

**INDUSTRIAL RELATIONS
RESEARCH ASSOCIATION SERIES**

**Proceedings of the Thirty-
Seventh Annual Meeting**

**DECEMBER 28-30, 1984
DALLAS**

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EDITED BY BARBARA D. DENNIS

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PREFACE

Not everyone who planned to come to Dallas for the IRRA's 37th Annual Meeting managed to get there (winter weather problems, of course), but those who did had the privilege of hearing a series of excellent papers—among them, Janet Norwood on “One Hundred Years of the Bureau of Labor Statistics,” John Dunlop on “Industrial Relations and Economics: A Common Frontier of Wage Determination,” and Wayne Horvitz's Presidential Address, “Management's View of Industrial Relations.”

Following BLS Commissioner Norwood's address at the opening plenary session, the users of BLS statistics had their say—complimenting the Bureau on its continued devotion to accuracy, objectivity, and impartiality over the years. One panel considered labor market data and a second panel discussed data on wages and industrial relations.

The Distinguished Speaker, John T. Dunlop, Lamont University Professor at Harvard and IRRA President in 1960, stressed that an understanding and adequate explanation of the behavior of labor markets and wage determination requires an integration of economic analysis and the “industrial relations tools of internal markets, persistent differentials in compensation generated by product market differences, and the negotiations process.”

Wayne Horvitz took a hard look at the cycles—the “changing moods”—in management's view of the industrial relations function, concluding that he hoped attention to the topic might be the beginning of a constructive and analytical dialogue.

The remainder of the program focused attention on both current and continuing industrial relations issues—ESOPs, collective bargaining in the newly deregulated industries, the impact of the world recession, job training, the industrial relations system in transition, comparable worth, unemployment insurance, and others.

The Association is grateful to the Dallas chapter and to Helmut Wolff, chairman of the local arrangements committee, for their generous contributions to the success of the 1984 Annual Meeting, and to Marion Leifer and others on the National Office staff for their help in all facets of planning and management.

Barbara D. Dennis
Editor

You are invited to become a member of

THE INDUSTRIAL RELATIONS RESEARCH ASSOCIATION

The Industrial Relations Research Association was founded in 1947 by a group who felt that the growing field of industrial relations required an association in which professionally-minded people from different organizations could meet. It was intended to enable all who were professionally interested in industrial relations to become better acquainted and to keep up to date with the practices and ideas at work in the field. To our knowledge there is no other organization which affords the multi-party exchange of ideas we have experienced over the years—a unique and invaluable forum. The word “Research” in the name reflects the conviction of the founders that the encouragement, reporting, and critical discussion of research is essential if our professional field is to advance.

In our membership of 5,000 you will find representatives of management, unions, government; practitioners in consulting, arbitration, and law; and scholars and teachers representing many disciplines in colleges and universities in the United States and Canada, as well as abroad. Among the disciplines represented in this Association are administrative sciences, anthropology, economics, history, law, political science, psychology, and sociology as well as industrial relations. Membership is open to all who are professionally interested and active in the broad field of industrial relations. Libraries and institutions who are interested in the publications of the Association are also invited to become members, and therefore subscribers to the publications.

Membership dues cover publications for the calendar year, January 1 through December 31, and entitle members to the *Proceedings of the Annual Meeting*, *Proceedings of the Spring Meeting*, a special research volume (*Membership Directory* every six years), and quarterly issues of the *Newsletter*.

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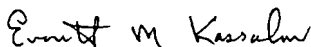
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Sincerely yours,



IRRA President 1985

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I. PRESIDENTIAL ADDRESS

Management's View of Industrial Relations in the U.S.

WAYNE L. HORVITZ
Labor-Management Consultant

I should like to announce that I am forgoing the temptation to quote George Orwell or to extend his remarks.

The task I have assigned myself is to give my assessment of how American Management views the industrial relations function. As is usually the custom, before I set out on this journey I will first enter a disclaimer.

There is no monolith called American Management. There are, as we know, many managements, in and within large business and small, in public and in private enterprise. Therefore there isn't something, written or not, that we can easily identify as a "management philosophy" in the United States, unlike our friends in Japan whom we admire, envy, and wish to emulate, at least if one examines the array of books in the Harvard Business School bookstore.

In fact, we have ignored a basic law of Japanese management. We have not as an industrial nation, for better or worse, articulated a management philosophy—a set of guiding principles on which there is national consensus, nor have we established a reasonably stable economic and social framework for reaching its understood objectives.

If there is a management philosophy, expressed or unexpressed, it is by and large, as it should be, uniquely American. It is pragmatic and goal-oriented. Conquer the competitive market, maximize sales, profit, return on investment.

Although there is little room for social goals per se, it is widely argued that any positive social results are reachable through the economic rewards of a free market system. Increased production and distribution of

goods and services, profits that are shared by participants through wages, benefits, and other methods of economic gainsharing, and high levels of employment are all means of fairly distributing the economic pie. Social gains will follow. Nestled in the arms of a benign government, all but those on the lowest rung of the ladder will gain.

This is a rather fragile philosophy. It's an inherited, often unexpressed, often unrealistic, usually unquestioned, general "good" feeling about a system that has provided many of us with opportunities and goods undreamed of in history. But it may be as close as any of us can get to identifying a "management philosophy."

It is not surprising, therefore, that given this very pragmatic economic engine to drive, management, seeking to maximize these goals, attempts to set policies that fit comfortably into such an amorphous, almost spiritual, agenda. And today, the management engine is chugging along in a storm of increased competition at home and abroad, and the designers of the management agenda are hurrying to meet the challenges.

And so industrial relations policy once more occupies an important place on that agenda. We have once more "discovered" that people, properly managed, can help to increase productivity, and there are now complex agendas for achieving that goal. But there is, I believe, a ghost in the meeting room when the industrial relations agenda is set.

My own experience as a management representative, a mediator and arbitrator, a consultant to management, and a company board member, past and present, convinces me that managements' view of the industrial relations function is, in most cases, distorted and often driven by a deeply ingrained animus toward the role of unions in our private and public enterprises and in our society. That fact, I submit, limits management's ability to assess objectively the role in planning the industrial relations agenda. As Al Smith used to say, "let's look at da record."

In my opinion, what we see again and again, throughout our industrial history, management has resisted, first, the existence, and secondly, the expansion of unions and therefore of the collective bargaining process as the institution for joint decision-making in the plant society. The inability or unwillingness to recognize and accept unions as full or even partial partners in the enterprise has been a hallmark of that history. Although the history has been cyclical, the cycles continue to this very day. It has been an ongoing and creative enterprise that engages a great deal of management time and attention. The intensity of the opposition has varied over time, but even in the most genial of times it is just below the surface of good will and accommodation. And today the evidence is clear that the cycle is repeating.

At one end of the spectrum is a mushrooming of support for the belief that nonunion operations are preferable and always achievable through

good management. Those industries already organized that eschew the open-warfare approach have increasingly gone “double-breasted.” Others openly employ consultants and attorneys who specialize in resisting union organizations and/or provide counsel on how to get rid of existing unions. The plethora of seminars that is offered on appropriate subjects these days is a good index of the fact that this group is on the march.

The centrists remain, but this group is declining in membership as the first group grows. The centrists are already organized. They are continuing, at least for now, a traditional policy characterized by open and robust adversarial relationships, containing elements of shared power and shared poverty, and they have historically achieved positive results through problem-solving within that relationship. Whether or not they secretly envy group one is an open question.

There is a third and, by far, the smallest of the managerial group that espouses new approaches to industrial relations. This group argues that labor and management should reevaluate the adversarial relationship. It suggests that labor and management open discussions on common problems that can be attacked cooperatively, while not abandoning the positive aspects of adversarial bargaining on traditional issues. A substantial number of negotiated labor agreements (perhaps 20 percent) contain written commitments to cooperative arrangements. I would doubt that more than 5 percent are constructively active despite shouts that the U.S. industrial system is in trouble.

We are, in fact, at a hot point in the cycle, reinforced by a new supporting cast of hit teams: a host of consultants and attorneys, and a new generation of young, tough-minded management insiders, products of the nation’s business schools whose academic leaders appear to be rising a new wave. In anticipation, or perhaps in response to their clients’ wishes, in many cases they have downgraded their offerings in labor history, labor economics, and collective bargaining.

They have instead upgraded courses in human resource management, in the behavioral sciences, finance, strategic planning, economic analysis, and marketing. All important, all necessary, but suggesting if there is a void to fill, it can be filled by today’s management. All types of management training reflects this trend.

I wonder what it is we fear. Surely in this sophisticated age it is not a fear that radical elements, “communists” and such, are undermining our cherished economic system through union organization and collective bargaining. Union behavior may be unseemly from time to time, but it can hardly be categorized as unpatriotic.

Is it a fear, perhaps, of outside forces usurping management’s right to manage? Yes, to a large extent it is. A fear that sharing decision-making

with unions will move from the shop floor to the manager's office to the boardroom? In some cases we are there. But on the whole we are, at best, ambivalent, struggling to find an acceptable distinction between employees and unions.

Does our history really justify these views, these fears? It is now 55 years since that golden spring in Appalachia, and the turbulence, bloodshed, sorrow and triumph that our colleague, Irv Bernstein, referred to in his stunning opening to *The Lean Years*. There was turmoil and turbulence, and perhaps some of the battles will never be over. But the turmoil was accompanied by evolution and growth. There was a release of creative energy in unions, in legislatures, in the courts, and most of all in the development of the collective bargaining process—the creature the parties ultimately created and shaped.

In the final analysis I believe that the labor-management history of the past 50 years, in peace and in war, is a testament to the institutions that a free society can create to resolve conflicting claims within that society. The record is filled with startling examples of innovation and wisdom and, yes, stupidity on the part of the courts, legislative bodies, mediators and arbitrators, and, most of all, the parties themselves. Voluntarism, collective bargaining, mediation and arbitration are rich words in the culture that have special meaning for labor-management practitioners, academics, and for all who, like those in this room, have contributed so much to that record.

But those conclusions about the past are largely not acknowledged or accepted today. At best, the conclusion is that the mechanisms we have created belong to the past and we cannot use even the fundamental structure to manage today's host of new and broader competitive economic problems. The demands are too harsh. The window of opportunity too small. Employees can be a part of the decision-making process of the enterprise at the shop level, even beyond, but unions put us behind the power curve, keeping labor costs high and institutionally resisting change. Trade union leaders bring too much political baggage to the bargaining table that inhibits their ability to face hard economic facts. And the conventional wisdom is that the labor half of the boat is sinking in any case—more so since the recent election.

It is interesting to note at this point that even in these competitive times in a country so large and diverse as this one there is evidence (much of it unpublished and unpublicized; some of it widely publicized by organizations such as the Work in America Institute) demonstrating that management and labor can and do address complex problems of both survival and competitiveness. More attention should be paid to what has happened in places like Xerox, with the Amalgamated Clothing Workers;

at Rochester products in Tuscaloosa, Alabama, with the UAW; in Sharonville, Ohio; and at AT&T with CWA. In some if not all of these situations the parties have jointly addressed plant survival, even corporate survival, as in Trucking and Airlines. In some cases they have even enlarged their agendas to include basic discussions on all aspects of cost reduction, planning, capital investment, management structure, engineering, retooling and design.

These examples are not widespread but constitute a visible representation that the parties can and do use the institutional relationships to attack hard problems and broad-range problems not only under challenges of survival, but challenges of continuing competition. It is not an easy road, but there is reason to believe that it can be traveled with positive results if the climate and the will are there. In fact, if one looks at the entire range of responses that the collective bargaining system has produced over the past few years, the record is as sound, if not sounder, than the performance of many of our other institutional behemoths—banking, for instance.

But nonetheless the rationale is set. The whole fabric, the need for a climate in which free trade unions can flourish and assume their responsibilities, the legal underpinnings of collective bargaining, and government support for these are all under attack in theory and reality.

But management knows that pursuing alternative courses leaves a void and strong replacement programs are required to meet the known and perceived needs of today's employees. And so new and innovative human resource management agendas utilizing traditional personnel and industrial relations experience and updated by the work of the behavioral scientists are now front and center.

The advantages to the firm appear obvious. If we now have new insights, a better understanding of employees' needs, and the techniques to engage and motivate employees to achieve self-esteem and satisfaction in their work, we will not make the mistakes of the past. The Human Resource Professional is not the ex-football star or brother-in-law of yesteryear.

But in assessing new approaches and programs one must recognize that subtle substitutions are often made with more than worker satisfaction and inspiration in mind. And many are not new.

As Robert B. Reich has pointed out in a review of *Theory Z* and *The Art of Japanese Management*:

. . . emphasis on the atmospherics of intimacy and trust at the workplace is hardly new to professional management in America. In their attempt to stem the rising tide of trade unionism during the first decades of the century, American managers

adopted “workplace cooperation” as their slogan, and devised an elaborate system of committees to represent worker interest. By 1922, 385 different companies maintained 725 plans of employee representation, which together involved 690,000 workers.

It is not hard to understand why some believe, unions included, that the new cycle may not be new—only the names have been changed to protect the guilty.

It is important to think about these developments because there is a great deal going on. QWL programs, ESOT, ESOP, Labor Management Committees have entered the everyday industrial relations lexicon. But the nagging questions remain. Is the product real? What are we selling? Will it survive? Are we talking about labor-management cooperation with a big *L* or a small *l*?

Some of the up-to-date evidence on the operation of these kinds of programs and their impact are subjects of papers and panels that are part of this year’s program. The sessions on “Industrial Relations in Transition,” “Collective Bargaining in Deregulated Industries,” and “Employee Ownership” will, I’m sure, contribute fresh knowledge.

In some cases, of course, it is too early to tell. I serve presently as a board member elected by employees in one company whose employees will, in the next few years, own 40 percent or more of the company. I serve as a consultant in another where the union members now own approximately 25 percent of the stock and have four seats on a 14-member board. In this latter case the union board membership has been largely ceremonial to date. But it is all very new. Despite or perhaps because of a long history of operating under collective bargaining agreements, management is very defensive about “union” invasion of the boardroom.

For some reason, I am reminded of a story about that authentic American philosopher, Billie Sol Estes. You may or may not recall that Billie Sol hitched his wagon to a curious star. He sold shares in substantial amounts of nonexistent fertilizer. He was not at all abashed when the inevitable moment of discovery came. What clearly bothered him was that he was *punished* for his misdeeds since he had never misrepresented himself or his activities to any of his clients. Somewhat sadder but no wiser when his final appeal was denied, he said, “I never sold anybody anything that didn’t exist without he didn’t know about it.” Billie Sol’s complaint makes one wonder. What is management selling? Are employees buying? And if so, what?

Why am I especially concerned about management’s industrial relations agenda? Why not assess the unions’? There must be enough assessment to go around. The answer is clear. The power pendulum has

swung sharply in management's direction. But even if that fact were not as striking as it seems to be, I believe that decisions on industrial relations initiatives emanate from that half of the equation. Unions, historically, have been reactive, first to conditions that made it possible for them to exist and then to management's shifting policy initiatives.

However, since the present national mood seems certain to prevail for some time, I would urge management to carefully assess the basis for its industrial relations agenda. I would ask this even from those who disagree with my analysis in whole or in part. And I would ask them to give special attention to what seems to me to be the consequence of the present course.

In the long run I believe it is tricky business to operate in two philosophically opposed worlds. In that world policies and initiatives will range from the messy to the deceptive. In the alternative, if one chooses cleanly to reject those institutions that historically supported labor-management relations, then one must be well prepared to create, predominantly through private initiatives, new solutions and new institutions that neither government nor unions through labor agreements can or will address. In that brave new world, where will the problems go? To managers, I offer a word of caution.

There are, as I have noted, questionable and untested proposals running about that presume to address "what we do instead." I would urge that we examine these with a clear eye without sentimentality and stripped of slogans and trade names. In looking at substitutes we must remember that the need for collective as well as individual protection against unknown, unpredictable, and tough forces is strong. Historically unions have played a key role in providing mechanisms for guaranteeing those protections. Old problems will still be around. New ones are just around the corner. What new legislative and institutional arrangements do we intend to construct? Consider the devil you know. Exorcism is not necessarily the answer.

On March 4, 1981, after much effort, principally by this year's Distinguished Speaker, a group of top-level, and I presume hard-headed, business and labor leaders who then constituted a national labor-management committee, issued the following statement:

The national interest requires a new spirit of mutual trust and cooperation, even though management and organized labor are, and will remain, adversaries on many issues.

. . . The uniqueness of America lies in the vitality of its free institutions. Among these, a free labor movement and a free enterprise economy are essential to the achievement of social and political stability and economic prosperity for all. It is

destructive to society and to business and organized labor, if in our legitimate adversarial roles, we question the right of our institutions to exist and perform their legitimate functions. In performing these functions, we recognize that both parties must respect deeply held views even when they disagree.

I am not aware of the present fate of that committee. Labor-management committees, particularly in these times, lead a precarious existence as both John and I know, but, strange to say, a reaffirmation of that statement is needed as much today as it was then.

In constructing this assessment, I thought a good deal about the audience—competent, dedicated and, above all, critical. I thought about differences in age, differences in background, differences in disciplines, and differences in experience. I struggled with the question of whether or not this forum was the right one for these comments and I decided it was.

My remarks will and should be greeted, I am sure, with reactions of all kinds and I hope questioning and discourse. What better place to introduce a request for dialogue? What better place to join in some detail this complex and sometimes overriding issue? What better place to pass on empirical observations and findings? I look forward to this dialogue.

II. DISTINGUISHED SPEAKER ADDRESS

Industrial Relations and Economics: The Common Frontier of Wage Determination

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A.

In discussing the relations between the discipline of Economics and that of Industrial Relations, more than 25 years ago I wrote:

The industrial relations system is not coterminous with the economic system, in some respects the two overlap and in other respects both have different scopes. The procurement of a work force and the setting of compensation for labor services are common centers of interest. A systematic explanation of production, however, is within economics but outside industrial relations. The full range of rule-making governing the work place is outside the scope of an economic system, but central to an industrial relations system.¹

The present discussion is designed to relate the common concerns of the two disciplines in wage determination and labor markets and to try to develop a greater appreciation of the contribution of both. This discussion is also a polemic against a recent breed of economists who assert the proposition that competitive market theory, with an occasional patch or patented term, is fully adequate to explain wage determination and labor market behavior in the real world. An understanding of the reality of wage determination and labor markets—apart from collective bargaining—requires, in my view, a conceptual blend of Industrial Relations and

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¹ John T. Dunlop, *Industrial Relations Systems* (New York: Henry Holt and Co., 1958), p. 5.

Economics. Policy prescriptions to be listened to and to be effective likewise need to proceed from an integration of Economics and Industrial Relations.

Economics must appreciate that wage rates are but one rule of the workplace among a vast array of rules. There are no fixed terms or rates of substitution with other rules or even with other compensation rules. All terms of employment are not reducible to money. There is no stable rate of substitution even in the same negotiations between the level of wage rates of a unit and all other rules. Industrial relations specialists likewise need to recognize, as should economists, how the complex of rules of the workplace are influenced, in both static and dynamic terms, by the contexts of technology, labor and product markets, and political power in the larger society—not by conventional labor markets alone.

B.

The fact is that the mainstream of Economics has always qualified and tempered its analysis of wage determination and labor markets by recognizing that special and peculiar features are at work that do not permit the unrestrained application of competitive theory, as applied to other markets. Four quotations reflect the mainstream:

We all learned of Cairnes and his noncompeting groups formulated more than a hundred years ago.

What we find, in effect, is not a whole population competing indiscriminately for all occupations, but a series of industrial layers, superimposed on one another within each of which the various candidates for employment possess a real and effective power of selection, while those occupying the several strata are, for all purposes of effective competition, practically isolated from each other.²

While no “hard lines of demarcation,” or a caste system was envisaged, competition was limited for practical purposes to a certain range of occupations as it is today within production and maintenance, technical and professional, clerical and top management categories in larger enterprises, in Cairnes’s term, “practically isolated from each other.”

Alfred Marshall’s classic treatment of “Trade Unions” recognizes the realities of labor markets and the differential policies of labor organizations in different labor and product markets.³ He formulates the issues:

² J.E. Cairnes, *Some Leading Principles of Political Economy, Newly Expounded* (London: Macmillan and Co., 1874), p. 72.

³ Alfred Marshall, *Elements of Economics*, Vol. 1 (London: Macmillan and Co., 1893), Ch. XIII, pp. 374–411.

Can Unions really make economic friction act for the workman instead of against him? Are the means which they take for this purpose injurious to production and therefore indirectly to the workman?⁴

Marshall responded to these questions by indicating the ways in which Trade Unions had favorable consequences as well as specifying the circumstances in which they might have adverse effects. He concludes the discussion by citing John Stuart Mill in a sentence that should be emblazoned over the pronouncements of all economists: “Except on matters of mere detail, there are perhaps no practical questions even among those which approach nearest to the character of pure economic questions which admit of being decided on economic premises alone.”⁵

John R. Hicks, in the Commentary on his own *Theory of Wages*, states:

The labour market is—by nature, and quite independent of Trade Union organization—a very special kind of a market which is likely to develop “social” as well as purely economic aspects. . . . For the purely economic correspondence between the wage paid to a particular worker and his value to the employer is not a sufficient condition of efficiency; it is also necessary that there should not be strong feelings of injustice about the relative treatment of employees (since these would diminish the efficiency of the *team*) Wage rates are more uniform both between workers, and over time, than they would be if the labour market worked like a commodity market.⁶

Paul Samuelson at the outset of a paper on “Economic Theory and Wages” wrote:

But I fear that when the economic theorist turns to the general problem of wage determination and labor economics, his voice becomes muted and his speech halting. If he is honest with himself, he must confess to a tremendous amount of uncertainty and self-doubt concerning even the most basic and elementary part of the subject.⁷

He concludes the paper with the admonition:

⁴ *Ibid.*, p. 384

⁵ *Ibid.*, p. 410.

⁶ J.R. Hicks, *Theory of Wages*, 2nd ed. (New York: St. Martin's Press, 1963), p. 317. The first edition was published in 1932, but it did not contain the quoted passage from the second edition Commentary. “There are important social (and expectational) elements even in the ‘free market’ part of wage determination. Even there wages are not simply determined by supply and demand” (p. 319).

⁷ *The Collected Papers of Paul A. Samuelson*, Vol. II, ed. Joseph E. Stiglitz (Cambridge, MA: MIT Press, 1966), p. 1557.

But [the economist] weakens his case and he loses the audience he ought to persuade if he dogmatically states that the wage and income structure that would eventuate in a relatively competitive order is an optimal one (for society as a whole, for particular workers or for workers as a whole), and if he blindly regards the existing institutional structure—with or without strong unions—as a good approximation to the competitive regime envisaged in Walrasian general equilibrium.⁸

These citations from the historical mainstream of Economics explicitly recognize the limitations of competitive models as applied to labor markets and wage determination, the special features of pricing labor services, a concern with undue applications to policy, and a modesty and “uncertainty and self-doubt” alien to many labor economists of recent vintage. The views cited are not those of institutionalists, however that maligned term is used.⁹ Hicks is precise in stating that there are “important social elements even in the free market part of wage determination,” and even “there wages are not simply determined by supply and demand.”¹⁰ The historical mainstream of microeconomics, however, did not develop any systematic body of ideas to give coherence to this social element.

C.

It is widely proclaimed that “modern labor economics has become an extensive branch of applied microeconomics. . . . At no other time in the history of the field has it been more closely aligned with its parent discipline.”¹¹ In this view, labor markets are to be analyzed like all other markets, and wages and prices in relevant time periods are to clear labor markets. The readily observable facts of unemployment and differentials in compensation in the same markets have encouraged, in the past 10 or 15 years particularly, an extensive intellectual effort and considerable ingenuity among microeconomists to find explanations within the framework of economic rationality.

A few illustrations may be noted, although industrial relations specialists with working experience may be amazed at the patches economists

⁸ *Ibid.*, p. 1586. The uncertainty as to the consequences of collective bargaining is reflected in the four lines, apologies to Hilaire Belloc:

If workers, low-paid, seek to better their lot
By grabbing some dough from the rich,
It makes jobs for more workers—or else it does not;
I cannot be positive which.

⁹ Samuel R. Friedman uses the term “the institutionalists” to refer to Dunlop, Kerr, and Reynolds when the term is properly used to refer rather to Commons, Veblen, and Perlman. See “Structure, Process and the Labor Market,” in *Labor Economics: Modern Views*, ed. William Darity, Jr. (Boston: Kluwer-Nijhoff Publishing, 1984), p. 176.

¹⁰ J.R. Hicks, *loc. cit.*, p. 319.

¹¹ William Darity, Jr., ed., *Labor Economics: Modern Views, op. cit.*, p. 3.

seek to apply to competitive labor market theory: Guillermo A. Calvo proposed that "it may be profitable for a firm to offer a wage above its workers' supply price in order to economize on supervision costs and that, as a consequence, there may exist an equilibrium with excess supply of laborers in which there is no tendency for wages to fall."¹²

S. C. Salop explains wage differentials for homogeneous labor as dependent upon turnover costs and the decision of the firm to control labor turnover via the wage policy of the firm, thus creating the wage differences that exist among firms.¹³

Joseph E. Stiglitz has emphasized the significance of information imperfections in the generation of wage differentials: "When there are information imperfections arising from (symmetric) differences in non-pecuniary characteristics of jobs and preferences of individuals, there will not in general exist a single wage equilibrium."¹⁴

Carl Shapiro and Joseph E. Stiglitz have developed a model of equilibrium in the labor market under the assumption that firms cannot costlessly observe workers' on-the-job efforts. Unemployment or job rationing serves as a monitoring or a worker discipline device.¹⁵

Perhaps the most ambitious and extensive effort of the past decade to reshape views of the operation of labor markets and wage determination has been the work of many economists on the concept of implicit contracts. "Since its beginnings, the implicit contracts literature has had the explanation of unemployment and wage rigidity as its goal."¹⁶ The implicit contract perspective views the employment relation not simply as a spot exchange of labor services for cash but a more complicated long-term attachment: a consequence of such a transaction is that wages are disengaged from the marginal revenue product of labor.

This literature has brought us into the realm of implicit-contract enforcement, moral hazards and reputations for "reliability," asymmetri-

¹² Guillermo A. Calvo, "Supervision, and Utility and Wage Differentials Across Firms," Discussion Paper 76-7711, Columbia University, April 1977. Also, see his "Quasi-Walrasian Theories of Unemployment," *American Economic Review* 69 (May 1979), pp. 102-107.

¹³ S.C. Salop, "Wage Differentials in a Dynamic Theory of the Firm," *Journal of Economic Theory* 6 (August 1973), pp. 321-44.

¹⁴ Joseph E. Stiglitz, "Equilibrium Wage Distributions," Cowles Foundation Working Paper Series, 1972.

¹⁵ Carl Shapiro and Joseph E. Stiglitz, "Equilibrium Unemployment as a Worker-Discipline Device," Discussion Papers in Economics, Woodrow Wilson School, Princeton University, April 1982.

¹⁶ Jerry Green and Charles M. Kahn, "Wage-Employment Contracts," *Quarterly Journal of Economics* 98 (September 1983), p. 186. For a description of the main developments in the theory of implicit contracts, see Costas Azariadis and Joseph E. Stiglitz, "Implicit Contracts and Fixed Price Equilibria," *Quarterly Journal of Economics* 98 (September 1983), pp. 1-22.

cal assumptions on information as between the employer and workers and their risk neutrality or risk aversion. Fortunately, the claims by the theorists are appropriately very modest.

The implicit-contract approach appears to me to be unlikely to help with wage determination and labor market behavior for a variety of reasons: Enterprises above some small size set wage rates and benefits for job classifications and not for individuals. In any given job classification at a specified wage rate, or rate change, are individuals with very different lengths of attachments to the enterprise or establishment and to the job classification. The time subscripts of job hiring and promotions are often very different for employees in the same job classification. Further, the insistence on treating these implicit contracts as individual decisions rather than some collective decision, under labor organizations or the informal workgroup, complicates the theoretical structure. The workplace is always organized in some respects. Further, here, I would have thought the experience of the recession years of 1981–82 would have cast considerable doubt on the relevance of the approach and the concern with the enforceability of implicit contracts. I know of no data on duration of employment, in whatever units, that would be helpful in explaining wage differentials among sectors or size groups in labor markets.¹⁷

Masahiko Aoki developed “a somewhat unconventional model of a firm in which both the employees and the stockholders share the organizational quasi-rent, and where the manager acts as the arbiter between them in formulating corporate policy.”¹⁸

Thomas A. Pugel, in an econometric study, developed and estimated a model of long-run wage equilibrium in industrial labor markets. He found product market influences are an important additional influence on inter-industry wage variation beyond labor force characteristics.¹⁹

These various suggestions²⁰ to provide an explanation, within the framework of microeconomics, for a more realistic operation of labor markets and wage determination are not likely to impress industrial relations specialists. The judgment is likely to be that the models are far too esoteric. They apply to few situations, and they will not take us very far toward a general view of labor market and wage behavior. The

¹⁷ See the data summarized in R.E. Hall, “The Importance of Lifetime Jobs in the U.S. Economy,” *American Economic Review* 72 (September 1982), pp. 716–24.

¹⁸ Masahiko Aoki, “A Model of the Firm as a Stockholder-Employee Cooperative Game,” *American Economic Review* 70 (September 1980), pp. 600–610.

¹⁹ Thomas A. Pugel, “Profitability, Concentration and the Interindustry Variation in Wages,” *Review of Economics and Statistics* 62 (May 1980), pp. 248–53.

²⁰ The previous brief recitation of views does not constitute a survey of the vast literature.

amendments to microeconomics are not adequate to the magnitude of the gap between the competitive model and reality.²¹

D.

I propose to consider three concepts that have their roots in industrial relations and practical experience that I regard as essential to an understanding of wage determination and the operation of labor markets. They are not congenial to microeconomic theory.

1.

An essential tool is the internal labor market,²² as distinguished from the conventional or external labor market. The monthly household survey reports persons as outside the labor force, as employed whether they worked or not in the survey period, and as unemployed and seeking work. Movement among these categories defines gross changes in employment and unemployment. All these changes constitute movement among enterprises, or self-employment, unemployment and movement across the boundary line between being inside or outside the labor force. These movements arise in the "external" labor market, a minute fraction of the complex of movements that take place each day.

Except in small establishments where decisions are on a personal basis, the administration of policies by management alone or through collective bargaining determines the patterns of movements, and the characteristics of those involved in hiring, promotion, transfer, layoff—temporary or permanent, relocation arrangements, leaves, discipline and discharge, retirements and disabilities. Some of these movements are purely internal to an administrative unit, and others impact the external labor market in different ways as in decisions respecting hiring, retirement, and permanent layoffs. The internal labor market is thus an administrative unit in which movements within the unit or with the outside are patterned by formal rules or customs. The unit may involve only some job classifications of an establishment or may include a number of enterprises as in multi-employer hiring halls or multi-plants of a single company. The internal market may be narrow involving a single enterprise, or be very broad as in the civil service system of governments.

²¹ The new textbooks on labor economics that are cast in the microeconomics mold are no more helpful.

²² John T. Dunlop, "Job Vacancy Measures and Economic Analysis," in *The Measurement and Interpretation of Job Vacancies*, A Conference Report of the National Bureau of Economic Research (New York: Columbia University Press, 1966), pp. 32–38. Peter B. Doeringer and Michael J. Piore, *Internal Labor Markets and Manpower Analysis* (Lexington, MA: Heath Lexington Books, 1971).

Internal labor markets are concerned with such topics as seniority, seniority districts for various purposes, retirement policies, hiring and recruitment standards, promotion rules, layoff criteria in a temporary or permanent mode, absentee policy, health care regulations, equal employment opportunity and age or handicap discrimination, as well as procedures for dispute resolution over these rules and their consequences for managements, employees, and labor organizations.

The internal labor market is an administrative unit within which relative wage rates are also determined among job classifications, not by individuals, with the aid of job evaluation or incentive systems or by decisions exercised by management or through collective bargaining. These relative compensation rates are peculiarly the social concerns to which John Hicks referred. The internal alignment of rates likewise needs to be related to some external rates, particularly for some job classifications.

Internal labor markets and their rules that govern the movement of workers are also the fundamental determinants of the quality of the workforce and the training that is acquired over a period of time on the job. Internal labor markets put substance into the importance ascribed to on-the-job training. What qualities and training does an employee have on entry? What skills and experience does an employee acquire through transfer and promotion? What additional experience is acquired when other employees are late, absent, sick, or on vacation? How broad or narrow are job classifications, and what are the configurations of seniority districts or units? How much hiring from outside or contracting out of work operations takes place?

The flexibility of the workforce, its adaptability to technical change, to shifts in work processes, to new quality and work standards, and to new products is likely to be mightily influenced by its previous work experience dictated by the rules of the internal market. Clearly also, the adaptability and employability of those exited to the exterior labor market is likewise materially influenced by these internal experiences and training.

I believe that Gary S. Becker's analysis of On-the-Job Training²³ is basically flawed because he ignores the fact that such training is largely dictated by administrative rules or the internal market rather than by a comparison of receipts and future outlays involved in the training of individual or groups of workers. Moreover, the rules are not established by such economic calculus, and the economic climate and calculus would

²³ Gary S. Becker, *Human Capital, A Theoretical and Empirical Analysis with Special Reference to Education* (New York: Columbia University Press, 1964), pp. 8-29.

change much more frequently than the longer-term stability reflected in these rules. Managements and unions do consider on infrequent occasions the consequences of various seniority districts and other internal labor market rules on costs and benefits. But any familiarity with internal labor markets and on-the-job training would afford no credibility in setting the rules of the internal labor market to the conceptions or equilibrating forces envisaged by Becker. On-the-job training as it actually takes place is a very different process than portrayed by Becker since it is determined by rules related to many other considerations.

Microeconomics has recently turned its formal analysis to pensions, to incentives for the workforce, to productivity and other features of internal labor markets. But efficiency is not the only test that a society applies to its labor markets, and particularly to internal markets, which are asked to meet tests of equity, security, equal employment opportunities, and other goals. In brief, I do not believe that microeconomic theory is adequate to provide a useful understanding of internal labor markets and their effects on internal and external movements of labor, on internal wage structures for job classifications in enterprises of size, and for on-the-job training. These are vast areas of labor market experience and wage determination that need to be incorporated in a consolidated industrial relations and economics perspective. These internal markets, answering to administrative rule, constitute a vast and neglected field for research even among industrial relations specialists.²⁴

An industrial relations approach to internal labor markets reveals such observations as the following: Capital-intense production methods—as in electric power generation, refineries, and basic steel—tend to be associated with seniority districts and numbers of job classifications with lengthy promotion ladders, elongated pyramids, while more labor-intensive operations as in light assembly, grocery stores, and sewing encourage

²⁴ Daniel S. Hamermesh and Albert Rees, *The Economics of Work and Pay*, 3rd ed. (New York: Harper and Row, Publishers, 1984). "Industrial Relations has as its main focus the relation between an employer and the worker or their union in a particular establishment, whereas, labor economics deals with larger aggregates" (p. xi).

I cannot accept the proposition of Rhonda M. Williams, "At least since the publication of Walter Oi's paper on labor as a quasi-fixed factor of production, neoclassical theorists have been comfortable with the existence of both internal and external markets and explain the former's emergence as a result of efficiency considerations," in *Labor Economics: Modern Views*, ed. William Darity, Jr., *op. cit.*, p. 38. The discussion of Oliver E. Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications* (New York: The Free Press, 1973), pp. 57–81, does not appear to be comfortable with the industrial relations idea of internal markets. Further, the idea is unacceptable that labor as a quasi-fixed cost is an adequate substitute for the richness of the internal labor market or that the enormous differences in the rules of internal labor markets, such as basic steel and railroads, can be related to the simple way in which labor costs vary with output. This patch on microeconomics does not help with reality no matter what it does for the competitive model of the labor market.

narrow job classifications with few promotion ladders, flat pyramids. Once the scope of a job classification is established, as in the duties of a maintenance craft, any reassignment of tasks or combination in an internal market is very difficult. In general, as a matter of history, managements have often preferred narrower seniority districts than have workers, to avoid costs of training and movement. Once established, they persist for long periods. Wage and benefit decisions are concerned with schedules which are typically set for a year or more, even in the absence of collective bargaining. The day-to-day administration of these schedules through piece-rates or incentives, rate ranges, promotions, transfers, layoffs, and other internal moves are decisive to the labor costs of the enterprise and the earnings of the workers. The administration of internal wage schedules may make significant differences among enterprises and workers, even with the same wage schedules.

2.

It is a well established fact that wage rates or average hourly earnings for a defined job classification, such as maintenance electrician or key punch operator, show very wide variation in a locality, particularly in a community with a variety of industries. The top wage rates for the same job classification are often two or three times the low ones. Differences in fringe benefit programs normally expand on these differences.

Neoclassical economics has sought to live with these large differences by proposing that they are related to the quality of the labor force in the different enterprises; by compensating differences in working conditions, safety, distances and the like; by differences in information; and by the fact that there are longer-run competitive forces in these labor markets tending to eliminate these differences. As a standard textbook states, "In a perfectly competitive market in equilibrium one might expect to observe almost no industry differentials beyond those that arise because industries use different mixes of occupations."²⁵

My experience teaches that this view of wage rate differentials is simply grossly inadequate to the reality, granted that some persistent differentials arise from the sources stressed by microeconomics, although they are virtually impossible to measure satisfactorily. I regard it necessary to explain in other than these conventional microeconomic terms the large wage rate and fringe benefit differentials that persist for a given job classification in a locality.

There are at least two sets of persistent and pervasive differentials, that are somewhat inter-related, that need to be recognized and explained.

²⁵ Daniel S. Hamermesh and Albert Rees, *loc. cit.*, p. 278.

These differentials are not uniquely the result of collective bargaining, although the differentials may be more formally maintained under collective bargaining. The differentials are related to product market groupings of firms and, in a given product grouping, to the size of the establishment, or in some circumstances to the size of the enterprise. Different competitive conditions in product markets are related to different compensation levels for the job classification in the labor market.

James Duesenberry recently observed that 40 years ago I had advanced "models of wage behavior that stressed product market conditions."²⁶ I simply do not believe that persistent wage differentials are explained fully by quality of the workforce, compensating differentials, lack of information, imperfections, short-run aberrations, etc.; product market differences and size differences are reflected into labor markets and wage levels. This is a reality about which every labor relations practitioner would feel comfortable.²⁷

While I am aware that no array of wage data can embarrass a true believer in the competitive microeconomic model of labor markets, it may be appropriate to refer to a new set of data that has come to me showing average hourly earnings for all 3-digit sectors for seven years or so, arranged by size category of establishment: 0-9 employees, 10-19, 20-49, and so on to over 1000 employees. These national data show marked differentials by size categories and generally a common progression of average hourly earnings by large size class, although in some cases the smallest size classes show higher wages over the next largest class reflecting, in my view, specialized markets of small enterprises.²⁸ Fringes would no doubt exaggerate this progression. Take SIC code 514, Groceries and related products, Wholesale Trade, with 134,000 employees in the sample. Average hourly earnings for the size categories progress for March 1981 as follows: \$6.21, \$6.78, \$6.73, \$7.20, \$7.64, \$8.50, \$9.02, and

²⁶ *Brookings Papers on Economic Activity* (1984), p. 220. See John T. Dunlop, *Wage Determination Under Trade Unions* (New York: Macmillan Company, 1944); "The Task of Contemporary Wage Theory," in *The Theory of Wage Determination*, ed. John T. Dunlop (London: Macmillan and Co., Ltd., 1957), p. 3-30. This latter paper developed the concept of wage contours that had been used as a basis for wage policy relating to the standard for interplant inequities during the Korean War stabilization program. See General Wage Regulation 17, *Hearings Before the Committee on Education and Labor, House of Representatives, 82nd Cong., 2d Sess., Pursuant to H.R. 532, 1952*, pp. 1130-32. A less explicit set of standards was established in World War II after April 8, 1943.

²⁷ See William Brown et al., "Product and Labor Markets in Wage Determination: Some Australian Evidence," *British Journal of Industrial Relations* (July 1984), p. 175: "... Overaward payments generally owe relatively little to clearing processes in the labor market ... the findings support the view that wage drift is strongly influenced by the employee's product market power."

²⁸ Also see Andrew Weiss and Henry J. Landau, "Wages, Hiring Standards, and Firm Size," *Journal of Labor Economics* 2 (October 1984), pp. 477-99.

\$11.10. Or consider SIC 242, Sawmills and Planing Mills with 81,000 employees. Average hourly earnings by these size classes progress from \$5.38 for the 0–9 category, to \$5.43, \$5.70, \$6.33, \$7.43, \$7.96, \$8.10, and \$9.00 for the size category over 1000 employees. These are large and persistent differentials.

Economists have deep trouble with the concept of product market differences affecting wages because it appears that enterprises that are assumed to maximize profits are paying unnecessarily higher wage rates for the amount and grade of labor required. Why do not lower paid workers move to higher paid firms and high paying enterprises recruit lower paid labor? The analytical soul is redeemed for some economists by explaining that the enterprise is sharing its rents with its employees. The view derived particularly from business schools and public policy programs that managers, in larger enterprises, are concerned basically with balancing conflicting constituency interests, rather than simply with maximizing profits, leads to a similar relaxed view as to persistent wage differentials. Thus, the model of the enterprise is also at stake in the concern with persistent wage differentials beyond the operation of labor markets.

Forty years ago I argued that “labor markets do not resemble bourses, auctions, nor closed-bid arrangements”: they “are found to be structurally different from a bourse”²⁹ The institutional form of any market influences its performance. It is strange, indeed, that so many contemporary economists have come so late to the simple truth that labor markets are not well depicted as a bourse. Robert E. Hall concluded in 1980 that “There is no point any longer in pretending that the labor market is an auction market cleared by the observed average hourly wage.”³⁰ Indeed, there never was any point in so pretending and industrial relations and its practitioners never did.

3.

It is imperative, in my view, in approaching wage rate determination, particularly in the presence of labor organizations and management associations, to be equipped with the tools of negotiation and dispute resolution, for markets alone abstract from this essential process. Bargaining has always been a problem to microeconomics because of the fewness in the number of buyers and sellers, or because of an indeterminacy of results of negotiations, or because of its abhorrence of strikes, lockouts, and serious conflict, or because of the consequences of public intervention on market performance.

²⁹ John T. Dunlop, *Wage Determination Under Trade Unions*, *loc. cit.*, pp. 11, 118.

³⁰ Robert E. Hall, “Employment Fluctuations and Wage Rigidity,” *Brookings Papers on Economic Activity* (1:1980), p. 120.

A number of efforts have been made to reconcile market wage and price determination with bargaining theory. But I do not believe these efforts are generally regarded as useful or satisfactory. There are several assumptions requisite to rigor which seem to me to render the theoretical frameworks rather unacceptable in wage rate determination; there are typically in my experience scores of rules under discussion which are not readily transmuted into money on a fixed basis, and none of the parties to the negotiations is a monolith.

