
Telephone	1,092	1,257
Accounting and auditing	2,140	1,405
Bank charges	57	44
Insurance	685	629
Depreciation	2,477	1,973
Duplicating	2,522	2,420
Miscellaneous	2,628	2,120
Total office and general expense	$ 24,322	$ 19,313
Total expenses	$238,202	$204,598

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin
Income Statements—(*Continued*)
For the Years Ended December 31,

	1988	1987
Income (loss) from operations	$(24,875)	$(7,202)
Other income and (expense)		
Interest income	$ 8,997	$ 12,681
Loss on securities	(98)	(11,403)
Other income and (expense)	$ 8,899	$ 1,278
Net income (loss)	$(15,976)	$(5,924)

(The accompanying notes are an integral part of the statements)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin
Statement of Changes in Fund Balance
For the Years Ended December 31,

	1988	1987
Unrestricted fund balance, beginning balance	$ 69,829	$ 75,753
Net income (loss)	(15,976)	(5,924)
Unrestricted fund balance, ending balance	$ 53,853	$ 69,829

(The accompanying notes are an integral part of the statements)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Statement of Changes in Financial Position
For the Years Ended December 31,

	1988	1987
Financial resources provided by:		
Operations:		
Item not affecting cash and short term investments: Depreciation	$ 2,477	$ 1,973
Decrease in inventory	1,388	
Increase in dues paid in advance	9,463	
Decrease io prepaid expenses	631	
Increase in subscriptions collected in advance	980	1,696
Total funds provided	$ 14,939	$ 3,669
Uses of Funds:		
Net loss	$ 15,976	$ 5,924
Increase in inventory		8,215
Increase in accounts receivable	6,888	126
Purchase of equipment	1,400	5,655
Increase in prepaid expenses		14,252
Decrease in accounts payable	9,517	8,872
Decrease in dues paid in advance		5,704
Total uses of funds	$ 33,781	$ 48,748

Increase (Decrease) in cash and short term investments	$ (18,842)	$ (45,079)
Cash and short term investments		
Beginning of year	$ 161,363	$206,442
End of year	$ 142,521	$161,363

(The accompanying notes are an integral part of the statements)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Notes to Financial Statements

NOTE 1—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The summary of significant accounting policies of the Industrial Relations Research Association is presented to assist in understanding the Association's financial statements.

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 is unrelated business income, and is taxable as such.

Investments
Cash—money market represents the balance invested in money market accounts held at Randall Bank, Madison, Wisconsin and Valley Bank-Shorewood Hills, Madison, Wisconsin. Interest earned on the accounts has averaged 4-6% per annum during 1988 and 1987.

Other investments include balances held in the Kemper Government Securities Fund and the Kemper Money Market account. Shares in the Government Securities Fund were traded at 9.16 to 8.78 per share. Funds are stated at lower of cost or market.

Inventory
The Association's inventory of 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 1989 and 1988 calendar years are reflected as deferred income on the balance sheet.

2—RESTRICTED FUND

At the Association's Executive Board Meeting held on April 17, 1985, the Board approved restriction of $6000 to be applied to expenses of the regional meeting of the International Industrial Relations Association, expected to be held in March, 1988.

The above restriction was lifted in 1986. However, at the General Membership Meeting on December 19, 1986, $5000 was restricted for use for a Comprehensive Review Committee.

ALPHABETIC LIST OF AUTHORS

Also in the

Industrial Relations Research Association Series

INDUSTRIAL RELATIONS RESEARCH IN THE 1970s: REVIEW AND APPRAISAL

Edited by Thomas A. Kochan, Daniel J.B. Mitchell, and Lee Dyer
374 pages $15.00

THE WORK ETHIC—A CRITICAL ANALYSIS

Edited by Jack Barbash, Robert J. Lampman, Sar A. Levitan, and Gus Tyler
261 pages $15.00

WORKING WOMEN: PAST, PRESENT, FUTURE

Edited by Karen Shallcross Koziara, Michael H. Moskow, and Lucretia Dewey Tanner
408 pages $35.00

(Available in hard cover from Bureau of National Affairs, Inc., 1231 25th Street, N.W., Washington, D. C. 20037)

MEMBERSHIP DIRECTORY 1987

$15.00

HUMAN RESOURCES AND THE PERFORMANCE OF THE FIRM

Edited by Morris M. Kleiner, Richard N. Block, Myron Roomkin, and Sidney W. Salsburg
343 pages $15.00

PUBLIC-SECTOR BARGAINING (2nd Edition)

Edited by Benjamin Aaron, Joyce M. Najita, and James L. Stern
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