As I have explained in a volume earlier this year,³¹ the essence of negotiations and mediation is the shifting alignments within each party. It takes three agreements, one within each side in the case of two parties, to reach the third agreement across the table between bargaining organizations. This essential view of negotiations is repugnant to microeconomics and its players. Outcomes in negotiations are variables not prescribed by markets, and the institutional features of the markets do make a difference. Indeed, these institutional features are themselves subject to negotiated change.

E.

It would require a separate paper to develop the inter-relationships between macroeconomics and industrial relations to be concerned with such topics as the determination of the general levels of wages, the relations between the levels of unemployment and compensation, wage rigidity, real and money wages, incomes policies, and the like. But it should be interesting to observe that while microeconomists have been unwilling to accommodate essential reality in their models, many macroeconomists seem to have been quite willing to accept a wide variety of assumptions as to wage rates and labor markets. The profession reflects a strange division. Keynes, most notably, incorporated into the structure of the *General Theory* the view of money wage downward rigidity and the measurement of variables in terms of wage-units.³² Arthur Okun sought to introduce concepts of search theory, toll theory, and implicit contracts into macroeconomic analysis.³³

I would only insist here that the concept of a national industrial

³¹ John T. Dunlop, *Dispute Resolution, Negotiations and Consensus Building* (Boston: Auburn House Publishing Co., 1984), pp. 3–27.

³² See Mancur Olson, *The Rise and Decline of Nations, Economic Growth, Stagflation, and Social Rigidities* (New Haven, CT: Yale University Press, 1982). Olson objects to the Keynesian assumption on wages: “. . . Such rigidities may be introduced only if they are in turn explained in terms of rational individual behavior or rational behavior of firms” (p. 194).

³³ Arthur M. Okun, *Prices and Quantities, a Macroeconomic Analysis* (Washington: Brookings Institution, 1981), pp. 26–133.

relations system and its national compensation rules³⁴ are essential to macroeconomic consideration of wages or wage policy. The existence of a family allowance system in some countries, or some provinces, or private pension and health and welfare plans, as pervasive elements of compensation beyond social security or a national health system, or the existence of annual bonuses or the prevalence of incentive systems of compensation are all elements of compensation not readily encompassed in microeconomic theory. The existence of an Australian Court of Conciliation and Arbitration or an institutional framework for negotiations between a confederation of unions and managements, as compared to decentralized bargaining, also provides a distinctive caste to macroeconomic wage policy and incomes policy. Thus, I do not agree with Hamermesh and Rees who would confine industrial relations to relations between an employer and worker or union in a firm or establishment and allocate to labor economics the larger aggregates.³⁵

F.

It has often been observed, and appropriately so, that the flourish of microeconomic analysis of labor markets and wage determination often has a conservative policy orientation as well. William Darity, Jr., refers to the conservative revolution for labor economics: "It was conservative in a conceptual and imaginative sense; it was radical in its demands for rigor."³⁶ If labor markets in fact operate as depicted in microeconomics, if they clear in reasonably short periods, then there is a stronger case to doubt the rationality of interventions in labor markets by government or by labor organizations or by employer associations. So, again, formal theory is not neutral in policy discourse.

G.

A personal observation out of experience may also be warranted. I have made many wage and compensation decisions over the past 40 years or more in many roles in many sectors: as wage and price controller in the government over 11 years, scattered over four decades, always with a responsibility for individual cases as well as policy; as mediator, fact-finder, special commissioner and arbitrator, in the private and public sector, as well as in the murky world in between; as government administrator, as dean of a faculty, as executive compensation committee

³⁴ John T. Dunlop and Melvin Rothbaum, "International Comparisons of Wage Structures," *International Labour Review* 92 (April 1955), pp. 3-19.

³⁵ *Loc. cit.*, p. xi.

³⁶ William Darity, Jr., *Labor Economics: Modern Views*, *loc. cit.*, p. 7. Also see Don C. Heldman, James T. Bennett, and Manuel H. Johnson, *Deregulating Labor Relations* (Dallas: The Fisher Institute, 1981).

member of a board of directors; etc. These roles encompass innumerable conversations and observations concerning labor market performance and wage-setting. One is impelled to reflect often on what is happening, and why, in the midst of discussion or with pen raised to do the deed. My testimony is that the competitive model, or economic considerations alone, are not an adequate tool unassisted by the industrial relations tools or concepts described above.

Anyone can assert the right to give advice. And most economists do. But you have to earn the right to give advice, or make responsible decisions, that are taken seriously.

H.

In sum, an understanding and an adequate explanation of the behavior of labor markets and wage determination inherently needs to integrate the contributions of economic analysis—and its dedication to competitive markets—and industrial relations with its tools of internal markets, persistent differentials in compensation generated by product market differences, and the negotiations process. Serious error, and bias, is derived from trying to get along one without the other. Such integration is in keeping with the long-run mainstream in Economics. The imperialism and arrogance of a band of microeconomists, who purport to have taken over labor economics, is the aberration from the historic mainstream of Economics. To facilitate the discourse and integration on labor markets and wage determination is one of the major intellectual responsibilities of the Industrial Relations Research Association.

I fully recognize that the integration of Industrial Relations and microeconomics is likely to involve for Economics a loss of formal rigor and intellectual beauty. But abstraction and relevance were never so far apart in Economics. A sensitivity to industrial relations remains essential to an understanding and to any sensible policy prescription for labor markets and wage determination.

III. A CENTURY OF THE BUREAU OF LABOR STATISTICS (Plenary Session)

One Hundred Years of the U.S. Bureau of Labor Statistics

Janet L. Norwood
Commissioner of Labor Statistics

It is now 100 years since the law creating a Bureau of Labor in the Department of the Interior was signed by President Chester Arthur. The new Bureau, which until 1913 functioned as the only federal agency concerned with the world of work, was directed by the Congress to collect information in the labor field. The first Commissioner—Carroll Wright—understood the importance of employer-employee relationships. He recognized the role that objective information could play in the development of an atmosphere in which workers could realize their full potential while industry remained aggressive and efficient. He believed that factual information could promote effective, rational, and equitable decision-making. It was Carroll Wright who established the motto that has during the past century become the hallmark of the BLS—“judicious investigations and the fearless publication of the results thereof” (NARC 48 1885). Or, as Commissioner of Labor Statistics Ethelbert Stewart put it many years later: “So long as the subject matter is of sufficient general interest as to justify the publication of the facts, and so long as the Bureau of Labor Statistics sticks strictly to the question of facts, then all I have to say is that somebody [who] dislikes the facts is in hard luck” (NARC 257 1929).

Carroll Wright’s early Bureau, with a staff of three and a budget of \$25,000, was a far cry from the BLS of today, a well-established institution of some 2000 employees with a budget of more than \$170 million. But the

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early focus began involvement in issues in which we continue to operate today. In its first quarter of a century, the Bureau gathered information on working conditions. During this early period, especially between its establishment in 1884 and its merger into the new Department of Labor in 1913, the Bureau of Labor investigated and reported on just about every important labor dispute in the country. Commissioner Wright's agents gathered data on the Missouri and Wabash and on the Southwest railroad strikes in the middle 1880s. Bureau agents collected information in the Pennsylvania anthracite coal fields and in Colorado in the early 1900s. In fact, Commissioner Wright himself was involved, at the request of the President, in investigating the Pullman strike in 1894. He served as recorder for the Anthracite Coal Commission following the 1902 strike. Bureau agents investigated the mining wars in Colorado and packinghouse strikes in Chicago.

Charles P. Neill, the Bureau's second Commissioner, helped to conciliate over 50 railroad disputes under the Erdman Act, and either Commissioner Neill or the Bureau staff investigated almost all of the major strikes of the period. Later Commissioners studied such issues as industrial democracy, technological displacement, and pensions, collected data on changing conditions in industry, and provided factual data in major collective bargaining situations.

The very first important study undertaken by the new Bureau of Labor dealt with the industrial turmoil growing out of the depression of 1873-78 and the recurrent labor disputes of the 1870s and the 1880s. In addition to the presentation of data, the study sought to explain the background of this unrest and to propose some remedies. For one thing, Commissioner Wright suggested that capital and labor "each shall treat with the other through representatives" in disputes and suggested further that the party refusing conciliatory methods could be considered as responsible for the full effects growing out of the dispute (Commissioner 1886, pp. 290-93).

Interest in collective bargaining issues, therefore, began early in the history of the BLS. In those early days of the Bureau, the agency was viewed as a part of a movement for social reform. In addition to the reports produced by the Bureau to shed light on the social and economic issues of the day, Commissioners were called upon to mediate industrial disputes and to advise the government on a broad range of labor issues. Indeed, the Bureau performed many of the tasks which today are performed by other parts of the Department of Labor. In a very real sense, therefore, this observance of the Bureau's centennial is an observance of government involvement in issues relating to the working men and women of this country. The establishment of the Bureau of Labor

was, in fact, evidence of the interest of the Congress in the plight of the American worker. As one Congressman put it during debate on the legislation creating the new Bureau of Labor: "A great deal of public attention in and out of Congress has been given to the American hog and the American steer. I submit, Mr. Chairman, that it is time to give more attention to the American man" (Congressional Record 1884, p. 3140).

These early activities in the industrial relations of this growing country produced a large series of reports, findings, and data as well as a number of statements supporting collective bargaining, mediation, and conciliation. But the Bureau also collected a good deal of information on earnings and working conditions. Data collection was not easy. Bureau agents went out to business establishments to search their records for data. Numbers were carefully transcribed onto previously tested collection schedules, properly verified, then combined into estimates for publication.

This early work on conditions of employment had many problems. Indeed, some of them remain unsolved to this day. The Bureau found, for example, that hours of work and earnings were frequently reported differently by employers and by employees. In addition, the earnings levels—and particularly their adequacy—looked very different depending on whether the point of collection was the worker or the employer.

Data collection also presented problems. Then, as now, high-wage employers were happy to report their wage practices, whereas employers paying very low wages were less eager to expose their positions. The Bureau's strict rules on confidentiality of data which began with the administration of Commissioner Carroll Wright have gone a long way toward breaking down this reticence.

Response rate issues also dogged the early data collectors. Special efforts were made to increase responses to Bureau surveys. Indeed, as the Commissioner of one of the state bureaus of labor statistics commented in reporting on the work of his agency in 1885:

If questions are asked of five hundred men indiscriminately, and two hundred actually give available answers, these two hundred will not be average representatives of the whole five hundred. They will, on the average, have more brains than the other three hundred. The very fact that they answer, while the others do not, shows this. (Connecticut 1885, p. 3)

As the Bureau developed, its data base grew. And the approach taken in its reports and analyses was very broad. It is interesting to look at some of the early reports. One of these, *Working Women in Large Cities*, for example, which was published in the Bureau's fourth year of existence, was a real trailblazer. The study, the first of its kind, on women working

in city “manufactories” covered 354 industries in 22 cities. The data were collected by women who were paid the same wages as the male agents of the Bureau, and Wright declared,

The result of the work of the agents must bear testimony to the efficiency of the women employed by the Department, and to the fact that they are capable of taking up difficult and laborious work. They have stood on an equality in all respects with the male force of the Department, and have been compensated equally with them. (Commissioner 1888, p. 10)

In this respect, the Bureau was ahead of its time. The report itself is full of concern for the plight of these workers, who earned generally no more than \$2.00 to \$3.00 per week. “. . . [T]he figures tell a sad story, [the report declares] and one is forced to ask how women can live on such earnings” (Commissioner 1888, p. 70). Statistics were presented on wages and general conditions, incomes and expenses, as well as home surroundings. But Bureau agents went further than that to consider the personal integrity and virtuous conduct of these working women. Declaring that working women did not “recruit the houses of prostitution,” the report concludes that, in spite of the problem of living upon the “small wages they receive . . . working women are as respectable, as moral, and as virtuous as any class of women in the country” (Commissioner 1888, p. 76).

The study on working women was but one of the early reviews of the economic and social conditions of workers and their families. From this work also, one can see a recognition of the difficulties in interpreting aggregates and averages. Indeed, as early as 1889 we find Commissioner Wright lecturing his state colleagues on the mix problem. He pointed out that there were many temporary workers on the railroads, many of whom did not work full time. It was very easy, he said, to obtain two simple facts from the railroads—the aggregate wages paid and the total number of workers employed at a given time. Division of one number by the other results, Wright said, in “a vicious quotient” to represent the average earnings of all railroad workers in the country. This general average could be quite misleading, he maintained, and insisted that those involved with data collection must work out methods to “individualize” the accounts so that the actual earnings of each worker would be properly reported (National Convention 1889, p. 20).

It took many years for the Bureau’s occupational wage surveys in particular areas and in major industries of the country to solve some of these problems. Indeed, the average earnings series from the BLS Current Employment Statistics program, the monthly federal-state cooperative

survey of business establishments, is still based on aggregate earnings and employment figures collected from company payroll records.

The BLS business survey was also the basis of some of the country's earliest efforts to estimate the number of workers who had lost their jobs. Long before the country's important labor force survey of households was begun by the Works Progress Administration, BLS reports on payroll employment constituted the most important source of continuing information on the number of workers in the country. Indeed, when the Congress requested unemployment figures from the Secretary of Labor, he turned to the Bureau of Labor Statistics for an estimate. Pointing to the differences between unemployment and a reduction in payroll employment, the Bureau responded with an estimate of the "shrinkage in employment" as measured in its business survey (NARG 174 1921, Congressional Record 1928, p. 5337). A reading of this history sometimes helps to put into context the problems we have in explaining some of the differences between the current estimates from the household survey and the business survey.

With the Great Depression and the New Deal of Franklin Roosevelt came development of a system of social benefits as well as such landmark legislation as the Wagner-Peyser Act, the Fair Labor Standards Act, and the National Labor Relations Act. Later, World War II brought government wage and price stabilization programs. The BLS refined and expanded its activities to provide data needed for these new initiatives. The number of occupational industry wage surveys was increased, a system of area wage surveys was inaugurated, and a comprehensive approach to information on and for collective bargaining was put in place.

During the Commissionership of Geoffrey Moore, a new and innovative approach was established for analysis of wage developments with publication of the BLS Employment Cost Index (ECI). The ECI, a base-weighted market basket of occupations in establishments, controls for both occupational and employment shifts. The ECI—which filled an important void in the nation's economic intelligence system—has become increasingly important as the structure of earnings has shifted from reliance on wage rates to greater emphasis on nonwage compensation or fringe benefits.

The ECI needs expansion—in occupations, establishments, industries, and areas for data collection. Only in this way can the amount of detail really needed for economic and social analysis be made available to users. We are currently developing plans at BLS to reweight the ECI, to expand its detail in the service-producing sector, and to find methods to provide level, as well as change, for employer costs of wages and fringe benefits.

We at BLS have not forgotten our heritage. We understand the need for revising and rescaling our program to provide the kind of data required for modern collective bargaining as well as for analysis of economic and social developments at the micro level. Although budget cuts during the Carter and Reagan years forced some retrenchment in the BLS industrial relations and collective bargaining programs, we nevertheless continue to provide a large body of data bearing on issues in labor-management relations. Our quarterly series on major collective bargaining settlements in private industry continues to reflect the results of successful labor-management negotiations. This series was recently supplemented with a semiannual series on settlements in state and local government bargaining units with 5000 employees or more. Because of the increased importance in public-sector bargaining, BLS has been trying for the last few years to expand this semiannual series to units of 1000 employees or more—the same coverage as the private sector. I am pleased that our efforts have been successful and we will be publishing the expanded series in February.

We have also maintained our monthly *Current Wage Developments* reports on individual bargaining settlements and major work stoppages, as well as our collective bargaining agreement public reference file. In addition, we will publish data on union membership from the Current Population Survey (CPS) in January. This set of data from the household survey will permit analysis relating union membership to the rich body of demographic data collected in the CPS.

In spite of this work, however, we know that more data are needed. Collective bargaining is a dynamic process, and our programs must keep abreast of important changes. We have asked both our business and our labor advisory committees for advice on their data needs for collective bargaining. We believe that the collective bargaining process can take place fairly only when decisions are made in a knowledgeable atmosphere. A new initiative is required, based upon the needs of both business and labor, which takes account of the conditions under which collective bargaining is conducted. I believe that development of new measures in this area is very much in the public interest.

We also need to know more than we now do about changes in employer practices and conditions of employment. More attention needs to be given to the collection of an integrated set of data covering wage and employment conditions for analysis that can be accomplished in a longitudinal framework.

Information on the safety and health of the workplace is now and will continue to be an essential element in improving conditions of work. We have recently begun an effort to work more closely with the National

Institute of Occupational Safety and Health and the National Center for Health Statistics to coordinate available data sources and to develop long-range improvement plans.

The Bureau of Labor Statistics is now 100 years old. Its program over the past century has changed with the times. The Bureau began by producing a large body of information touching on most of the social and economic issues of the labor market of the time. Over the years, the Bureau's output has moved from the collection of data on social issues to the development of information on economic problems, from publication of one-time statistics on particular industries in a few cities to regular periodic time series for the nation as a whole. Through the years, the pendulum has swung back and forth between focus on social data to economic data and from concentration on micro to macro series.

The Bureau has been faced with the problem of setting priorities for use of limited resources in a period of increasing use of statistics in public policy programs. At the same time, there has been increasing demand for data by a population concerned with understanding the complex issues that confront the country as well as by our traditional groups of users. A 1.0-percent change in the Consumer Price Index, originally developed for wage adjustment, now triggers about \$2 billion in federal government expenditures for entitlement programs, according to the Congressional Budget Office (U.S. Congress 1981, p. xiii). Unemployment rates are used to trigger allocation of federal funds to states and local areas. BLS average earnings and producer price series are used to escalate payments in long-term defense contracts. Over the last two decades, as new uses of BLS data have grown, the Bureau has been forced to reassess its priorities and to spend more than before to modernize and to improve the quality of some of its series.

During the last 100 years, the Bureau of Labor Statistics has, I believe, contributed to an understanding of labor conditions themselves and to the effective functioning of wage determination and collective bargaining. We stand now on the brink of the Bureau's second century. As we move forward, we need to move rapidly to keep our data systems relevant and accurate. The world of the labor market changes fast. It is only by providing a data system that reflects these social and economic changes, as well as the most modern state of the statistical art, that the Bureau of Labor Statistics can fulfill its basic mission to provide the country with "information upon the subject of labor, its relation to capital, the hours of labor and the earnings of laboring men and women, and the means of promoting their material, social, intellectual and moral prosperity."

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DISCUSSION

GEOFFREY H. MOORE
Columbia University

Shortly after I arrived at the BLS in 1969, I decided to use four words to characterize our objectives. They were: relevance, timeliness, accuracy, and impartiality. I think these words are good for at least another hundred years. Since I shall not be around in 2084 to check on whether the BLS has lived up to them, I'll give that assignment to whoever is Commissioner in 2084.

This is not to say that the BLS should be the sole judge of its own performance. It should be one of the judges, because by continually evaluating its own record it can take corrective action promptly, it can promote a responsible attitude in its staff, it can secure the confidence of the public, and it can establish its right to survive. But others should be involved in the evaluation, notably users of the statistics. The BLS has long engaged two committees for this purpose: the Labor Research Advisory Council and the Business Research Advisory Council. Possibly there should be a third committee—a Professional Research Advisory Council—with membership from universities and research institutions. Of course, this suggestion itself should be carefully evaluated, since it is being advanced by one who is presently affiliated with a university and has had several affiliations with research institutions. Nevertheless, I hope it will be considered seriously and a decision rendered before the next milestone is reached, 2084. I need only recall my second word, timeliness, to reinforce the point.

It is tempting, on an occasion such as this, to try to forecast what the BLS will be doing during the next hundred years. Perhaps the best forecast was contained in the initial congressional mandate, which instructed the Bureau to “collect information upon the subject of labor, its relation to capital, the hours of labor, the earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity.” The means for accomplishing these objectives have changed enormously in a hundred years, with the development of sample surveys, collection of information by telephone, computer data processing, and dissemination of information by radio and television.

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There have been vast changes, too, in the statistical concepts deemed relevant to the objectives. Seasonal adjustment is commonplace today: the idea was virtually unknown in 1884. The concepts of employment and unemployment have been carefully defined. We are more astute today about the difference between a consumer price index and a cost of living index. We view measures of productivity, including the contribution of capital, as relevant to the “material prosperity” of laboring men and women. We have developed a measure of wages on the same principles as our measures of prices. We use price statistics to convert income, sales, output, and inventories into “real variables” that are widely used to judge the economy’s performance.

This brief list is sufficient to put one in a humble frame of mind in considering the BLS’s next hundred years. The only forecast I shall attempt is this: At its second centennial the BLS will celebrate just as many significant accomplishments as we are celebrating at its first.

Naturally, in order to preserve my reputation as a forecaster during the next hundred years, I must emphasize that this is a conditional forecast. It is conditional upon the faithful application of my four target words: relevance, timeliness, accuracy, and impartiality. It is conditional upon the continued hard work of the advisory committees, including the new council that I proposed, and it is conditional upon the acceptance by the Commissioner of Labor Statistics in 2084 of the responsibility for deciding whether the accomplishments of the BLS from 1984 to 2084 were at least as significant as its accomplishments from 1884 to 1984!

DISCUSSION

ALBERT REES

Alfred P. Sloan Foundation

In her article “Centennial” in the September *IRRA Newsletter*, Commissioner Norwood identifies some of the principles that have guided the Bureau of Labor Statistics (BLS) over the past century. Among them are “a commitment to objectivity and fairness” and “the pursuit of improvement.” I should like to comment on both of these themes.

The United States has just come through a hotly contested presidential election. Among the leading subjects debated in this contest was the state of the economy. The candidates for president and vice president frequently cited statistics on the unemployment rate, the rate of inflation, productivity, and the growth of real GNP. Incumbents took credit for desirable changes in their administration and blamed their predecessors for undesirable ones; the challengers did the reverse. The ammunition for this barrage of statistics was all supplied, in whole or in part, by BLS. Not once did I hear a candidate question the accuracy of the statistics he or she was using, or accuse BLS of any unfairness or the manipulation of release dates. I can think of no higher tribute to the objectivity and fairness of BLS.

On three occasions, I have had the pleasure of serving on outside panels that have examined bodies of statistics produced by BLS: the Stigler Committee on the price statistics of the federal government, the Gordon Committee on measuring employment and unemployment, and the National Research Council panel on measuring productivity. In each case BLS staff participated actively in the work of the committee, produced numerous special studies and tabulations at the committee’s request, and—most important—eventually implemented many if not most of the changes recommended by the committee. From this experience, I can testify to the sustained interest of BLS in improvement. In this connection, we might note two important recent changes in major BLS series—the new treatment of housing prices in the Consumer Price Index, and the introduction of a new series on multifactor productivity. These changes were introduced smoothly after careful preparation and have been well accepted by users.

Commissioner Norwood has told us this morning that the current BLS

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budget is \$170 million and that it is again threatened by cuts. Perhaps it is hard for people to tell whether \$170 million is a lot or a little. If you have been trying unsuccessfully to get a research grant of \$25,000, it sounds like a lot. As the amount needed to maintain the instruments that guide an economy with a gross national product of \$3.7 trillion, it does not seem excessive, particularly when one index point on the Consumer Price Index triggers billions of dollars of changes in taxes and Social Security benefits. I am deeply concerned about the budget deficit, but in my judgment it would be false economy to allow our basic statistical instruments to deteriorate to save \$5 or \$10 million.

IV. LABOR MARKET DATA (BLS Panel)

The U.S. Bureau of Labor Statistics: 100 Years of Service and Support to the Industrial Relations Community

BEN BURDETSKY

George Washington University

It is particularly appropriate that the Industrial Relations Research Association has set aside some time at its 1984 annual conference to honor the United States Bureau of Labor Statistics on the occasion of its 100th birthday. The products turned out by the Bureau are of substantial value to industrial relations researchers, practitioners, and administrators, who are confident that what they receive is objective and impartial.

This confidence is highlighted in a *New York Times* article entitled "Statistics and the Art of Honesty" (Keller 1984, p. 8). The article assured presidential candidates concerned with BLS's statistics that the Bureau's product ". . . is reputed to be unimpeachably honest a source of numbers as there is."

This reputation for honesty and professional integrity can be traced to the appointment in 1885 of Carroll D. Wright as Commissioner of the Bureau of Labor, the original name for the Bureau of Labor Statistics (Clague 1968, p. 9). Wright was a respectable labor statistician who had headed up the Massachusetts Bureau of Statistics on Labor. In all the years since that time, Commissioners of the BLS have been qualified professional statisticians or economists.

Wright held office for 20 years under both Republican and Democratic Presidents. After taking office, Wright wrote to his boss, the Secretary of the Interior, stating that ". . . the Bureau of Labor could not be shaped to

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special ends and that its work has that of pure fact," free from the exigencies of politics (Grossman 1973, p. 6).

This philosophy and policy has characterized the attitude and actions of every Commissioner and Acting Commissioner of Labor Statistics for the hundred years that the BLS has been in existence. Attempts at politicization over the years have been successfully thwarted by the loyal, dedicated officials and staff of the Bureau. It is a testimony to their competence, integrity, and intestinal fortitude that the BLS has remained free of special interest groups and political interference.

Early History and Products of the Bureau of Labor

The early reports of the Bureau covered such topics as "Industrial Depressions" and "Convict Labor" (Grossman 1973, p. 7). Other statistics on such subjects as marriage and divorce were also prepared and were well received.

In 1888 President Cleveland signed a bill establishing the Bureau of Labor as a new independent Department of Labor, without cabinet rank. Its research reports hereafter were directed straight to the President. Its studies were extended into railroad labor, industrial education, working women, effects of machinery on labor, labor legislation, housing for working people, and a variety of other subjects (Grossman 1973, p. 7). A major milestone in 1895 was the inauguration of the "Bulletin of Labor," which has evolved over the years into the prestigious *Monthly Labor Review*.

In 1903 President Theodore Roosevelt felt that the interests of workers and employers could best be served by creation of a Department of Commerce and Labor. He signed the reorganization bill which subordinated the Department of Labor in this new department. Carroll Wright resigned. From the start there were serious differences pertaining to such topics as immigration policy. Business interests, for example, favored open immigration, while labor wanted immigration controls.

Finally, in 1913, after years of pressure by organized labor, President William Howard Taft signed a bill establishing an independent, cabinet-level Department of Labor, and the Bureau of Labor was included in the new Department as the Bureau of Labor Statistics (Clague 1968, p. 15).

Evolution and Status of Major BLS Series

Most of the more significant BLS statistical programs were undertaken in response to a critical national need for a particular kind of data.¹ The

¹ Clague's book, *The Bureau of Labor Statistics*, provides an excellent historical perspective on BLS programs through the 1960s.

first major statistical initiative undertaken by the Bureau after its merger into the new Department of Labor was the creation of the Cost of Living Index. This index was developed during World War I in response to a need for data to be used in fixing wages in war production industries. The BLS undertook family expenditure surveys to determine "weights of various goods and services in the average family's living costs" (Clague 1968, p. 7). The Cost of Living Index was the forerunner of the present-day Consumer Price Index, one of the best known and most widely used of all government statistical indexes.

Labor unions were concerned about the decline in the Cost of Living Index in the early 1920s and began to show interest in productivity as a better basis for determining profits and, thus, wage potential. In the mid-1920s the BLS began its program of productivity measurement in a number of industries. These studies have been expanded over the years and form the core of the Bureau's productivity measurement program.

During the Great Depression of the 1930s, the government labor force statistics were found to be grossly inadequate for policy or program purposes. There was no program in place to collect data about unemployment. The Census Bureau began to collect unemployment data in the 1930s, but controversy developed over definitions. For example, when is a worker considered unemployed? Do you count as unemployed workers who are out of work, but are expecting to be called back to work? Are part-time workers employed or unemployed?

The controversy over the labor force statistics led to the establishment of a special committee of the American Statistical Association (ASA) to review the government's statistics and make recommendations for improvement. This was the second time the ASA had been asked to take an independent look at government statistics, the first having been shortly after the 1913 formation of the Department of Labor when the ASA reviewed wholesale price collection programs. Out of the 1930s effort came a report which recommended substantial changes and enhancements in government statistics, including major revisions in base-line BLS statistics on prices and labor force.

Outside neutral bodies have been used on numerous occasions over the years to examine and report on BLS statistical programs. In addition to the ASA's frequent involvement, a review committee headed by Dr. Aaron Gordon presented a comprehensive report in 1962 that covered the BLS's labor force statistical programs in depth and made a number of important recommendations, many of which were accepted and implemented. In the late 1970s Dr. Sar Levitan of George Washington University headed a Presidential commission to study employment and unemploy-

ment statistics, and many of that commission's recommendations also were adopted. A major change noticeable to those who read the monthly employment releases is the inclusion of military employment in the BLS labor force figures.

At times the BLS has been asked to undertake analytical studies or statistical surveys that traditional, long-time professionals feel are not consistent with the role or responsibility of the Bureau. One such activity was the Urban Employment Surveys of the late 1960s. Those in the Department of Labor who were concerned with employment and unemployment problems of the disadvantaged and others in the U.S. labor force facing special barriers to their obtaining employment needed these studies as well as studies of black Americans. Reluctantly, the BLS undertook the surveys and produced a series of reports that portrayed employment, unemployment, and underemployment in ten of the nation's largest central cities. They have not been replicated.

The Family Budget Program, introduced in 1967 in response to a felt need for information about living costs, particularly on an inter-city comparative basis, was dropped in 1982 because it had been permitted to deteriorate, and major revisions, at great cost, would be required to make it a high-quality program (GAO 1984, p. 41). While quality deterioration was the major reason for dropping the program, its output was often misused. Welfare advocates, for example, frequently cited the BLS's Lower Budget as a proxy for the poverty level and based their budget and support demands on these figures. The fact is that the Lower Budget is hypothetical; any dollar level could have been selected and costed out.

In the early 1970s the BLS, responding to the interests of its Commissioner, Dr. Geoffrey Moore, initiated studies of job vacancies, to determine how many there were, by occupation and by location. This program hobbled along, never reaching its potential, and was gradually eliminated (GAO 1984, p. 45).

The Job Vacancy Program highlighted a classic argument between producers of statistics and program administrators. The BLS refused to let the Manpower Administration use information from individual firms, citing its pledge of confidentiality to survey respondents. The Manpower Administration, however, saw these data as an excellent source of potential job openings, pinpointed to specific employers. This dichotomy of interests has plagued the relationship between the BLS and the Manpower Administration (now the Employment and Training Administration) through all the years of their mutual existence in the Department of Labor. But the BLS refusal emphasizes one reason why most employers are willing to provide the Bureau with sensitive, proprietary information

even though there is no law requiring them to do so. BLS is able to function because it faithfully carries out its pledge of absolute confidentiality.

The BLS's Labor Turnover Program was also eliminated in the budget reductions of 1982, leaving the nation without a statistical program to study and report on quits, hires, and the general mobility of workers in the labor force. It also deprived the Commerce Department's Bureau of Economic Research of a series it used in conjunction with its leading economic indicators program (GAO 1984, p. 17).

In response to criticism that its productivity measurement program concerned only labor productivity, in 1981 the BLS initiated its Multifactor Productivity series. The expansion provides a more complete coverage of the U.S. economy and enables better international comparisons.

In 1982 the BLS discontinued its *Directory of National Unions and Employee Associations*, which provided union membership figures and other items of interest to the industrial relations community. The Bureau of National Affairs took over this publication, utilizing materials collected by the BLS to publish a report for 1982.

Recently there were reports of rapid and substantial declines in union membership. The sources of these reports leave serious questions regarding accuracy and reliability. What is the truth? Who should collect these data and report them? While the BLS knew of deficiencies in the data collected for the *Directory*, the user-public still considered the *Directory* to be the best source for union membership figures.

At the same time, in 1982, there were reductions in work-stoppage coverage, a reduction in the wage collection programs, and cuts in analysis of the labor contract files. Each cutback has tended to weaken the Bureau's industrial relations program.

Other programs such as the Occupational Employment Statistics Program were a response to a demand for more detailed occupational-industrial information at both the national and subnational levels. The program provides data to assist in the planning of occupational and vocational training programs and for projecting future occupational demand. It never received the support required to satisfy all its potential uses, and the 1982 budget reduced its level of detail.

The Local Area Employment and Unemployment Statistics Program (LAUS) blossomed as a major, highly sensitive program during the life of the Comprehensive Employment and Training Act of 1973 and is still important to the Job Training Partnership Act of 1983. Suddenly, local area figures on unemployment were used as a basis for distribution of

billions of dollars in training program funds. The BLS inherited a system with serious methodological problems and inadequate quality control.

Local area detail is expensive to gather and to produce. Since the local area data system largely depends on the Current Population Survey (CPS), the major way to improve accuracy and to expand the level of detail is to increase the size of the CPS sample. This was done over the years, but the 1982 budget cutback included CPS sample reductions. In addition, cuts were made in research areas which, together with the cut in sample size, "reduced the reliability of the local data" (GAO 1984, p. 43).

The Occupational Outlook Program produces the *Occupational Handbook* and *Occupational Outlook Quarterly*, among the best known publications on occupations. The *Handbook*, in particular, finds its way into virtually every secondary school and college in the United States, provides students, counselors, and others interested in occupations and careers with a plethora of information about occupations in terms of preparation required, openings anticipated, salary information, etc. Around 100,000 copies are sold each year it is produced. This program was also reduced in 1982.

Other programs such as the Economic Growth Projection of U.S. Economic Growth and Industry Employment, Labor Force Projections, National Industry-Occupational Employment Matrix, and National Occupation Projections provide excellent planning information for educators, business firms, government policy-makers and program administrators, and others. The November 1983 issue of the *Monthly Labor Review* is a particularly useful source of planning information for all sectors of the economy.

Continuing Issues

Anyone who has ever worked for the BLS knows that it performs a dual role. First, it is a provider of accurate, objective, relevant, and timely information to a wide range of users outside the Department of Labor. These users are inside and outside of government and have various interests ranging from overall economic analysis to specific questions at the firm or individual level. The other role of the BLS is to provide supporting data for internal Department of Labor programs such as the Fair Labor Standards Act, the Occupational Safety and Health Act, and local area data for fund distribution programs.

Occasionally these roles have collided and placed the Bureau at odds with DOL administrators. Former Secretary of Labor Willard Wirtz was particularly disappointed at what he felt was the BLS's failure to provide him with statistics and research support for departmental programs. The

claim has been made that the BLS would much prefer to stick to producing its traditional series, with limited analysis, so as to avoid the kinds of political issues that often surround DOL programs.

Seasonal adjustment is another lingering issue. For years the BLS has worked to refine its methodology to reduce discrepancies to an absolute minimum. During the Nixon years members of his staff were certain that the BLS was “fudging” its seasonal factors to make the administration look bad. One Saturday the head of the Office of Management and Budget’s Office of Statistical Policy spent several hours trying to convince a White House staffer that this wasn’t so. He showed him that the seasonal factors were published a year in advance and that anyone could take the raw data and apply the seasonal factors. The staffer was never fully convinced.

On another occasion former Senator Hubert Humphrey was incensed at the use of seasonally adjusted employment and unemployment figures. He asked if Department of Labor officials had ever seen a seasonally adjusted, unemployed worker. Needless to say, he knew better, but he was making his point about the coldness of statistical methods.

More recently Molly Sinclair wrote an article in which she questioned seasonal adjustments in the CPI. She saw problems in the reporting of fuel prices which were rising, but which showed a drop on a seasonally adjusted basis, and she didn’t trust the CPI “because of its controversial seasonal adjustment . . .” (Sinclair 1984, p. B2). Obviously, one of the problems is many people’s lack of knowledge about seasonal adjustment.

Still another issue is the way the BLS releases its products. There are some who feel the Bureau should release its figures with a minimum of statistical interpretation. Their view is that there are plenty of competent analysts outside the Bureau. The BLS, they say, should not get too deeply into data interpretation, which can lead to charges of politicization, slanting of emphasis or meaning, and other such potential conflicts.

Others have strongly urged the Bureau to get more deeply involved in in-depth analysis in all of its programs. During the late 1960s and early 1970s this was the BLS’s direction. Gradually, the BLS returned to more traditional statistical analysis, leaving qualitative analysis of social issues to others. This, of course, is a much safer course for a government statistical agency.

Conclusion

It is a testimony to its outstanding professional reputation that the BLS has survived for 100 years. There have, however, been some very difficult times—particularly during the early 1970s when efforts were made to shake up the Bureau and its staff. There was even talk of merging

statistical agencies or reorganizing some of them out of existence as independent entities. In each case, strong opposition to any such move came from business, labor, and the Congress. While there were some in each sector who had technical differences with the BLS, all of them trusted and respected the Bureau's professional integrity and products.

Since joining academe in 1978, this writer has become a frequent user of BLS material. On every occasion that the BLS has been contacted, it has responded. If they didn't have the data, they knew where they could be found. The BLS is also a goldmine for students who find the BLS staff extremely helpful and courteous.

At the start of its second 100 years, the BLS is strong, it has outstanding leadership, and its programs are vigorous. Its national and regional offices are staffed with competent, dedicated professionals. The Bureau is a monument to professionalism, integrity, and service to its public.

Happy 100th Anniversary to the BLS.

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Forces Driving or Impeding Changes in Labor Force Statistics

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Five years ago a congressionally mandated commission concluded, after extensive and thorough review of our labor force statistics, that “the nation is served by a comprehensive labor force data system expertly prepared by a cadre of dedicated public servants.” I fully concur with this evaluation. However, recognizing that the federal statistical agencies are staffed by competent professionals who feel more comfortable with refining measurement techniques than developing new data sets that are laden with political implications, the commission added a caveat: “If the statistics are to reflect changing economic conditions and meet policy needs, periodic revisions and improvements are necessary.”

The Stakes Involved

Granted all professional virtues of the Bureau of Labor Statistics and the Bureau of the Census staffs, adaptation of the concepts and definitions used in collecting and presenting labor force data to the changing demographic and economic scene is too cautious and slow to adequately serve public and private policy-makers. The statement is not intended as a criticism of the statistical agencies, but rather as a recognition of a fact of life. It is not difficult to discern the reluctance of the agencies to tamper with their data sets, but the obstacles to change are more likely to be found elsewhere than among Census and BLS analysts.

Academic and other researchers have a stake in preserving continuity in government-funded data collection. Shifts in time series caused by definitional changes disrupt, and may render obsolete, earlier research and detract from established reputations. It is not surprising that the two major study committees, the Gordon Committee in 1962 and the Commission on Employment and Unemployment Statistics in 1979, encountered strong opposition from academics in proposing changes that would establish discontinuities in data series.

Politicians have an even more immediate stake in labor force data than

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the analysts. Literally billions of dollars ride on these numbers. In fiscal 1983, for example, more than \$8 billion was expended in supplementary and extended unemployment benefits. Eligibility for these benefits depended upon estimated state unemployment data.

With such high stakes, reduced unemployment figures can be a political liability. In 1982 the unemployed in Illinois were threatened with being denied extended unemployment benefits as a result of amendments initiated by the Reagan Administration in the preceding year. The governor, then involved in a closely contested reelection campaign, could hardly afford such an occurrence. Jobless workers who had not previously applied for benefits were encouraged to do so, and a review of rejected applicants was ordered, with the aim of qualifying them. The efforts paid off and the covered unemployment rate reached the required 5 percent. Under these circumstances, the imprecision and arbitrariness of the unemployment figures can be an advantage if the political stakes are high.

Similarly, the distribution of more than \$3 billion in federal employment and training funds is based on the rate and number of unemployed and low-income persons in each state and locality. Any change in the rules counting the unemployed could result in a loss or gain of millions of dollars flowing to these areas. Labor Department analysts estimated, for example, that inclusion of the military in the labor force count would have reduced San Diego's 1979 share of federal employment and training funds by some \$6 million. It should not be surprising, therefore, that elected officials in areas with high concentrations of military installations displayed strong interest in the apparently esoteric detail of including the military in the total labor force count. The national commission that recommended the inclusion of the military in the labor force count made it conditional, displaying Solomonic wisdom, that the proposal would apply only to national estimates, but not to states and localities, thus leaving the distribution of federal funds unaffected.

With large sums riding on presumably slight changes in the labor force and poverty statistics, it is no wonder that politicians resist attempts at reform. Their vested interest in maintaining the current concepts and definitions underlying existing measures and opposing new measures has been demonstrated repeatedly. Considering the diverse interests that are opposed to change, the statistical agencies continue to grind out time series. These data sets assume a life of their own, and with the passage of time some lose relevance to the events they are supposed to reflect.

Independence of the Statistical Agencies

Given the political stakes involved, the Census Bureau and the Bureau of Labor Statistics have wisely been given considerably autonomy, along

with direct access to Congress, to data-users, and to the public through the media and their own publications. These agencies have developed stringent rules to prevent political appointees from meddling with the collection, processing, and dissemination of data. With only few exceptions, political appointees and Congress have honored these rules. In turn, these two agencies have steadfastly maintained the highest professional standards in releasing the data they produce, steering clear of advocacy or normative analysis.

In this context, the agencies' reluctance to tinker with time-tested definitions and concepts is perhaps understandable. Whatever changes they implement may touch off political controversy, quickly placing them squarely in the middle. Altering existing measures or creating new ones might threaten the structure of the statistical system in the short run, but assure its continued relevance and vitality in the long run. For the agencies producing the statistics, the lesser risks of inaction seem to outweigh the perils associated with change.

The propensity of statistical agency staffs to present an image that is above suspicion, like Caesar's wife, while commendable, may occasionally be fraught with serious political implications. Seasonal adjustments are a case in point. The BLS releases monthly seven alternative seasonal adjustments for estimating aggregate unemployment rates. Only the chosen few understand how they are derived, and to the multitudes the results may appear to be pulled out of a black box. Consider the reported unemployment figures during the four months prior to the recent national election: the unadjusted rate, which did not reflect true change in economic conditions, continued to drop from 7.5 to 7.0 percent, while the officially reported, seasonally unadjusted figure dropped only one-tenth of a percent. Moreover, if the BLS had pushed another seasonal adjustment button, the official unemployment rate would have dropped by 0.2 percent. Needless to say, the BLS did not have a choice and stuck to its predetermined procedure and reported that unemployment in October 1984 was 7.4 percent. With the wisdom of hindsight, we know that President Reagan did not need help from the BLS to win his reelection.

Lest you think that this technical point is of interest only to the learned IRRA members, you may want to turn to the 1976 presidential election, which was a much closer race. If a different seasonal adjustment technique had been used, it would have indicated that unemployment remained stable prior to the 1976 election. Instead of reporting that unemployment was rising in late spring, the media would have told the public a different story. I am not complaining about the results of the 1976 election, but I hope that seasonal adjustments did not play a role in determining the outcome.

The issue is not which figures the BLS should publish and which are the "correct" numbers, but which numbers should receive top play in its news release. The BLS avoids the issue by publishing a series of numbers and then leaving users to choose whatever number they wish. Some have charged that this is a cop-out. For 44 years the BLS and predecessor agencies have published an "official" unemployment figure. More recently the BLS has also included six other estimates of unemployment rates in its monthly labor force report. But it seems that what matters most is the official figure reported by the media; the other numbers are almost completely ignored.

In his 1984 campaign President Reagan raised the question of whether we are better off today than when he was first elected. Based on the official data, the unemployment rates were the same in October 1984 as in January 1981, when Reagan took office. However, the number of persons employed part-time for economic reasons and who live, therefore, on half rations rose by more than a million. Was it the duty of the BLS to point out this fact in its monthly release on the employment situation?

If the BLS had included this information in its release, it would have voluntarily made itself a target in the political shooting gallery. But by omitting the fact, the agency failed to provide the public some basic relevant information, and reliance on the media to educate the public has not always worked. This observer believes that the BLS acted properly. Yet there remains the gnawing feeling that the public was not adequately served.

In the cases cited here, the BLS played it straight and stuck to its guns. However, a suspicious outsider not privy to the internal decision-making processes in the upper spheres of government might be forgiven for suspecting an occasional transgression. Beginning with 1983 the BLS had included military personnel in the labor force count, thereby reducing the overall level of unemployment by 0.1 to 0.2 percentage points. It did so in response to the recommendation of the National Commission on Employment and Unemployment Statistics. However, the agency failed to act on other recommendations of the commission which might have been of equal merit. To its credit, the BLS continues to publish unemployment rates excluding the military and continues to base its analysis on the old series. Was the inclusion of the military in the labor force count a case of the scribe yielding to the prince, or was the change driven by a desire to improve the employment and unemployment measures?

Unresolved Problem Areas

The illustrations mentioned thus far are clearly defensible because by publishing alternative numbers and rates, the BLS leaves users to choose

the numbers that suit them best. In some cases, however, the BLS resolves its political dilemma by forgoing analysis of potential problem areas. The best case in point is the perennial problem of discouraged workers. The BLS publishes quarterly estimates about these workers, but continues to count them among persons who are not in the labor force. Based on the latest available estimates, the inclusion of discouraged workers among those counted as unemployed would raise the unemployment rate by as much as a complete percentage point. Current data suggest, however, that it would stretch the point to include *all* discouraged workers, as they are now counted, in the ranks of idle persons seeking work. Still, the current BLS practice is subject to a great deal of controversy as is reflected in the National Commission on Employment and Unemployment Statistics discussion of this issue. The majority of the commission members agreed with the current BLS practice, but they also unanimously recommended changing the procedures for counting discouraged workers.

In August 1984 the BLS at long last came out with a brief but succinct analysis of the discouraged worker phenomenon. The data strongly indicated that between one-third and one-half of the persons counted as discouraged workers were indeed unemployed but were not counted as such because they had not searched for a job within the four weeks prior to the survey. An examination of the movement of discouraged workers shows clearly that their numbers swell during periods of recession and decline during recovery. For example, during the 1981–82 recession the number of discouraged workers rose to a record high of 1.0 million, but declined during 1983 and 1984 at about the same rate as the overall unemployment rate. Having objectively and carefully analyzed the data, as is its usual practice, the BLS surprisingly concluded that the “evidence presented here supports the present practice of not including discouraged workers in the labor force.” The apparent explanation for this strange conclusion is that the BLS opted for maintaining the status quo.

An equally significant BLS aversion to change is reflected in its practice of linking labor force data with earnings. In the public mind, unemployment is associated with economic want, while work is presumably a guaranteed escape from poverty. In reality, about four of every five unemployed persons in recent years were not poor, while some 2 million persons who work full-time, year-round have remained in poverty. In response to recommendations of the National Commission on Employment and Unemployment Statistics, and other pressures, the BLS has at long last published three annual reports attempting to link various labor force data with earnings.

Meanwhile, the Bureau of the Census has stepped into the vacuum by

developing a new series of data, the Survey of Income and Program Participation, that will enable it to link employment, earnings, and other income in much greater detail than the BLS can derive from the annual CPS supplement to the March survey. The wisdom of the two agencies independently publishing data on the same subject is open to question. In the past, both the BLS and the Bureau of the Census published labor force data. To reduce the resulting confusion, the two agencies divvied up the turf, leaving the Census Bureau to collect the data and the BLS to analyze and disseminate the results. Because the BLS dragged its feet on this subject, the public is now faced with duplication of effort, as well as confusion of data sources and the need to reconcile potentially conflicting data sets. If the Census data turn out to be superior to the information available to the BLS, the status of the latter in supplying vital labor force statistics will be endangered and the public will be the loser. Without underestimating institutional rivalry, the situation might still be corrected by following past practice and assigning the Census Bureau the responsibility for designing the sample and collecting the data, while leaving to the BLS the task of analyzing and disseminating the information.

BLS labor force data also fall short of providing adequate state and local information, as well as data on minorities. A major objective of the Reagan Administration is to reduce the role of the federal government by turning over many functions and programs to the state and local governments and by providing states federal aid through block grants. In too many cases, however, state and local labor force data are more guesses than reliable estimates within acceptable margins of error. Doubling the current monthly population survey sample would yield reasonably reliable state data as well as statistically significant data for key groups in the population. Instead of boosting the CPS sample, however, the administration budget reductions forced a cut in the sample to 60,000 households, and there is reason to believe that the sample may decline even further.

If the sample is decreased or even kept at the same level, the quality of the disaggregated statistics becomes highly suspect. For example, data on Hispanics and blacks (particularly black youth) are currently unreliable due to excessive sampling error. The new federalism advocated by the administration is a matter of controversy, but if the policy is to be implemented, more reliable state and local labor force data will be necessary. Leaving it to the 50 states to develop their own individual employment and unemployment data will result in a Babel of numbers.

Sound Statistics Cost Money

There is no question that the quality of statistics will deteriorate and their usefulness for public policy will diminish if labor force statistics fail

to respond to policy needs. BLS Commissioner Dr. Janet Norwood commented: "There is a problem with a statistical system that stands still and does not do new things to keep up with the state of the art. . . . In five years [the system] can be a has-been; the whole statistical system of the United States could be that way."

Secretary of Labor Donovan concluded early in his stewardship that because of budgetary constraints he could not make any recommendation that would improve labor force statistics if the implementation of the recommendation involved additional costs—regardless of potential returns. Although he believed that "more accurate state and local area employment estimates and more reliable state data on minority workers are desirable," he maintained that in good conscience he could not request increased expenditures.

Labor force and related income statistics are essential for private, as well as public, policy-making. In the federal sector the distribution of billions of dollars affecting the well-being of millions of persons are dependent upon these numbers. Reliable and sound data are needed for evaluating the consequences of supply-side economics as well as any other policies. Individual employers require sound data on which to base production decisions. Political conservatives should heed the fact that there is no free lunch, and this rule applies equally to statistics as it does to more edible objects.

We should, therefore, retain the faith that the Secretary of Labor and the Secretary of Commerce, or their successors, will see the light and will not choose to preside over a deteriorating labor force statistical system. Likewise, we can hope that Congress will approve the necessary funds to maintain the system properly. This will enable the Census Bureau technicians to collect the necessary data and BLS analysts to renew their efforts in advancing the frontiers of analyzing and reporting labor force statistics.

Some Unanswered Questions About BLS Data

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I have chosen the title of my paper with care. I am going to raise “some” questions that the BLS labor market data suggest or hint at, but for which they do not always provide clear answers. I will provide a few illustrative examples which are interesting to me, but which are very far from an exhaustive listing of all of the unanswered questions that lurk in or protrude from the enormous mass of BLS data. I trust that there is no need to emphasize that my comments are not intended to imply any criticism of the competent, dedicated, nonpartisan professional staff for which BLS has been famous for many generations. Many of these professionals have provided at least tentative answers to some of the questions suggested by the BLS data, and no doubt that process will continue long into the future—provided that BLS is not eviscerated in order to make a small contribution to the solution of the national budget deficit crisis.

The first question that I will consider is a deceptively simple one: “What is full employment?” I was confident that I knew the answer to that question 40 years ago. I remember sitting as a member of a professional forecasting unit in 1945 and 1946. Since the group was composed of economists, and we were working on long-range cost projections, disagreements were noisy and numerous. However, at this distance in time, I recall no serious challenge to the proposition that a 3-percent unemployment rate was a reasonable working definition of full employment.

Today, if you polled a random sample of—say—1000 economists about the proper definition of full employment, you would probably find at least some support for figures ranging all the way from 2 percent to 10 percent—with perhaps a majority supporting the middle figures: 5, 6, and 7 percent. What has happened in the last four decades to our former acceptance of the 3-percent unemployment rate as the full employment unemployment rate? The BLS data provide some hints and suggestions about the basis for this change, but the data do not provide a single,

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simple answer. Multiple answers have been developed from the data, but I do not think that any of them are very convincing, especially when you factor in offsetting factors that are also shown in the BLS data. The age-sex-race composition of the labor force has changed, bringing into our count of the unemployed many groups with higher-than-average unemployment rates. But years of schooling among the young have increased; early retirement removes many older men from the labor market, and among less-educated males at all ages, labor force participation rates have been dropping for years. (I will offer some further discussion of this point later in this paper.)

Possibly some of the current disagreement about the concept of full employment grows out of gradual changes in the meaning of unemployment. During the Great Depression of the 1930s, being unemployed generally meant that an individual or household was suffering hardship or deprivation. Today, a significant number of collective bargaining agreements include provisions giving the most senior employees preference in accepting layoff “opportunities.” SUB plus UC plus a voluntary layoff may give the senior employee a vacation with little reduction from his regular pay. On the other hand, some workers who work a full year with no layoffs fail to earn enough to support themselves and their families at or even near the officially defined poverty level. We have come to call these people “the working poor.” And their number has increased in the last few years, after decreases in the 1960s and 1970s. So unemployment is no longer a proxy for destitution, and even a full-time job is no guarantee against impoverishment.

Some of the increased ambiguity that has come to surround the national unemployment rate could be diminished by linking the data on employment status with a measure—or measures—of economic hardship.¹ It is a great deal easier to write that sentence than it would be to achieve the stated result. I make no claim to the possession of a complete set of sure-fire answers to all of the questions that would have to be answered in order to achieve that linkage. Nevertheless, I believe that the next major step in labor market analysis is likely to be in this difficult and complicated area. When will it happen? When we restore the goal of “full employment” to the high priority it had in my graduate student days. I yield to my temptation to state my personal definition of full employment. The term refers to a labor market in which every person who really wants to work can find a job at reasonable wages in a reasonable time.

Our labor market data at the national level are generally regarded as

¹ Since 1980, BLS has linked employment status with measures of economic hardship, but BLS leaves it to the user to decide on a single index figure.

reasonably accurate with regard to their totals for employment and unemployment. But disaggregated data are quite a different story, especially with regard to figures that are intended to show the status of what are euphemistically called "minorities," and also units of government or communities that are of lesser size than the whole United States. I merely note in passing the difficulties that grow out of Census undercounts of various minority groups, some members of which seem to be remarkably elusive. A good example of the difficulties in this field is the estimates that have been made of the number of illegal aliens residing in the United States, which disagree with each other to the magnitude of millions of people. Brave efforts to adjust for undercounts have been made over the years, but much doubt remains.

I will turn my attention now to the state and local unemployment data. As you know, scores of billions of federal dollars have been allocated among the roughly 6000 state and local units of government in part or largely on the basis of these state and local labor market data. As some of you may not know, there is fairly general agreement that the state and local figures are probably the least reliable that are issued by the BLS. Only a few populous states contain a large enough number of persons that are covered by the Current Population Survey (CPS) sample to use those data exclusively, or almost exclusively, in the production of their own labor market data. In the overwhelming majority of the 6000 units (for which data must be produced on a *monthly* basis!), the required figures are developed in a cooperative relationship between the U.S. Department of Labor and state employment security agencies. I will not bore you with a detailed description of the methodology that has been developed for producing these state and local estimates. Suffice it to say that most of the work is done under the guidance of "the handbook method," which is also known as "the seventy-step procedure." Raw data are drawn from a variety of sources, including the unemployment insurance program, the CPS, the population census, tax reports of employers, and other establishment surveys. The data yielded by these sources are combined according to rules that have been set forth by the BLS. These rules obviously fit some localities much better than others. Unquestionably, a great deal of undercounting and overcounting is produced by this methodology. And the stakes are not trivial. Billions of federal dollars are involved. For every unjustified dollar that goes to an overcounted unit, a dollar is denied to a needier, undercounted unit.

In 1976, Congress mandated the creation of a National Commission on Employment and Unemployment Statistics. After some delay (mainly due to the change of administrations) the Commission began work in April 1978 and filed its final report on Labor Day 1979. I think it is fair to say,

although in general the Commission was laudatory concerning most aspects of labor market data, they were quite critical of the state and local reporting systems, especially with so many dollars being allocated on the basis of such highly questionable figures. The Commission recommended a substantial expansion of the Current Population Survey from around 70,000 households, to about 120,000 households. That recommendation was rejected by the Secretary of Labor, purely on budgetary grounds. Indeed, subsequent budget-cutting (since 1979) has forced the reduction of the CPS to around 60,000 assigned households. The current concern about the huge federal deficit does not stimulate optimism concerning the federal government's attitude toward increased support for the compilation of more or even better statistics. But I must report that there is a small glimmer of sunshine amidst the dark clouds. The last Congress passed a special appropriation bill in the amount of \$6,000,000, to be used by the Bureau of Labor Statistics in the preparation of a new mass-layoff and plant-closing report and also the improvement of some existing data series.

With regard to local labor markets, one aspect of this matter fairly bristles with unanswered questions. I refer to what are commonly called "nonmetropolitan" (or "nonmetro") areas. There is some confusion in terminology which helps to increase the analytical difficulties on this subject. Some government agencies and authors use the terms "nonmetro" and "rural" as synonyms, but others make some distinctions. This is a significant point for researchers to bear in mind, but I lack the space to go into the fine points here.

As of 1976, about a quarter of the U.S. population lived in nonmetro areas, and about a third of the labor force worked there. There are significant differences between urban and nonmetro labor markets. Despite some increase over the years in the ambiguities surrounding the national unemployment rate as officially defined, that rate does retain some validity as an indicator of looseness or tightness in labor markets and of groups in trouble in the labor market. Most of the scholars who have investigated nonmetro labor markets (and their number is fairly small) have concluded that in most such labor markets, applying the concepts and definitions that are used in calculating the national unemployment rate can and often does result in misleading statistics. For example, in 1975 the incidence of self-employment was about twice as high in the nonmetro areas (17.4 percent) as in metro areas (8.9 percent). It seems reasonable to infer that the higher degree of self-employment in the rural areas is largely the result of farming there. One needs only to have worked just one hour for pay or profit during the survey week in order to be classified as "employed" in the Current Population Survey. There is more involuntary,

part-time work reported in rural areas than in metropolitan areas. Median family incomes in rural areas are substantially lower than those of urban residents. The members of the National Governors Association have increasingly been assigned responsibility for manpower training and related activities in rural areas. That Association has been quite critical of the use of conventional unemployment rates as a basis for fund allocation. That group has pressed for the development of some measure of underemployment to substitute for the unemployment figures in rural areas. Since there would be losers as well as winners as a result of such a change, the resulting political struggles may block any consideration of the change. Other practical difficulties may contribute to such a result, such as the substantial cost of gathering any new figures that might be agreed upon. Nevertheless, I suggest that further exploration of the distinctive features of rural labor markets should be high on our agenda.

I now turn to the last of my questions for the morning. Permit me to remind you of the well-known fact that, in virtually all age groups of men, labor force participation rates have been declining fairly steadily for at least the past 30 years. Many people have concluded that the explanation is obvious—a combination of early retirement, longer schooling, disability benefits, and competition from women whose labor force participation rates have been rising at most ages. I have found a way to disaggregate the data for men in a way which raises some questions that intrigue me.

I begin with men in the age group 35–44. Some people call these the “prime working years.” Hardly any of these men are still full-time students. Very few (excluding a handful of professional athletes) have been able to choose early retirement. The introduction of disability benefits during the last three decades may have had some effect, but not much, in this age group. I have tabulated and charted changes in civilian labor force participation rates for this male age group by level of educational attainment for a period of more than 30 years. The behavior of the differentials in participation rates between the educational attainment groupings fascinates me. The median educational attainment for this group rises slowly over the years, and is now somewhere between 12 and 13 years. Above this median, there has been almost no significant change in participation rates over the past 30 years. College graduates had a participation rate of about 99 percent in 1950; by 1982, the rate had declined by perhaps a tenth or two of a percentage point below the 99 percent level—which I regard as substantial stability. The other groups with educational attainment above or close to the median—that is, those with 13 to 15 years of schooling and most high school graduates—have declined a little, but not very much, over the 30-year period under consideration. The 13 to 15 years of schooling group and the 12 years of

schooling groups had participation rates within a tenth or two of 99 percent in 1950. Thirty years later, the rates for both groups had declined to between 96 and 97 percent; in other words, a drop of roughly two percentage points in the 30-year period.

For the educational groupings below the median attainment, declines in participation rates have been much more precipitous. High school dropouts (9–11 years of education) fell from a 99 percent participation rate in 1950 to about 92 percent in 1982. Those with 8 years of education dropped from a 98 percent rate in 1950 to around 90 percent in 1982. The remaining two educational attainment classifications (5–7 and 1–4 years of education) dropped from the mid- or lower-90 percent range in 1950 down to the 70–80 percent range by 1982. Looking at the picture in its entirety, the *spread* in participation rates for this one age group classified by level of educational attainment has widened from roughly 6 or 7 percentage points in 1950 to almost 30 percentage points in 1982. And I remind you that I am dealing *only* with the 35–44 age group. Various explanations have been offered for this widening of differentials, but they are generally based entirely on speculation and are not very convincing. The most reasonable explanation that I have heard is that more and more less-educated men are being supported by their wives or housemates, while the most-educated men tend to be self-supporting—in this age group, at least. And it would also be helpful to know if these lesser-educated men are permanent dropouts from the labor force, or if from time to time they test the labor market.

I leave the podium with regret that I have been unable to touch on more than a few of the unanswered questions about labor force data that are still out there. I do not underestimate the difficulties of the kinds of research that my comments may have suggested to you. In fact, I trust that those difficulties will serve to some degree to distract your attention from the rather narrow scope of this paper.

The BLS and Local Labor Market Statistics*

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There is a nonchalant acceptance of what has been a considerable accomplishment of our government—the provision of labor market statistics by a professional organization serving in a frequently charged and conflictual environment. Exposure to the statistical operations of other countries soon focuses attention on the U.S. ability to produce reliable labor market statistics. One takes for granted that there has been neither ineptitude nor political expediency in the fundamental structure of the statistical system. There is a deserved trust in the BLS system which has been nurtured over a substantial number of years. The ingredients of this substantial, but not altogether satisfying, stew have been a continuing concern for meeting the needs of principal users (see next section), gathering-systems that are concerned with minimizing the burdens on those who supply data, sensitivity to the interaction between these two ingredients, concern for the importance of theoretical statistics, protection of confidentiality, timely and efficient distribution, concern for the professional development of user communities, and meeting the general and specific needs of both the legislative and executive branches of government within the budgetary constraints imposed upon it.

This pot has simmered for decades and fortunately for us all has been in the hands of a group of dedicated chefs who have frequently been more concerned about our intellectual health than we ourselves. They have been ably assisted through the years by a dedicated group of individuals, frequently in the early years coming from those states like Massachusetts which had a statistical system far ahead of its sisters, or the federal government. There were scholars like Clarence Long working through institutions such as the National Bureau of Economic Research. The most continuous force for good has been the American Statistical

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Association who, like a head chef or mother superior, stands watch over all her charges (BLS, Census, etc.). In no part of this rather exemplary history has the Industrial Relations Research Association played any institutional role. This moment of reflection for BLS is also one of reconsideration for IRRA.

Evaluating the BLS

Establishing a basis for evaluating the BLS on its centennial is difficult for a number of reasons, but two are outstanding. The analysis of the operation of labor markets has undergone a profound alteration in the last two decades. Three roots are discernible. The first are the theoretical developments emerging from the analysis of the allocation of time and its offshoot/parent, human capital theory. A second root is the analysis of the operation of markets in general, but labor markets in particular. Immediately one can think of general market segmentation theories, market discrimination and human capital variables, search and information theory. A third root emerges from concern over the market adjustment process. Econometric developments coincident with the technological changes that make empirical analysis and simulation feasible and efficient have been catalytic agents. Each of these willow-like roots is insatiable in its thirst for sustenance, data to test the theories, while changing the menu of what is considered relevant for data gathering.

A second feature in the evaluation process is the set of decision-makers calling upon data developers while they are being called upon to carry out broad policy initiatives. The debate on unemployment emerging in the late 1950s and flowering in the 1960s carried with it the seeds of alternative research strategies on labor market statistics. The demand deficient neo- and orthodox-Keynesians had little need for micromarket data. In fact, it could be inferred that an enhanced microdata strategy was a misplaced emphasis, save in rejecting the hypotheses of the structuralists.

The structuralists viewing the same landscape see all the fissures and faults, concluding that the overwhelming reality is both static and dynamic irregularities. These make the equilibrium conditions at the macro level necessary but not sufficient for achieving full employment or the characteristics of an efficient market. They reject the idea that wages may equal marginal revenue product even when adjusted for human capital variables. Not only does the market not achieve the anticipated result, but there exists a class of problems that cause externalities in labor markets. The persistence of racial and sexual discrimination as indexed in labor markets by a host of variables from wage differentials to receipt of specific human capital even at full employment argues for some focus on specific markets.

The thrust of federal labor market policy emerging from that debate has focused policy at the local and regional levels. Human resources policy implementation from MDTA State Committees, CAMPS, CETA prime sponsors, and now the Private Industry Councils (PICS) under the Job Training Partnership Act has moved toward increased discretion in the expenditure of federal funds to local market-based groups. Throughout this shift in policy emphasis there has been and continues to be a persistent complaint that the decision-makers are hampered by an absence of relevant and timely data for decision-making.

These policy needs parallel the earlier theoretical developments. Clearly, the policy need has primed the pump of research—sometimes uncritically—while illuminating areas significant for both policy and research. The focus upon regional and locally responsive programs while positing a political imperative leaves open whether there is a genuine economic rationale for such efforts. Both the theoretical developments and policy concerns provide a basis for local labor market research which requires for its success statistical detail on local markets.

The problems of the poor, the disadvantaged, and the discriminated have a localized character—though that is not their exclusive feature for analysis. These sufferers generally are relatively immobile among markets. While there has been a great history of geographic mobility, there is a compelling need to study the characteristics of the specific markets where people, for a variety of economic and noneconomic reasons, are anchored. These localized markets vary in demography, industrial structure, and institutions, all of which argue for analysis, both quantitative and non-quantitative, at the local level.

What Better Local Data Would Tell Us

The BLS has in many ways been like prerennaissance painters. It was the early custom to paint babies as little old men. In a similar way the BLS has treated local labor markets as if they were homogeneous versions of the national market. (This is not to imply that they were naive or unmindful of many of the failings of this approach.) However, their legislative charge, the array of tasks they were required to perform, and the budgetary limitations forced them to pursue a substantially macro-based approach.

The developments discussed above have affected the availability of local statistics only modestly. The cooperative BLS-state efforts dealing with employment and unemployment have sought to produce a more reliable local labor market statistical base, integrating the CPS with the employer-based local surveys. The improvement in employment detail at the local end has not been matched by developments on unemployment

and labor force participation. Improved current statistics and projections would aid in producing more appropriate human resource investment strategies at the local level. A policy of generating more trained and educated people from special programs at a time when there is a general oversupply in the local market must be based upon the premise of some structural malfunction in the local market. At best one could only anticipate achieving the same share of unemployment for the target group that existed for the population as a whole.

Better local projections should help in monitoring the general course of the economy which would be useful for planning purposes. At a point of general downturn in the local market the most critical decisions may be in deciding whether men and women who have never been through the human resource development cycle should be introduced into the process as opposed to a strategy of skill maintenance. That is, an inventory strategy could be productive so that part-time work for the unemployed to preserve skills may maximize the long-term payoff to human resource programs. Such a strategy would depend upon the improvement of local labor market macro projections.

The development of local labor market occupational projections frequently found to be wanting in the local areas is probably unobtainable, or at best obtained at a very high cost. The current BLS method of linking macro forecasts, industry forecasts through input-output, shift-share analysis for regionalization, and then an occupational-industry matrix, while imprecise, roundabout, and cumbersome, is probably superior to the suggested alternative. The localists want intensive employer surveys or census at the local level to develop a local occupational projection from scratch. The cost and reliability of a from-scratch occupational projection would be prohibitive and possibly irrelevant given the general tasks that lie ahead of human resource investment planners.

A BLS research strategy that would permit the development of research where the size and nature of the local economy could appear as an independent variable in determining a number of significant dependent variables would, however, be a substantial improvement for both policy and research. Whether occupational-output matrices vary by size of employer and region (possibly as a function of the degree of specialization) is conceptually knowable nationally. The results could then be made available at the local level. This implies that the BLS or some transform thereof would develop a program where the information base would vary from the current base, along with collection methods. This raises two problems. One is of random sampling as opposed to the total enumeration of employers now generally undertaken at the local levels. In addition to

the generally discussed benefits of efficiency from surveys, there is the added virtue of being able to add up the statistical sample results from smaller surveys to develop significant results for archetypical geographic units in hierarchies that have a policy and theoretical logic. The second problem is in moving in the direction proposed without doing violence to data sets that have the virtue of historic continuity.

The critical question that may be asked of either researcher or planner is whether a local labor market is working efficiently. The obverse to that is what could be done to improve the operation of the local labor market. Are wages reflecting the elements that employment/wage/occupational theory say they should? Should the theory be altered? When looked in this light, wage data are as significant as employment data, particularly if they are analyzed from industry/occupation source and have related to them detail by age/race/sex and other personal and industrial characteristics. Training people for high-wage industries if the wages are compensation for high productivity is appropriate. If the wages are a compensating factor for high injury and low employment stability, then the wages should be treated differently in allocating training resources. This suggests that the BLS could look at the entire range of data it and other agencies collect to determine how they should be put together so that the sum may be substantially greater than its parts.

In this framework, total compensation and employment attributes are legitimately a significant part of the labor market information framework. Administratively generated data in such programs as unemployment insurance, in both employer and claimant files, as well as occupational accident data have rich potential. These data would be supplemented by other data from surveys directly by the Census for BLS or from state-generated files. There is now a good deal of confusion among users because of differing sources of data as well as complaint by those who file forms, which may reduce the reliability of information as a reaction to the burden.

In a subnational research strategy, states should be encouraged to experiment in establishing innovative data files and integrating both administrative and survey data. The BLS must assure the reliability of national data collection (i.e., appropriate standards for questions) and their analysis. A special budget set-aside might serve as an incentive for states and even local areas to innovate in the development of localized information systems. Such cooperative efforts would only be an extension of past practice. The BLS could offer technical assistance to assure reliability and usefulness. This would serve the purposes of the local users while also guaranteeing that such information could be an input into a larger data set providing geographic detail now missing.

This increased emphasis on local labor market information is not a call for a “panda” strategy. Pandas, because of a peculiar digestive system, must continuously devour bamboo to gain enough nourishment to survive. The idea of the NOICC/SOICC has been a “panda” policy. It calls for the maximum to total accumulation of all data. In this strategy, data are in an open and ill-defined set. We now have available a substantial explicit theoretical framework upon which the data strategy should be based. This calls for a policy which is selective and analytical and not just apparently comprehensive empiricism. At the policy and research levels there are signs of malnutrition from too much “junk” data.

The IRRA’s Role

In reflecting on the performance of the BLS, it is necessary to look inward. The BLS has moved in the direction of improving the collection of statistics at the local level in the price, employment, and wage areas. The vehicles that have been employed—direct programs as well as state-federal cooperative efforts like the 790 program—have been successful, but fall short in two dimensions: they do not employ statistical sampling, which limits them technically, and they have been conservative in pursuing new topics that could be pursued through the national vehicle from localized and identifiable information. The BLS attitude has been one of first meeting the needs as established through its authorizing legislation. There has been a strong and natural inclination to serve the users of the product. To that end there has been a long history of outside advisory committees to the Bureau. This interest in the participation of user groups has been given even greater emphasis in recent years. Having received the invitation to participate as a user, the IRRA looked inward to its client responsibility in the institutional improvement of BLS.

The IRRA is an organization subdivided into at least four groups. There are the labor and management practitioners who sit upon our Executive Board and who, in their business and labor institutional roles, also sit as members of the National Bureau of Economic Research and advisory groups to the Bureau of the Census and BLS. My sense is that they view themselves as articulate “interest” representatives, as opposed to professionals seeking to advance the profession. A third group are the neutrals, who have their own institutional links such as the National Academy of Arbitrators, the AAA, and, to a degree, the FMCS. They have a professional identification, but quantitative research has never been a particular interest. Thus they tend to act as partisans as well. Last are the scholar/researchers. This group within the IRRA has not been represented and recently took the occasion to express our lack of concern for the question.

As a profession we have little standing to evaluate what has been done in this century by the BLS. Worse though is that we are not in an exemplary position to give guidance to the BLS which is essential to the continued good health, relevance, and sense of justification for the field of industrial relations. The advocates will pursue their own ends absent this society. The statisticians, economists, sociologists, etc., each pursue their own interests with the statistical establishment which may meet those professions' needs. There is no evidence that these groups have a feel for the substance of industrial relations which is our specialty. The recent introspective and self-critical analysis of industrial relations suggests that our data needs are growing increasingly subtle and becoming more sharply defined. The BLS, to its credit, continues to extend its hand. It is time for us to accept that offer for our mutual benefits. It is appropriate that the IRRA has decided to establish a statistics committee. *Natura non facit saltum.*

DISCUSSION

THOMAS J. PLEWES

U.S. Bureau of Labor Statistics

They say that one way to measure the success of a government agency is to evaluate the calibre of its friends. The Bureau of Labor Statistics is in very good shape, on this 100th anniversary year, with friends of the calibre as those with whom I share the platform today. As a current employee of the Bureau of Labor Statistics and one of the heirs to the legacy that was discussed in these papers, I find that commenting on these four thoughtful papers is, for the most part, a pleasant experience. I say “for the most part” on purpose. All four of the papers have redeeming social quality. They all begin with a ringing tribute to the Bureau and the professionalism of the staff, past and current. They all conclude with high praise for the commitment of the staff to uphold the Bureau’s reputation for truth and integrity—characteristics that have been the Bureau’s hallmark for its first century.

It is the midsections of all of the papers that are somewhat painful. This distinguished panel presents a litany of observations, portraying concepts unsolidified, definitions undefined, valuable programs eliminated, and challenges unanswered. It reminds me, if you will, of a report card that professors write for students that could do just a bit better, and it characterizes one of the pillars of the United States statistical system—that is, our users feel a sense of ownership, and hence are prone to critique the operation of the system just as they fiercely defend the Bureau before the outside world.

This morning’s succession of reminiscences, kind words, and criticisms in commemoration of the 100th anniversary of BLS compels some reminiscences, kind words, criticisms, and challenges to the academic community. This is most fitting, for BLS’s relationship with the academic community has been close, open, and symbiotic through these 100 years. It began with Carroll Wright, our first Commissioner, who started in a progressive state agency, served a distinguished two decades with BLS, then moved on to academia. That symbiotic relationship is well represented on today’s panel and is carried into the thoughtful papers that have been presented this morning.

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Few symbolize better what I am talking about than Ben Burdetsky, a former Deputy and Acting Commissioner of the BLS, who has carried on our first Commissioner's tradition at George Washington University. Dr. Burdetsky evaluates the current management of the trust that has been bequeathed to BLS, gives high marks to the Bureau, and reminds us of the professionalism, integrity, and service orientation that is our birthright.

Dr. Burdetsky makes the important point that our Labor Market Information Programs have emerged in response to a critical need for a particular kind of data.

The data demanded seem to change with the change of seasons, however. In the 1960s, policy-makers needed data to help focus on poverty, minorities, and the urban problem; in the 1970s, emphasis shifted to quality of worker and economic hardship of working people; and in the 1980s, we see concern over declining industries and dislocated workers. Concerns, like fashions, come and go with the changing seasons, while statistical data collections to help illuminate those concerns are, on the one hand, affected themselves by the trends and, on the other, are often difficult to develop and usually expensive to conduct. What Dr. Burdetsky did not say was also important. Those who have a need—Congress, the public, an administration—do not often know what data they need. Over the years, one of the tasks of the Bureau has been to translate that need into a data item. That is a great deal of responsibility, for the data available often frame the debate and preordain the decision. This is one reason that it has been important to have had outside neutral bodies on a periodic basis and advisory panels from Business and Labor on an ongoing basis to examine our labor market information programs.

The BLS has been least successful, Dr. Burdetsky reminds us, when we have ventured into highly speculative areas, and he gives, as examples, the Urban Employment Surveys and collection of job vacancy statistics. I must remind him that these less successful enterprises were in direct response to demand to produce data with the kind of program and policy relevance that he also criticizes BLS for lacking.

Speaking with the frustration of an academic who whipped a national commission into the unheard of task of finishing on schedule and under budget, Sar Levitan looks back to Labor Day 1979 when the National Commission on Employment and Unemployment Statistics issued its report. Dr. Levitan wonders why BLS has been so slow to adopt not only the suggestions that were recommended by the Commission, but also some, such as developing a statistics linking employment and economic status into one index, that weren't. He commends the Bureau for political independence, on the one hand, and then wonders why we fail to take a more active role in controversial issues, on the other. As a social observer,

he wants to see change; as an analyst, he recognizes the need for continuity in a data series so we can see where we were to better understand where we are going. The most valuable point he makes is that data need *relevance*. That, in essence, is the ultimate challenge to both the BLS and the user community.

We can look at that relevance in two ways: One is to point out some troublesome areas that are part and parcel of an unfinished agenda. All of the speakers added to that list today. Professor Killingsworth's list is certainly the most specific—and most controversial:

1. He would have BLS define “full employment” and unemployment. We respectfully decline, not from obstinance but from recognition of the kind of measurement problems that were recognized in a report by Joe Antos and others that appeared in *Monthly Labor Review* of March 1979. (These bias effects stem from changing labor force composition and changes in unemployment compensation laws, minimum wage levels, among other factors of a noncyclical nature.) I note that there is mounting evidence of a rekindling of interest in this difficult concept. It appears to be one of those items that grows in interest as the unemployment problem begins to decline.

2. Dr. Killingsworth worries, as do Professors Levitan and Weinstein, about the quality of state and local data, particularly in light of the trends to shift allocation of dollars on the data and decisions on their spending to local area unemployment statistics. The data are clearly inadequate to the challenge—they were before the 1982 cuts that Burdetsky discussed, and will be despite the best efforts of BLS, including the possible fielding of a proposed new advanced method for model-based computation of such data. In this light, Professor Killingsworth makes a contribution when he reminds us that a large part of our population no longer can be classified as urban. His plea for more attention to rural data is well taken.

Killingsworth performs another valuable function. He introduces the paper by Dr. Weinstein when he asks the question “What is unemployment?” To answer that question, we need a theoretical framework. Although Dr. Weinstein does not elaborate a full-scale framework, he points us in that direction and, in doing so, addresses the second way of assuring reliance of our data—that is, acceptance by the professional community. Weinstein's arguments are particularly urgent, since we see here a theory tied to the empirical, reflecting perhaps the frustration of one who has worked to develop employment and training program plans for the State of Maryland. Indeed, I note that the common element of frustration ties all of these papers together. He makes the valuable point that more extensive analysis of individual record data would help in the understanding of labor market behavior, particularly when it comes to investigating

marginal labor force behavior, such as whether the person is in or out of the labor force, or to gain a better understanding of discouragement. Some similar basic questioning is under way in the Bureau, in the form of a framework for discussing these issues developed by Jack Triplett and Janet Shack-Marquez. This was also the conclusion of a most productive conference on longitudinal data from the Current Population Survey held last summer under Census/BLS sponsorship.

I should also point out that Weinstein makes another contribution when he offers a sort of decision rule as to the appropriate level of reliability to which to target data for local areas. He suggests that data be produced on the size and nature of local economies to allow the areas to be used as independent variables. We are looking at this approach in proposals for a new method of computing local rates. I might add, however, that the local role in paying for that reliability should also be addressed.

In the final analysis, when confronting the ambitious agenda laid out before us, it comes down to a matter of choice and priority. As we confront the next century for the Bureau, we have the benefit of the road maps provided by the impartial commissions, the continued interest of our advisory panels, and, now if Weinstein's admonishments are paid heed, a heightened interest on the part of the IRRA membership. When you mix up all these factors, add a dash of budget-cutting and a pinch of basic questioning on the relevance of the data, these first few years of the Bureau's next century should be quite interesting indeed.

V. OFFICE OF WAGES AND INDUSTRIAL RELATIONS (BLS Panel)

Should the Government Collect Wage and Industrial Relations Statistics?

RUDOLPH A. OSWALD
AFL-CIO

The current attention to the federal budget deficit has renewed a review of all government programs, among them the various activities of the Bureau of Labor Statistics. It is appropriate to ask: Why should the government gather wage and industrial relations statistics? The answer needs to be more than "We have been doing it for 100 years."

Wage and industrial relations statistics are compiled for three basic reasons:

1. As an aid to facilitate collective bargaining, or corporate wage setting, or interest arbitration.

2. As background for public policy decisions involving (a) minimum wages and maximum hours legislation designed to prevent workers' exploitation, (b) wage and price control or guideline mechanisms developed to deal with inflation, and (c) government wage-setting for its own employees or its contract employees.

3. As data for research and analysis.

These data must be collected by government because only government provides the objectivity necessary for the parties' acceptance in collective bargaining, and because only government has sufficient influence to secure the cooperation of the various firms and unions in gathering the background information for both public and private decision-making.

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The 1884 original charter of the Bureau of Labor Statistics set forth the role of the Bureau of Labor as a collector of: "Information upon the subject of labor, its relation to capital, the hours of labor, and the earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity."¹

This charter goes well beyond the development of data for research, as it states that the information collected should be "the means of promoting their [laboring men and women] material . . . prosperity." That goal of collecting information to help workers improve their lot should remain the central feature of BLS activities, and particularly that of the Wages and Industrial Relations section.

The establishment of the Bureau of Labor Statistics was one of the subjects discussed at the first convention of the AFL in 1881. The Federation of Organized Trades and Labor Unions passed a resolution stating that:

. . . we recognize the wholesome effects of a Bureau of Labor Statistics as created in several States, and we urge upon the Congress the passage of an act establishing a national Bureau of Labor Statistics, and recommend for its management the appointment of a proper person identified with the laboring classes of the country.²

The important role of BLS in collecting data useful for collective bargaining was highlighted by the Congress when it amended the National Labor Relations Act in 1947. Congress provided clear responsibility for the BLS to "furnish upon request of the service [Federal Mediation and Conciliation Service] or employers, employees, or their representatives, all available data and factual information which may aid in the settlement of any labor dispute . . ."³ Thus the legal underpinning for the Bureau's activities is ultimately connected to serving collective bargaining.

Today, through formal recommendations to the Bureau of Labor Statistics and through the Labor Research Advisory Council to the BLS,

¹ Chapter 127, an Act to Establish a Bureau of Labor, June 27, 1884, *The Statutes at Large of the United States, Vol. XXIII* (Washington: U.S. Government Printing Office, 1885), pp. 60-61.

² *Federation of Organized Trades and Labor Unions, Proceedings*, 1881, p. 4; Joseph P. Goldberg and William Moye, "The AFL and a National BLS: Labor's Role Is Crystallized," *Monthly Labor Review* (March 1982), pp. 21-29. William T. Moye, "The American Federation of Labor and the Federal Government: Relations Between the Early Federation and the Bureau of Labor," paper delivered to the American Historical Association Convention, Los Angeles, 1981.

³ 29 USC 181.

the labor movement still supports the collection of wage and industrial relations data. Labor's current concern is with the severe cutbacks in wage and industrial relations programs that particularly benefited collective bargaining.

In setting wage and fringe benefits through collective bargaining or through company-determined personnel actions or by interest arbitration, five basic criteria are used to evaluate their appropriateness.⁴ The number-one criterion is comparability both in the level of wages and benefits and in rates of change. The other four criteria are the cost of living, the relative standard of living, productivity gains, and ability to pay.

Cost-of-living data go back to World War I and were developed to meet workers' demands that real wage levels be maintained during the wartime inflation. The government directed the Bureau of Labor Statistics to develop a Consumer Price Index as a measure of changes in the cost of living. Considerable attention was given to the standard of living of women workers in the early part of the 20th Century and later for families. Standard budgets were developed to describe a "modest but adequate" standard of living. Productivity data were developed early by the Bureau and were extended in the period after World War II. Ability-to-pay information is derivable from Commerce Department information on profit and income distribution, and on specific private corporations from reports filed with the Securities and Exchange Commission.

The data compiled by the Office of Wages and Industrial Relations relate particularly to comparability criteria. Over the years the Office has developed various measures of both wage and fringe benefit levels and measures of rates of change in wages and in total compensation.⁵ Much of the information has been for detailed occupations and industries and for specific geographic areas. The interests of collective bargaining were not just in general measures of change, but rather in specific industry and occupational wage and fringe benefits. Some of these programs have been discontinued recently; thus some information desired by those engaged in collective bargaining is no longer available.

Interest arbitrators are also highly dependent on objective data on wages and fringe benefits, as most of them rely upon "comparability" as a

⁴ See, for example, John T. Dunlop, *Wage Determination Under Collective Bargaining* (New York: A.M. Kelley, 1944); Arthur M. Ross, *Trade Union Wage Policy* (Berkeley: University of California Press, 1948); Jules Blackman, *Economic Data Utilized in Wage Arbitration* (Philadelphia: University of Pennsylvania Press, 1952); George Taylor and Frank Pierson, eds., *New Concepts in Wage Determination* (New York: McGraw-Hill, 1957).

⁵ See H.M. Douty, "A Century of Wage Statistics: The BLS Contribution," *Monthly Labor Review* (November 1984), pp. 16-28.

major criterion for determining awards. The recent growth of interest arbitration in the public sector, and the continuation of such a policy in parts of the printing, transit, and utility industries should have encouraged BLS to strengthen its wage and fringe-benefit data.

From its earliest days, public policy demands for labor statistics included wage data. An important element in the early 1900s was the drive in various states to set minimum wages and maximum hours—particularly for women and children. This public policy question of minimum wages persists. For example, as of the close of 1984, the minimum wage had remained unchanged for four years during which the cost of living increased 20 percent. However, no statistics have been collected on general wage distributions to permit an adequate evaluation of the effect of an adjustment in the minimum.

The importance of detailed wage data was emphasized by the various governmental agencies that undertook wage and price controls or guideline programs designed to curtail inflation. Under the policies of the War Labor Board of World War II, the governmental demand for wage statistics expanded substantially. The required data included wage rates or straight-time earnings by occupation, industry, and area, as well as a general wage rate index. As recently as 1979, the Pay Advisory Committee of the Council on Wage and Price Stability, under the chairmanship of John Dunlop, wrote the Secretary of Labor and the appropriate Congressional committees objecting to the loss of certain basic collective bargaining data and asking for additional information on the public sector.

Since 1962 the BLS has been collecting information on private-sector pay for the comparability pay policy governing federal white-collar employees. The Bureau's annual study of Professional, Administrative, Technical, and Clerical Pay (the PATC survey) provides the statistical framework for the comparability evaluations of the Federal Pay Council.⁶ More recently, data on fringe benefits have been collected for this same data base.

Both the general data on wage levels and wage changes, as well as the detailed industry, occupation, and area data, provide background for general economic research and analysis. These data provide not only inputs into macroeconomic models of the economy, but also detailed insights into the wage-setting and collective bargaining process.

The Wages and Industrial Relations Program

The programs of the Wages and Industrial Relations sector can be divided into core activity areas:

⁶ George Stelluto, "Federal Pay Comparability: Facts to Temper the Debate," *Monthly Labor Review* (June 1979), pp. 18–28.

- I. *Wage Information*
 - A. Wage Levels
 - 1. Industry Wage Surveys
 - 2. Area Wage Surveys
 - 3. Specialized Occupations: Professional, Administrative, Technical, and Clerical Pay; Fire Fighters, Police, Teachers; Local Transit; Building Trades; Printing; Local Trucking; Food Stores; Public Sector
 - B. Wage Change
 - 1. Employment Cost Index
 - 2. Average hourly earnings: industry, area, occupation
 - 3. Average hourly compensation
 - 4. Collective bargaining settlements
 - 5. Wage Chronologies
 - 6. Current Wage Developments
- II. *Fringe Benefits*
 - A. Supplementary Remuneration Surveys
 - B. Employment Cost Index
 - C. Parts of Industry, Area, and Occupational Wage Surveys
 - D. Parts of Current Wage Developments
 - E. Parts of Wage Chronology
 - F. Summary of Major Health Plans
 - G. Summary of Major Pension Plans
- III. *Industrial Relations*
 - A. Strike Data
 - B. Union Membership
 - C. Summary of Major Collective Bargaining Provisions
 - D. Contract Provision Analysis
 - E. Contract File
 - F. Public Sector Contract Analysis

BLS information on wage levels has been reduced substantially by the recent rounds of budget cuts. The wage level information is particularly important for collective bargaining and other wage-setting purposes because of the basic need to compare wages paid for particular occupations. It is also the cornerstone of federal pay comparability and prevailing wage laws affecting government contractors.

The Industry Wage Surveys historically have been the framework for occupational wage comparisons as they provide information for the most common occupations within various industries. Most wage determinations reflect industry patterns, and thus the industry data are important elements for comparability purposes. The BLS industry data program

dates back to the 1920s, but recently the program was cut from 61 to 55 industry wage reports and the period between reports was extended to a survey cycle of five or six years. A more frequent cycle (such as the previous three-year cycle) would enhance the usefulness of the data for many bargainers who typically bargain on a three-year basis.

The approximately 140 Area Wage Surveys provide information on a community basis for certain clerical occupations and for some basic skilled and unskilled occupations which cross industry lines. This information is particularly useful in some wage-setting situations and was used by the federal government as background material for the clerical part of the federal comparability survey and for wage and benefit determinations under the Service Contract Act.

BLS hurt negotiators and wage analysts when it discontinued many specialized occupational wage surveys, such as those covering fire fighters, police, teachers, local transit, printing, building trades, local trucking, food stores, and public-sector occupations. Some of these surveys date back to 1907, and their discontinuance has disrupted the flow of information to negotiators in the industries covered by the surveys. Some of these reports have provided detailed union occupational wage-scale information for more than 100 cities in industries traditionally heavily unionized. Parts of the occupational wage survey program are the longest series of specific occupational wage information in existence, and their discontinuance will restrict the ability of researchers to compare wage changes over long time periods.

Information on wage change has been supplemented in the past few years by development of the Employment Cost Index since it provides an additional means of evaluating wage change as well as the more traditional information on average hourly earnings change and the macroeconomic estimates of change in average hourly compensation. The extension of the Employment Cost Index to include fringe benefit expenditures is an attempt to provide a broad measure of changes in employment expenditure patterns. While the statistical quality of the program is being enhanced, it still depends upon a relatively small sample. The index has proved more useful for economic analysts than for wage negotiators, who still tend to look at the collective bargaining settlements as a measure of bargained wage changes.

The Current Wage Development reports continue to provide negotiators and other wage-determiners with current information on specific settlements on both an industry and area basis.

BLS's discontinuance of the Wage Chronology Series destroys users' ability to put the current changes into historical perspective and to review the overall long-term changes in particular major industry settlements.

Many current bargainers as well as historical analysts have tended to use the chronology as a comprehensive description of major contracts. The wage chronologies were important evidence in the 1977 postal interest arbitration chaired by James Healy.

Surveys of fringe benefits are of growing importance for bargainers and analysts in this rapidly expanded element of compensation. Unfortunately, some of the greatest reductions in the Wages and Industrial Relations program have taken place in this area of the Office's activities. The previous economy-wide analyses of expenditures for fringe benefits have been shrunk to reflect the funding by the Office of Personnel Management and the basic PATC survey sample. The resulting loss of information as to levels of expenditure—while still reporting purported rates of changes in such benefits as part of the ECI—creates a vacuum in the BLS data base.

The elimination of the descriptive provisions of major health and pension plans removed the documentation that provided details on what is actually contained in health insurance or pension plans.

The recent cutbacks in industrial relations data have reduced public understanding of collective bargaining and unions. The elimination of the union directory removed general information on unions and the extent of unionization in the American economy. Both of these elements were of interest to economic analysts; however, they played less of a role in bargaining. The discontinuance of the Summary of Major Collective Bargaining Provisions and the periodically detailed contract provision analyses are major losses to both negotiators and analysts.

Both of these programs provided a quick insight into the broad range of elements included in collective agreements. They recognized that industrial relations activities included more than just wages or some basic fringe elements and allowed negotiators to compare their situation with those under different contracts.

Also, as a result of the budget cutbacks, the BLS no longer maintains contract files for those contracts that cover less than 1000 workers. This restriction has substantially curtailed information about collective bargaining sectors dominated by small firms or small contractors—sectors like printing, machine tools, and others.

The curtailment of BLS work in public-sector contract analysis and public-sector wage surveys hinders our understanding of industrial relations in this important sector of the economy and removes an essential source of data for collective bargaining as well as for the growing number of public interest arbitrations.

The Wage and Industrial Relations program has been particularly susceptible to the impact of budget cuts in recent years. The cutbacks in

programs have devastated the central role that BLS data should provide for wage determination and collective bargaining.

BLS needs to reevaluate how it is performing its basic mission as a supplier of information that will be useful to workers in improving their well-being. It was support of this mission that led to the establishment of the Bureau 100 years ago, and it is still an appropriate principle to govern the allocation of the limited resources of government and of BLS in particular. The BLS program should continue to be directed toward encouraging the improvement of the lot of working men and women.

Monitoring Wages And Industrial Relations: The BLS at 100 Years

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In recent years academic researchers and other users of Bureau of Labor Statistics (BLS) data on wages and industrial relations have become increasingly concerned about the future availability of such information. The Industrial Relations Center Directors—an informal group of directors of over 60 university research programs—protested impending budget cutbacks at BLS in 1982, an action acknowledged by the IRRA Executive Board which directed publication of the statement in its newsletter.¹ Although the worst of the budget problems that befell BLS are past, issues about priorities remain.

A Quick Look Backwards

When the BLS was created a century ago—originally as the Bureau of Labor—its administrators viewed the agency as an active part of a reform movement. Statistical and nonstatistical reports were compiled on working conditions as a means of improving those conditions. The topics chosen for investigation were those seen as important to the reform agenda. Typically these involved improving the terms and conditions of private employment. Thus, Carroll Wright, first Commissioner of the Bureau of Labor, defended the gathering of workplace information in the following manner: “We ought to know . . . whether there are really among us employers who are laying up great riches for themselves by keeping their employees in a condition of impoverished dependence.”²

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¹ Discussions of the IRRA Executive Board are reported in the *Proceedings* of December 1981 and 1982. The Board considered a resolution urging continued statistical service in industrial relations at BLS and other agencies. Although the Board voted by 11 to 3 to approve the resolution, no official action was taken due to opposition by management members. The IR Center Directors' letter appears in the May 1982 IRRA *Newsletter*.

² U.S. Bureau of Labor Statistics, *What Are Labor Statistics For?*, Bull. 599 (Washington: U.S. Government Printing Office, 1939), p. 2. The statement was made when Wright headed the Massachusetts bureau.

As the Bureau of Labor developed, its interests expanded from the private workplace to public policies such as social insurance.

The establishment of a cabinet-level Department of Labor in 1913, however, narrowed the mission of the Bureau. “Statistics” was officially added to its name—suggesting a technical role for BLS—with wider social concerns left to the umbrella Department. Still, the shift was gradual. In 1933, in a pamphlet entitled *What Are Labor Statistics For?*, the BLS explained that wage data were useful because workers could find out if they were receiving lower compensation than others in the community or being undercut by cheap, female labor. Strike data were gathered, BLS said, because “industrial disturbances . . . point to conditions which need correction.”³

Macro Needs in the Postwar Period

After World War II, macroeconomic policy came into ascendency. Economic policy-makers needed aggregate indicators of unemployment, productivity, labor costs, and inflation. BLS was able to accommodate these needs while also expanding its offerings of traditional wage and industrial relations data. In retrospect, the late 1970s was a golden age in which two needs—macro and micro—both received adequate funding. But when the budget pressures of the early 1980s developed, a “revealed preference” for the macro side became apparent. The traditional price series were protected, a program of import and export price indexes was expanded, productivity measures were refined. Those wage and industrial relations data which were macro-oriented were preserved and expanded. But micro-level indicators of industrial relations were cut back or eliminated.

Basic Wage Indexes

The macro-policy influence is clearly indicated by the development of the Employment Cost Index (ECI) in the mid-1970s. Through the 1960s hourly and weekly earnings data from the establishment survey were the prime measure of wage costs available from BLS. These data covered only production and nonsupervisory workers and omitted fringe benefits. They were affected by shifts of employment between industries and occupations and by changes in the mix of overtime and regular hours. For econometricians interested in aggregate wage-change equations, these deficiencies were unfortunate.

The Employment Cost Index

One solution was to use the more comprehensive measure of hourly

³ *What Are Labor Statistics For?*, pp. 4, 9.

compensation which included all occupations and fringe benefits. But this index, too, suffered from employment shift and overtime effects. Initially, the BLS offered its hourly earnings index (HEI) as a partial solution. The HEI controlled for interindustry shift and overtime effects in manufacturing. But, as Table 1 shows, the more refined ECI paints a different picture of wage trends than any of its predecessors.

TABLE 1
Alternative Earnings Indexes, 1980-1983

| Year | Average Hourly Earnings ^a (1) | Hourly Earnings Index ^a (2) | Employment Cost Index | | Compensation per Hour ^c (5) |
|------|---|---|---|---|--|
| | | | Wages and Salaries ^b (3) | Total Compensation ^b (4) | |
| 1980 | 8.8% | 9.4% | 9.0% | 9.8% | 10.8% |
| 1981 | 7.5 | 8.2 | 8.8 | 9.8 | 9.0 |
| 1982 | 4.8 | 6.0 | 6.3 | 6.4 | 7.1 |
| 1983 | 3.7 | 4.2 | 5.0 | 5.7 | 4.8 |

Note: Columns (1)-(4) are on a December to December basis. Column (5) is on a 4th quarter to 4th quarter basis.

Source: *Current Wage Developments, Monthly Labor Review*, various issues.

^a Production and nonsupervisory workers, private, nonfarm sector.

^b Private, nonfarm sector.

^c Nonfarm, business sector.

The total compensation ECI shows a lower peak wage inflation rate than the more volatile compensation per hour index and a higher peak than the indexes which omit fringes. It also shows a higher rate of wage inflation by 1983 (after the economic slump had taken its toll) than the alternative indexes. With the addition of public-sector data in 1982, the ECI is plainly the best macro indicator of wage change available.

Wage Developments in Manufacturing

The ECI has been helpful in spotlighting differences in union and nonunion wage trends. Prior to the ECI, the only time series available with a union/nonunion cut was a series on wage developments in manufacturing (WDM). But, as Table 2 shows, the WDM series was seriously flawed. In the nonunion sector, the omission of "merit" pay adjustments was known to bias its estimate of wage inflation downward, as can be seen on the top two lines of the table. But as can be seen from the next two lines, it also apparently underestimated union wage increases. Since the WDM series covered adjustments in small union units as well as the "major" agreements, it created the impression that "minor" union agreements were not keeping up with their major counterparts. After the ECI became available, this impression was contradicted.

TABLE 2
Wage-Rate Changes in Manufacturing, 1977-1978

| | 1977 | 1978 |
|--------------------------|------|------|
| Nonunion | | |
| WDM ^a | 6.0% | 6.8% |
| ECI | 7.4 | 7.9 |
| Union | | |
| WDM ^a | 7.7 | 8.0 |
| ECI | 8.3 | 8.7 |
| Major union ^b | 8.4 | 8.6 |

Note: WDM = wage developments in manufacturing survey; ECI = employment cost index.

Source: *Current Wage Developments*, various issues.

^a Production workers only.

^b Agreements covering 1000 or more workers.

Given its inaccuracies, it is not surprising that BLS abandoned the WDM series after 1978. But the WDM did offer information at the micro level not available from the ECI, namely, information on the *dispersion* of wage decisions. For the nonunion sector and smaller union bargaining units, lack of dispersion information is an important gap in monitoring wage developments.

Abandoned Union Wage Series

The abandonment of the WDM series was based on its deficiencies rather than on purely budgetary considerations. But other wage series, particularly in the union sector, were dropped during the budget crunch. And it could not be said for these that superior alternatives had become available. For example, Table 3 compares the now-abandoned series on union wage-rate changes in construction with the still-available series on effective wage adjustments in "major" construction union agreements.

TABLE 3
Union Wage-Rate Changes in Construction, 1975-1980

| Survey | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 |
|-------------------------------|------|------|------|------|------|------|
| Major agreements ^a | 8.1% | 7.2% | 6.5% | 6.5% | 7.1% | 9.9% |
| Union wage rates ^b | 8.0 | 5.9 | 5.5 | 5.9 | 7.0 | 9.9 |

Source: *Current Wage Developments*, various issues

^a Agreements covering 1000 or more workers.

^b Cities of 100,000 or more inhabitants.

During the latter half of the 1970s, construction wage settlements went through a period of comparative moderation after two earlier wage explosions. The two series, when compared, indicate that the wage moderation was more dramatic in the agreements covering relatively small numbers of workers. Construction has been a center of concession bargaining in the 1980s, but now it is not possible to make such comparisons with BLS data.⁴

Also lost during the budget crunch was the wage chronology series. Wage chronologies provided useful information on wages and other conditions in selected union-employer settlements. As econometricians became more interested in the micro side of wage decisions, the chronologies were used to provide insights not available from aggregate Phillips curves. Without the chronologies, researchers must use the original contracts (not always easy to obtain retroactively) or other less detailed sources such as *Current Wage Developments*. Research efforts, in short, will be impeded.

As of 1980, almost eight out of ten private-sector wage-earners were nonunion. Thus, if any criticism could be leveled at the wage chronology series, it was the neglect of nonunion companies. Research interest in the personnel practices of large, nonunion firms grew in the 1970s. Thus, a widening of the chronologies to include such employers—rather than their abandonment—was indicated.

Fringe Benefits and Nonwage Conditions

The growth of fringe benefits as a proportion of total compensation is a well known phenomenon. In recognition of this trend, the BLS initiated a survey in 1959 on Employer Expenditures for Employee Compensation (EEEC). The survey initially covered only manufacturing but was later widened to include the rest of the private, nonfarm sector. Information was available showing the level of employer expenditures on various types of fringes such as pensions, sick leave, and severance pay. Various cuts of the data were published (union/nonunion, different establishment sizes, etc.). In addition, computer tapes were made available to researchers interested in more detailed information.

EEEC data have not been available since 1978. Thus, researchers interested in detailed fringe costs must turn to other sources, notably the Chamber of Commerce survey. However, as Table 4 shows, the Chamber's survey appears to be biased toward higher paying, more fringe-intensive employers. Less information is available on the Chamber's sampling methodology than could be obtained from BLS and a union/

⁴ Related specialized wage series in other industries were also eliminated.

nonunion cut is not published. BLS has started publishing a new series showing the number of workers covered by various fringes. But this information is complementary to, and not a substitute for, the abandoned EEEEC survey.

TABLE 4
Composition of Employee Compensation, 1977

| | Bureau of Labor Statistics ^a | Chamber of Commerce ^a |
|----------------------------------|---|-------------------------------------|
| Amounts | | |
| Total compensation | \$7.43 | \$8.43 ^b |
| Average hourly earnings | 5.70 | 6.17 |
| Straight time | 5.56 | 5.76 |
| Percent of compensation | | |
| Legally required benefits | 6.9% | 6.2% |
| Pensions | 4.1 | 4.4 |
| Life, accident, health insurance | 4.0 | 4.4 |
| Total benefits | 23.3 | 26.9 |

Sources: U.S. Bureau of Labor Statistics, *Handbook of Labor Statistics* Bull. 2070 (Washington: U.S. Government Printing Office, 1980), p. 317; Chamber of Commerce of the United States, *Employee Benefits 1977* (Washington: 1978), pp. 12, 25.

^a Hours-paid basis

^b Includes discounts on company goods and employee meals.

Until the budget crunch, the BLS had published periodic analyses of nonwage conditions offered in major union agreements, an endeavor which traces its roots back to surveys of "trade agreements" which began in the 1920s. By the 1970s there were regular surveys of major contracts plus detailed bulletins on particular types of contractual arrangements. This program has been abandoned. Some of the gap has been made up through surveys published by the private Bureau of National Affairs, Inc., an organization whose efforts to fill in for BLS are commendable and much appreciated.

As in the case of the chronology series, the pressing need was not for abandonment, but for expansion to nonunion firms. True, there are various surveys of nonunion personnel practices available from private organizations. But questions of sampling and representativeness of the surveyed group haunt these studies.

Work Stoppages

Collection of data on strikes dates back to the late 19th century. Regular (annual) surveys of such information began in the World War I

period. The data gathered were not limited to aggregate tabulations. Detailed tables were available by industry, issue of the dispute, means of settlement, and so on. In 1982, however, reporting was cut back to disputes involving 1000 or more workers, and no detailed analyses have been published.

Limiting coverage to disputes involving 1000 or more workers is in keeping with the macro emphasis. Table 5 shows the proportion of all recorded disputes in 1979–80 which involved that many workers. As can be seen from the table, such disputes accounted for just under 60 percent of the workers involved, but less than 5 percent of the disputes. Moreover, the proportions vary considerably by type of dispute. A macro analyst interested in aggregate worktime lost to strikes would be less impaired by the cutback in coverage than a micro analyst interested in sources of workplace conflict.

TABLE 5
Work Stoppages Involving 1000 or More Workers
As Percent of All Stoppages, 1979–1980

| Type | 1979 | | Type | 1980 | |
|----------------|---------------------|-------------------|----------------|---------------------|-------------------|
| | Number of Stoppages | Number of Workers | | Number of Stoppages | Number of Workers |
| T ^a | 4.9% | 59.1% | T ^a | 4.8% | 58.2% |
| F | 2.1 | 42.9 | F | 1.2 | 17.4 |
| R | 5.2 | 64.9 | R | 5.7 | 63.6 |
| D | 6.8 | 42.9 | D | 6.1 | 46.7 |
| O | 3.9 | 44.5 | O | 3.7 | 31.5 |

Note: T = total stoppages; F = negotiation of first contract or recognition; R = renegotiation of contract; D = during term of contract; O = one-day stoppages.

Source: *Analysis of Work Stoppages*, 1979 and 1980 issues.

^a Includes categories not shown separately.

Abandonment of comprehensive strike surveys has caused a loss of information which, unlike wage chronologies, cannot be retrieved retroactively. One possibility for a substitute source—the Current Population Survey (CPS)—in fact is not satisfactory. CPS estimates of individuals not at work or forced to work part time due to an industrial dispute, fell well below the old work-stoppage survey. Moreover, the CPS sample is too thin to provide industrial detail and contains no information on the issue of the dispute or the other information categories previously collected.

Union Membership

The BLS began publishing directories of unions in the 1920s. During the post-World War II period, substantial statistical detail on union

membership was added. Since the data were based on *claimed* membership, their accuracy was questioned. In 1980, for example, the CPS estimate of labor organization membership was 20.1 million compared with a claimed membership of 23.9 million. However, the claimed membership data provided the only tabulation of membership by organization.

With the budget crunch, the BLS dropped its union membership survey. In addition, no CPS data on union membership have been published since the May 1980 survey. Fortunately, the BNA has maintained part of the directory, but statistical detail has been lost.⁵ Ironically, this loss of information came at a time when union membership fell dramatically. BLS's own estimates of the number of workers under *major* private union agreements fell from 9.3 million in 1979 to 7.9 million in 1983. Thus, at a critical period for the collective bargaining sector, BLS dropped an important data source with no guarantee that private publishers would issue a substitute (or that they will continue to do so).

Protection of Wage and Industrial Relations Data

Faced with a budget crisis, BLS administrators had to make unpleasant decisions quickly. The purpose of this paper is not to second-guess those decisions (the author would probably have made similar choices under the circumstances), but to document the losses and to draw some lessons.

First, the budget crisis demonstrated that BLS has a reservoir of good will among users and in Congress. This reservoir prevented worse damage from being inflicted, once news of the BLS's predicament became known. However, BLS did not have structures in place which could act quickly enough to prevent significant harm to its programs.

Second, BLS's reliance on labor and management practitioners to protect its programs and to guide the establishment of what Commissioner Janet Norwood described as "a new data program for those engaged in collective bargaining" is too narrow. During the budget crisis, members of the BLS's labor advisory committee were supportive, but tended to focus their attention on data series that could be used to document real wage losses, such as family budgets and after-tax real weekly earnings (both discontinued). Management advisors were reluctant to criticize Reagan Administration budget cuts and, perhaps with a misperception based on BLS's historical origins, tended to view BLS data as largely of interest to unions.⁶

⁵ Courtney D. Gifford, *Directory of U.S. Labor Organizations*, 1984–85 ed. (Washington: BNA, 1984). Another directory has been advertised by Industrial Relations Data and Information Services but was not available at the time this paper was prepared. Since this paper was given, the BLS has issued CPS estimates of union membership for 1983–84.

⁶ "BLS Wants to Develop New Program to Aid Collective Bargaining Parties," *Daily Labor Report*, May 13, 1983, pp. A7–8.

Wage and industrial relations data, other than macro-oriented indexes such as the ECI, will not be vigorously defended by government policy-makers. Management support for such information is not strong. Union support is stronger, but tends to focus on selected series of use in current bargaining. The result is that during a crunch BLS will find itself in a sideshow of labor-management conflict.

A third lesson of the budget-crisis episode is that BLS needs to develop its formalized contacts with, and tap the support of, the academic research community. It is that community which has the clearest interest in extensive, comprehensive data and the maintenance of an accurate, continuous historical record of the U.S. industrial relations scene.

VI. IMPLEMENTATION OF THE JOB TRAINING PARTNERSHIP ACT BY STATES AND SERVICE DELIVERY AREAS

The Implementation of Title IIa of JTPA in the States and Service Delivery Areas: The New Partnership and Program Directions*

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KALMAN RUPP AND ASSOCIATES
Westat, Inc.

The Job Training Partnership Act (JTPA) marked a shift in national employment and training philosophy. This paper discusses the implementation of the primary training title of the new act, which provides training services to economically disadvantaged youth and adults.

The findings reported here are from two studies currently being conducted by Westat. One focuses on the process by which JTPA is being implemented by states and localities (Cook et al. 1984a). The other, called the Job Training Longitudinal Survey (JTLS), follows a sample of participants.¹ Data from the Current Population Survey were also used.²

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¹ The JTLS data cover the JTPA "transition year" (October 1, 1983 to June 30, 1984).

² Data on JTPA eligibles were derived from the March 1984 CPS. Eligibility variables were measured using calendar year 1983 CPS information.

The process study covers a stratified random sample of 20 states, and a sample of 40 Service Delivery Areas (SDAs) within these states. This paper is based on observations in states and SDAs made during the period of transition to the new program (October 1983 to June 1984). The state and local observations have been conducted by a network of field associates using a relatively open-ended report form (Cook et al. 1984a, Nathan 1982, and Rawlins 1982).

Key JTPA Elements and Implementation Results

The new act departs from previous employment and training legislation—and particularly from its immediate predecessor, the Comprehensive Employment and Training Act (CETA)—in a number of important ways. JTPA provides state governments with substantially increased authority and responsibility while narrowing the role of the federal government. It also emphasizes the need for an active partnership with the private sector and incorporates outcome-oriented incentives. In sharp contrast to CETA's tightly drawn rules on eligibility, JTPA provides wide discretion to states and SDAs in selecting participants. It also allows latitude in the mix of services and service providers, which can be chosen in response to locally perceived needs.

The Westat process study was designed to assess how states and localities were implementing key JTPA features as the act took effect. The observations reflect not only the effects of the act, but also changing economic conditions and reductions in the amount of funding compared with CETA. In addition, the early data describe a period of transition, a situation which may not represent a steady state view of the JTPA system.

Role of State-Level JTPA Actors

Governors took an active role in the implementation of JTPA. In 13 of the 20 states studied, the governor assigned primary responsibility for JTPA to an agency that was different (to one degree or another) from the one that had administered CETA. Governors also exercised substantial discretion in two areas where JTPA granted them control over funding. States commonly retained control over projects funded by Title III to aid workers dislocated from their jobs by structural changes in the economy. Only three of the states studied allowed the local SDAs a major voice in the disbursement of these funds. Most states also retained discretionary authority over funds under Title IIA that are set aside for various purposes. (These set-asides total 22 percent of Title IIA funding.)

Representatives of the private sector also played a significant role at the state level by participating in the Job Training Coordinating Councils. As of June 30, 1984, the Westat field associates reported that private-

sector participation was strong on 8 of 20 councils, moderate in 6, and weak in 6. In 9 of 20 states, the council was judged to be purely advisory, while in the other 11 the council played a role that was at least equal with that of the governor. It appears that where the governor wanted to reorient job training with the end of CETA, private-sector influence on the JTPA coordinating council was one way to accomplish this.

Private-Sector Influence at the Local Level

Congress intended the private sector to play an important role in local JTPA programs. In each SDA, policy-making responsibility is shared by local elected officials and members of a Private Industry Council (PIC), a majority of whose members must be from the private sector. There were two early concerns about whether the private sector would be a full partner with local elected officials. The first concern was that the private-sector members would not have enough of a grasp of the program to make a useful input. The other major concern was whether private-sector representatives would see enough benefit to make a commitment to training programs for the economically disadvantaged. The early field results in Winter 1984 demonstrated that these concerns were not groundless. Among the 22 SDAs reviewed in March, in only 6 (27 percent) did the PIC play a primary policy-making role, although 6 other PICs were attempting to move to a status equal to that of local elected officials.

By the conclusion of the transition year in June 1984, the field observations found stronger private-sector participation. In 24 of the 40 SDAs observed (60 percent), the PIC was judged to be primary or dominant in determining the content of the services plan for program year 1984 (July 1984 through June 1985). This is a rather remarkable growth in PIC (and private-sector) influence over the program in less than a year. Further, as of July, the field associates judged that private-sector participation was growing in 13 SDAs and declining in only 7. In 18 SDAs, the associates saw no particular trend. Thus it would appear that private-sector influence was still on the rise at the end of the transition year.

If the private-sector representation is influencing the program, how is this being felt? Private-sector influence affects the program through a more "business-like" orientation, with emphasis on a new customer (the potential employer) and on the outcome (a placement). Efficiency and the prevention of disallowed costs are also emphasized. The emphasis on efficiency seems to be manifested in more cooperation and less respect for bureaucratic rules and "turf." Shared responsibility for the program with local elected officials also can reduce political influences, such as pressure from certain groups or agencies, and may contribute to improved contractor selection.

“Marketing” the program is another area for private-sector influence. Business representatives on PICs are often active in encouraging other businesses to provide on-the-job training slots and other cooperation. While such efforts are just beginning, they may represent the ultimate effect of private-sector participation if they can provide credibility for the program among private-sector employers.

Stress on Outcomes

The private-sector influence on local PICs appears to have reinforced the act’s emphasis on ensuring that participants be placed in private jobs, and that JTPA funds be focused on bringing about that outcome. The field associates found no substantial evidence of local attempts to circumvent JTPA limits on wages, stipends, supportive services, or administrative costs. Most local officials appear to agree with the focus on low-cost services to those disadvantaged who are motivated to participate in training, particularly in light of the huge pool of eligibles and reduced funding.

Although performance standards set by the Department of Labor did not play an operational role during the transition year, local programming was influenced by performance-conscious PICs. The highest priority appears to have been given to two measures of outcomes: the percentage of participants who found jobs (the “entered employment rate”) and the cost per entered employment. The stress on costs and placement outcomes was further reinforced by the widespread use of performance-based contracting by which contractors are paid on the basis of measures of these outcomes. Such contracts, however, usually do not reward performance on other outcomes. One result is that JTPA programs during the transition year placed larger proportions of participants than CETA had, and made placements at lower cost, but 30 percent of SDAs failed to achieve the standard for the wage average at placement, and almost half missed the standard for the percentage of youth who found jobs or were otherwise “positively” terminated. JTLS data show average hourly wages at termination of \$4.77 relative to a national standard of \$4.90.

Eligibility, Targeting, and Participant Mix

Because JTPA gives states and SDAs substantial discretion in targeting training to particular groups within the eligible population, and because program operators are concerned with costs and measurable outcomes, it is important to determine how equitably services are spread among eligible groups. In addition, widespread concern was expressed even before the start of the program that JTPA might neglect the most disadvantaged in favor of “creaming” easy-to-serve eligibles.

These issues may be addressed with a combination of statistical data and field observations. Using a methodology developed to measure CETA eligibility (see Rupp et al. 1983a), we estimated the population eligible for JTPA and compared it to the characteristics of JTPA participants during the transition year. The data show that 23 percent of all people 14 years old and older were eligible for JTPA training under Title IIA because they satisfied the economically disadvantaged eligibility criteria during some time in 1983, but only an estimated 1.85 percent actually participated in Title IIA training during the transition year (on an annualized basis). This low participation rate—not qualitatively different from CETA (Rupp et al. 1983a)—suggests that selection processes are crucial in understanding the mix of participants.

The number and mix of program participants depend on both supply and demand. Supply is determined by decisions that program operators make about targeting, outreach, screening, and other matters. Demand is determined by self-selection among people who are eligible (Rupp et al. 1983b). Not all eligibles apply for JTPA, or would apply even if outreach efforts were more widespread or aggressive. For example, people who are not in the labor force or are employed full-time are less likely to seek JTPA training than are people who are unemployed. Of those who are eligible for JTPA Title IIA but would not have qualified for CETA Title IIB—a group dominated by persons not in the labor force—only a fraction actually participated in JTPA. Forty percent of the people who are eligible for JTPA are in this category, compared with only 6 percent of participants.

Table 1 compares the characteristics of JTPA eligibles and participants. (It also provides comparable data on CETA participants.) JTPA youth participants are overrepresented (relative to eligibles) even though many SDAs had trouble meeting the requirement that 40 percent of Title IIA spending be aimed at youth. Older workers are underrepresented, and blacks are overrepresented among participants. Participants are clearly more disadvantaged than eligibles as measured by family income and unemployment experience. This fact, and the fact that only 6 percent of JTPA participants are not economically disadvantaged, suggest that JTPA does not favor those who are less disadvantaged by labor market and income criteria. Multiple regression results indicate that unemployment is the single most important predictor of participation among eligibles. However, participants tend to be less disadvantaged than eligibles as measured by educational attainment. This may be partially explained by participant self-selection related to motivation, aptitudes, and other aspects of human capital. Field data also indicate the importance of screening on education and motivation-related variables.

TABLE 1
 Distribution of (i) JTPA Title IIA Eligibles and
 Participants and (ii) CETA Title IIB Participants by
 Various Characteristics (In percent)

| Characteristics | JTPA Eligibles | JTPA Participants | CETA Participants |
|---|-------------------|----------------------|----------------------|
| <i>Total</i> | 100 | 100 | 100 |
| <i>Sex</i> | | | |
| Male | 44.1 | 50.1 | 47.0 |
| Female | 55.9 | 49.9 | 53.0 |
| <i>Age</i> | | | |
| 14-21 | 19.4 | 39.8 | 46.3 |
| 22-44 | 44.5 | 52.8 | 47.6 |
| 45-54 | 9.2 | 5.0 | 4.3 |
| 55 or more | 26.9 | 2.5 | 1.9 |
| <i>Minority Status</i> | | | |
| White (excluding Hispanic) | 64.3 | 54.1 | 48.7 |
| Black (excluding Hispanic) | 22.5 | 32.0 | 33.0 |
| Hispanic | 9.9 | 9.9 | 11.6 |
| Other | 3.2 | 4.1 | 6.6 |
| <i>Family Income as Percent of Poverty Line</i> | | | |
| 50% or less | 44.2 | 66.5 | 65.1 |
| 51-90% | 26.5 | 23.0 | 18.6 |
| 91-100% | 7.0 | 4.5 | 4.1 |
| 101% or more | 22.4 | 6.0 | 12.1 |
| <i>Family Income per Person</i> | | | |
| \$500 or less | 28.0 | 45.9 | 50.8 |
| 501-2,000 | 25.7 | 28.7 | 34.4 |
| 2,001-4,000 | 30.6 | 19.6 | 11.6 |
| 4,001 or more | 15.7 | 5.8 | 3.1 |
| <i>Weeks Unemployed</i> | | | |
| None | 76.0 | 5.8 | 32.8 |
| 1-8 | 5.2 | 7.0 | 13.3 |
| 9-13 | 3.1 | 5.8 | 7.7 |
| 14 or more | 15.8 | 81.5 | 46.1 |
| <i>Receiving Public Assistance</i> | 45.9 | 41.2 | 50.5 |
| <i>Receiving AFDC</i> | 15.3 | 20.6 | 24.6 |
| <i>Receiving SSI</i> | 13.9 | 2.3 | 6.7 |
| <i>Education</i> | | | |
| Less than high school | 52.0 | 37.9 | 47.6 |
| High school or more | 48.0 | 62.1 | 52.4 |

Source: JTPA Eligibles from the March 1984 Current Population Survey; JTPA Participants from the Job Training Longitudinal Survey (October 1, 1983-June 30, 1984); and CETA Participants from the Continuous Longitudinal Manpower Survey (July 1, 1980-June 30, 1981).

The comparison between JTPA and CETA participants shows that JTPA and CETA participants are comparably disadvantaged by income and unemployment experience. In fact, JTPA participants appear as more disadvantaged by unemployment than their CETA counterparts. Some underrepresentation of youth, females, and public assistance recipients in JTPA relative to CETA appear to be related to this finding; these subgroups overrepresent new labor force entrants. JTPA participants are

less disadvantaged than participants in CETA Title IIB training programs by educational attainment.

Although some states require SDAs to make special efforts to serve certain “significant segments” of the eligible population, such as welfare recipients, these provisions are best viewed as constraints that still leave SDAs and program operators with the ability to determine how they will choose participants. Screening, the selection of service mix, and performance-based contracting all appear to have substantial impacts on the selection of participants. At the same time, no jurisdiction appears to serve only the most job-ready or only those most in need. All are providing some service to each of these groups, and the real differences are in the degree and direction of their attention. Large urban SDAs often use “dual programming,” providing different services to more job-ready than they do to more difficult-to-serve groups. For these SDAs, performance standards and equitable service are two sets of constraints, but neither is an overriding goal. By contrast, some of the less experienced SDAs, heavily dominated by the PICs, appear to stress low-cost training, placement outcomes, and service to the most motivated. Overall, there appears to be less emphasis on those needing extensive services than had been the case in previous training programs.

Summary

Early JTPA implementation results suggest an increased private-sector influence, increased cost-consciousness, emphasis on training, and a strong output orientation. These changes appear to signify a substantial shift, consistent with the act. At the same time, states and SDAs appear to be quite concerned about providing equitable service to various categories of eligible persons. States, and especially SDAs, have added to the targeting in the law. However, the study also found a strong PIC stress on services to highly motivated eligibles who are likely to find jobs after training. JTPA participants are more economically disadvantaged than eligibles, but there are indications that difficult-to-serve persons receive less attention than they did in the past. Our data suggest the presence of complex selection processes, but do not support any simplistic notion of “creaming” by JTPA. Short-term cost and placement (but not wage) outcome measures appear impressive; the assessment of true, net impacts on participant economic well-being must wait until more data are available.

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The Title III Dislocated Worker Program*

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The passage of Title III of the Job Training Partnership Act (JTPA), authorizing the dislocated worker program, represented acknowledgment by Congress of a relatively new labor market problem faced by thousands of American workers. Although JTPA is primarily concerned with training the economically disadvantaged, the focus of the dislocated worker program is entirely different. Title III is a direct response to a national recession and structural changes that have affected this country's basic industries. This section of the law is designed to assist workers who have lost their jobs or are at risk of losing them because of plant closings and massive layoffs due to world competition and technological change.

Although retraining technologically unemployed workers was done on a small scale during the early days of the Manpower Demonstration and Training Act of 1962 (MDTA), historically the focus of employment and training policy over the past two decades has been on improving the employability of economically disadvantaged youth and adults.¹ Title III, therefore, represents a renewed interest in structurally displaced workers.

MDTA training programs were contracted directly by the federal government. Perhaps the greatest significance of JTPA is the role it gives the states in designing and implementing the program. Many management, coordination, program planning, and oversight responsibilities that were traditionally functions of the federal government have been shifted to the state level. States have almost complete authority over how the program is targeted, how resources are distributed, and what services will

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¹ For a discussion of the evolution and impact of federally funded training programs, see Perry (1975).

be provided. This shift is in concert with the New Federalism philosophy of the Reagan administration.²

Emphasis on Training

The legislation seeks to emphasize training and requires that 70 percent of all Title III funds be devoted to a training activity. While Title III was envisioned as relying heavily on long-term institutional retraining, early evidence indicates the use of a wide variety of services for dislocated workers. For example, many Title III eligibles have substantial experience in high-paying jobs, although the skills learned in those occupations were industry-specific and not readily transferable to other high-wage occupations. These persons may require counseling to bring their wage expectations into line with what they are likely to earn after training. Other dislocated workers have been unemployed for long periods and need financial assistance and personal counseling. Still others choose on-the-job training or job search assistance, which provide an immediate source of income rather than training that holds only promise of later employment.

Organization of Title III

Because the states have almost complete discretion over the use of Title III funds,³ there is interest in how the states target and allocate resources.

The Westat findings in an early (January 1984) observation revealed that the majority of the sample states established centralized Title III programs.⁴ Although four states have altered their allocation strategies since that observation, the trend toward a centralized program has not changed.

By the end of the transition year, ten of the 20 states studied were organizing Title III by funding projects chosen under a request-for-proposal (RFP) procedure; seven conducted statewide Title III programs; two states earmarked allocations to SDAs (or counties) and then distributed the funds on an RFP basis; and one distributed 75 percent of its total allocation by formula and the remaining 25 percent on an RFP basis.

² Although 75 percent of the funds are distributed to the states on the basis of a formula, 25 percent is allocated on a discretionary basis by the Secretary of Labor to projects proposed by the states.

³ The act contains only three restrictions on states' discretion. First, all Title III programs, other than those operating on a statewide or industry basis, must be submitted for review and recommendation to the PIC and elected officials of any SDA in which they operate (Section 305). Further, full consultation must take place with a labor organization before a Title III program provides services to a substantial number of members (Section 306). Also, the statewide coordination plan must address Title III activities.

⁴ For a description of the study, see Robert F. Cook et al. (1984), Ch. 1.

In almost all of these states, decision-making was generally concentrated in one or two state agencies with little or no input from local Private Industry Councils (PICs). In the two states where program resources were earmarked on a formula basis to the counties or SDAs, the state agency responsible for the program retained the prerogative to choose among all projects proposed. The field associate from one of these states reports that some state officials favor this allocation procedure because from a state perspective "the process provides greater flexibility in project application and is the superior method for responding to project-specific requests."

The RFP process was popular among states for the following reasons:

- It enhances state control of program resources by allowing them to select only those projects consistent with state policy (often emphasizing economic development).
- It ensures that the "best" projects will be selected—a particular concern when resources are limited.
- It can maximize program impact by targeting resources on projects in areas where the dislocated worker problem is particularly severe.
- It requires a minimum level of local input in program planning and operation.

Continued use of the RFP process for distributing Title III funds may cause problems, according to several associates. In one state, the procedure has been marked by an increase in technical requirements and detailed guidelines in the RFP, resulting in a systematic bias against smaller programs in rural SDAs. State officials acknowledge that some type of formula funding arrangement would be more equitable, although this might spread resources to the point that smaller SDAs might not be able to mount an effective program. This strategy would reduce the overall impact of Title III. A complaint with both the RFP process and formula funding is that they prevent the state from responding to urgent situations. To overcome this, some states maintain a contingency fund in order to respond to emergencies such as unexpected plant closings.

Three of the seven states operating statewide programs made changes in their programs during the transition period for JTPA (October 1983 through June 1984). In two states the program was organized through the regional and local Employment Service offices. In the third, a consortium of state agencies was selected to operate the program. These states adjusted their programs to overcome previous implementation difficulties. However, the benefits of a statewide program—effective coordination, centralized communication, and the capacity to operate large-scale programs—are often offset by the disinterest and coordination problems at the local level.

SDA-Operated Title III Projects

Because the act does not specifically require states to pass Title III funds to the SDAs, many states fund projects outside of the SDA delivery system. As of January 1984, only 16 percent of Title III money was allocated to SDA administrative entities in the sample states. By June 1984, the figure had increased to 36 percent. However, only 2 percent of the Title III resources were passed to the SDAs through a formula-funding arrangement. The number of SDAs in the sample that operated their own Title III projects rose only slightly, if at all. In Winter 1984 when 22 SDAs were studied, seven operated projects; in Summer 1984 when the sample had grown to 40 SDAs, a total of 14 operated projects.

Coordination problems between SDA-operated programs and state-run Title III programs continued during the transition period. As the states continued to allocate Title III resources outside of the SDA delivery system, SDA criticism of this strategy increased, and coordination of services across programs remained low. In the 21 sample SDAs where both Title IIA and Title III programs were operating, officials in 14 acknowledged a complete absence of coordination between SDA-administered programs and the Title III projects administered by various private, state, and local agencies. Officials in eight of these SDAs attribute this lack of cooperation to the existence of the state-administered Title III program. The level of communication between the state and these SDAs usually does not extend beyond a letter of notification that "a project" will be funded in the SDA.

State Targeting for Title III

The targeting provisions in Section 302 of the act clearly focus on unemployed persons with a recent labor force attachment. The specific reference to individuals affected by plant closings or layoffs is a direct attempt to concentrate resources on people thought to be hurt by a changing labor market. In addition, the law provides a priority focus on individuals who are eligible for, or have exhausted, their unemployment insurance (UI) benefits. The states have the responsibility for identifying dislocated workers, and they have been granted significant latitude to determine who will be served and how to identify the desired target population.

The observation made in Winter 1984 found that state targeting decisions evolved slowly, lagging behind other Title III activities. It was concluded that targeting goals would become more explicit as the transition period progressed. Findings from Summer 1984 reveal a marked increase in state-level targeting activity. One-fourth of the sample states narrowed the focus of their Title III projects by adding to the eligi-

bility criteria in the legislation. All of these states organized the dislocated worker program on an RFP/project basis.

Targeting decisions were generally made by officials in the state agency administering the program. The basic objective of state targeting strategies was to develop criteria that distinguished between a narrow group of workers legitimately displaced from the labor market and workers experiencing periodic spells of unemployment.

Seven sample states added no provisions to the targeting in the legislation, but chose projects that met unwritten state "threshold" requirements. This approach shifted many project-level targeting responsibilities to local operators. In addition, the strategy granted operators the needed flexibility to identify dislocated workers in their labor market area, while reserving final approval of the targeting decisions to the states.

In eight of the 20 sample states, there is still no apparent focus on serving particular groups of dislocated workers. Targeting decisions are often left to the discretion of program operators with limited guidance from the states. Four of these states have chosen to operate statewide Title III programs; the operators are usually state agencies. In these states, the policy of providing services on an "individual basis" does not create concern that an inappropriate population might be served. Rather, locating the program in state agencies is thought to ensure that program operators will identify and serve truly dislocated workers.

Title III Matching Requirement

Each state⁵ is required to provide a match equal to the formula-funded allocation for fiscal year 1983 and program year 1984 (July 1984 through June 1985). The amount of the match was reduced for states with high unemployment rates relative to the national rate. Nineteen of the 20 sampled states were subject to the federal match requirements. Eleven states passed the responsibility on to the program operators. Another five passed it to the subgrantee level without designating a source for the match. Only three states provided a cash match through appropriations by the legislature. The most common sources for generating the match continue to be the employers' contribution to wages paid under OJT contracts (10 states) and the UI benefits received by enrollees (8 states). Eight states also used in-kind contributions from either the nontuition share of the budget for state institutions providing Title III services, or

⁵ The one-for-one match of federal Title III funds is reduced by 10 percent for each 1 percent (or fraction thereof) the state average unemployment rate exceeded the national rate during the prior fiscal year.

from state staff services. Five states designated in-kind contributions from the private sector as a source of the match.

Title III Build-Up

There was a slow build-up of Title III fund obligation through mid-January 1984. Over 39 percent of the funds had not been obligated by the states and another 19 percent was committed to projects that had not begun to enroll participants. Findings from the Summer 1984 observation reveal that this problem has been corrected. By June 1984 more than \$94 million had been made available in the 20 sampled states. Of this amount:

- 2.5 percent was allocated by formula directly to the selected SDAs.
- 16.7 percent was earmarked for projects within SDAs funded through a state RFP.
- 6.5 percent was committed to projects that had not enrolled participants as of August 1984.
- 55.8 percent was committed to projects that were enrolling participants.
- 10.4 percent was committed to projects that had completed operations.
- 5.9 percent was reserved for contingency funding by the states.
- Only 2.3 percent had not yet been committed.

Several strategies were used to successfully obligate Title III resources. Generally, the effort to commit these resources involved distributing program funds to an existing network of employment and training service providers (such as local Employment Service offices or community colleges), or renewing funding for projects that received fiscal year 1983 funding. A number of state officials indicated that early build-up problems were merely temporary pains associated with starting a new program.

Several states made organizing the state JTPA structure and planning training programs under Title IIA activities their first priority. Once these issues were settled, administrators could attend to the dislocated worker program. Allocation activities picked up after the resolution of disagreements and struggles over program administration. Two states credit the early development and consistent use of the same allocation strategy as the major factor behind their rapid obligation of funds during fiscal 1984.

Title III Expenditure Rate

Most sample states had problems organizing the dislocated worker program and starting specific projects in the first fiscal year of JTPA. Beyond those early implementation troubles, however, are other obstacles that have effectively slowed half of the sample states in spending their Title III allocation.

The central reason for this inability to spend Title III resources relates to the newness of the program. In some states new service providers were selected who had to establish procedures for intake and eligibility determination, etc., before they could enroll participants. Other states complain about inability to attract those workers to the program who have become victims of plant closings. Many of these workers “persist in the thinking that the plant will reopen and are, therefore, slow to take advantage of the training offered through Title III,” a field associate reported. They often rely on UI and supplementary unemployment benefits to cushion the wait for the plant to call them back to work. This has caused problems for Title III projects relying on UI recipients for their required match.

Associates from four states with low expenditure rates point to state decisions to operate the program outside of the SDA system as a major reason. Often the administrative entities in the SDAs have staff in place and have established relations with local industries, unions, and government officials. Funding projects outside of this system necessitates early efforts to develop these relationships instead of building up enrollments.

Title III Service Mix

The variety of service strategies employed during the first fiscal year for Title III reflected the flexibility granted the states to select eligible activities and the input of many local operators in determining what specific project activities would be.

Several states continue to fund projects that provide services, such as job clubs, to locate immediate employment for Title III participants. The premise underlying this approach is that the displaced worker can be effectively reemployed through services that sharpen or improve job search skills.

Other states are funding projects designed to provide new job skills to dislocated workers whose skills are considered obsolete. Typically, these projects target workers affected by specific plant closings. These programs often combine classroom and/or vocational training for specific occupations with OJT contracts with small businesses.

Future Implementation of Title III

With few exceptions, the sample states seemed determined to maintain control of the Title III program through centralized decision-making. The feeling is that a more centralized approach to program organization enhances coordination and provides the mechanism for incorporating Title III into the governor’s policy agenda. Planned arrangements for the first full program year indicate that this will continue.

Future SDA involvement in the program will be mostly limited to those SDAs that are able to propose and win specific projects. However, the fact that nine states plan to distribute resources on an RFP/project basis indicates a minimal review and recommendation role for SDA officials. In addition, the shift for program year 1984 to direct formula funding to the SDAs in one state and the planned strategy of another state to select projects recommended by SDAs is a recognized attempt at decentralization. State officials continue to complain, however, about the inefficiency of the RFP procedure and are searching for ways to speed up (centralize) future decision-making for Title III.

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Florida's JTPA Experience: Preliminary Observations

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The history of modern employment and training programs in the United States demonstrates notable variations in both program design and in levels of funding. Since the Area Redevelopment Act was enacted over 20 years ago, the U.S. has provided job training under the auspices of three distinct pieces of legislation—the Manpower Development and Training Act (MDTA) of 1962, the Comprehensive Employment and Training Act (CETA) of 1973, and the Job Training Partnership Act (JTPA) of 1982. These programs have been characterized by numerous changes in design and objectives as well as often erratic funding levels.

JTPA was to be different, appealing to a new constituency, with a different program mix (including no public service employment), and with other new approaches to solving human resource problems. Although a review of JTPA and CETA legislative goals indicates a number of similarities, there are distinct elements which differentiate the programs. The first concerns the role distinctions between local and state governments. Under JTPA, this distinction is based on function rather than geography. The governor of a state has the overall responsibility for all state programs. This role includes the responsibility for designating service delivery areas (SDAs), approving local plans, coordinating programs between SDAs, implementing management controls, and enforcing performance standards. Inherent in the JTPA legislation is a renewed commitment to decentralization, not unlike the basic intent of CETA.

Local governments, acting through service delivery areas, are responsible for designing and implementing the specific training programs, in conjunction with a private industry council (PIC). Herein lies a second

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important difference between CETA and JTPA. Although the 1978 CETA amendments provided for a private industry council, its role was minor. JTPA placed the PIC in a central role by assigning the details of the program delivery mechanism in service areas to the result of negotiations between the PIC and local government agencies.

Another element of the restructuring concerns the relationship between training, income, and other support. Wage or allowance payments to participants were drastically cut under JTPA. The legislation also specified that not more than 30 percent of program funds be spent for the costs of administration, supportive services, needs-based payments to participants, and costs of work experience (unless combined with training). Despite this attempt at a formal limit, the program does permit exceptions when specifically requested by a private industry council.

Probably one of the most unique features of JTPA is the establishment of performance goals which the local service delivery agencies strive to meet.¹ These goals are established by the federal government but may be modified—if justified—at the state level. The state government, as a controller, relies on data provided by the management information system which monitors the performance of the SDAs in reaching these goals.

The establishment of performance standards is, of course, not unique. What is unique, however, is the optional use of a system of bonuses or rewards for programs exceeding performance standards, including incentives for serving hard-to-serve individuals. Unlike CETA, which penalized program operators if standards were not met, JTPA adopted a positive system of bonuses, amounting to 6 percent of the total funds allocated to each state. JTPA also allows performance-based contracts where the contractor receives part of the reimbursement only if there are positive terminations. What follows is a preliminary examination of the JTPA program in the State of Florida during the program's first 12 months of operation.

Methodology

In an effort to determine the impact of JTPA on the delivery of job training services in the State of Florida, a comparison was undertaken between JTPA and CETA. Since JTPA contains no public service employment component, any meaningful comparisons of JTPA with the earlier CETA programs must be between programs with similar functions.

¹ Nationwide goals: *Adult*—entered employment rate, 58%; cost per entered employment, \$5900; average wage at placement, \$4.90; welfare entered employment rate, 41%. *Youth*—entered employment rate, 41%; positive termination rate, 82%; cost per positive termination, \$4900.

As a consequence, the only meaningful comparison is between JTPA Title IIA and CETA (1978) Title IIB-C in which participant eligibility requirements are similar. Further, because the number of individuals enrolled at any time reflects training in progress, comparisons are based on terminations or training completed.

Given these factors, the methodology for assessing the impact of JTPA focuses on two elements. First, data are utilized from a fiscal year 1978 study of Florida CETA participants for six prime sponsors, adjusted to exclude all those who did not meet the 1978 CETA-JTPA eligibility requirements. This, combined with data from other studies, provide an indication of what might be expected from JTPA. Second, performance data for Florida CETA in fiscal years 1979–1982 are reviewed and compared with data from Florida JTPA's first year. Next, quarterly performance data for Florida JTPA are examined to establish trends that might be developing. Finally, the Florida SDAs will be analyzed with respect to their record in meeting JTPA performance standards during the year of transition.

Analysis

A survey of fiscal year 1978 CETA IIB participants conducted by one of the authors (Raffa 1979) provides certain guidelines for anticipating the performance impacts of JTPA Title IIA. The major characteristics of this CETA group are: 63.0% female, 7.7% age 45–54, 5.8% age 55 and over, 42.4% black, 17.4% unemployment compensation claimants, 25.1% public assistance recipients, and an average of 31.8 weeks of program participation (see Table 1).

In an attempt to establish a further basis for anticipating the participant composition of JTPA, data for post-1978 CETA Title II were examined. Pertinent observations from this review include a noticeable decline in the level of program participation, considerable variability in the participant cost, and substantial consistency in the characteristics of CETA program participants over this time period. Program terminations declined steadily over the period from a high of 38,392 in 1979 to a low of 23,508 in 1982. Accompanying this decline was a rise in the cost per enrollment and an erratic level of cost per placement. In 1982, the cost per placement was \$3619, down significantly from a high of \$4624 in the previous year, but only slightly lower than the \$3808 recorded in 1979. While some participant characteristics such as the percent age 55 and over experienced a decreasing trend during the period, most remained relatively constant. The percent of female (60–64%), black (47–53%), high school dropouts (32–34%), and welfare recipients (20–22%) did not change dramatically.

Data from the first year of JTPA operation demonstrate several

TABLE 1
 Program and Participant Characteristics of
 CETA Title II and JTPA in the State of Florida
 1979-84

| | (Six County Survey) | CETA IIB-C FY 78 | CETA IIB-C FY 79 | CETA IIB-C FY 82 | QI | JTPA FY 84 QII | QII ^a | JTPA FY 85 ^b QI ^c |
|-----------------------|---------------------------|------------------------|------------------------|------------------------|---------|----------------------|------------------|---|
| Placement | n.a. | 45.3 | 48.5 | 66.6 | 73.6 | 70.0 | 77.4 | |
| Cost/Placement | n.a. | \$3,808 | \$3,619 | \$4,032 | \$3,134 | \$2,347 | n.a. | |
| Cost/Positive Termin. | n.a. | \$1,596 | n.a. | n.a. | n.a. | n.a. | n.a. | |
| Cost/Enrollment | n.a. | \$1,159 | \$1,755 | n.a. | n.a. | n.a. | n.a. | |
| Terminations | 5,23k7 | 38,392 | 23,506 | 1,875 | 5,214 | 11,583 | 1,933 | |
| % Female | 63.0 | 61.6 | 60.3 | 53.0 | 51.6 | 52.8 | 53.5 | |
| % 45-54 | 7.7 | n.a. | 4.1 | 4.5 | 6.4 | 7.2 | 5.7 | |
| % 55 & over | 5.8 | 4.5 | 2.2 | 2.2 | 3.3 | 3.1 | 1.9 | |
| % Black | 42.4 | 47.3 | 52.9 | 45.1 | 42.6 | 45.4 | 44.4 | |
| % Hispanic | n.a. | 7.4 | 9.7 | 7.2 | 10.5 | 13.9 | 3.8 | |
| % Dropout | 37.6 | 33.1 | 33.6 | 28.9 | 29.5 | 31.3 | 27.5 | |
| % Handicapped | n.a. | 5.9 | 6.6 | 5.0 | 5.5 | 5.9 | 7.0 | |
| % UI Claim | 17.4 | 1.8 | 1.9 | 5.1 | 4.1 | 3.5 | 3.9 | |
| % Welfare Rec. | 25.1 | 22.0 | 19.8 | 14.9 | 17.7 | 18.8 | n.a. | |
| Average Weeks | 31.8 | n.a. | n.a. | 22.1 | 21.1 | 9.9 | 14.9 | |

Sources: *Work in Florida*, various years; Quarterly Prime Sponsor Reports, various quarters; *Quarterly JTPA IIA Status Reports*, various quarters.

^a Data are cumulative.

^b Florida has adjusted the JTPA fiscal year to coincide with its own July 1-June 30 fiscal year.

^c July 1-October 14, 1984.

interesting program trends. JTPA placement rates reflect a pattern of sustained increases from a level of 66.6 percent at the end of the first quarter (December 1983) to a high of 77.4 percent by October 14, 1984. In distinct contrast, CETA placement rates reached a high of only 48.5 percent during fiscal year 1982. A recent study conducted by the Florida Department of Labor found that 12 SDAs made 82 percent of the placements in fiscal 1984. Further, 11 of these SDAs were also MSAs. With few exceptions, the SDAs with the highest adult placement rankings also had the highest rankings for youth (Sutherland 1984).

In addition to the placement performance, a noticeable decline in the cost per placement also exists. During the course of the first quarter (ending December 31, 1983) cost per placement was \$4032—fairly consistent with the 1979-82 CETA levels. However, in dramatic contrast,

this figure dropped to \$2347 by the end of the third quarter (June 30, 1984).

A partial explanation for this decline in cost is an accompanying fall in average number of weeks of participation. The first two quarters of JTPA had an average program participation of 22.1 weeks. This declined noticeably in the third quarter to 9.9 weeks, and although rising slightly to 14.9 weeks during the period July 1 to October 15, 1984, remained well below the initial level—and significantly below the fiscal 1978 CETA level of 38.1 weeks. This latter resulted from program participation under CETA which tended to be long, as participants continued to be enrolled until positive termination took place. Other noticeable comparisons can be made by examining participation rates. Under JTPA, female participants average almost 10 percentage points less than under CETA, while black JTPA participation is approximately five percentage points less than CETA levels. Although the initial Hispanic composition of JTPA participants was comparable, or even above CETA levels, the first quarter of 1985 reflects a 3.8 percent Hispanic participation level as compared to an average of over 9 percent under CETA. Additionally, the levels of dropout, handicapped, and age-55-and-over participants under JTPA are slightly lower than CETA levels, while the percentages for age 45–54 and for unemployment insurance claims are higher under JTPA than under CETA.

Finally, our comparison of the JTPA and CETA programs reveals a striking decline in program terminations under JTPA. For the four quarters of JTPA ending October 15, 1984, JTPA had a total of 13,516 terminations. In sharp contrast, CETA averaged a high of 38,392 in 1979, decreasing to 23,506 in 1982—still almost twice the level of JTPA terminations.

A review of Florida's achievements with regard to the JTPA performance standards for all eight areas reveals that, on average, Florida's SDAs exceed them. Not only are employment rates significantly above the required performance levels, but the various cost figures are all less than one-half of the standard level. When the Florida data are disaggregated, the performance records vary somewhat among the SDAs, from a low of two standards met to a high of eight out of eight standards met by 50 percent of the SDAs.

Summary and Conclusions

A comparison of the characteristics of Florida participants and programs funded under JTPA with those of CETA reveals a number of similarities, including the initial cost per placement as well as the percentage of dropout and handicapped participants. The data examined

also reflect a pattern of lower participant levels for females, blacks, Hispanics, and welfare recipients under JTPA programs. Moreover, these participant trends accompany the observation of an increased placement rate (77.4% under JTPA vs. 48.5% under CETA) and a decreased cost per placement under JTPA. The latter finding is consistent with a decrease in the average weeks of participation from 31.8 weeks under CETA (1978) to 14.8 weeks under JTPA (1st quarter, fiscal year 1985).

Thus, in terms of placement rates and cost per placement, JTPA has emerged as a more efficient training program than its CETA predecessor. Indeed, the achievement of efficiency would seem to be an inherent feature of the JTPA legislation. Meeting job-placement-oriented performance standards appears to be driving the JTPA model. The data further reflect that JTPA may be deemphasizing the targeting of specific economically disadvantaged groups and instead is enrolling individuals who provide the highest probability of meeting the JTPA performance standards. In short, an initial conclusion is that JTPA in Florida appears to have engaged in "creaming." This conclusion is strengthened by a review of Florida SDAs' achievement of performance standards. Statewide, all eight JTPA performance standards were met during the first nine months of operation, with fully 50 percent of the individual SDAs meeting all eight standards.

Thus, given the data available, it would appear that the transition from CETA to JTPA has resulted in an emphasis on programs and participants that provide the "best" results in terms of entered employment rates and cost per termination (i.e., JTPA performance standards). Whether JTPA's goal of affording job training to the economically disadvantaged and other groups facing barriers to employment is being accomplished, as opposed to preparing youth and unskilled adults for entry into the labor force, remains unanswered at this time.

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VII. CONTRIBUTED PAPERS: LABOR ECONOMICS

Stockpiling Job Applicants*

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“We have no openings now, but we will consider you when an opening occurs.” Every week this promise results in job applications being filled out and left at firms that have no current openings in the job-seeker’s skill area. How does the stockpiling of job applicants influence a firm’s search for a new employee when an opening arises? Do these firms give serious consideration to old applications? Why do some firms stockpile job applicants—that is, accept applications when they have no current openings? These are the issues to be addressed in this paper.

The paper is organized as follows. The relationship between stockpiling and a firm’s extensive and intensive search to fill a vacancy is developed in the first section, followed by a section detaining evidence on the effects of stockpiling on a firm’s extensive and intensive search. The final section includes a discussion and tests of a theory of stockpiling.

Theoretical Framework

The recruitment, screening, and evaluation process that precedes hiring is an information-gathering process. Recent studies of firms’ search activities have focused on two dimensions of an employer’s search to fill a vacancy.¹ First, there is an extensive search, as measured by the expected number of applications evaluated. Second, there is intensive search, as

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* We wish to thank Lawrence Kahn for comments.

¹ See Barron, Bishop, and Dunkelberg (forthcoming) and Barron and Bishop (forthcoming).

measured by the average time spent gathering information from applicants for the vacant position.²

Missing from the above view of a firm's search activity is the option open to firms of stockpiling applications in anticipation of a vacancy. Many firms increase the extent of their search by following a stockpiling strategy—that is, accepting applications even when there are no openings and calling in qualified applicants for interviews when an opening occurs. Two questions arise. First, how does a stockpiling strategy affect a firm's measured extensive and intensive search to fill a vacancy? Second, what determines whether or not an employer pursues a stockpiling strategy? We start by considering the first question.

A firm incurs both direct and indirect costs in filling a vacancy once one occurs. The direct costs are the resources expended to recruit, screen, and interview applicants. Indirect costs arise from the losses for the period of time when the position remains unfilled. As discussed below, a stockpiling strategy can reduce both the direct and indirect costs of considering another applicant once a vacancy arises.

Stockpiling reduces the indirect hiring costs of seeing another applicant once a vacancy occurs by creating a pool of candidates a firm can quickly evaluate. This pool of stockpiled applicants supplements applicants who contact the firm after it discovers (or decides) there is an opening. A stockpiling strategy can also increase the flow of new applicants once an opening occurs. This follows since a stockpiling strategy strengthens incentives for job-seekers to apply to the firm. If there are no openings at the time an individual applies, with stockpiling there still remains the possibility of being considered for a future opening.³

Firms that stockpile applications even when there are no open positions must handle an increased flow of phone calls and personal visits at all times. Consequently, the total direct costs of hiring are probably greater with stockpiling. However, stockpiling firms have lower direct costs of considering an additional applicant once a vacancy occurs. When an opening arises, the stockpiling firm has already done some preliminary screening and identified promising candidates. In addition, advertising the vacancy is less likely to be necessary. Thus, the impact of a stockpiling strategy on direct hiring costs has different effects at different times. By spreading the screening process out over time, stockpiling increases search investments at times when the firm has no vacancies, but decreases direct hiring costs when an opening is being filled.

² The terms extensive and intensive search follow Rees (1966).

³ Offsetting this attractiveness of stockpiling to job-seekers is the fact those seeking jobs at firms that stockpile face competition for current vacancies from past applicants who have been stockpiled.

Since stockpiling applicants reduces the direct and indirect costs of considering another applicant for a position once a vacancy occurs, stockpiling firms are expected to engage in a greater extensive search as measured by the number of applicants evaluated prior to filling a vacancy. However, a stockpiling firm is expected to report lower intensive search as measured by the average time spent gathering information from each applicant during the time the vacancy existed.

Effects of Stockpiling

An employer survey sponsored by the National Institute of Education and the National Center for Research in Vocational Education that was conducted between February and June 1982 provides the basis for analyzing the effects and determinants of stockpiling.⁴ Each employer surveyed was asked about the screening and interviewing activity associated with the last employee hired prior to August 1981. The 2264 employers who provided answers to a series of questions concerning the last person hired make up the sample of employers whose hiring activity is examined. These employers answered questions on the number of individuals who applied for the position, the number interviewed, the number of interviews with stockpiled applicants, the hours spent recruiting, screening, and interviewing applicants for the position, and the number of offers made.

Models have been estimated predicting measures of extensive and intensive search.⁵ By adding a dummy variable indicating firms that called in a prior applicant for an interview when filling a position, we can examine the effects of a stockpiling strategy on extensive and intensive search.⁶ The results are presented in Table 1. As hypothesized, stockpiling has a positive impact on extensive search as measured by the number of applications reviewed. This reflects both a greater number of applicants seen per interview and a greater number of interviews per employment offer. On the other hand, intensive search as measured by the average number of hours spent per applicant significantly declines with stockpiling.

⁴ The survey represents the second wave of a two-wave longitudinal survey of employers from selected geographic areas across the country. The first wave, not utilized in this study, was funded by the U.S. Department of Labor to collect data on area labor market effects of its Employment Opportunity Pilot Project (EOPP). A total of 447 employers responded that they had hired new employees but did not have complete information on the hiring process; they were excluded from the sample. Note that the sample is representative of the hiring activity of a group of employers, not hiring activity associated with the employment of a group of job-seekers during a specified time frame. The sample more likely underrepresents larger employers if the employment of a group of job-seekers over a specified period of time were to be considered. A copy of the questionnaire as well as other related information is available from the authors on request.

⁵ See Barron and Bishop (forthcoming) for details concerning these estimations.

⁶ Note that our measure of stockpiling understates the actual number of firms that stockpile applicants since stockpiling is indicated only when at least one stockpiled applicant was interviewed for a position.

TABLE 1
Impact of Stockpiling on Extensive and Intensive Search^a

| Applicants per Offer (log) | Applicants per Inter. (log) | Interviews per Offer (log) | Hours per Applicant (log) | Number of Offers (log) | Direct Hiring Costs (log) |
|----------------------------|-----------------------------|----------------------------|---------------------------|------------------------|---------------------------|
| .34 | .18 | .16 | -.21 | -.008 | .12 |
| (6.72) | (5.71) | (3.70) | (4.26) | (.80) | (2.20) |

^a Control variables are size, multi-establishment employer, rate of phone calls and visits, union, amount of OJT, size of labor market, generality of training, part-time job, temporary job, cost of machinery, multiple openings, and advance notice of openings. *t*-statistics are in parentheses below the coefficients.

The hypothesis that stockpiling increases the number of job-seekers contacting the firm can be tested by entering a dummy for stockpiling into models predicting the number of job-seekers calling, visiting, or applying at the firm during the two-week period preceding the survey. The results of this test are presented in Table 2.⁷ Firms that used a stockpiling strategy in a particular hiring event about a year previously (i.e., had called in a stockpiled applicant for an interview) received 33 percent more phone calls, 35 percent more visits, and accepted 44 percent more applications.

TABLE 2
Impact of Stockpiling on the Number of Job-Seeker Contacts^a

| Phone Calls (log) | Visits (log) | Applications (log) |
|-------------------|--------------|--------------------|
| .286 | .302 | .367 |
| (4.6) | (5.8) | (7.3) |

^a Other variables in the model included nine variables describing the number of current and future vacancies, seven dummies for various types of recruitment efforts, a dummy if the firm had a personnel office, firm size, employment growth rate, sales growth rate, new hire rate, proportion part-time, proportion workforce less than 25 years old, union, occupational breakdown, industry, wage rate, form of compensation, job security, importance of seniority, retention rate of new hire, cost of machinery, training, and characteristics of the local labor market. *t*-statistics are in parentheses below the coefficients.

Determinants of Stockpiling

A firm's decision to adopt a stockpiling strategy depends in part on the anticipated gain from such a strategy in generating potential new employees at the time a vacancy occurs. For a particular firm, let c denote the rate at which job-seekers contact the firm. With stockpiling, when a vacancy arises the firm can consider cD_a stockpiled applicants, where D_a

⁷ The regression results are reported in full in Bishop and Barron (1983).

is the average lifetime of a stockpiled job application. Let V_a denote the average value of an additional (stockpiled) applicant to the employer with a vacancy. Then, letting P_v denote the probability of a vacancy, the expected gain to stockpiling is given by

$$(1) \quad G_a = P_v V_a c D_a$$

Below we examine differences in the incidence of stockpiling and suggest how these differences might reflect differences in the anticipated gain to a stockpiling strategy.

Empirical evidence on the incidence of stockpiling is presented in Table 3. Thirty-five percent of the firms in the sample called in a prior applicant for an interview when they were filling a position. Only 27 percent of the firms with fewer than 10 employees called in prior applicants, but 58 percent of the firms with more than 250 employees did so. This is not surprising since equation (1) suggests that larger firms, with a higher probability of a vacancy in any given period, have a greater anticipated gain to stockpiling.

TABLE 3
Employer Use of Prior Applicants

| | Proportion of Employers Who Call in Prior Applicants | For Employers Who Call in Prior Applicants, Proportion of Interviews with Prior Applicants | Number of Employers |
|-------------------------------|---|---|------------------------|
| Number of Employees | | | |
| 1-9 | .27 | .70 | 913 |
| 10-25 | .34 | .68 | 578 |
| 26-250 | .43 | .65 | 661 |
| 251+ | .58 | .62 | 112 |
| All | .35 | .66 | 2264 |
| Occupation | | | |
| Professional and technical | .30 | .60 | 183 |
| Managerial | .29 | .59 | 85 |
| Clerical | .33 | .61 | 539 |
| Sales | .34 | .65 | 308 |
| Service | .42 | .69 | 427 |
| Blue-collar | .36 | .69 | 722 |
| All | .35 | .66 | 2264 |

Stockpiling is most common for service jobs and least common for professional and managerial jobs. Like size, the high incidence of stockpiling for service jobs likely reflects a higher probability of a vacancy for such occupations. This higher probability for a vacancy for such occupa-

tions is due in part to high turnover and in part to the fact that such occupations typically account for a large share of the employment. On the other hand, professional and managerial workers are highly specialized and hired only infrequently, so the gain to stockpiling for these positions is less. Column 2 of Table 3 suggests that once the firm has adopted a stockpiling strategy, the proportion of interviews that come from the stockpile does not vary significantly with occupation or the size of the establishment.

Hypotheses concerning the determinants of stockpiling are tested by estimating a logit model of the probability at least one prior applicant is called in for an interview when filling a vacancy. The results are presented in Table 4.⁸

TABLE 4
Determinants of Stockpiling

| | Parameters | Asymptotic <i>t</i> -Statistic | Derivatives (Evaluated at Means) |
|-------------------------------------|------------|-----------------------------------|-------------------------------------|
| ln (Employer size) | .22 | (6.23) | .05 |
| Firm has other establishments | .153 | (1.39) | .034 |
| ln (Starting wage) | -.484 | (3.94) | -.109 |
| ln (Training) • Proportion general | .048 | (1.27) | .011 |
| ln (Training) • Proportion specific | .078 | (1.73) | .018 |
| ln (Quit rate) | .076 | (2.28) | .017 |
| Union | .404 | (2.22) | .091 |
| Temporary/seasonal position | .085 | (0.64) | .019 |
| Part-time position | .073 | (0.53) | .017 |
| Multiple openings | .546 | (4.07) | .123 |
| Constant | -.737 | (2.77) | |

As expected, the coefficients on firm size and the quit rate are significantly positive, supporting the hypothesis that the likelihood of a vacancy, P_v , directly affects the probability of adopting a stockpiling strategy. The likelihood of a vacancy is also typically greater in low-wage jobs. This occurs because (a) low-wage jobs have higher turnover, (b) low-wage jobs typically have many occupants doing similar work, and (c) a firm's low-wage jobs are typically the port of entry for the great bulk of a firm's new employees. This line of argument is supported by the significant increase in the likelihood of the use of stockpiling applicants at positions with lower wages.

The value of an additional stockpiled worker is expected to be higher when more than one opening must be filled at approximately the same

⁸ See Barron and Bishop (forthcoming) for a more detailed description of the variables involved in the estimation.

time. Thus, stockpiling is hypothesized to be more prevalent when multiple openings are common. As expected, the presence of more than one opening to be filled at the same time increases the likelihood that at least one stockpiled applicant is interviewed.

When specific training investments are considerable, the importance of identifying an individual who matches well with the position is heightened. This suggests a greater value to an additional stockpiled applicant, V_a , at positions involving greater training, and in particular greater specific training. This hypothesis receives some support. Specific training has a small but significant positive effect on the probability at least one prior applicant is interviewed.

Unionization can be expected to increase the gain to stockpiling applicants for at least two reasons. First, unionization makes it harder to correct hiring mistakes, so the gain to screening additional applicants (and stockpiling) is greater. Second, many labor contracts specify, or informal pressure dictates, that union members receive hiring priority, even when they have not previously worked at the firm. Thus, many unionized employers probably feel obligated to give the union members in the application stockpile an interview. The evidence is consistent with the above view, in that unionized firms are significantly more likely to interview prior applicants.

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The Work Disincentive Effect of Unemployment Insurance in the Context of Extended and Federal Supplemental Benefits and Multiple Jobless Spells*

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The empirical literature on the labor supply effects of unemployment insurance is fairly extensive. A great deal of this literature has been devoted to ascertaining the extent to which the policy parameters of unemployment insurance are associated with increases in the duration of a given jobless spell. The magnitude of this work disincentive effect, as it is called, has been found to be sufficiently large to cause concern that actions by the government, such as the taxation of benefits, is called for.¹ The purpose of this paper is to evaluate the magnitude of this work disincentive effect in a different setting: in the context of a group of individuals who differ in terms of the number of compensation spells, some of whom received Extended and Federal Supplemental Benefits during the 1974 recession. The empirical results imply substantial differences in the relative impact of each policy parameter on benefit utilization for all persons studied, as well as significant differences among persons receiving additional benefits in 1974 and those who did not.

The Model

For a group of unemployment insurance recipients not restricted in terms of the number of jobless spells, an appropriate measure of the work

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¹ The implicit assumption throughout this literature is that any increase in weeks unemployed resulting from this program is "bad." Given data limitations and the income maintenance aspects of unemployment insurance which imply some increase in weeks unemployed, such an assertion is likely to be as much speculation as fact.

disincentive of unemployment insurance is the proportion of the total number of eligible weeks utilized (*PROP*). This proportion is related to the expected weeks unemployed for a given jobless spell ($E(W)$), the number of such spells (*SPELLS*), and the period of benefit entitlement (*PTNDUR*):

$$(1) \quad PROP = f(E(W), SPELLS, PTNDUR)$$

Expected spell duration has been the subject of an extensive literature at both the theoretical and empirical levels (Lippman and McCall 1976, Welch 1977), which suggests a reduced-form model of expected spell duration:

$$(2) \quad E(W)_i = F(X_i, M_i, UI_i, C_i, S_i)$$

where, for person i , X_i is a vector of demographic variables reflecting differences in search intensity and preferences for work and leisure time; M_i is a measure of labor demand conditions; UI_i is a vector of unemployment insurance policy variables; C_i is cost of job search; and S_i is skill level.

The vector of policy variables consists of potential duration and the net replacement rate ($REPLACE_i$), the ratio of weekly benefits to disposable weekly earnings. Consistent with the empirical literature on this equation, it is postulated that expected spell duration is greater, the lower is the cost of job search and the greater is the net replacement rate and potential duration. The impact of a change in either skill level or the local unemployment rate is indeterminate, a priori.² Substituting the arguments of expected weeks into equation (1) gives the following equation:

$$(3) \quad PROP_i = g(X_i, M_i, REPLACE_i, PTNDUR_i, C_i, SPELLS_i, S_i, e_i)$$

where the variables are defined as before and e_i is a stochastic disturbance term. The functional form of this relationship is expected to be nonlinear in both policy parameters and the number of jobless spells. This implies, for example, that the impact of changes in *PTNDUR* on expected weeks compensated, and hence *PROP*, will differ depending on the number of weeks of benefit eligibility and the extent to which each week of benefits subsidizes lost wages. Given the number of compensated spells, the greater is the replacement rate and potential duration, the greater will be

² For skill level, this outcome arises since the likelihood of upward revision in the reservation wage accompanies the increase in the wage-offer distribution. With changes in the unemployment rate, the ambiguity is caused by the potential for increased dispersion in the latter distribution to offset the effect of greater involuntary unemployment.

the expected proportion of eligible weeks utilized.³ Finally, it is hypothesized that other things equal, additional compensated spells increase *PROP* at a decreasing rate, which is consistent with empirical findings based on single jobless spells.

The Data and Empirical Specification

Two cross-sections of 2881 young adults experiencing at least one compensated unemployment spell during the years 1973 and 1974 from the Continuous Wage and Benefit History of the State of Indiana are utilized as the data base for this study. These data contain information on demographic, employment, and unemployment insurance characteristics of benefit recipients for these years. In Indiana, both the weekly benefit amount (*WBA*) and potential duration are earnings-determined.⁴ During the two years covered by this data base, weekly benefit amounts were increased twice, while maximum potential duration rose due to the presence of Extended Benefits and Federal Supplemental Benefits. Such changes in the unemployment insurance policy parameters are necessary to introduce the kind of variability required to obtain estimates of the impact of each policy variable on the proportion of benefits utilized. Another important aspect of this data base is that the values of the weekly benefit amount and potential duration for each person are directly calculable, which eliminates the necessity of dealing with measurement error problems in the estimation of the proportion equation.

The form of equation (3) utilized for estimation is:

$$(4) \quad \begin{aligned} PROP_i = & \beta_0 + \beta_1 SEX_i + \beta_2 AGE_i + \beta_3 RACE_i + \beta_4 SPELLS_i \\ & + \beta_5 SPELLS_i^2 + \beta_6 UNEMP_i + \beta_7 STBLTY_i + \beta_8 DSPINC_i \\ & + \beta_9 REPLACE_i + \beta_{10} REPLACE_i^2 + \beta_{11} PTNDUR_i \\ & + \beta_{12} PTNDUR_i^2 + \beta_{13} (REPLACE \cdot PTNDUR)_i + U_i \end{aligned}$$

where, in addition to the variables defined previously, *SEX_i*, *AGE_i*, and *RACE_i* are dummy variables equal to 1 if male, 20–24 years of age, and white, respectively; *UNEMP_i* is the local unemployment rate; *STBLTY_i* is the stability of base year earnings, equal to the ratio of base year earnings to high quarter earnings; *DSPINC_i* is the value of real disposable weekly

³ Note that this specification allows for the possibility of different signs for the partial derivative depending on the level of the policy variables used to evaluate this magnitude.

⁴ The formulas utilized are: *WBA* = min(*Z*, .043 High Quarter Earnings); *PTNDUR* = min(26, Maximum Dollar Benefits/*WBA*); where *Z* is a dollar value set by the state system, and Maximum Dollar Benefits are the smaller of 26 times *WBA* or base year earnings.

earnings; and U_i is a stochastic error term assumed to be normally distributed with zero expectation and constant variance.

Based on the previous discussion, equation (4) postulates a nonlinear relationship between the policy parameters and the number of jobless spells on $PROP_i$. The dummy variables SEX , AGE , and $RACE$ are included to account for differences in job search behavior among persons with varying demographic characteristics. Previous empirical studies on this topic have not found the influence of demographic variables to be very strong. These variables are included, however, to test whether the same result is true in a multiple jobless spell context. Based on previous results, the expected signs of each of these variables is negative. Skill level is controlled for by inclusion of $STBLTY$, which is a proxy for the amount of human capital possessed by the individual (Becker 1975). The closer is $STBLTY$ to its upper limit of 4.0, the lower is the observed variability in base year earnings and weeks worked, an outcome indicative of persons with large amounts of specific human capital. For them the probability of layoff and expected spell duration is lower than for either untrained persons or those with general training (Lardaro 1984). Finally, the opportunity cost of job search is represented by real disposable weekly earnings.

Empirical Results

Estimation of the proportion of benefits equation necessitates dealing with a data truncation problem. The dependent variable, $PROP$, equals the ratio of weeks compensated to potential duration, which has an upper truncation point at one. The existence of this truncation point dictates that a maximum likelihood estimation method be employed as an alternative to ordinary least squares, since the latter provides biased and inefficient parameter estimates in this context. The estimation chosen is the tobit technique (Tobin 1958), which allows unbiased and consistent parameter estimates to be obtained when the dependent variable is subject to truncation. Tobit results for the parameters of equation (4) are presented in Table 1.⁵

Looking first at the nonpolicy variable, we see the proportion of benefits utilized is lower for males, white persons, and those 20–24 years old. While the variable AGE is not statistically significant for either group, differences in the impact of race are significant only for persons not receiving additional benefit entitlement. This result implies that demographic characteristics play a more substantial role in the absence of

⁵ These coefficients are comparable to those of OLS with the exception that each indicates the partial derivative of the ratio of weeks unemployed to potential duration for changes in the variable in question.

TABLE 1
Tobit Estimates of Coefficients
For Persons With and Without Extended and Federal Supplemental Benefits
(Absolute values of asymptotic *t*-values in parentheses)

| Variable | Persons without Added Benefit Entitlement | Persons with Added Benefit Entitlement |
|-----------------------------|--|---|
| <i>SEX</i> | -.115 (4.84) | -.073 (2.31) |
| <i>AGE</i> | -.005 (.191) | -.003 (.073) |
| <i>RACE</i> | -.043 (1.92) | -.004 (.108) |
| <i>STBLTY</i> | -.150 (7.12) | -.063 (1.98) |
| <i>UNEMP</i> | .017 (1.94) | .053 (1.84) |
| <i>PTNDUR</i> | -.197 (8.68) | .004 (4.13) |
| <i>REPLACE</i> | -4.35 (3.23) | 2.82 (1.65) |
| <i>(PTNDUR•REPLACE)</i> | .134 (5.08) | -.016 (1.96) |
| <i>DSPINC</i> | -.004 (6.04) | -.0009 (1.88) |
| <i>SPELLS</i> | .180 (6.47) | -.070 (1.74) |
| <i>PTNDUR</i> ² | .003 (6.38) | .00003 (0.75) |
| <i>REPLACE</i> ² | 2.15 (1.98) | -1.43 (1.64) |
| <i>SPELLS</i> ² | -.018 (3.93) | .006 (.712) |
| Intercept | 4.32 (5.95) | -.272 (.404) |
| Number | 2484 | 396 |

additional entitlement, which most likely results from standardization in the method by which such increases in benefit duration are determined. An increase for either group in the cost of job search, represented by *DSPINC*, or the level of specific human capital, *STBLTY*, is also associated with a fall in weeks unemployed relative to potential duration, while the opposite change is implied for a rise in the local unemployment rate.

The nonlinear relationship of both policy variables and the number of jobless spells with *PROP* is supported by the empirical results in this table and further validated by the results of a likelihood ratio test on the squared variables and the interaction term for each equation, which permitted the null hypothesis of zero joint influence of these variables to be rejected at the 1 percent level of significance.

The partial derivative of *PROP* for each of these variables reveals interesting differences in the responses for each group. Increases in

potential duration are associated with a fall in the proportion of benefits utilized for both sets of individuals (assuming mean values of *REPLACE* and *PTNDUR*), where a one-week increase in *PTNDUR* is associated with a fall in *PROP* of slightly over one-half of 1 percent (.0054) for persons without additional benefit entitlement, versus a value of four-tenths of 1 percent for those with additional weeks of benefits. A positive sign for this partial derivative would imply a replacement rate no greater than .494 (assuming *PTNDUR* to equal 65 weeks) which is most likely to occur for persons with relatively high base year earnings. For persons not receiving added weeks, a positive partial derivative would result from the combination of 26 weeks *PTNDUR* and a replacement rate of only .306 or above, which is considerably more likely to exist. One significant difference with respect to this partial derivative is that the square of *PTNDUR* is extremely small and not statistically significant for persons with extra benefit entitlement, which implies that the sensitivity of *PROP* to changes in potential duration depends only on the proportion by which benefits replace earnings for these persons.

To make these results comparable with previous studies, an estimate of the partial derivative of weeks unemployed with respect to potential duration was calculated.⁶ One additional week of benefit entitlement is associated with approximately one-half of an additional week of compensation (0.463) for persons not receiving additional benefits, and seven-tenths of an additional week for the other group (0.695). This is significantly higher than the estimate of Moffitt and Nicholson (1982), where each additional week of potential duration was found to increase weeks unemployed by 0.1 weeks. Estimates of the elasticity of weeks unemployed with respect to potential duration show both groups to have inelastic responses (at the mean) of slightly above 0.8. This is slightly lower than the value of 1.09 obtained by Newton and Rosen (1979). Overall, therefore, the magnitude of the response to changes in potential duration appears to be somewhere in the middle range of previous studies.

The impact of changes in the replacement rate on *PROP* is positive for each group, where a .10 increase in this value raises the proportion of benefits utilized by 7.6 percent for those with regular benefit entitlement, and by 3.7 percent for persons with extra weeks of entitlement (assuming mean values of *PTNDUR* and *REPLACE*). The derivative of weeks

⁶ To obtain this estimate, use is made of the interpretation of the coefficients stated in the previous footnote, and that weeks unemployed is a function of both policy variables. Differentiating *PROP* with respect to the policy variable of interest and solving for the partial derivative of weeks unemployed with respect to the policy variable gives the formula which, combined with sample mean values of relevant variables, gives the estimate used.

unemployed with respect to the replacement rate shows a .10 increase in the replacement rate to be associated with a rise of .138 in weeks unemployed for persons not receiving additional benefits and .143 weeks for those with extra benefit weeks. Both latter values are below Moffitt and Nicholson's estimate of 0.4 additional weeks of unemployment. The figures based on this data base translate into very inelastic values for the elasticity of weeks unemployed with respect to the replacement rate of .084 for persons with regular entitlement and .028 for those with extended benefits. It thus appears that the response of the proportion of benefits utilized and weeks unemployed to changes in both these policy variables is relatively inelastic, which is consistent with the work disincentive effect of unemployment insurance not being as large as empirical findings based on equations that fail to explicitly control for the number of compensated spells. An implication that follows directly from these estimates is that a policy of taxing weekly benefits will be a very ineffective way of reducing weeks unemployed for benefit recipients. Since a reduction in the replacement rate of, say, .10 by taxation will reduce weeks unemployed by only about one-sixth of one week, equity considerations would likely outweigh those of efficiency in such a situation.

The impact of an increase in the number of compensated spells on the proportion of benefits utilized is positive for persons without extra benefit weeks and negative for those with such benefits. Using the mean value of *SPELLS* for each group, an additional jobless spell increases the proportion of benefits utilized by .12 for persons without additional weeks, while decreasing this proportion by .051 for the other group. The latter sign is most likely the result of a severe collinearity problem between *SPELLS* and *PTNDUR*, since additional spells are necessary to qualify for the fixed multiples of original potential duration for the group receiving extra benefits. The number of compensated spells may be endogenous for some of those persons as well. For the group not receiving additional benefit weeks, however, additional spells increase the proportion of benefits utilized at a decreasing rate. Thus, given the relatively inelastic responses with respect to potential duration, the replacement rate, and the number of compensated spells, the concern of some that the work disincentive effect of unemployment insurance is excessive does not find backing in the results of this study. The same situation is true as well for those receiving extra weeks of benefits, based on the magnitude of the policy variables.

Conclusions

The primary finding reported here is the relatively inelastic response of measures of the work disincentive effect of unemployment insurance

to both the replacement rate and potential duration in the context of a group of benefit recipients differing in both the number of compensated spells and additional benefit eligibility. Controlling for the number of compensated spells, the magnitude of the disincentive effect for each policy variable was found to be smaller than those reported from previous studies, which may have encountered upward bias by either failing to account for differences in the number of spells, or utilizing data for persons with only a single compensated spell. The impact of changes in potential duration appears to be relatively more powerful than changes in the replacement rate in increasing unemployment. This implies that if substantial reduction in weeks unemployed is desired, the more effective means of attaining this goal is through reduction in the number of weeks of benefit entitlement, not the taxation of weekly benefits.

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Post-School Occupational Training and the Private Sector

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Institutions of formal education, particularly colleges and universities, have received extensive attention as institutions where individuals may acquire knowledge and skills. Noticeably less analytical attention has been rendered to providers of post-school formal occupational training despite the importance of these institutions in the training marketplace. Of particular interest today is the role and effectiveness of the private sector in occupational training inasmuch as programs historically sponsored by the federal government are being moved toward increased private-sector involvement. This changing orientation has been clearly demonstrated in the legislative move from CETA (Comprehensive Employment Training Act) to JTPA (Job Training Partnership Act).

Post-school formal occupational training refers to training and skill development received in formal training or educational courses which do not lead to an academic degree. Institutional providers of such training include business and technical institutes, private companies, proprietary schools, area vocational schools, apprenticeship programs, the armed forces, and community agencies, as well as high schools and junior and community colleges. Training is provided in such diverse fields as computer programming, bricklaying, electronic assembly, typing, shorthand, and managerial techniques. The extent of post-school occupational training is given in the following statistics. Data from the Survey of Participation in Adult Education suggest that some 40 million people

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participated in this form of occupational training in the United States in 1978 at an estimated total annual expenditure of \$27 million.¹ This figure amounts to nearly 8 percent of U.S. gross domestic investment in 1978 and about 19 percent of all public and private school expenditures in 1977–1978.

Focusing on skill development during the adult years, this paper examines how participation in post-school occupational training affects economic and social well-being through labor market activity. Does post-school training affect individual economic and social well-being? Which occupational types and institutional sources of training offer the greatest benefits? Particular attention is given to comparing occupational training provided by the private sector to that provided by other institutional sources. These questions are explored using data on a sample of young men from the National Longitudinal Survey of Young Men, 1966 to 1976.

Analytical Strategy

The base analytical strategy is straightforward. Regression equations were estimated expressing labor market outcome measures proxying income, employment stability, and occupational prestige as functions of personal characteristics, community characteristics, formal educational attainment, and participation in post-school occupational training. The list of labor market variables employed as dependent variables included annual earnings, hourly rate of pay, occupational prestige as proxied by the Duncan Index, and employment stability proxied by whether the individual experienced unemployment during the year.

Personal characteristic variables used in the regressions included age, marital status, number of dependents, and number of years the respondent had been employed in jobs related to the occupation of his current job. Community location was proxied by a metropolitan/nonmetropolitan, South/non-South distinction. Formal educational attainment was represented by a series of variables distinguishing between less than high school education, high school graduate, some college, and college graduate.

A number of alternative variables were used to proxy participation in post-school occupational training. A type-of-training variable was constructed to categorize training into five occupational groups: professional/technical, managerial, clerical, skilled manual, and a miscellaneous cate-

¹ These statistics imply that approximately one out of four persons 17 years of age and older participated in these adult education activities in 1978. The cost estimate does not include salaries or wages of employees and military personnel being trained. For further information see Arvil Adams et al., "The Neglected Source of Human Wealth: A Study of Formal Education and Training During the Adult Years" (Washington: Employment and Training Administration, U.S. Department of Labor, September 1982).

gory. Since benefits to occupational skill development can reasonably be posited a function of the source of training, an alternative proxy was constructed differentiating between institutional providers of training: (1) business colleges and technical institutes; (2) company training programs; (3) correspondence courses; (4) academic institutions including area vocational schools, high school night classes, nondegree programs in junior, community, or four-year colleges and universities; and (5) "other" institutions,² including community agencies, apprenticeship programs, the armed forces, etc.³ Each respondent's training history was searched to determine his most recent and longest duration training experience. These experiences were then described by the proxies defined above.

Finally, believing occupational skill training to be a selective process which may be a function of unobserved or omitted variables as well as observed factors, we included a standardized estimate of participation likelihood as an independent variable in the regressions to control for self-selection bias in the participation decision.⁴

A total of 2270 young men in the NLS Young Men's Survey were deemed eligible for the analysis. Labor market outcomes were measured in 1976 when the young men in the sample ranged in age from 24 to 34. Eligibility was limited to 1976 labor force participants not enrolled in formal schooling from 1974 to 1976 who reported an annual income or hourly rate of pay in 1976. One additional exclusion was made. Young men reporting training in 1976 were eliminated from the analysis since permitting training participation in the year outcomes were measured would downward bias training effects inasmuch as training participation may involve forgone earnings and forgone labor market activity.

² Sample size limitations made it impossible to analyze the subgroups of the "other" category more specifically.

³ Believing the number and duration of training experiences to be training attributes affecting the economic and social outcomes associated with participation in post-school occupational training, we constructed two additional alternative training variables. Multiple training experiences were analyzed by a variable defining the number of different years in which post-school occupational training programs were completed. The effects of training duration were explored by a cumulative duration variable capturing total time spent in post-school occupational training programs from 1966 to 1975.

⁴ The predicted probability of training participation employed here is the standard Mills-ratio procedure generally attributed to James Heckman ("The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and a Simple Estimator of Such Models," *Annals of Economic and Social Measurement* 5, Fall 1976). Probit analysis was used to regress participation in training on vectors of independent variables thought to influence participation. These variables include age, IQ score, socio-economic status, number of siblings, type of high school curriculum, highest grade completed, marital status, and number of dependents. The estimated likelihood of participation was then included as an independent variable in the labor market outcomes equation and serves as a proxy for the unobserved characteristics of individuals which influence their likelihood of participation in training and the receipt of economic rewards for so doing. The procedure is econometrically correct under the assumption that there is one sorting process (participation in training vs. no participation) and participants are equally likely to choose any particular training program.

Results

Forty-seven percent of the eligible out-of-school population of white adult males participated in occupational training between 1974 and 1976. Among blacks, 33 percent of those eligible participated. Company-provided training was the source of one-third of the training received by men of both races. For whites, another 20 percent was provided by junior and community colleges along with area vocational schools, 12 percent by business and technical institutes, and 10 percent by correspondence courses. Training of blacks was disproportionately larger in junior colleges and vocational schools (35 percent) and less in business and technical institutes (5 percent of all training).

Companies provided most managerial training, a sizable portion of professional and technical training, and emerged as a major source of skilled manual training reported for both races. Business and technical institutes were the major source of clerical training for whites, while company training was again the major source for blacks. Training provided by companies was typically of shorter duration than that provided by other sources, reflecting the intensity of the training experience and the profit motivation of private enterprise. A summary of labor market outcomes associated with participation in post-school occupational training follows.

Type of Training

Participation in professional and technical training significantly affects labor market outcomes for young men. Whites having participated in such programs averaged \$834 more in annual income than nontrainees after controlling for educational attainment, occupational experience, marital status, differences in the likelihood of receiving training, and other factors likely to influence benefits (Table 1). Black participants in this type of training averaged \$1255 more per year than black nontrainees. Participation in professional and technical training raises occupational prestige as well. The average Duncan Index score for those completing such training was 9 points above the average of those who did not undertake training. Whites completing professional and technical training were 5 percentage points less likely to experience any unemployment than were nontrainees.

Managerial training appears to yield the greatest monetary benefits. When managerial training was the most recent program completed, whites averaged \$1873 more than whites who did not participate. For blacks the corresponding amount was \$1947. Recipients of managerial training averaged higher occupational prestige than nontrainees. For whites, the average Duncan Index score was 9 points higher among

TABLE 1
Regression Coefficients Relating Attributes of Post-School Training^a to Labor Market
Outcome Measures Among Male Labor Force Participants,^b 1976
(Standard Error)

| | Annual Income | | Hourly Pay | | Occupational Prestige | | 1 or More Weeks Unemployment | | 15 or More Weeks Unemployment | |
|----------------------------|------------------|------------------|-------------------|-------------------|-----------------------|--------------------|------------------------------|---------------------|-------------------------------|--------------------|
| | White | Black | White | Black | White | Black | White | Black | White | Black |
| Type of training | | | | | | | | | | |
| Professional/technical | 834** (387) | 1255° (691) | 0.38** (0.17) | 0.22 (0.27) | 8.73*** (1.35) | 8.55*** (2.51) | 0.046** (0.022) | -0.035 (0.073) | -0.023 (0.015) | 0.042 (0.056) |
| Managerial | 1873*** (546) | 1947° (1044) | 0.32 (0.23) | -0.13 (0.41) | 8.72*** (1.89) | 9.63** (3.80) | -0.087*** (0.031) | -0.037 (0.112) | -0.036° (0.021) | 0.118 (0.087) |
| Clerical | -1144 (1107) | -1201 (1724) | -0.64 (.47) | -0.38 (0.68) | 4.18 (3.90) | 22.23*** (6.27) | -0.094 (0.061) | 0.097 (0.182) | -0.025 (0.041) | -0.126 (0.141) |
| Skilled manual | 151 (434) | 139 (513) | 0.48*** (0.18) | 0.69*** (0.20) | -2.93° (1.51) | 1.20 (1.87) | 0.030 (0.025) | 0.094° (0.053) | 0.01 (0.017) | 0.05 (0.041) |
| Other | 649 (482) | -1332° (702) | 0.08 (0.21) | -0.14 (0.28) | 4.49*** (1.67) | 2.87 (2.55) | -0.032 (0.027) | 0.222*** (0.071) | -0.008 (0.018) | 0.193*** (0.06) |
| R ² (corrected) | .301 | .372 | .25 | .361 | .393 | .486 | .208 | .185 | .153 | .207 |
| Degrees of freedom | 1681 | 525 | 1681 | 525 | 1662 | 523 | 1575 | 479 | 1575 | 479 |
| Source of training | | | | | | | | | | |
| Company | 1259*** (400) | 2359*** (587) | 0.46*** (0.17) | 1.08*** (0.23) | 3.03** (1.40) | 6.36*** (2.19) | -0.064*** (0.023) | 0.012 (0.062) | -0.002 (0.02) | -0.042 (0.047) |
| Bus. college/tech. inst. | 1009° (538) | -1240° (670) | 0.65*** (0.23) | -0.01 (0.26) | 7.24*** (1.90) | 1.28 (2.50) | 0.011 (0.031) | 0.119° (0.072) | -0.022 (0.025) | 0.19*** (0.055) |
| Correspondence course | -31 (671) | 533 (1295) | -0.26 (0.29) | 0.96° (0.51) | 1.13 (2.36) | 3.37 (5.01) | -0.049 (0.038) | 0.082 (0.132) | -0.027 (0.025) | -0.064 (0.10) |
| Academic institution | -88 (501) | -241 (844) | 0.04 (0.21) | -0.33 (0.33) | 6.52*** (1.76) | 1.17 (3.15) | -0.036 (0.029) | 0.104 (0.087) | -0.023 (0.019) | 0.095 (0.066) |
| Other | 425 (414) | -755 (561) | 0.29° (0.18) | -0.01 (0.22) | 3.80*** (1.46) | 5.32** (2.10) | 0.001 (0.024) | 0.137** (0.059) | 0.001 (0.016) | 0.143** (0.085) |
| R ² (corrected) | .30 | .389 | .251 | .38 | .377 | .474 | .203 | .175 | .152 | .224 |
| Degrees of freedom | 1683 | 526 | 1683 | 526 | 1663 | 524 | 1577 | 480 | 1577 | 480 |

Source: National Longitudinal Survey of Young Men, 1966-1976.

^a Training experience analyzed in the regression is that most recently completed.

^b Coefficients are from regressions controlling for age, community location, marital status, number of dependents, personal control, educational attainment, years in occupation of current job, and the probability of training participation.

***Significant at $p < .01$ level.

°Significant at $p < .05$ level.

*Significant at $p < .1$ level.

training completers, while for blacks completers exceeded nonparticipants by 10 index points. As with professional training, completion of managerial training affected labor utilization measures for whites but failed to yield significant results for blacks. Whites completing managerial training were 9 percentage points less likely to experience unemployment than were nonparticipants.

White trainees whose longest training was in the clerical field averaged 8 points more on the Duncan Index and were 10 percentage points less likely to experience unemployment than their nontrainee counterparts.⁵ Clerical training increased occupational prestige for blacks but did not significantly improve the income of individuals of either race. Contributing to this result was the small proportion of men participating in this form of training.⁶

Skilled manual training increased hourly pay rates for men of both races. White participants in this training averaged \$0.48 per hour more than whites not having participated in post-school training. Blacks completing training averaged \$0.69 more per hour than nontrainees. However, there is no evidence here to suggest that skilled manual training raises annual incomes. This may reflect the seasonal nature of employment in industries such as construction which would show up either as unemployment or time out of the labor force. Among blacks, for example, completers of skilled manual training were 9 percentage points more likely to experience unemployment than were nonparticipants.

Institutional Sources of Training

Company-provided training offered substantial benefits to men of both races. Whites completing company training averaged \$1259 more in annual income than whites not receiving training. Black trainees earned \$2359 more annually than nontrainees. Whites completing company training averaged \$0.46 more per hour, and blacks \$1.08 more per hour, than their nonparticipating counterparts. Completion of company training programs signalled advances in occupational prestige as well, with black participants holding jobs averaging 6 points more on the Duncan Index than nontrainees. For whites the differential was 3 index points. In addition, whites completing company training were 6 percentage points less likely to experience unemployment during the year than whites not having received training.

⁵ Tables reporting the results using training experience of longest duration are available from the authors.

⁶ Trainees in the clerical field represented only 3.6 percent of all white participants and 2.1 percent of all black participants in training.

Training provided by business and technical institutes offered monetary returns, particularly to whites. When this was the most recent training program completed, whites averaged \$1009 more in income, \$0.65 more in hourly pay, and an additional 7 index points in occupational prestige than whites not having participated in any training. Results for blacks contrasted sharply with those for whites. Blacks receiving training from business and technical institutes averaged \$1240 less in annual income than blacks who did not participate at all. In addition, black participants in this training were 19 percentage points more likely to have extended unemployment during 1975–1976 than were their nontrainee counterparts.⁷

Whites completing nondegree training in academic institutions held jobs averaging 7 points higher on the Duncan Index than did nontrainees. These occupational rewards did not come for blacks, however. No significant earnings or employment effects were found for young men of either race who participated in adult education and training provided by academic institutions.

Training provided by correspondence schools affected hourly pay of blacks and employment stability of whites. Blacks receiving training from correspondence schools averaged \$0.96 more an hour than blacks with no training, but completion of training did not seem to influence annual income.

Conclusions

Controlling for the influence of personal attributes, educational attainment, community characteristics, and differences in the likelihood of training participation, we have investigated the impact of post-school occupational training on labor market outcomes.⁸ Sizable gross benefits flow from completion of professional, technical, and managerial training based on the data analyzed. Reported benefits from clerical and skilled manual training were more uncertain. Substantial gross benefits in income,

⁷ The model was estimated both with and without the control for selectivity bias. Estimation of the model without the control gives the impression that professional and managerial training and training provided by companies offer no significant benefit to blacks on average, that whites receive sizable average benefits from training provided by business colleges, and that cumulative training experiences do not yield increased benefits to blacks. The perception is quite different after controlling for differences in participation likelihood as manifested by the findings in this paper.

⁸ Factors beyond participation in training contributed to labor market outcomes in the analysis. These are not discussed here due to space limitations. Of all variables, formal educational attainment proved the most consistent estimator of labor market outcomes. Earnings and job status increased sharply with additional education and with increases in occupational experience.

employment stability, and occupational prestige were reported to participation in company-provided training for young adult men of both races. This suggests the benefits of being tied to a career-oriented internal labor market. Company training often carries an implied commitment to the trainee and represents an investment of company resources in the individual. In contrast, individuals trained by other training providers such as business and technical institutes often do not enjoy ready employment and must traverse a possibly lengthy training-to-work transition.

Given the size and extent of the marketplace for post-school occupational training, further investigation of labor market outcomes associated with participation in this marketplace is warranted. Particular attention should be given to comparing the characteristics of participants in the various types of occupational training. The market for post-school occupational training may be selective, with individuals of particular characteristics unable to gain access to particular types and sources of training. Is the occupational training market selective? Does failure in early education and training handicap an individual's chances in the market for post-school occupational training? These issues are of particular importance as the private sector is called upon to take an increasingly active role in society's employment and training efforts.

DISCUSSION

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By prior agreement with the session chair, Paula Voos, I will discuss the Bishop and Barron paper and Lardaro's paper. Bishop and Barron's paper on stockpiling job applicants opens up significant new ground in labor economics. While the job-search behavior of workers has been the subject of a large volume of theoretical and empirical research, the search behavior of employers for workers has received much less attention. Learning more about employer search is important for theoretical and practical reasons. First, the approach taken by Bishop and Barron sheds light on the determinants of the employer's demand for information and behavior under uncertainty. Second, knowledge about employer recruitment policies can improve our ability to evaluate discrimination claims, especially those concerning hiring discrimination and the concept of the appropriate labor market. In addition, employer search has implications for macroeconomic testing as well; in particular, the notion of stockpiling applicants implies unemployment rates may not be the best indicator of the supply of labor to the firm.

The basic theoretical framework Bishop and Barron provide for understanding the firm's decisions about stockpiling is the comparison of costs and benefits. The authors assume that stockpiling will increase the number of applicants because a potential job-seeker will now get more than one chance at an offer. While this reasoning seems intuitive, under stockpiling, a new applicant must also compete against previous applicants. This possibility might scare some new applicants away. Thus an area where the authors could expand their efforts is to model the search behavior of job-seekers with regard to stockpiling vs. nonstockpiling firms. Such modeling would necessarily take the form of systematic search models in which workers have information about firms.

To assess the benefits of stockpiling, the authors estimate the effects of stockpiling on measures of extensive (i.e., number of applicants examined) and intensive (resources spent per applicant) employer search, controlling

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for other factors. In these regressions, the stockpiling decision is taken to be exogenous, an assumption that contradicts Bishop and Barron's discussion of the cost-benefit framework and their later empirical work. Thus, for example, a positive "effect" of stockpiling on the number of applicants per interview might reflect reverse causality: firms that screen many applicants per interview may find it relatively advantageous to stockpile. Some attempt to take account of this kind of dual causality should probably be on the research agenda.

Similar remarks could be made about several of the variables in the authors' analysis of the determinants of stockpiling. For example, a higher starting wage has a significantly negative coefficient in a regression estimating the determinants of stockpiling. While the authors argue that this reflects the specialized nature of high wage jobs, it may well be that wage policy and stockpiling are alternatives to attracting job applicants. Similarly, the quantity of training a firm has decided to offer is probably jointly determined with its search strategy. Training and intensive screening may be substitutes from the firm's point of view. These comments suggest that the general employer strategies of recruiting, screening, training and pay need to be understood and modeled as interdependent processes. Of further interest in the determinants of stockpiling is the positive effect of unionism on the firm's contacting of prior applicants. This finding may be evidence of union impact on workers' well-being—referral for jobs. While this role for unions is well known in industries that use hiring halls (such as longshoring and construction), Bishop and Barron's finding implies at least some effect in the general case. The union role in job security thus needs to be examined more carefully than merely studying the effects on permanent and temporary layoffs, retirements, and discharges.

A final substantive point concerns the measurement of stockpiling. The authors would like to gauge employer intentions; however, the actual measures of stockpiling are the probability of calling in a prior applicant (a qualitative dependent variable that should be analyzed with nonlinear rather than the authors' linear methods) and the proportion of interviews with prior applicants. In either case, the dependent variable is affected by the supply of current applicants as well as the firm's stockpiling decisions. If unanticipated changes in the supply of new applicants are correlated with some of the explanatory variables (e.g., the quit rate), then biased coefficients will result.

The Lardaro paper uses some good data on Indiana's unemployment insurance—UI—parameters (replacement ratio and maximum duration of benefits) to estimate the work disincentive effects of this UI system. An important consideration in the paper is to control for the number of spells

of unemployment. In addition, Lardaro is able to distinguish the effects of special extended benefits of the severe 1974 recession from the "normal" benefits in the 1973 period.

Work disincentives are measured by the percentage of eligible weeks of UI coverage actually used (*PROP*), the dependent variable. While *PROP* may be related to work disincentives, perhaps a more direct measure would be actual weeks of unemployed search. Some workers may be unemployed for longer than the benefit period, in part because UI tides them over. This effect would be missed by *PROP*. In addition, if someone uses 50 percent of a 26-week eligibility, does that indicate less work disincentive than 100 percent utilization of a six-week eligibility? While inclusion of weeks of eligibility mitigates this last problem, a negative spurious correlation between weeks eligible and *PROP* may be induced by measurement errors. The author in fact finds a negative effect. Thus the estimation could well be redone with weeks of unemployment as dependent variable.

The use of spells of unemployment (*SP*) as an explanatory variable is interesting, since it allows a closer examination of the UI process at work. However, the number of spells itself may be affected by UI parameters as well as by the dependent variable, making questionable the assumption of exogenous *SP*. In particular, a job-seeker may be more willing to select an unstable job (yielding an increased probability of more spells) the more generous UI is and the less eligibility that has been used up. Thus, not only is inclusion of *SP* in the single equation context likely to lead to biases, its inclusion is likely to lead to an understatement of the overall work disincentive effects of UI. Perhaps a place to start is to estimate a reduced-form model with spells excluded.

The nonlinear estimation technique—tobit—is used because *PROP* is truncated at one. It is also truncated at zero—many workers who get layoff notices with advance notice may well line up new jobs without experiencing unemployment. If these workers would have been eligible for UI, then the truncation will occur; further, the fact that these workers are, necessarily, excluded from the sample may lead to censoring biases.

Among the more interesting results are those for race and sex. Specifically, all else equal, men and whites use a smaller percentage of their eligibility than women and minorities, respectively. Is this evidence of more extensive job search by women and minorities? Are there race and sex differences in the effects of coverage parameters as well? Are men and whites given favorable treatment by potential employers and thus have less search duration than women and minorities? Such questions

might be answered by survey data on employers such as the data used by Bishop and Barron. Are men and whites given better treatment in stockpiles of applications than women and minorities?

Finally, Lardaro concludes that *PROP* is more sensitive (in elasticity terms) to changes in the duration of eligibility than the level of benefits. He argues that reducing weeks of eligibility will therefore have a greater effect on reducing work disincentives than taxing UI benefits. This finding should not be surprising, since reducing the weeks of eligibility is essentially equivalent to imposing a 100 percent marginal tax rate on benefits.

DISCUSSION

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The paper by Arvil Adams and Stephen Mangum provides important new evidence on the labor market consequences of post-school occupational training. As the authors point out, such training is a major source of human capital which has received relatively little attention from labor economics. The separate analysis of blacks and whites with regard to participation in training and returns to training yields insights on the role such training plays in differential labor market outcomes by race.

It seems to me that an important control variable is missing from the current analysis: union status. This is problematic insofar as union status is almost certainly positively correlated with two dependent variables, hourly pay and annual income, and may be correlated with other dependent variables. I would surmise that union status is negatively correlated with participation in managerial and clerical training and positively correlated with participation in skilled manual training, particularly the apprenticeship programs categorized as "other" under sources of training.¹ Given these probable correlations, the coefficients on the training program variables are biased in the current estimations. Adding a union variable would correct this problem. It is also needed to determine the actual differences between returns to blacks and returns to whites for each type of training because the two races have different rates of unionization.

The other problematic aspect of the Adams/Mangum research is the manner in which the authors control for selection bias. Selection bias arises because those individuals who receive the greatest returns from training are more likely to invest in additional training; such bias has been an issue in the empirical literature at least since Willis and Rosen's 1979 paper. The assumption employed by Adams and Mangum is that there is one sorting process (participation in training vs. no participation) and that participants are equally likely to choose any particular training program. This assumption is, of course, somewhat unrealistic. The authors note, in a

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¹ Union status may also be correlated with participation in professional/technical training or participation in company-sponsored training, although the direction of correlation is less evident and may, in fact, be a matter of some interest.

footnote, that they found considerable differences between the estimates with and without the controls for selectivity bias, particularly in the black subsample. This indicates that changing the selection model might alter the coefficients considerably. Consequently, the estimates reported here might be improved by the development of a more complex model of the decision to invest in particular types of post-school occupational training, although the difficulties of such an endeavor would be considerable.

Despite these reservations, I found the Adams/Mangum paper to be of considerable interest. They note that young black males are much less likely to participate in post-school occupational training than young white males. Blacks are underrepresented in private-sector training programs—company-provided training and training through business and technical institutes²—and overrepresented in training provided by junior colleges and vocational schools, which are largely, albeit not entirely, in the public sector.

These bare facts suggest two things. First, the private-sector market for training in particular seems to operate in a manner that shortchanges blacks. We need to know more about why that occurs.³ Second, these facts suggest that a policy shift in responsibility for training from the public to the private sector would bear disproportionately on the black population, a group which is already disadvantaged by lower levels of participation in these human-capital-creating programs. In a future paper, I would like to see the authors indicate the extent to which inclusion of the post-school occupational training variables accounts for differences between black and white labor market outcomes.

The coefficients presented here do seem to indicate that this type of training is a less certain, and perhaps less good, investment for blacks than for whites, although the pattern of returns is complex. In Table 1 there are 43 significant effects of training for whites, all but 2 of which are positive.⁴ On the other hand, only 23 out of 38 significant coefficients are positive for blacks. No type of training reduces the likelihood of black unemployment, nor does any particular source or provider of training, even company-sponsored training! These findings suggest to me that public

² This is inferred from the facts that companies provide the same proportion of total training for the two races and that total training by blacks is less.

³ For instance, is this a result of capital market imperfections coupled with low black incomes, the result of continued discrimination against blacks when companies select employees for training, or other factors?

⁴ A reduction of the probability of unemployment is counted as a positive effect. These statements are based on absolute coefficients insofar as the authors do not present tests for significant differences in coefficients across races. These should be presented in future work along with additional regressions utilizing the natural logarithm of hourly pay as the dependent variable in order to facilitate judgments about racial differences in the rate of return to training.

policy not only should be concerned with assuring black access to training programs, but also should be concerned with insuring equal opportunity for persons with similar training.

Turning to Leonard Lardaro's paper, we are presented with an innovative examination of whether improved unemployment benefits elevate unemployment by creating a disincentive to work. Lardaro finds that both the replacement rate and the potential duration of unemployment benefits have relatively small effects on the number of weeks unemployed, but that in both cases a disincentive effect exists.

Lardaro's data are from the State of Indiana for the years 1983 and 1984. The young adults in his sample experienced at least one spell of unemployment beginning in those years which made them eligible for UI benefits. There are two sources of variation in the data, cross-sectional variation in weekly benefit amount and potential duration due to differences in previous earnings, and variation over time due to legislated increases in weekly benefits and extensions in maximum potential duration in those months in which Indiana was eligible for the extended and supplemental UI benefit program financed by the federal government.

Because the federal program is triggered by a formula related to a state's unemployment rate, potential duration increased in these data as economic conditions worsened. Worsening economic conditions, in my view, are likely to increase weeks of unemployment, despite the theoretical ambiguity noted. Lardaro controls for local economic conditions by introducing the local unemployment rate into his equations. Despite this control, it is likely that the coefficient on potential duration reflects, in part, variation in the state's general economic climate over time. Consequently, the paper probably overstates the extent to which the policy of reducing the number of weeks of UI eligibility would actually reduce total weeks of unemployment, absent any improvement in economic conditions.

Most research in this area suffers from the same problem. Legislators tend to increase UI benefits precisely in those periods and in those locales suffering high unemployment. In reality, causality is partly from the dependent variable to the key independent variables. In fact, this paper is superior to some research in this area because it utilizes data from only one state. Researchers who have utilized cross-state data, and thus introduced variation in potential duration from the existence of the federal program in particularly high unemployment states, have a bigger problem in this regard.

Given the connection between adverse economic conditions, the federal program, and added benefit entitlement under that program, I am loath to conclude much from the differences in coefficients between the

two subsamples: persons without added benefit entitlement and persons with added benefit entitlement. Couldn't the differences merely reflect different economic circumstances facing the two groups?

Despite this fundamental reservation about this entire area of research, the Lardaro paper, in my view, makes an interesting contribution to the literature on the unintended side-effects of the unemployment insurance program.

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VIII. UNEMPLOYMENT INSURANCE

The Performance of Unemployment Insurance Since 1979*

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Over the past four years unemployment benefits have been paid to an unusually small fraction of jobless workers. Although civilian unemployment rose to unprecedented postwar levels, the amount paid out in unemployment insurance (UI) never attained the peak achieved during the milder 1975–1976 recession. The detailed reasons for this development are not entirely understood, but in broad outline the explanation is reasonably clear.

At both the state and federal levels, authorities began to clamp down on the UI program in the late 1970s. The 1974–1976 recession left many state programs with unusually small reserves or even in debt to the federal treasury. Some states responded to this situation by tightly limiting eligibility for the UI program in the late 1970s. Back-to-back recessions in 1980 and 1981–1982 put further pressure on state systems. In addition, the federal government was substantially less generous in providing loans to financially strapped state programs starting in 1980 and also less generous in extending UI protection to the long-term unemployed. In the remainder of this paper we will briefly discuss three aspects of the recent UI experience. We first consider the exact dimensions of the shortfall in UI benefits over the 1980–1984 period. Then we describe the changing financial fortunes of state programs and show how those fortunes have

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* The views expressed here are the authors' own and should not be ascribed to the IRRA, the Brookings Institution, or the Urban Institute.

affected states' willingness to provide jobless benefits during the past recession. Finally, we discuss the current condition of state programs and consider the future outlook for changes in recent UI trends.

The Shortfall in UI Benefits

The total unemployment rate—or TUR—rose significantly from 1980 to 1982, but the insured unemployment rate—or IUR—failed to rise as fast or as much. From the first quarter of 1980 to the last quarter of 1982 the TUR rose by 4.3 percentage points to 10.6 percent, but the IUR rose only 1.8 percentage points to a peak of 5.1 percent. The relatively low level of the IUR was a direct reflection of the small number of workers collecting regular (26-week) benefits. The IUR represents the percentage of workers in jobs covered by UI who have filed current claims for regular benefits. In fiscal year 1982 only about 42 percent of unemployed workers collected benefits under regular, extended, and supplemental UI programs. By contrast, in 1976, during the previous severe recession, nearly three-quarters of the unemployed were covered by some type of jobless benefit.

As a consequence of the trends just mentioned, the amount of countercyclical stimulus provided by UI was smaller in real terms (and far smaller in relative terms) in the recent recession than it had been in the previous serious recession. In fiscal 1976, when only 7.6 million workers were unemployed, the nation spent almost \$31 billion (1982 dollars) on all UI programs. In fiscal 1982, when unemployment averaged 10 million workers, less than \$24 million was spent on jobless benefits. In 1983, with the introduction of the Federal Supplemental Compensation (FSC) program, spending rose to \$30 billion, but the average number of unemployed reached more than 11 million, or almost 50 percent above the number recorded in 1976. Stated another way, the real level of UI compensation per unemployed worker fell by over 40 percent in 1982 and by over one-third in 1983.

The drop in UI coverage and outlays was caused by reductions in all three of the programs mentioned above—regular UI, the extended benefit (EB) program, and FSC. The most important (and unexpected) source of decline was the drop in the number of covered unemployed in the regular program. Before 1980 the number of jobless workers claiming regular UI was within a few percentage points of the number of short-term unemployed job losers. This is hardly surprising, since the goal of UI is to insure the earnings of workers on temporary or permanent layoff. Unemployed workers who are new entrants or reentrants to the labor market or who are job losers and job leavers unemployed longer than 26 weeks are rarely eligible for regular UI. Only a small fraction of job

leavers unemployed fewer than 26 weeks qualify for benefits. The regression equation below shows the shift in the relationship between the number of insured unemployed and the number of short-term job losers. The results are based on quarterly data covering the period 1968:1 through 1984:3 (absolute *t*-statistics in parentheses).

$$\begin{aligned}
 IU = & -14.530 + 1.081 L - 0.103 L8084 - 0.107 L8184 - 0.071 L8284 \\
 & (0.282)(45.829) \quad (4.616) \quad (3.975) \quad (3.304) \\
 & - 0.057 L84 \\
 & (2.285)
 \end{aligned}$$

$$\bar{R}^2 = 0.981; \text{ Durbin-Watson statistic} = 1.627.$$

In our notation *IU* is the quarterly average number of insured unemployed under regular UI programs; *L* is the number of job losers unemployed 26 or fewer weeks as measured on the Current Population Survey (CPS); and *L8084*, *L8184*, *L8284*, and *L84* are interactions between *L* and dummy variables representing the periods 1980–84, 1981–84, 1982–84, and 1984, respectively. In relation to the average value of *IU* (about 2.5 million workers), the constant term is very small, suggesting that regular insured unemployment is very nearly proportional to the number of short-term job losers. Before 1980 the number of insured unemployed was 1.08 times the number of these job losers. In 1980 the factor of proportionality fell by 0.10 to 0.98; in 1981 it fell by another 0.11 to 0.87; in 1982, by an additional 0.07 to 0.80; and in 1984, by an additional 0.06 to 0.74. In all, the fraction of job losers claiming jobless benefits has fallen by nearly a third since 1979. This implies that after 1981 over a million fewer workers received regular benefits in a typical week than we would have expected on the basis of the 1968–1979 experience.

There is no evidence that the changing composition of unemployment can explain the sharp drop in UI beneficiaries over the past few years. According to CPS statistics, the fraction of prime-aged men among the unemployed was actually somewhat higher in the recent recession than in the previous severe recession. (Adult males are more likely to qualify for UI when they become unemployed than are younger workers and women.) The distribution of unemployment by industry and occupation has not shifted in any way that would explain the drop in regular UI. The geographic concentration of unemployment also provides no explanation. There is actually a *smaller* concentration of unemployment in states with strict UI qualifying regulations than there was in 1974–1976 (Burtless and Saks 1984).

The severity and duration of the recession raised the number of workers exhausting regular UI. In addition, it affected the UI eligibility of

some newly unemployed workers. As a recession persists, many workers who lose their jobs are likely to have suffered a previous recent spell of unemployment. Because they have already received UI, the newly unemployed will be eligible to receive fewer than 26 weeks benefits on their second spell of unemployment. But this problem was also common during the 1974–1976 period, when high unemployment persisted for two years. Yet a much higher fraction of new job losers received UI in 1976 than received it in 1981–1983. Comparing jobless workers who had been unemployed the same length of time and had previous work experience of equal duration, the unemployed worker in 1981–1983 was far less likely to receive regular UI than was a comparable worker in 1976 (Burtless 1983). In the next section we describe some of the main reasons that insured unemployment under regular state programs has fallen.

The decline in the number of workers collecting regular UI has caused the IUR to fall about 1.4 percentage points. This in turn has affected the performance of the EB program, which is triggered in individual states by local IUR levels and provides 13 weeks' benefits beyond regular UI. Because the IUR has been unexpectedly low in comparison to the TUR, states have been less likely to make EB payments at a given level of the TUR. Even for states where the EB program is triggered on, the IUR is likely to fall below the threshold trigger level at an earlier point in the recession. In addition, because the number of UI claimants is low relative to historical experience, the number of exhaustees of regular benefits will be lower than is normal in a severe recession. Finally, the Administration and Congress have tightened the EB triggering mechanism, greatly reducing the probability that the program will be triggered. The nation has also provided less supplemental aid to workers who exhaust regular and EB payments. Until October 1982 the nation's UI system offered no income protection beyond 39 weeks in states qualifying for the EB program and beyond 26 weeks in states not qualifying for EB. When the FSC program was implemented in late 1982, it was less extensive than the comparable FSB program enacted during the 1974–1976 recession. In the next section we consider the financial and political constraints that led to the tightening in the regular, EB, and federal supplemental programs.

Causes for the Declining Level of Outlays

Changes in the financial circumstances of individual state programs contributed to recent reductions in the availability of UI benefits. During the 1970s there was a loss of trust fund reserve adequacy, and many states borrowed from the federal UI loan fund in years of high unemployment, particularly in 1975–1977. Between 1972 and 1979, 25 state programs borrowed a total of \$5.6 billion. States were slow to repay the loans during

the late 1970s, and by the end of 1979 \$3.7 billion was still owed to the federal government.

The loss of trust fund reserve adequacy can be illustrated with data on state reserve ratio multiples. These multiples provide convenient summary measures of the size of trust fund reserves relative to the potential demand for UI benefits. The numerator of the multiple is the current trust fund balance expressed as a percent of covered payrolls for the year. The denominator is the benefit payout rate (benefits as a percent of covered payrolls) in an earlier 12-month period when there was a high demand for benefits. Thus the reserve ratio multiple expresses the fund reserve in terms of the number of years of benefits that could be paid at a high payout rate before exhausting the trust fund. A committee of the Interstate Conference of Employment Security Agencies (ICESA) has recommended a range from 1.5 to 3.0 as a minimum reserve ratio to assure fund adequacy. Although ICESA never formally adopted this as a solvency standard, it is often used by UI practitioners in judging the adequacy of a state's fund.

At the end of 1969, 34 of the 51 state programs (including the District of Columbia) had reserve multiples of at least 1.5 and 16 other states had multiples between 1.0 and 1.49. Only Michigan's program had a reserve ratio multiple smaller than 1.0. In 1979, at the end of a lengthy economic expansion, only two states had reserve multiples of at least 1.5 while only 11 additional state multiples fell in the range from 1.0 to 1.49. Over the ten-year period after 1969 the number of states with multiples below 1.0 grew from one to 38. The loss of reserves in the 1970s was a problem experienced by nearly all state programs.

The economic downturns in 1980 and 1981–1982 placed a new and heavy burden on UI programs which already had inadequate reserves. One consequence was a widespread resort to borrowing. States borrowed more than \$3 billion in 1980–1981 and an additional \$11 billion in 1982–1983. Between January 1980 and September 1984, federal lending to insolvent state programs exceeded \$17 billion. Lending has been concentrated among industrial states in the north central region, which account for 64 percent of total borrowing, but 32 states borrowed at least once between 1980 and 1984.

In the past four years the federal government has placed increased financial pressure on states to reduce their debts and to avoid borrowing altogether. The added pressure to raise employer payroll taxes and reduce benefit outlays occurred in a period of unprecedented postwar unemployment. Four specific developments are worth noting. (1) Unlike the 1970s, debtor states have an unambiguous responsibility to repay outstanding loans. There is no longer any active discussion of proposals

for cost-sharing or partial debt forgiveness; such proposals were common in the 1970s. (2) Since 1979 the federal government has demonstrated its willingness to impose penalty taxes (additions to the rate for the Federal Unemployment Tax, or FUT) on employers in states with debts more than two years old. Although these automatic repayment provisions existed in the 1970s, their implementation was twice deferred by temporary measures enacted in 1975 and 1977. (3) The cost of loans made after March 1982 was increased. Under the Omnibus Budget Resolution Act of 1981 new loans carried interest charges. With an annual interest rate of 10 percent (the maximum allowable interest charge) the cost of new debt became an important financial consideration for the states needing large loans. (4) The Social Security Amendments passed in March 1983 provided debtor states with an opportunity to reduce and defer the costs of indebtedness. If a debtor state enacted new legislation that substantially improved net solvency, it would be able to limit further growth in FUT penalty taxes, defer interest charges, and, if solvency adjustments were sufficiently large, pay an interest rate one percentage point below the rate otherwise chargeable. Improvements in net solvency could be achieved by different combinations of benefit reductions and tax increases.¹

These developments have placed the states under increased financial pressure to improve program solvency. Between late 1982 and early 1984 state legislative activity was especially rapid. All eight states with the largest debts in September 1984 enacted important solvency legislation in this period, and in five of them, net solvency was improved by enough to qualify the state for fiscal relief under the 1983 Amendments (Vroman 1984). As a consequence of the state legislation it is estimated that net solvency in the eight states will improve by \$12 billion between 1983 and 1986, with roughly a 70/30 percentage split between employer tax increases and benefit reductions.

The flurry of state legislative activity after 1982 is a dramatic illustration of the interest of states in improving the net solvency of their UI programs. The reductions in UI outlays that occurred before 1982 were also largely the result of legislative and administrative actions to reduce benefits. For example, since the mid 1970s disqualification periods of voluntary job leavers have been lengthened and the earnings requirements needed for eligibility have been increased in many states (Burtless and Saks 1984). These state-level changes are a major reason for the un-

¹ Improvements in net solvency are measured as the sum of two percentage changes—increases in taxes plus reductions in benefits. To defer interest on loans a state must improve net solvency by 25, 35, and 50 percent, respectively, in the first three years of indebtedness. To pay lower interest rates, the respective solvency improvements must be 50, 80, and 90 percent.

expectedly low levels of insured unemployment in the 1980s and the increased gap between insured and total unemployment.

Financial pressures on state programs have not been the only factor behind the recent low levels of insured unemployment. At the federal level, authorities required states to impose tougher qualifying provisions for UI applicants receiving pensions or social security. In 1979 the federal government for the first time imposed income taxes on UI received by high-income taxpayers, and in 1982 it lowered the income threshold for taxability, dramatically raising the number of UI recipients subject to taxation. In addition, it provided strong financial incentives for states to impose a waiting week before newly unemployed workers can receive benefits. By reducing the net value of UI, these federally imposed changes presumably reduced the incentive for jobless workers to apply for benefits.

As mentioned above, the persistence of high joblessness has also reduced the fraction of unemployed collecting jobless benefits because it has increased the fraction of claimants who exhaust benefits. In recessions since 1958 the federal government has stepped in to offer added income protection to UI recipients exhausting their regular benefits. After 1980, however, several federal actions reduced the duration of benefits available for unemployed workers. The 1981 changes in the EB triggering mechanism, in combination with the declines in the IUR already noted, have nearly eliminated the extended UI benefit program except during periods of exceptionally high unemployment. (EB outlays during the first nine months of 1984, for example, were just \$44 million.) Long-term benefits are now paid mainly under the emergency FSC program, which is scheduled to expire in March 1985. That program began later—and was substantially less generous—than the equivalent emergency program enacted during the 1974–1976 recession. Emergency long-term benefits have been lower than those in the previous recession, even though the EB program was less generous and long-term unemployment was much higher. The federal attitude toward helping the long-term unemployed has been affected by the same trends that have influenced other social welfare spending, including federal spending on education, means-tested transfers, and manpower programs.

Future Prospects for the UI System

Because the decline in insured unemployment after 1979 was largely due to legal and administrative changes in the UI system, it is conceivable that some of the recent trends may be reversed by further reforms. But

this is not probable in the near future. By changing the costs of indebtedness and providing inducements for program solvency, the federal government has had a clear effect on state behavior. Despite borrowing a record \$6.6 billion in 1983, states saw their net indebtedness increase by only \$2.7 billion in that year because they made loan repayments of \$3.9 billion. This was three times the amount repaid in 1979, and by far the highest amount repaid in history, in spite of the fact that the level of unemployment was the highest of the postwar period. Loan repayments in the first nine months of 1984 totalled \$5.9 billion, which was \$3.5 billion more than new state borrowings. The economic recovery coupled with rapid loan repayments have produced a noticeable improvement in program solvency in 1984. Net reserves stood at $-\$5.8$ billion in January, but rose to $+\$1.8$ billion in September and will probably reach $\$2.0$ billion by year's end. This increase in net reserves—nearly $\$8.0$ billion in a single year—is the largest absolute increase ever recorded.

Nonetheless, nearly all the state programs currently have very low net reserves. To avoid renewed borrowing in the event of another recession, states would have to resort to benefit cuts and/or tax increases almost immediately. This was exactly the pattern of state behavior in 1980–1983 which led to declining UI coverage ratios as unemployment was rising. The state-level response to higher unemployment was encouraged by federal actions that induced states to repay loans and reinforced by legislation that eliminated the EB program in many states. Now that the economy has emerged from recession and state programs are no longer in imminent danger of insolvency, pressure is building in many states to lower employer UI taxes. If this should occur, state reserve accumulations will slow down and states may not attain the reserve ratios that appear prudent to program specialists. In our judgment, if a recession takes place in the next two or three years, state UI programs will be in no better condition to deal with it than they were in 1980. Reserves will be low and state legislators will be tempted to cut income protection and countercyclical stimulus when it is most needed—as unemployment is rising. The EB program will actually provide even less income protection than it did in 1980–1981, because the changes legislated in 1981 have reduced the cyclical responsiveness of that program. Consequently, with the scheduled elimination of federal supplemental benefits in March 1985, there will be no income protection beyond 26 weeks for unemployed workers in most states, even during a sharp economic contraction. For the immediate future the UI system will be less effective in delivering income protection and countercyclical stimulus than it was during most of the postwar period.

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The Unemployment Insurance Debt Problem and Recent Legislation in Wisconsin*

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In February 1982, Wisconsin's UI fund was exhausted and it was necessary—for the first time in the 50-year history of the program in Wisconsin—to borrow money from the federal government. It had been known for some time that the system was in deep financial trouble, but Wisconsin's policy-makers were unable to take action. Financial disaster arrived with a bang. In 1982 it was necessary to borrow over \$400 million; about 70 cents of every benefit dollar was being covered by federal borrowing. It was clear, moreover, that the problems were not merely financial and that an economic recovery—even one of miraculous proportions—would not cure the ills of the system.

Early in 1983, newly-elected Governor Earl created a special panel to deal with this problem. The panel was chaired by the Secretary of Industry, Labor and Human Relations and included the four leaders of the Wisconsin legislature. This panel did three things. First, it produced a bill which provided for sharp tax increases and benefit cutbacks to stem the flow of red ink. Second, with some augmented membership, the group made a thorough study over several months of the origins of the UI problem. And third, the group provided for a complete restructuring of the UI policy machinery. The author participated in these various efforts. This is an account of what took place.

How the Problem Developed

The origins of the unemployment insurance (UI) financing problem in

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Wisconsin involved a blend of economic trends, overcommitment, and institutional failure.

Economic Trends

In dealing with the financing problems of Wisconsin's UI program, one frequently encountered the idea that the system worked well for nearly half a century and that the problems were caused by the twin recessions of the early 1980s. In these terms, the problems of the UI system were viewed as transitory, related entirely to highly unusual economic conditions which, we can expect, will soon pass. These attitudes are changing, and there is an increasing awareness that our problems are a good deal deeper than that.

It is suggested that we view the problem in these terms: that the UI system worked fairly well only when unemployment was at abnormally low levels, in the late 1940s, 1950s, and 1960s. Before that time—from 1932 through 1945—the UI system simply wasn't much of a factor. The UI system began in Wisconsin (the nation's first) in January 1932, and the first benefit check wasn't written until August 1936, some four and one-half years later. The highest yearly level of benefit spending in Wisconsin during the Great Depression was \$3.6 million in 1939, scarcely a major amount in the context of the massive levels of unemployment of that time. In the early 1940s, of course, unemployment nearly disappeared during World War II.

For the next quarter-century, roughly from 1946 through 1970, the UI system did work smoothly and well. During the 1970s and 1980s, unemployment has been much higher than during that halcyon quarter-century, and the UI system has been consistently in trouble.

As to unemployment levels: from 1954 through 1970 the Wisconsin total unemployment rate averaged 3.7 percent. The rate reached 5 percent only twice—in 1958 (5.1 percent) and in 1961 (5 percent). The figures changed radically for the 1970s and 1980s. From 1971 through 1979 unemployment averaged 4.9 percent, and for 1980–1983 the average was 9 percent. Unemployment is estimated at 7.9 percent for 1984 and is forecast at 8 percent for 1985, 8.4 percent for 1986, and 8 percent for 1987.

Thus, we are experiencing unemployment rates *each year* which are much higher than the *highest* rates reached during the 1950s and 1960s, and we may expect this condition to continue. Average rates are projected to be more than double those of the 1950s and 1960s.

As unemployment levels rose sharply in the 1970s, Wisconsin's UI program began encountering major financial troubles. The cash balance dropped to \$162 million in 1975, equivalent to about 6 months of benefit spending—the lowest relative level by far in the program's history. The

UC Advisory Council deadlocked, and legislation was enacted in 1976 only when the Governor acted to resolve the deadlock—and that legislation provided only temporary relief while building in even more serious problems for the future. This set the stage for the crisis of the early 1980s.

It needs to be recognized, then, that we do not have a record of coping successfully with levels of unemployment such as we are now experiencing, or can reasonably expect for the future. That's the economic ingredient of our UI financing problem.

Overcommitment

As the economic problems were deepening, Wisconsin's policy-makers were at work, during the 1960s and 1970s, increasing the commitments of the UI system. This overcommitment extended to both the workers and the employers of the state. To the workers, Wisconsin law provided one of the most generous UI packages in the country. For employers, Wisconsin's UI taxing provisions were among the nation's most lenient. As a rough measure, it could be said that Wisconsin in the early 1980s ranked about sixth nationally in terms of benefit costs and about 30th in terms of tax effort.

The benefit pattern was expanded in stages. Around 1960, regular benefits were increased from 26 to 34 weeks, almost the highest in the country, and the maximum benefit payment was indexed to the trend in state average wages—increasing twice each year. From 1976 (the last tax increase before 1983) to 1982, when UI borrowing began, the average UI benefit check increased by 60 percent.

In 1971 the multiplier for calculating the maximum benefit was increased from 52.5 percent of the state average wage to 66 2/3 percent, and the quit provision was considerably relaxed. Prior to 1971, if a worker quit a job without good cause, he/she could draw no benefits based on work for that employer. This was changed in 1971 to permit drawing such benefits after requalifying with at least 4 weeks of work with at least 20 hours each week. In 1976 this was further modified to require 4 weeks of work (not necessarily in employment subject to a UI law) with total earnings of \$200—almost the most lenient quit provision in the country. In 1974 the number of weeks required to qualify was dropped from 18 to 15; in 1976 the requirement for a waiting week was dropped.

While the benefit load was growing, the tax structure that had to bear the load—never very robust—was being progressively weakened. From 1967 to 1976 Wisconsin law included a provision which provided for the imposition of a special tax (calculated by the state agency) sufficient to prevent the fund balance from falling below a specified level. This

provision was dropped in 1976—paradoxically enough, to “give something to business” in return for dropping the waiting week in accord with the labor position. Beginning in 1980 and continuing through 1983, Wisconsin law provided no tax (the “zero rate”) for the most stable employers. Beginning in 1982, Wisconsin ceased charging the state share of extended benefits to employer accounts, thus causing a further drain on the fund.

Wisconsin’s law provided that employers could “write-off” any negative balances in excess of 10 percent of taxable payroll. From 1980 through 1982, about \$500 million in negative balances were thus, in effect, forgiven. Wisconsin’s top tax rate (7.4 percent of \$6000, or \$444 per employee) would cover just over two benefit checks per employee per year. Even if all employers in the state had paid the top tax rate on their entire payroll, tax receipts would have been insufficient to cover benefits in 1982. Only 7 percent of the state’s payrolls were taxed at the top rate, and 20 percent were not taxed at all. Employers could “buy” lower tax rates by making “voluntary contributions,” increasing their balances by exactly enough to qualify for a lower tax rate (sometimes 10 brackets lower than the rate which would otherwise have applied). An employer’s tax could not be more than 1 percent higher than the rate paid last year. These three provisions—writeoffs, voluntary contributions, and the rate increase limiter—interacted in such a way as to produce some garish results. One firm, for example, ran up \$56 million in benefit charges, paid \$6 million in taxes without ever paying the top rate, and wrote off the remainder.

Institutional Failure

As these problems were developing, Wisconsin government simply failed, for a good many years, to deal effectively with them. Since the 1930s, UI matters in Wisconsin had been the exclusive province of the Unemployment Compensation Advisory Council. By the 1970s, the pattern was simplicity itself: what the Council approved was enacted into law, and what the Council did not approve was not enacted. With one limited exception (in 1976), governors, legislatures, department heads, and state agencies gave the UI area a wide berth—the delegation to the Council was absolute. The Council consisted of 10 members—five representing labor and five representing employers. In effect, each member had a veto.

It became apparent in the late 1970s, and especially in 1980 and thereafter, that Wisconsin’s UI program was in very deep financial trouble. The employer (business) representatives on the Council indicated that they were willing to support major tax increases, but only if there were also extensive cutbacks in benefits in areas where they believed Wisconsin’s benefit package was far out of line. The labor representatives

refused to accept any benefit reductions. The Council deadlocked on this point and continued in deadlock for three years, until the Governor assigned the problem to a special panel in March 1983.

Two things need to be emphasized at this point. First, the UI problem had become (in the context of a middle-sized state such as Wisconsin) a massive one. By 1982 and early 1983, state UI taxes were covering just 30 percent of benefits; the other 70 percent had to be borrowed. The magnitude of the problem is suggested by the fix that ultimately was undertaken: state UI taxes have more than doubled and benefits were cut by about 20 percent. Second, the Council was, after all, a part-time, uncompensated advisory body—not a part of the formal structure of government. It is not surprising that the Council could not handle this problem. It was surprising, though, that through 1982 the governor, the legislature, and the state executive agencies were essentially silent and inactive.

The Federal Pattern and the Arithmetic of the Wisconsin Problem

As the Wisconsin political leadership began to pay serious attention to the UI problem around the beginning of 1983, two sets of questions assumed great importance. The first of these involved gaining an understanding of the exact terms of the federal loans, especially with respect to taxes and interest and the options available to a borrower state. The second set of questions was internal to Wisconsin. This involved, basically, the political arithmetic of the UI program in Wisconsin.

The Federal Pattern

By the spring of 1983 the federal pattern with respect to UI program loans was about as follows: first, that all loans after March 31, 1982, would bear interest; second, that unless states reduced their debts in accordance with a certain schedule, an additional (and progressively rising) federal payroll (FUTA) tax would be levied in the state; third, that states could sharply reduce interest costs and avoid FUTA taxes by acting to get their own house in order; fourth, that these provisions would be enforced—there would be no pattern of forgiveness or sunseting.

For Wisconsin, the consequences of inaction were stark. Interest payments would have been over \$100 million for 1984, and would have reached \$200 million annually by about 1987. The added FUTA tax would have been \$31 million for 1984 payrolls, \$62 million for 1985, and so on, reaching \$186 million for 1989—and rising thereafter if necessary. Putting it together, added FUTA taxes and interest charges would have reached about \$300 million per year by 1987 and \$500 million per year by 1989. The minimization of these added federal charges (interest and

FUTA) became the pacing element in the development of Wisconsin's 1983 legislation. The objective was to lower these costs, for the years 1983–1988 cumulative, by \$1 billion. The mix of carrot and stick in the federal pattern provided a very strong inducement for states to act to get their UI finances in order.

Wisconsin's Arithmetic

In transitioning from a federal to a Wisconsin perspective, it's necessary first to understand that hundreds of millions are, in Wisconsin, immense amounts of money. In 1979, for example, Madison's newspapers were exposing abuses by state legislators. One who got a great deal of attention in the press had run up \$7.60 for personal phone calls at state expense.

A second aspect of Wisconsin arithmetic involved the basic financial relationships within the UI system. The highest UI tax that a firm could pay in 1983 was \$518 per employee (7.4 percent of \$7000). The top UI benefit check was \$196 per week. Under the old law, then, a firm's UI tax would cover (on the average) less than 3 weekly benefit checks per employee per year. If a firm's layoff experience was greater than that, the top UI tax wouldn't cover the resultant benefits. The problem was that the preponderance of UI benefit payments involved precisely such firms. In relatively prosperous 1978–1979, 67 percent of Wisconsin's UI benefit payments involved firms whose employees were drawing an average of more than 3 benefit checks per year. In years of high unemployment (1980–1983), 82 percent of benefit payments were in this category.

Thus, the great preponderance of Wisconsin's UI benefit payments could not be recovered from the employers who had laid off the claimants. The system's solvency tax, which was (in theory) supposed to cover this gap, proved far from adequate. In 1982, when ineffectively charged benefits amounted to over \$400 million, the solvency tax yielded \$57 million. About one-fourth of state payrolls, it will be recalled, were not taxed at all.

The third aspect of Wisconsin's UI arithmetic involves the makeup of the state's employer community. Of about 100,000 private firms in the state subject to the UI law:

- About 82,000, accounting for about 64 percent of covered employment, have few layoffs. Even in periods of high unemployment (such as 1980–1983) these firms average less than one weekly benefit check per employee per year.
- About 9000, accounting for about 8 percent of covered employment, have high layoffs. Even in good years (such as 1978–1979), these firms average more than three weekly benefit checks per employee per year.
- The remaining 9000 firms, accounting for about 28 percent of

covered employment, average less than one check per week in good years, but more than that in bad years.

The 9000 firms that have high layoffs even in good years are concentrated in three areas: about 3500 are in construction; about 3500 are in retail and service areas, often related to tourism; and about 1000 are in manufacturing.

Here's another way to look at the Wisconsin employer community in 1983:

- About 88,000 firms employed 656,000 people (44 percent of the total) at an average wage of about \$9000. These included all retail firms plus all other firms with less than 15 employees.
- About 12,000 firms employed 846,000 people (56 percent of the total) at an average wage of about \$18,000.

As the lines formed in Wisconsin's UI financing battle, these various divisions within the Wisconsin employer community became quite pronounced. There are a small number of firms, accounting for about 8 percent of state employment, for which UI is a way of life. These include certain construction, manufacturing, and other firms. In these firms, layoffs (due to weather, model changeovers, and other reasons) are normal, frequent, and accepted.

There's a much larger slice of the state economy where UI benefits are virtually unheard of. Many of these are family businesses, involving a great deal of part-time work and work at or near the minimum wage. In such a setting, it is often the task of the wife to piece together a workforce to accord with the peaks and valleys of the day, the week, and the seasons. The work patterns are often tailored to the needs and the availabilities of people in the neighborhood. In such a setting, UI—paying people \$196 per week for not working—is seen (even in Wisconsin in 1984) as the spawn of the devil.

Many employers had not paid a state UC tax since 1979. The financial crisis, for such employers, involved the threat of large added FUTA and interest charges, as well as a large state UC tax—and perhaps all of these. The crisis caused all Wisconsin employers to become involved in UC financing questions for the first time in many years. In this sense, the problem burst the bounds within which UI issues had normally been considered.

Wisconsin's 1983 Legislation

Wisconsin's political leadership (the governor and the majority and minority leaders in each chamber of the legislature) devoted a great deal of time throughout 1983 to the UI program—far more such attention than had been devoted to UI matters for decades. Two major packages of

legislation resulted. The first package comprised a number of laws which made sharp increases in taxes and cutbacks in benefits, aimed at stabilizing the fund for the next few years. The second involved legislation dealing with the UC policy structure and process.

Tax and Benefit Changes

As noted, the UC Advisory Council had been deadlocked for about three years. In March 1983, the Governor created a special panel to develop a solution. This was chaired by the Secretary of the Department of Industry, Labor and Human Relations and included the majority and minority leaders of the two chambers of the legislature. In about a month this group produced what became Wisconsin Act 8. In the fall they produced Wisconsin Act 99, which modified certain of the quit and misconduct provisions.

As to taxes, the wage base was increased from \$7000 under the old law to \$8000 in 1983, \$9500 in 1984 and 1985, and \$9700 in 1986 and thereafter. The zero rate was abolished; the lowest rate was set at 0.4 percent. The balance required to qualify for the lowest rate was increased from 8.5 to 10 percent of taxable payroll. The top rate was increased from 7.4 to 8.5 percent.

The limiter on rate increases was moved from 1 to 2 percent. Writeoffs were banned outright in connection with 1984 and 1985 rate determinations and will be permitted thereafter only for firms which have paid the top tax rate for the two preceding years. Voluntary contributions can only be used to reduce the rate by a single bracket, and the size of the brackets was greatly reduced. Provision was made to charge the state share of extended benefits, and certain benefits stemming from quit employment, to employer accounts.

Under these provisions, state UC taxes rose from \$222 million in 1982 to \$560 million in 1984 and are estimated at \$604 million in 1985—roughly double what they would have been under the old law.

Benefit provisions were significantly tightened. The number of weeks of regular benefits was reduced from 34 to 26. The number of weeks required to qualify for benefits was increased from 15 to 18 in 1984 and 1985 and to 19 weeks in 1986 and thereafter. A wage qualification was introduced. During the base period the claimant must have earned the product of: 30 percent of the state average weekly wage times the number of weeks required to qualify. Benefit rates were frozen indefinitely at a maximum of \$196 and a minimum of \$37 weekly.

Where an employee is discharged for misconduct, all credits applicable to that employer are cancelled. This continues. Under the old law the

employee had only to wait three weeks to draw benefits based on other employment. Under the new law a requalification is required: 7 weeks of work in covered employment, with earnings equal to 14 times the benefit rate.

As to quits, the old law required a requalification involving 4 weeks of work, not necessarily in covered employment, and earnings of \$200. There was no reduction in benefits. The new law continues the various good-cause justifications for quitting, and otherwise provides:

- A quit-to-take provision. To meet this, an employee must have had the specific job offer when he/she quit the other job; new job must be in covered employment; must work at least 4 weeks in that job; and must meet one of four other conditions. If all this is met, the employee can draw benefits based on the quit employment, without reduction.
- Otherwise, the employee must requalify with 7 weeks of covered employment, and earnings 14 times the benefit rate. The benefits based on the quit employment are cut in half.

These various benefit cutbacks reduced benefit payments by about 17 percent in 1984, 20 percent in 1985, and 23 percent in 1986 below what they would have been under the old law.

Policy Structure and Process

In August 1983 a second group was appointed by the Governor to develop a new policy structure and process for the UI program. This group included all five members of the first group (the Secretary as chair and the four legislative leaders) plus three others: the president of the State AFL-CIO, the president of the Wisconsin Association of Manufacturers and Commerce, and a prominent labor attorney. The two presidents had been active on the UC Advisory Council for many years.

It is necessary to mention the setting in which this new group began its meetings. The spring legislation, involving substantial tax increases and the first significant benefit cutbacks in the half-century of life of the program, had caused a great deal of controversy and bitterness. The state's political leaders were shocked and dismayed at what they found as they began delving into the UI area—the depth and complexity of the unresolved problems, the harsh choices available, and the demonstrated failure of state institutions (not just the Advisory Council, by any means) to do what might reasonably have been expected of them. There was a great deal of bitterness. The fall 1983 sessions contributed greatly to a necessary process of healing and rebuilding.

These sessions came to involve a top-to-bottom reconsideration of the UI policy structure and process in Wisconsin. Many alternatives were

considered, and at first the preponderance of opinion clearly was to abandon the council approach—or, at most, to provide a very weak council.

After considering alternative approaches at considerable length, however, it was decided to continue with a strong council. Wisconsin's political leaders concluded that the council should have real power, so that it could attract to membership people who could commit a significant constituency. A policy structure including such a council was deemed to be more promising than the more traditional approach centered upon an executive department and standing committees of the legislature. This decision was the product of about 10 meetings over a period of four months, each meeting of several hours' duration. At each of these meetings, Wisconsin's political leaders considered the pros and cons of various alternatives.

What emerged had three main elements. First, a strong council, all members to be newly appointed. Appointment would be by the Secretary of the Department of Industry, Labor and Human Relations, not by a quasi-judicial body. The Council is expected to vote, with the votes of 7 (of the 10) members necessary to take a position.

Second, a strong new policy role for the Department of Industry, Labor and Human Relations. On January 15 of every odd-numbered year, the Department is to provide to the Governor and the legislative leaders projections of UI receipts, benefit payments, and fund status over the next several years, together with related legislative recommendations. The report is to show the position of the Council on each recommendation.

Third, the Governor and the legislative leaders are to have the month from January 15 to February 15 (when the Department is to report to the entire legislature) to decide whether to handle the UI package through a special panel. At the request of any two of the four leaders, the Governor is to convoke a special panel (the four leaders, chaired by the Secretary, as in 1983) in lieu of following the normal legislative route.

The Systemic Deficit

Under Wisconsin's current law, state UI tax receipts climbed from \$222 million in 1982 to \$301 million in 1983 to \$560 million in 1985. Thereafter, tax receipts are estimated in the annual range of \$440 million to \$460 million from 1986 through 1989. The sharp drop from 1985 to 1986 and thereafter reflects the return to much lower tax rates of many of the state's stable employers with substantial payrolls. These firms wound up in higher tax brackets in 1984 and 1985, due to the increase in taxable wages and higher

tax rates and reserve ratio requirements. Once these firms have increased their balances sufficiently, they will qualify for a very low (often the minimum) rate.

From a peak of \$738 million in April 1984, Wisconsin's UI debt is projected (under current law) to fall to \$443 million in December 1986 and to \$125 million at the close of 1989. Added FUTA taxes are expected to be avoided through 1986, but are expected to be paid beginning in 1987. They would amount to \$458 million for the years 1987-1989 together. These added FUTA taxes would be necessary because, due to the falloff already noted, state UI tax receipts will not be adequate to cover benefit payments and to make the prescribed debt reduction. To put it another way, without the added FUTA tax Wisconsin's debt would grow from 1986 to 1989—even without a major recession.

Wisconsin's UI system, then, is not in equilibrium. Benefit payments will tend to exceed tax receipts over a period of years. This systemic deficit results from the relationship of the maximum tax and the solvency tax, given the current structure of benefits.

The maximum UI tax in Wisconsin is 8.5 percent of \$9700, or \$824.50 per worker. With a maximum benefit check of \$196 per week, the maximum tax will cover 4.2 benefit checks. For average payrolls and average benefit amounts (rather than maximums) the top tax will cover about 4.7 checks per worker per year. A firm whose employees draw an average of 4.7 UC checks per year or less will pay its own way in the system; firms whose employees draw more than 4.7 checks per year, on the average, do not pay sufficient taxes to cover the resultant benefits. In years of low unemployment (such as 1978-1979) about half of benefit payments involve firms whose employees are drawing an average of 4.7 or more benefit checks per year; in years of high unemployment (such as 1980-1983) about two-thirds of benefit payments are in this category. Thus, a very large part of Wisconsin's benefit payments involve firms which aren't going to pay for them.

Wisconsin's UI tax is in two increments: a basic tax, which is credited to the account of the employer, and a solvency tax which is credited to a statewide (balancing) account. Through the workings of the reserve ratio system, the basic tax will cover benefit payments up to a point. The solvency tax is intended to cover benefit charges beyond that point. The solvency tax is set at about 35 percent of the basic tax. This means that a firm whose employees are drawing an average of (say) 3 benefit checks per year will pay \$1 of basic tax and 35 cents of solvency tax per \$1 of benefits. These firms with relatively low layoffs are paying a sufficient tax to cover their own benefit charges plus 35 percent. The problem is that 35

percent isn't enough to cover the deficits being incurred by the high-layoff firms.

Given the current structure of benefits, there are essentially two ways to solve a problem such as this: either raise the maximum tax so that it will yield much more than \$824.50 or raise the solvency increment to something much more than 35 percent. Until changes along these lines are made, the Wisconsin fund will be in deficit under the present benefit pattern. Increases in the wage base and tax schedule will produce temporary cash inflows, as noted, but the underlying problem will remain.

The Mid-1980s and Beyond

The remainder of this paper is devoted to a discussion of the problems and issues which appear, to this writer, to be most worthy of attention at this stage of the UI program.

The Incentive for Reform

During most of 1983, the Governor and Wisconsin's four legislative leaders devoted a great deal of their time to the UI program. Much was accomplished. If this pattern could be repeated and continued on state and national levels, we could in time reduce our UI problems to manageable size.

But, of course, this can't continue. The 1983 experience was a once-in-a-half-century kind of thing, stemming from the fact that the UI problem had assumed crisis proportions. The crisis brought to the UI area the very best that Wisconsin has to offer—in terms of political leadership and skill, dedication, intelligence, courage, and clout. Our problem has to do with the other 49 years of each half-century when the leaders can devote only fragments of their time to the UI area and the system has to be run by the regulars instead of the stars.

If necessary corrective actions are to be undertaken in the UI area, two things are necessary. First, there have to be bureaucrats who are willing to work hard and to develop and support difficult and unpopular positions. They are not easy to find in an American bureaucratic system that offers so many attractive alternatives—jobs that pay just as well for dealing with matters at a far lower level of difficulty and that offer greater long-run rewards and job security.

The other requirement is for politicians with a combination of courage, skill, and willingness to devote time to the kind of problem that isn't going to make good copy back in the district.

The council approach, as recently reconstituted in Wisconsin, provides part of the answer. This brings into the process political operatives who have some of the attributes mentioned.

Asking the Obvious Questions

There are some very obvious questions having to do with the purpose of the UI program. For example, to what extent is the program intended to provide additional income each year to workers with substantial earnings, who elect to work in seasonal jobs? What purpose are we serving in providing \$5000 per year in UI benefits, year in and year out, to workers who have \$40,000 per year in wages and other income? How do we relate that kind of benefit spending to payments for a worker who is laid off for the first time in many years and who has no other income for the year? It is time that we begin exploring these questions. We don't need to become embroiled in a means test along the way.

Similar questions exist on the tax side. For example, there is probably general agreement that firms which are hit hard by a recession should not be burdened—while struggling to recover—with paying 100 percent of the benefit charges attributable to them. What about firms, though, that year in and year out make reasonable profits and routinely run up (and write off) deficits in their UI accounts equivalent to several thousand per worker?

No income maintenance program, and no tax system, is immune from problems of the type mentioned. When they cease to be exceptions and begin to predominate, it is time to pay serious attention to them.

Planning for the Best

It's said that our generals are always planning for the last war or assuming that our potential enemies will follow a course of action which we have weapons to counter. The same tendencies are apparent in our planning for social programs, certainly including UI. We tend to hope that we have seen the worst, that the future will be at worst a lot better than our past, and that the economy will somehow serve up a set of questions for which we have prepared the answers.

It is suggested here that reality is not so benign. Every decade in this century has produced massive developments which were not foreseen in its beginning. In the unemployment area we have gone through a series of jolts, each tending to be worse than the last and none foreseen. It is not wise to assume that we have seen the end of this process.

UI planners ought to be giving some thought to three sets of possibilities. First, unemployment levels in the next several years might be much higher than those of the early 1980s. This could result from a number of factors: the federal deficit, the third-world debt problem, other aspects of the international monetary situation, unresolved problems within the American economy, and some future equivalent of the energy crisis—to name some. We ought to be giving some thought to how we

would react to such a development—other than assuming that the federal government would then pay additional weeks of benefits.

A second set of possibilities involves federal action. The UI literature abounds in reinsurance proposals and other schemes under which the federal government would assume a greater slice of the UI burden. There is a strong possibility, though, that the federal deficit and competing priorities generally could drive the federal partner to retrenchment in the UI area. This could involve a cutback in federal spending for extended benefits or supplemental compensation, or increases in the FUTA tax to cover such programs. Federal lending provisions—still very liberal—could be curtailed. Some attention ought to be paid to these possibilities. For example, if we must take a cut, where is the best place to take it?

The third potential problem area in the UI world involves the degree of popular support for the program. There has been a tendency, on the part of those active in the UI field, to assume that public support for the program is rock-solid. It isn't—not even in Wisconsin in 1984. To put it softly, there are many aspects of the UI program that are not simple to defend. A family, for example, many of whose members work long hours to earn a net income of \$25,000 in a family business does not like to be taxed to provide UI benefits for workers whose wages are much higher than that. There is no use pretending such questions do not exist; they do. And no real friend of the UI program will sweep them under the rug. What is needed, then, is to give some very serious thought to the possibility that there will no longer be strong popular support for the program as it is now structured.

The Federal Pattern

In closing, I would offer some suggestions regarding federal action.

First, a general proposition: Any new UI ideas in this vein ought to be in line with federal budget realities. And those realities are as follows: the federal government isn't going to be looking for new ways to spend money for the foreseeable future, and the UI area is a good candidate for cutback.

Second, it is suggested that the federal government sharply increase the wage base from the present \$7000 to something in the range of \$20,000 or more. This would bring in additional federal revenues (even if rates were adjusted downward) and would help with the state financing problems.

Third, it is suggested that the federal government make much greater use of interest rates to provide financial inducements to states. For example, interest rates up to 20 percent could be paid to states with high trust fund balances; interest rates of up to 20 percent could be charged on

large outstanding debt. It should be possible to devise a pattern that will sharply reduce overall net financing costs at the federal level while providing strong incentives to states to strengthen the financial base for the UI program.

Fourth, it is suggested that the federal government place heavy emphasis upon effective charging of benefit costs. As noted, less than half of Wisconsin benefit payments are effectively charged. It is possible for a firm to pay \$800 per employee per year into the fund, while its employees draw an average of \$4000 in benefits each year. There are strong indications that many of our problems would disappear if the top tax covered a larger share of the benefits paid. If the employer participates in a pattern in which the employee draws 15 or 20 weeks of benefits each year, and the employer pays for it, there is not as much ground for concern as there is today. The federal government could encourage effective charging (or discourage ineffective charging) in a variety of ways.

The proposals made here would not involve higher federal outlays. In fact, properly implemented, they could reduce federal spending while providing strong incentives to states.

State Unemployment Insurance Fund Adequacy: Past and Present Perspectives*

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What is an adequate reserve level for a state unemployment insurance (UI) fund? How has that issue been viewed over the years, and what is its future? Let me first set forth a few basic points of departure: (1) Each state must finance its own benefit costs; with minor exceptions, states rely on employer payroll taxes for that purpose. (2) Benefit costs vary widely over the business cycle. (3) Abrupt sharp increases in payroll taxes are undesirable, making “pay-as-you-go” UI financing unacceptable. (4) One alternative is to borrow funds when needed and gradually repay, but that now incurs costs and some loss of program control. (5) The other alternative is to build reserves gradually in advance of need—historically, the preferred approach.

UI Beginnings and Developments

When UI was adopted in the gloom of the Great Depression, expected high costs led to great concern and caution. A 3-percent payroll tax to pay for UI was regarded as all that business could afford in its depressed state. The question was not how much of a reserve fund to build, but what 3 percent would finance. The answer was: a very limited program by present standards.¹ By 1939, however, it was clear that the plan adopted was too conservative. Despite high unemployment, benefit costs were running well below current revenues. Reduced tax rates were not allowed under federal law without experience rating, still a few years off.² Amend-

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* Facts and observations presented in this document are the sole responsibility of the author. The viewpoints do not necessarily represent positions of The W.E. Upjohn Institute for Employment Research.

¹ The provisions adopted generally included a weekly benefit at half pay up to about 12 weeks after a waiting period ranging from 2 to 4 weeks.

² State UI taxes are credited against the federal UI tax; credit is lost if the state tax is reduced without experience rating.

ments to reduce the overall federal tax rate or to speed up experience rating failed in 1939.

During the war years, 1940–1945, UI became largely a revenue-producing machine; little was paid out in benefits. As experience rating took hold, tax rates gradually declined. By the end of 1945, state reserves totaled over 10 percent of all covered payrolls, about 6 years of taxes at 1945 rates.³ After the war the economy began a quarter-century of phenomenal growth and prosperity. Fears of relapse into another depression vanished. The very high state reserve funds came to be seen as excessive. Tax rates continued to decline. The period was marked by several recessions, however, when benefit outlays exceeded current revenues. After the 1954 recession, total state reserves were down to 6 percent of total payrolls and state taxes to less than 1 percent of total payrolls.

The severe 1958 recession, followed soon by the milder one of 1960–1961, shook the program financially. Fund adequacy moved into the forefront of UI issues. Weakness had appeared in a few states earlier in the 1950s, leading Congress to establish a loan fund for states with depleted reserves. Conditions for borrowing were easy, no interest applied, and repayment could be delayed and prolonged. A few states borrowed in the 1958 and 1960–1961 recessions.

Meanwhile, a group of UI financing specialists developed an approach to evaluate the adequacy of state UI funds.⁴ A state's reserve is compared to its high benefit cost experience. The reserve, taken as a percent of total payrolls, is divided by the highest previous 12-month benefit cost, also taken as a percent of total payrolls. A resulting "reserve multiple" that falls between 1.5 and 3.0 should provide a reasonable assurance of adequacy. A state's own experience and tax structure determine where, within this range, its reserve multiple should be. Some states replenish reserves quickly with substantial tax increases soon after a recession and consider as safe a multiple level of 1.5 or lower. Aggregate state reserves fell to less than 3 percent of total payrolls in the early 1960s. Tax rates climbed to average about 1.4 percent of payrolls in 1962. At the end of 1964, several years after the last recession, 23 states had reserve multiples under the recommended minimum of 1.5, including 6 under 1.0. The multiple was 2.0 or more in only 21 states.

During the rest of the 1960s, unemployment and benefit cost rates declined to their lowest levels since World War II. Fund solvency

³ Data cited in the paper are based on *Unemployment Insurance Financial Data* and other materials of the U.S. Department of Labor, Employment and Training Administration.

⁴ Benefit Financing Committee of the Interstate Conference of Employment Security Agencies.

concerns seemed remote in this heady atmosphere. State UI tax payments in 1969 averaged 0.7 percent of total wages, the lowest ever, but still more than the benefit cost rate. Yet the year-end reserve multiples of 16 states were below the 1.5 level; multiples were less than 2.0 in 30 states. One might have expected generally better reserve positions after so many years of relatively low costs.

The recessions of 1970–1971 and 1974–1975 sent the UI system into reverse as heavy benefit outflows weakened the not very robust state funds. The severe blow struck in the mid-1970s when many funds went under. As 1976 closed, 23 UI programs were in debt, including 13 in the 16 states which had reserve multiples under 1.5 at the end of 1969 and 6 more with multiples under 2.0. Only 3 states with reserves below the 1.5 multiple at the end of 1969 escaped insolvency in the 1970s. Improved economic conditions in the later 1970s allowed some debt repayment and limited fund recovery. Yet the funds were not in good shape to take the blows that lay ahead. Only 10 programs had negative fund balances as 1979 ended, but only 2 funds met the minimum 1.5 multiple.

The spotty recession of 1980 was soon followed by the severe general recession of 1982. The majority of UI funds became insolvent. A total of 31 states found it necessary to borrow at some time during the 1980–1984 period. About half these states had also borrowed in the 1970s. By the end of 1982, the net total of all state reserve funds was negative. Only one out of four states has managed to avoid any borrowing since 1970. We are now in a recovery period when debt repayment and reserve accumulation can proceed. There is a long way to go to fund solvency and adequacy.

The Future of State Fund Adequacy

At mid-1984, 20 states had negative net reserve positions.⁵ Few states had positive reserves exceeding 1 percent of total payrolls, and no fund came close to the reserve multiple of 1.5 recommended for minimum adequacy. State reserves normally are down after a recession, but the way back to adequate levels is very long this time. Most states have increased their UI taxes; many have restricted their benefits and made eligibility much tougher. The business pickup has cut insured unemployment substantially. The results have been higher UI tax revenues and lowered benefit outlays. Fund recovery should be good, barring another economic slump soon.

Will it be good enough to restore solvency and reserve adequacy? To gain a notion of what it might take to achieve that end, I developed some

⁵ A total of 26 states had outstanding loans at this time, but 6 had net positive reserve balances. In November 1984, the total was 19 states with loans outstanding.

simple projections for the U.S. as a whole (see Table 1). They are based on a number of assumptions about the economy; payroll growth, benefit outlays, and average tax rates. The projections cover the years 1984

TABLE 1
Projected U.S. Aggregates: State UI Covered Payrolls,
Revenues, and Benefit Outlays, 1984-1987

| Year | Total Payrolls (billions) | State UI Tax Revenues | | State Benefit Outlays | |
|-----------------|---------------------------|-----------------------|-------------------|-----------------------|-------------------|
| | | Percent of Payrolls | Amount (billions) | Percent of Payrolls | Amount (billions) |
| 1982 (actual) | \$1,184 | 1.02% | \$ 12.1 | 1.82% | \$21.6 |
| 1983 (prelim.) | 1,236 | 1.29 | 15.9 | 1.66 | 20.5 |
| 1984 | 1,310 | 1.50 | 19.6 | 1.1 | 14.4 |
| 1985 | 1,389 | 1.75 | 24.3 | 1.0 | 13.9 |
| 1986 | 1,472 | 2.00 | 29.4 | 1.0 | 14.7 |
| 1987 | 1,560 | 2.00 | 31.2 | 1.0 | 15.6 |
| 1984-87 (total) | | | \$104.5 | | \$58.6 |

Source: For 1982 and 1983 data, U.S. Department of Labor, Employment and Training Administration.

through 1987. First, I assume no recession before 1988. Unemployment and benefits are down a good deal in 1984—the outlay projection for this year is a fair estimate. Thereafter, a benefit cost rate of 1 percent of payroll is assumed, similar to prior post-recession experience. Payroll growth is projected at a rate of 6 percent each year, much slower than earlier post-recession periods. Assumed here are more moderate labor force increases and continued restraint of wage inflation. Revenue projections are high, especially after 1984, rising to 2 percent of payrolls. The previous high post-World War II average rate came in 1962 at 1.4 percent of total payrolls. The higher projected rates help illustrate the magnitude of the effort required.

The highest national 12-month benefit cost rate occurred in 1975, reaching 2.24 percent of payrolls. Applying the minimum adequacy reserve multiple rule of 1.5 calls for a reserve ratio of 3.36 percent for the aggregate of all state reserves. Based on projected payrolls for 1987 of \$1,560 billion, reserve funds should total about \$52 billion at year end to meet the minimum level.

At the close of 1983, the net aggregate of state reserve funds was a negative \$6.5 billion. Projected revenues and benefit outlays over the next four years indicate surpluses totaling \$46 billion. These surpluses alone would raise total reserves by the end of 1987 to almost \$40 billion. To this total must be added interest earned by positive reserve balances which

accumulate in the state funds, an addition of probably \$5 billion or so during the period.⁶ Moreover, federal penalty taxes are imposed on employers in states with loans outstanding for two years or more. These payments go toward reducing the state debt, thereby increasing the fund level. Such debt reductions may total a few billion dollars in the 1984–1987 period. Taken together, then, these projections yield aggregate state reserves at the end of 1987 approaching \$50 billion, somewhat short of the minimum goal. Even so, it would be a major accomplishment to reach that point.

Is that result likely? I would have to say that the chances are slim. Two major doubts cloud this outlook. The assumption of no recession through 1987 is based on experience since 1949 averaging 4 to 5 years between recessions. The present recovery is almost two years old and mutterings are already heard about a possible slump sometime next year or in 1986. The other question concerns the revenue projections. Despite the tax increases already adopted by many states, it seems unlikely that the high average rates projected for the next three years can be achieved or maintained without further state action. Politically speaking, such action seems at least dubious. Even if the shaky scenario just described were to be achieved, it must be recognized that the goal of adequate reserves in all states would remain a distant one. The projections cover the U.S. *aggregate* fund picture. Many individual state reserve funds would fall well below the minimum adequacy level criterion at the end of 1987; several probably would still be in debt. An economic downturn in 1988 would again spell widespread insolvency and massive debt, this time with tax rates already high.

Other Potential Aids to Solvency

As noted earlier, each state is responsible for its own UI benefit costs. Cost rates vary widely among the states mainly because of variations in unemployment rates, and especially during recessions. Sounder UI financing policies in the past would have strengthened UI funds in some states, yet it is doubtful that all states could have escaped insolvency given the troubled economic conditions of the past 15 years. If similar economic patterns occur over the next 10 years or so, the UI financing burdens in some states may simply become overwhelming. It is useful to recall that the federal law enacted in 1935 to establish the UI system was motivated primarily by the fears of competitive disadvantage. States wanting to provide employer-financed UI were inhibited by the thought that other

⁶ Interest paid by states on federal UI loans may not come from state UI reserves, but is financed separately from UI.

states might not do the same, thereby placing employers in a UI state at a disadvantage. The federal unemployment tax was imposed originally to assure that all employers would pay a tax whether or not their state adopted UI. States which did adopt UI thus relieved their employers of most of the federal tax.⁷ Now, half a century later, the wide disparities in interstate costs and in the taxes needed to finance benefits are again giving rise to fears of competitive disadvantage.

Two approaches might be considered to ease the impact of such extremes and the funding problems in hard-pressed states. One is a national reinsurance fund accumulated from a uniform assessment on all employer payrolls, probably as part of the federal unemployment tax. States experiencing excessive UI benefit costs in a given period would draw grants from the fund to cover a portion of the excess. The reinsurance idea has been debated off and on since UI began in this country, most recently in the late 1970s. Sticking points concern how "excess cost" is measured, how and when states are eligible for grants, and the size of the grants. Politically, however, the impasse stems from the resistance of states which generally have not faced high costs. Reinsurance proposals attracted most, though insufficient, support in the 1970s when insolvency first spread so widely.⁸ So far, the reinsurance idea has not reemerged actively in the 1980s.

The second approach is also a form of national pooling of costs. Such pooling is already applicable in the system for extended benefits, payable during periods of high unemployment. Extended benefit costs are shared equally by the federal and state governments. The federal share is financed by a pooled fund accumulated from a portion of the federal unemployment tax; the state share is paid out of state reserve funds.⁹ The approach suggested is to expand on this idea in one or both of two ways. One is to raise the proportion of the federal share to, say, 75 or even 100 percent of extended benefit costs, perhaps relating the share to the level of the unemployment rate or some other appropriate indicator. The other is to provide some federal sharing of costs for regular benefits covering, perhaps, the 20th to 26th week of unemployment or beginning with the 15th week. Such cost-pooling could be significant during recessions when interstate cost disparities are largest.¹⁰

⁷ Credit for state UI taxes is offset against the federal tax.

⁸ Congress seriously considered several proposals but adopted none.

⁹ Federal-state extended benefits, adopted in 1970, trigger on and off based on state insured unemployment rates. Federal Supplemental Compensation, adopted in 1983 and payable through March 1985, provides added weeks of benefits financed entirely by federal general revenues.

¹⁰ A House Ways and Means Committee panel plans to review proposals concerning extended and supplemental benefits, including the degree and source of federal funding as determined by unemployment rate levels.

Conclusion

The prime responsibility for regaining UI fund solvency and adequacy rests with the states. Over the years, state benefit costs have been financed at levels averaging somewhat over 1 percent of all payrolls. Adding UI costs financed by the federal unemployment tax probably raises the total to less than 1.5 percent of payrolls, not half of the original estimate of a 3 percent cost for a very modest program. Costs have risen in recent years, but are still under the 3-percent level overall. For some states, of course, that level has been reached or exceeded at times. The long habit of relatively low UI taxes in general, however, makes the need now for a sustained higher tax level a painful one to contemplate.

Unless we are headed for a long, relatively recession-free period of stability and growth, the prospect is for continuing, perhaps more serious, problems of state fund insolvency. The consequence may well be an end to the federal-state UI system as we have known it. Increasing federal control seems inevitable, as has been the trend in recent years. That trend runs counter to the presumably dominant current preference for less federal and more local control generally in government. Limited national pooling to cover part of the excessive UI costs that occur in some states during recessions may make it easier to preserve the basic state system, just as the federal unemployment tax created that system in the first place.

DISCUSSION

EDWARD M. GRAMLICH

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The Burtless-Vroman (BV) paper is an attempt to evaluate the performance of the UI system since 1979. While at several times BV used words like “shortfall” and said that UI benefits have been paid to an “unusually small” share of unemployed workers, they never really came up with a straightforward evaluation of performance—was it bad, good, fair, or what? Moreover, while they imply that they don’t like certain features of the system, they never say what, or what they would change. I’d like to use some of their facts to fill in the blanks.

To begin with the basics, one of the perennial policy issues in the U.S. is that of federalism—should responsibility for a particular program be federal, state, local, or mixed in some way? Many programs are mixed in that there is a federal grant to states or localities; the UI program is mixed in a different way. Rather than being funded by a federal grant, the program is basically run by states—they set the employer payroll tax rates and the benefit provisions. These programs are financed out of state trust funds that borrow from the federal government if they acquire a negative balance.

The prevailing empirical regularity, an underlying theme of all three papers in this session, is that state trust funds undersave. Even in the good years up to 1970, about one-third of the states *were* underfunded, and almost no states *are* fully funded now. More than 30 states have borrowed from the federal government since 1980, and Blaustein figures the 1983 balance is more than \$50 billion below the balance that would be shown were the funds in actuarial equilibrium. BV show, convincingly I think, that the combination of prior undersaving and the extreme recession of 1982 is the reason UI has appeared to perform poorly in recent years. States have had to cut back when times got bad.

BV then show that this perverse fiscal behavior at the state level was caused by changes in federal policy over the past four years—the federal government no longer discusses forgiving state debts, it has imposed penalty payroll tax rates for states with large debts, and it now charges interest on state loans. BV certainly imply, though they don’t state outright, that these federal measures were mistakes.

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At this point I'd like to part company with BV. I want to argue, first, that the underlying structure of the UI program is a good one, better than most public finance theorists would have come up with, and that the recent tightenings, attributable I think to both Carter and Reagan, were sound. They have led to transitory difficulties, but at some point or other the steps needed to be taken.

While none of the papers pointed it out, the UI system is designed incorrectly from the standpoint of received wisdom in the public finance area. The received wisdom has it that stabilization policy should be a national government responsibility. The national government is the one to engage in countercyclical fiscal policy, while the states are to balance their budgets. Whether for this or other reasons, all states except Vermont now have constitutional provisions prohibiting deficit spending on current account. The only exception I know of is for UI, where states can run current account deficits through the mechanism described above. So UI is set up differently than all other state programs, and differently than public finance theorists say it should be set up.

On this issue I think the public finance theorists are wrong and the anonymous founders of the UI system, perhaps including Wilbur Cohen, were right. The ultimate question is whether stabilization policy should be a national or a state responsibility. Imagine a situation where demand or supply shocks were positively correlated across the country. Then it clearly wouldn't matter whose responsibility it was to stabilize; the deficit policy would be much the same in either case. But if demand shocks were *not* positively correlated, it does matter. If there is excess demand in one area and excess supply in another, the national government can take no effective action against the shock. But states can. Those in the excess demand areas can run surpluses and those in excess supply areas deficits.

The UI system permits this to happen. If unemployment is low in some states, these states can build up their balances. If unemployment is high, states can run down their balances and even borrow. But if we want to encourage both fiscally responsible and stabilizing behavior in the upswings, the federal government needs to behave like a bank in the downswings; it cannot forgive loans or interest, and it needs to impose penalty taxation. As I read all those papers, this is exactly what has happened lately. Pre-Carter and Reagan, the federal government didn't take the UI debt seriously and states didn't save enough. Now the federal government does and states should know that they had better save. I can join with BV in lamenting the fate of the workers who didn't get UI in the recent recession, but I would attribute most of the blame not to the bank who was tough, but to the one who was lenient.

DISCUSSION

WILBUR J. COHEN

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Unemployment insurance has become a neglected aspect of public policy evaluation. While the subject has been included in several annual IRRA programs, the number of “experts” studying this important program is very limited. Compared to the number of scholars working in the field of Social Security, retirement, or health policy, the number of independent students of unemployment insurance (outside of federal and state governments) is negligible.

In recent years much attention has been given by economists and the press to the alleged “bankruptcy” of Social Security. But Social Security never went bankrupt and it is not bankrupt now. On the other hand, the state unemployment insurance system is bankrupt! Many states have had to borrow from the federal government in order to be able to continue to pay promised benefits. But it is difficult to find national journals or academic symposia discussing the problem or offering specific solutions to current or future difficulties.

The recent report (1980) of the National Commission on Unemployment Compensation has received virtually no political attention. The unemployment insurance system of the United States limps along, operating far below its capacity as an economic stabilizer.

That is not to say that the countercyclical contribution of the unemployment system has been negative. Blaustein’s paper shows that about \$42 billion was paid out by the states during the two years 1982 and 1983, about \$28 billion was received in tax revenues, yielding about \$14 billion in a compensatory countercyclical impact. This amount, however, really should be much more in order to contribute to the restoration of more favorable economic conditions. The present unemployment insurance system is simply not contributing sufficiently to countercyclical policy and not to the extent it could. At the same time, we can agree with Blaustein that the system currently has “a long way to go to fund solvency and adequacy.”

The Burtless-Vroman paper convincingly demonstrates that the rela-

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tive countercyclical impact of the state systems declined from 1976 to 1983.

Not only has the overall countercyclical impact on the economy declined, but from the standpoint of the worker, his family, and the community, the state-by-state program is inadequate. The number of persons estimated to have experienced a period of unemployment in calendar year 1982 was 26.5 million ("Work Experience of the Population in 1981-82," BLS Bulletin 2199, p. 1), equal to 22 percent of the labor force. However, there were only 11.6 million beneficiaries of the program of which 4.2 million exhausted their benefits.

The Miller paper describes the trials and tribulations of the pioneer Wisconsin law. Almost exactly 50 years after the Wisconsin law was enacted, it went bankrupt! One recommendation by Miller I endorse very enthusiastically, namely, to increase the maximum contribution base from the present \$7000 a year. My suggestion is that it could well be one-half of the maximum contribution base in the Social Security program. This could have made the Wisconsin base \$19,800 for 1985 (one-half of \$39,600). But more important, it would be automatically indexed each year to an annual increase in wages.

Both the financial and benefit aspects of the state-federal system of unemployment insurance needs revision. On this coming 50th anniversary of the Social Security Act (August 14, 1985), it is important to consider improvements.

IX. COMPARABLE WORTH: WHERE DO WE GO FROM HERE?

Research Needs in Comparable Worth*

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In October 1983 a small group of social scientists met, under the auspices of the National Research Council (NRC) Committee on Women's Employment and Related Social Issues, to discuss research needs in the comparable worth area. The seminar was chaired by Donald J. Treiman, a sociologist and member of the committee, and funded by the Ford Foundation. The group represented economics, sociology, psychology, anthropology, history, and the law; the participants took a broad view of their charge and considered comparable worth remedies in the context of general labor market behavior and other equal employment opportunity remedies. They did not attempt to set priorities among the research issues suggested. Some of the topics they suggested break new ground; others represent a continuation of already established research areas. Here, I briefly summarize portions of the research agenda that emerged, reflecting my own sense of priorities in this area. The full report of the seminar, including six papers prepared for the seminar and the complete research agenda will be published in 1985 by the National Academy Press in a volume entitled *New Directions for Comparable Worth Research*.^{••}

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• The views expressed are those of the author and not necessarily of the National Research Council/National Academy of Sciences.

•• Parts of this essay are taken from the full research agenda, co-authored by Heidi I. Hartmann, Patricia A. Roos, and Donald J. Treiman.

Comparable Worth

By “comparable worth,” seminar participants generally meant the strategy that calls for the realignment of the relative wage rates of jobs that are predominantly male or female if they are found to require the same level of skill, effort, and responsibility and similar working conditions, considered together. This strategy is addressed to single employers and is generally based on firm-specific job evaluation plans which are used to identify and measure pay-related job features. Concern for the average wage levels of jobs and occupations stems from the persistence of sex segregation in the labor market, the continued large wage gap between men and women, and the association of predominantly female jobs with low wages. Social observers have been fascinated for centuries with relative prices and wages—why is water cheaper than diamonds? What is a just wage? Why do some people earn vastly more than others? At issue in the current comparable worth debate, however, are only those differences that can be attributed to stereotyping, bias, or discrimination based on sex (or race or ethnicity). Current proponents of comparable worth claim that the wages of women’s jobs are depressed by discrimination and should be raised to levels paid in other, comparable jobs that are not female-dominated. In this context comparable worth is a strategy that addresses one aspect of discrimination in the labor market—wage discrimination. It does not address issues of equal access, promotion, and so on.

There are a number of reasons why comparable worth is opposed as a strategy for remedying wage inequality. Some analysts do not believe discrimination is a significant factor in the labor market in general, and especially not in affecting the relative wage rates of entire occupations. This characterizes June O’Neill’s position. Others agree with comparable worth advocates that discrimination in the labor market and in wage-setting is a problem, but disagree with the comparable worth remedy, perhaps because they see it as difficult to implement. Rather, they suggest more attention to issues of equal access, equal job assignment, and equal educational opportunities, which would all help to attack the basic causes of the problem—albeit in the long run. This characterizes Mark Killingsworth’s position. Killingsworth is especially concerned that women may lose jobs if their wages are raised to where they would be in the absence of discrimination and so suggests they continue to work at discriminatory wages. And it seems to ignore the standard neoclassical argument that eliminating discrimination would result in a more efficient allocation of resources. Another objection to the comparable worth strategy from this perspective might be that the comparable worth brush paints too broadly—it would not directly target specific instances of wage discrimination,

but rather through job evaluation might result in the realignment of many wage rates where discrimination is not a factor.

At issue in the current debate over the usefulness of comparable worth as a remedy for sex-based wage discrimination are a number of questions that have empirically determinable answers. Is discrimination a significant factor in determining relative occupational pay rates? How much of the difference in pay between male and female occupations is due to discrimination? How well do current job evaluation tools identify discriminatory wage differences? What is the elasticity of substitution for labor in the predominantly female jobs? If small, disemployment effects of comparable worth remedies are likely to be small; if large, they could be significant. Whatever the actual merits of the case, comparable worth remedies *are* being implemented, particularly in the public sector at state and local levels. Questions about the problems that emerge in implementation and the most effective solutions to them, and issues such as displacement of women workers, can now be studied empirically in "natural experiments." New research findings on these issues would make valuable contributions to the policy debate surrounding comparable worth.

Research Needs

Two broad sets of issues emerged from the discussion of the seminar. One set encompasses investigation of occupational wage differentials and discrimination, including their underlying causes. The second set encompasses wage-adjustment strategies, particularly job evaluation and comparable-worth-based adjustments, and their impact. It bears pointing out that, in the view of the seminar participants, economists do not have a monopoly on issues related to wage determination; sociology, psychology, and anthropology, as well as economics, offer relevant perspectives and methodologies.

We need to understand better how wages are set and what factors lead to wage differentials, in order to measure how much wage discrimination affects the relative average wage rates of jobs and occupations. Three research topics were identified by the seminar participants: (1) Wage-setting within enterprises: the influences of other employer practices, such as job assignment, as well as of workers' decisions; the impact of market forces and competition. Little research on wage determination within firms has been undertaken. (2) The behavior of workers within the labor market. Although substantial research has been carried out in this area, there is still no consensus regarding the relative importance of workers' choices (regarding investment in human capital, for example) vs. employers' assumptions and behavior. (3) The underlying cultural assump-

tions and belief systems that structure people's attitudes regarding appropriate pay levels for men's and women's jobs and appropriate work for women and men. How does our culture come to value certain kinds of work, or work done by certain kinds of people, more (or less) than other work? Research in this area would be new and pathbreaking.

With respect to the second set of research issues identified, we need to know more about wage adjustment strategies and their impact. If comparable worth is adopted as public policy, effective ways to implement the policy and to minimize any adverse impact will need to be identified. In contrast to research on some aspects of wage differentials and labor markets, this general area has received very little attention from the social science research community. In particular, three topics were identified by the seminar participants: (1) Improvement of existing job evaluation procedures to make them appropriate for the assessment of pay discrimination; for example, the extent of social judgment bias in existing job evaluation systems needs to be assessed. (2) The economic and other consequences of implementing comparable worth, especially the relative impact of various implementation strategies and the costs and benefits of the comparable worth strategy in comparison with those of other equal employment opportunity and affirmative action strategies. (3) The political aspects of the process of implementing controversial policies such as comparable worth, including issues such as consensus-building and power relations in the workplace. What strategies are likely to be most effective and to result in the most desirable policy decisions?

Of these issues, I would like to discuss particularly those that relate to underlying causes of wage discrimination (as important as I think the implementation issues also are).

Cultural Beliefs and Wages

The previous NRC Committee that reported on comparable worth in 1981 (Treiman and Hartmann 1981) concluded that there is no strictly scientific or technical basis for determining the relative worth of jobs, because "worth" is ultimately a matter of values. (The report noted, however, that once criteria of worth are agreed to, the establishment of job-worth hierarchies is amenable to technical solutions.) For this reason it is important to investigate the varying and competing belief systems underlying the value judgment made about different kinds of jobs and workers. While the centrality of the concepts of worth and value to wages is questioned by economists, who view wages as prices that signal us about the allocation of scarce resources, most economists would acknowledge that cultural beliefs and practices do play a role in wage determina-

tion. In my own view wages are not like other prices. Wages signal social status and political power as much as they do scarcity or surplus.

There is some evidence that virtually all societies with wage economies value similar attributes of jobs and that consensus exists within societies regarding what constitutes a “just wage” for different sorts of jobs (Treiman 1977, Jasso and Rossi 1977). The available evidence is highly aggregated, however; it refers to very general categories of occupations and to measures such as “prestige” or “just wages” rather than to more specific attributes of value of the kind that would differentiate jobs within individual enterprises. Research is needed on how more generalized cultural beliefs are transformed in workplaces and used as guides in determining wage rates and in assigning “appropriate” jobs to men and women and on what employers and workers value about jobs in specific settings.

Are there “folk” models that people use to justify setting differential wages for traditionally male and female jobs? For example, one very important belief system affecting the setting of pay rates in our society is the equation of the worth of jobs with existing pay rates, which are thought to be determined largely or solely by irrevocable economic laws, such as the “laws of supply and demand.” That in actual practice supply and demand may not always be the determining factors or that many factors such as discrimination affect supply and demand may not alter the underlying belief in the justness of wages “set by supply and demand.” What role does the widely shared belief that women are and should be primarily responsible for household and family care play in the labor market? Historians have shown how specific cultural constructions of gender have shaped women’s lives and influenced perceptions of women as workers (Cott 1977, Eisenstein 1983); similar analyses are needed for the present. In recent years, scholars of labor studies have developed the concept of work culture to describe the set of beliefs and practices that govern interactions at work (Melosh 1982); work cultures, too, legitimate or challenge current cultural constructions of work appropriate for women and men. Furthermore, why are the value systems observed in the workplace often contradictory? Why is it that certain “dirty” jobs traditionally held by men are considered inappropriate for women, particularly for white women—while nursing, which also involves “dirtiness,” is not and other dirty jobs such as cleaning are often associated with minority women?

To discern what employers and workers value about jobs in specific settings, it would be of interest to know how such values are formed, what they are, and how they change. Is there consensus that jobs requiring

more skill, responsibility, or effort, or performed under difficult or unpleasant conditions, deserve more pay? What about specific measures of these attributes? Even if there is consensus that skill should be rewarded, is there agreement as to which indicators are appropriate measures of skill? Are the skills that many women have as a result of keeping families and households running acknowledged in the workplace? If consensus is lacking, is lack of agreement systematic? That is, do employers and employees disagree in systematic ways? Do male and female workers disagree? What about manual and nonmanual workers? In short, we need to know far more than we do now about perceptions of what attributes of jobs should be compensated.

The overall research issue that emerged from deliberations at the seminar is the role that underlying belief systems play in the setting of wages, particularly in the explanation of why men's and women's jobs are valued differently. Proposed research questions on underlying belief systems focus on three major topics: (1) What are the varying belief systems that currently influence the wage-setting process? (2) Is the differential evaluation of male and female tasks reflected in the wage-assignment process? For example, does adding female tasks (e.g., typing, nurturing, waiting, clerical work) to job descriptions reduce the perceived value of a job? Does the established consensus about the worth of tasks in jobs decline if the number of women entering the field increases? Do the tasks change? (3) How are competing belief systems reflected in existing job evaluation systems?

Work Careers and Pay in the Workplace

At issue in the discussion of the merit of comparable worth remedies is the relative importance of preferences and discrimination in employment outcomes. In addition to beliefs of workers and employers, we need to know more about their behavior in the labor market and in workplaces.

Compensation systems within firms often set lower salaries for occupations held mainly by women than those held mainly by men. According to economic theory, differential salaries are attributable both to differences in demand for certain jobs and to the differing amounts of labor available. Hence, those jobs most in demand and facing the most severe shortages should command the highest salaries. Yet pay scales often seem relatively unresponsive to market forces. For example, despite shortages of nurses in recent years, nursing salaries have not increased substantially relative to other salaries. Instead, hospitals have used nonwage forms of competition to attract nurses (offering one-time bonuses, recruiting nurses from abroad, etc.). Hospitals also rarely differentiate nursing specialties

in compensation (Remick 1984). Case studies of salary-setting practices in hospitals would be very illuminating. For people employed in large organizations in both the private and public sectors, job salaries are a function of intraorganizational wage-setting practices that may adjust only slowly, if at all, to changes in the supply and demand for labor outside the firm or agency. Many large firms organize their internal labor markets into career ladders; they often promote from within and may have unique demands for labor that they supply with their own workers. Relative wage rates also reflect the values of management and must be responsive to employee perceptions of equity within an organization.

More generally, there is a strong need for additional organizational case studies of the kind Rosenbaum reports (1985) to help us better understand how wages are actually set within enterprises. We need to know more about the use of formal and informal job evaluation procedures, the ways in which job evaluation results are used in the wage-setting process, the ways market wages are taken into account through surveys and other means, the degree of response to and insulation from market forces firms experience in setting their wage rates, the local impact of the wage-setting practices of large organizations on other smaller firms in the local labor market, and, finally, the role of management-labor negotiations in the way wages are set for specific jobs. Ideally, such information would be available for a representative sample of enterprises so that it would be possible to understand variations in the wage-setting process for enterprises in different sectors. Analysis of this kind would go a long way toward helping us understand the role of organizations in creating and perpetuating pay differences between women and men.

Another way to approach some of these issues would be to study how wage structures are developed in new occupations, industries, and organizations. Are wage hierarchies established *de novo*, or do they mimic hierarchies already existing in other organizations? Most important, does sex-typing of new jobs or occupations occur prior or subsequent to wage assignment?

At an economy-wide level, it would be of interest to determine how sex segregation affects the relative wage rates of men's and women's jobs and what occupational wage levels would be in the absence of sex-based wage discrimination (and other forms of employment discrimination as well). Other important questions include: What have been the effects of significant influxes of women into traditionally male jobs (or men into traditionally female jobs) on the status and the wage rates associated with those jobs (e.g., lawyers, doctors, bus drivers, bakers)? Which jobs have been successfully integrated? Do they remain so?

The other side of employer practices in wage and job assignment is the

work career of the employee. Most supply-side explanations for the earnings gap claim that women's lower earnings relative to men are attributable in large measure to gender differences in the extent and pattern of work experience. Specifically, the argument is made that women earn less than men because their participation in the labor force is intermittent, and hence their total amount of accumulated experience is low relative to that of their male counterparts. Moreover, their expectation of intermittent employment may affect their educational investments and their occupational choices. In order to test these hypotheses, researchers need continuous work history data that describe how men and women organize their work lives. Such data have been largely unavailable in the United States.

What we do know about sex differences in work experience comes from survey data about events at particular points in the socioeconomic life cycle (i.e., first job, current job, job five years ago). From such data it is clear that differences in total amount of labor force participation affect women's occupational opportunities (Treiman 1984). We also know that the age pattern of women's labor force participation has changed substantially since the turn of the century. Fewer women drop out of the labor force to have children; indeed, among the youngest cohorts of women, practically no dip in labor force participation is observed during the peak childbearing years. To the extent that continuous participation affects occupational mobility, one might expect women's occupational prospects to increase in the future. The problem with this expectation, however, is that current women workers with continuous labor force attachment have an occupational distribution that is very different from that of men. This finding suggests that continuous attachment may not benefit women workers in the same way it does men (Roos 1983).

Some researchers have approached these issues by aggregating individual work histories into job or career trajectories in which the question of interest is the pattern of variation in occupational status or income over the course of the career. These studies implicitly assume that most workers have orderly career progressions, although this has not been empirically established; indeed, available evidence (Evans and Laumann 1983) suggests the contrary. Of concern here is whether men or women, or women with differing family responsibilities, have similar career trajectories. Although such questions are only now beginning to be addressed, preliminary indications are that women have much flatter occupational status and earnings trajectories than do men (Treiman 1984). But the reasons for this are far from being adequately understood. Employer practices may have as much to do with it as employee choices.

Among the many questions for future research in this area are:

- Do orderly job trajectories (successive jobs) exist at all and, if so, for what categories of workers?
- Do men and women have different career trajectories? Do men and women with differing levels of family responsibilities differ in their job trajectories?
- To what extent do formal career paths (established by the organization) and informal career paths (the actual pattern followed by individuals) correspond?
- What are the effects of career ladders (or job tracks) on wage assignment? For example, are salaries higher for jobs leading to key parts of the organization?
- What are the patterns of shifts in and across jobs? Do women who have moved into traditionally male jobs remain in these jobs, or do they tend to shift into traditionally female jobs?

Conclusion

Comparable worth claims and strategies for adjusting wages based on such claims need to be understood as part of the larger process of wage determination and as one of several means of wage adjustments. In addition to the wage determination issues discussed above, issues related to wage adjustment strategies are also important: job evaluation plans, the conditions that lead to the successful implementation of pay equity, the economic consequences of implementing comparable worth policies, and their merit relative to other equal employment opportunity policies.

The accomplishment of the research suggested by the seminar participants would have substantial results not only for achieving a better understanding of comparable worth, pay equity, and equal employment opportunity issues, but also for improving our understanding of work and workplaces, wage-setting, gender inequality, and social change more generally.

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Economic Analysis of Comparable Worth and Its Consequences*

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Economists often perceive comparable worth as antithetical to wage determination by market supplies and demands. Ironically, however, in a sense comparable worth may be traced to no less a figure than Adam Smith. In Book I, Chapter 10, of *The Wealth of Nations*, Smith wrote:

The five following are the principal circumstances which, so far as I have been able to observe, make up for a small pecuniary gain in some employments, and counter-balance a great one in others: first, the agreeableness or disagreeableness of the employments themselves; secondly, the easiness and cheapness, or the difficulty and expence of learning them; thirdly, the constancy or inconstancy of employment in them; fourthly, the small or great trust which must be reposed in those who exercise them; and fifth, the probability or improbability of success in them.

In words only slightly different from Smith's, comparable worth proponents define comparability in terms of the same factors: skill ("the difficulty and expence of learnings [jobs]"); responsibility ("the small or great trust which must be reposed"); effort and working conditions ("agreeableness or disagreeableness," "the constancy or inconstancy of employment," "the probability or improbability of success").

In a sense, then, comparable worth is simply an insistence that the economic theory of compensating wage differentials be taken seriously. If two jobs *are* comparable in terms of Smith's factors but pay different wages, is the differential justified? If the wage differential favors the job with greater male representation, is that not gender-based discrimination?

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* A longer version of this paper, containing additional discussion, footnotes, and references, is available from the author.

The Rationale for Comparable Worth: Was Adam Smith Right?

No. Adam Smith and the latter-day advocates of comparable worth are wrong. There is no necessary relationship between the “worth” of a job and what it will pay, or even what it ought to pay in the absence of labor market discrimination.

The basic reason for this is that tastes and preferences are heterogeneous: different people can (and do) evaluate the same job quite differently. Thus, the “job worth” and “comparability” advocated by the proponents of comparable worth are inherently subjective. Neither concept necessarily conveys any useful information, either about the way the current discriminatory real world labor market works, or about the way a nondiscriminatory real world labor market would work.

To see why, consider an example provided by Sharon (not Adam) Smith: an employer asks us to evaluate the jobs of Spanish-English translator and French-English translator. Most job evaluations would probably find these jobs comparable: it would be hard to argue that one requires more skill, effort, or responsibility than the other, and since they are at the same employer, both presumably involve the same working conditions. Under comparable worth, then, both jobs would get the same wage.

Now, however, suppose we learn that the employer in question is located in Miami (or Dallas). Even if all employers of translators were gender-blind, would it be very surprising if the two supposedly comparable jobs received different pay?

Likewise, there is no reason why jobs of different “worth,” as defined by advocates of comparable worth, should necessarily receive *different* pay, even in a completely gender-blind labor market. For example, police work is generally regarded as arduous and dangerous. It would therefore not be surprising if a job evaluation awarded more points, and higher pay, to police work than to clerical work. But would such a pay differential really be necessary? If enough people think of police work as exciting and clerical work as dull, all police jobs could be filled without any wage premium, even in a gender-blind labor market. Of course, in the discriminatory labor market of the real world, comparable worth could serve as justification for paying premium wages to police work—a job still held mostly by men—even if there were no real reason for such a differential.

The general point is illustrated in Figure 1, which analyzes the market for two jobs, *A* and *B*. Both involve the same skill, effort, responsibility, and working conditions, as measured by a job evaluation. However, different people evaluate the jobs differently, as summarized by the preference distribution in panel (a) of Figure 1. The height of the distribution

at a particular relative wage $w(A)/w(B)$ measures the percentage (more precisely, the density) of persons who are indifferent between A and B at that relative wage. The area below the distribution and to the left of a given relative wage value measures the percentage of persons who would

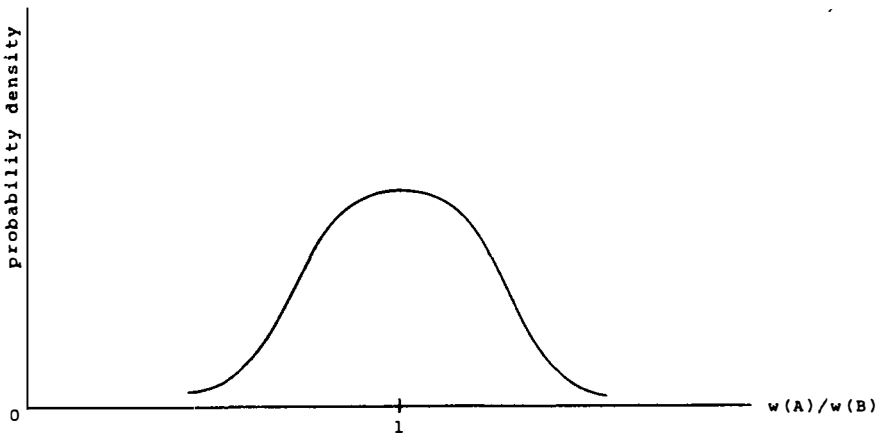


Figure 1(a): Preference Distribution for Job A Relative to Job B

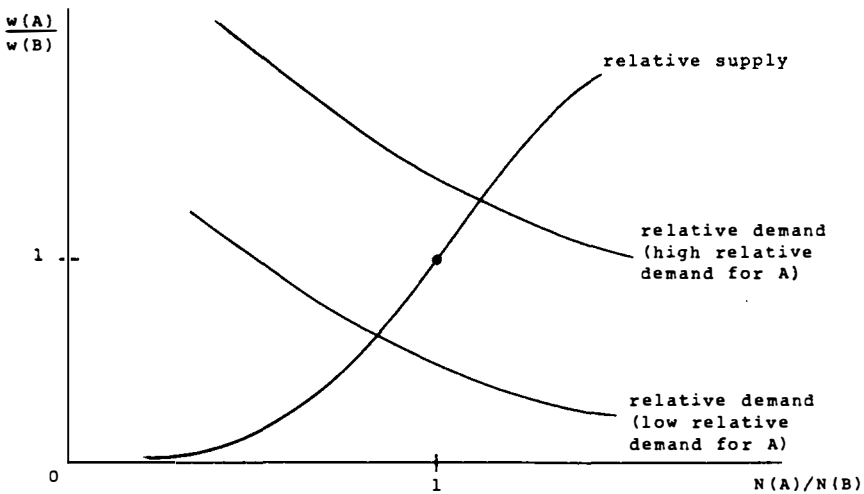


Figure 1(b): Relative Supplies and Demands for Jobs A and B

prefer to work in *A* rather than *B* at any relative wage at or below that value. A few people would work in *A* even if the *A* wage were much less than the *B* wage; more would work in *A* if the relative wage were higher. The distribution peaks when $w(A)/w(B) = 1$; that is, the average (mean or median) person would be indifferent between the two jobs if they paid the same wage. Thus, the average or representative worker, like the job evaluation, regards the jobs as comparable.

Now consider panel (b) of Figure 1, which shows relative supplies and demands $N(A)/N(B)$ and relative wages for these jobs. Panel (a) implies that the supply to *A* will be small at low relative wages $w(A)/w(B)$, larger at higher relative wages, and exactly equal to the supply to job *B* when both jobs pay the same wage. Thus, the relative supply curve in panel (b) is positive sloped and passes through the point (1,1).

What about demand? Clearly, the relative demand curve will be downward-sloping (that is, employer demands for *A* relative to *B* will be low when the *A* wage is high relative to the *B* wage). However, little can be said about its *position*. If technology and product market conditions generally require high (or low) employment of *A* relative to *B* labor, it will lie far away from (or close to) the origin. In that case, *A* will tend to be paid a higher (or lower) wage than *B*. Note also that the relative demand curve will pass through the point (1,1) *only* if, when wages for the two jobs are the same, firms want to employ exactly the same number of workers in each job. A priori, that seems rather unlikely. However, when tastes are heterogeneous, it is the only circumstance in which equilibrium can entail $w(A)/w(B) = 1$, that is, equal pay for jobs of “comparable worth.”

If tastes are perfectly homogeneous and everyone regards the two jobs as comparable, then both will certainly receive the same pay: in this case the preference “distribution” of panel (a) would be a vertical straight line intersecting the horizontal axis at $w(A)/w(B) = 1$, and the relative supply curve of panel (b) would be a horizontal straight line intersecting the vertical axis at $w(A)/w(B) = 1$. Here market equilibrium must entail equal wages for the two jobs, no matter what the relative demand curve looks like: wages are completely supply-determined.

Unfortunately, it is hard to imagine a situation in which everyone in the labor market feels exactly the same way about any pair of jobs. If tastes are heterogeneous, however, wages are supply-*and-demand*-determined, and the mere fact that the representative (or average) worker—or a job evaluation—deems two jobs to be comparable provides no useful information about their pay, even in a nondiscriminatory labor market.

It is true, as advocates of comparable worth note, that job evaluation and “job worth” are used in private industry. However, there is a crucial

difference between job evaluation as used in private industry and job evaluation as advocated by proponents of comparable worth. The former is generally based explicitly on market considerations: for example, commercial job evaluation firms often “benchmark” wages for “key jobs” on the basis of labor market surveys, analyze existing salary structures to determine the weights that they implicitly give to factors such as working conditions, etc. In contrast, comparable worth proponents argue that the existing wage structure is likely to be contaminated by discrimination. They therefore advocate “bias-free” job evaluations, derived on an a priori, ad hoc basis independently of the existing wage structure. Such evaluations would differ substantially from those now in use.

Nor is there anything inherently suspicious—as comparable worth advocates sometimes suggest—about a situation in which predominantly female jobs are paid less than supposedly comparable but predominantly male jobs. Just as the abstract case for comparable worth ignores heterogeneity of tastes in the general population, this specific argument ignores systematic gender-related differences in tastes and career choices. A woman’s labor market success may be critically affected not only by employer discrimination, but also—or instead—by parental socialization, discrimination against her in the school system, or the roles her husband imposes on her.

This is in no sense an attempt to “blame the victim”; discussion of gender differences in choice of field of study, work career, etc., need not (and in this case does not) entail the assumption that such “choice” is “free.” However, this does not dispose of—indeed, it underscores—a point that many advocates of comparable worth overlook: factors other than employer discrimination contribute substantially to the male-female pay gap and to the concentration of women in low-wage occupations. This being the case, there is simply no reason to ascribe all of the difference in pay between “comparable” predominantly female and predominantly male jobs to employer discrimination, as comparable worth implicitly does.

The Labor Market Consequences of Comparable Worth

Not only is comparable worth conceptually specious, it is also dubious from a purely pragmatic standpoint. Reduced to its essentials, it amounts to a policy of raising the cost of employing low-wage, predominantly female labor. Hence, other things being equal, it will reduce employment of such labor. To the extent that it raises overall labor costs, it may also reduce employment in other categories—for example, predominantly male or integrated jobs. Thus, comparable worth “solves” the problem of women’s low wages only to aggravate others.

The main difficulty in predicting the effects of comparable worth in the U.S. is simply that comparable worth has not been implemented here to any considerable extent. Australia's experience, although not directly applicable to the U.S., is nevertheless instructive. Under Australia's policy of "equal pay for work of equal value," which began in 1972, federal and state wage tribunals set the same pay minima for jobs judged to be comparable in terms of skill, effort, responsibility, and working conditions. Between 1971 and 1977, the female/male earnings ratio for full-time nonmanagerial adults in the private sector rose from 0.607 to 0.766 (Gregory and Duncan 1981, p. 409).

However, the policy also had several adverse side-effects. Results derived by Gregory and Duncan (1981) imply that, as of 1977, the policy's cumulative impact was to reduce women's employment growth relative to that of men by about 1.3 percentage points per year. Since the actual annual relative employment growth rate of women between 1972 and 1977 was about 3.0 percentage points, the policy reduced the rate of growth of women's employment, relative to that of men, by almost one-third.

Gregory and Duncan also analyzed the impact of the policy on female joblessness. Their results imply that the policy's cumulative impact as of 1977 was an increase in the female unemployment rate of about 0.5 of a percentage point.

Alternatives to Comparable Worth

Having argued against the conceptual and practical merits of comparable worth, I now briefly discuss alternatives to it.

The first alternative is the "old-time religion" of Title VII. The essential difference between comparable worth and Title VII is very simple. Comparable worth makes it very costly for all employers—whether or not they discriminate against women—to employ low-wage, predominantly female labor. It raises wages, but reduces women's employment opportunities. In contrast, Title VII makes it costly for discriminatory employers to treat equally qualified men and women differently with respect to employment, promotions, or pay. Since it focuses on discriminatory employers and penalizes unequal treatment of equally qualified men and women at any point in the employment relation, Title VII increases wages *and* employment opportunities for women.

Although discrimination certainly reduces women's wages, another possible factor also deserves investigation: cartelization. The nursing labor market is quite literally a textbook example of a cartelized labor market; according to one witness at recent Congressional hearings,

hospital administrators in Denver—the site of one notable comparable worth case—colluded to fix nurses' wages. Likewise, another witness testified that employers of clerical workers in Boston and San Francisco have formed "consortia" or "study groups" whose actual purpose is collusive wage-fixing. How important is such employer wage-fixing, and how can it be combatted? The potential importance of such wage-fixing deserves serious study; application or expansion of the antitrust laws to address such wage-fixing deserves serious consideration.

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The Pay Gap and Occupational Segregation: Implications for Comparable Worth*

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HAL SIDER

The U.S. Commission on Civil Rights

A major factor motivating women's groups to seek new legislation or regulation aimed at improving women's incomes has been the large gender gap in wages and the apparent failure of this gap to narrow despite the enactment of equal pay and employment legislation and the dramatic rise in women's labor force participation. The argument for adopting comparable worth policy as the particular means for narrowing the pay gap is based on the premise that the wage gap stems primarily from occupational segregation, where women are relegated to different and lower paid jobs than men. Moreover, a major contention of many comparable worth supporters, and one that appears crucial to the validity of this approach, is that pay in female-dominated occupations is lower not because of overcrowding, but because employers systematically downgrade these occupations (England 1984).

This paper discusses the empirical foundations of the comparable worth argument. It explains why the pay gap failed to narrow over the past three decades and presents new data suggesting that the pay gap has begun to narrow in the past few years. The paper then examines the allegation that women's occupations are underpaid. Finally, current trends in women's education and work experience are reviewed as the basis for speculation about the size of the wage gap in the future and the implications of these developments for a comparable worth policy.

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* The views expressed in this paper do not necessarily reflect the position or policy of the U.S. Commission on Civil Rights or of the Urban Institute, its sponsors.

Why the Wage Gap Failed To Narrow

In 1955 the wage gap was 31 percent, measured by the percentage difference in hourly earnings of men and women who were full-time year-round workers.¹ This wage gap widened to 35 percent by the early 1960s, rose to 37 percent in the early 1970s, but narrowed after 1980, reaching 31 percent again in 1983.

It is implausible that trends in discrimination or in government actions to combat discrimination account for either the widening of the gap after 1955 or the recent narrowing. During a period when the wage gap was widening, attitudes about women's employment outside the home were liberalized and the passage of equal pay and employment opportunity legislation starting in 1963 imposed additional costs on firms for discriminating.

A recent study (O'Neill 1985a) suggests that the puzzling behavior of the wage gap can be explained by changes in the skill level of employed women relative to employed men, where skill is measured by schooling and work experience. Over the post-World War II period, the labor force participation of women, particularly married women, increased sharply. The composition of the female labor force also changed as the new entrants had less schooling and work experience than the incumbents. At the same time the education level of men advanced more rapidly than that of women, in part due to the GI bill. Thus, while in 1952 women in the labor force had completed 1.6 more years of schooling than men, by 1979 this differential had disappeared. In itself, the relative decline in the education of working women would have caused the wage gap to widen by 7 percentage points between 1955 and 1982.

Women work fewer years than men and this differential contributes significantly to the wage gap. Data on the cumulated years of work experience of employed women are not readily available for periods before 1967. As a proxy, the O'Neill study examined differences in years of current job tenure between men and women and found a relative increase in men's job tenure between 1951 and 1963, a factor that would have contributed an additional 2 percentage points to the widening of the wage gap over this period. After 1963, however, women's job tenure increased relative to men's and by 1981 the tenure differential had returned to the level of the 1950s.

For the period 1967 to 1978, data from the National Longitudinal Survey provide direct information on accumulated years of work experi-

¹ The hourly wage gap is obtained by adjusting the ratio of annual earnings of full-time year-round workers for the difference in hours worked by full-time men and women, since full-time men typically work 8–10 percent more hours. See O'Neill (1985a). Also, see below for information on the wage gap measured with weekly earnings data.

ence. These data show that among all women who worked full time, year round (whose earnings are measured by the wage gap statistics) no gains in years worked occurred, although for the subgroup of women under the age of 35 years there was a small gain.²

The trend in the wage gap differs by age group. At ages under 35 the gap narrowed significantly after 1965. At older ages the gap widened substantially (by 8 percentage points) between 1955 and 1975 and has barely narrowed since then. These differences by age are also examined by the pattern of change in the schooling and tenure differentials. For the age group under 35 the gender difference in schooling remained minimal throughout the period 1952–1983. Mature women, however, lost ground as compositional changes eroded their initial advantage in schooling. Similarly, the job tenure differential in favor of men widened much more substantially for older workers and has not yet narrowed to any significant extent.

The Decline in the Wage Gap, 1979–1983

Between 1979 and 1983 the wage gap narrowed perceptibly whether measured by annual earnings of full-time, year-round workers (a decline from 40 to 36 percent) or hourly wages of all full-time wage and salary workers (a decline from 32 to 28 percent). The narrowing is again much more pronounced among those under 35 years of age.

An analysis of data from the Current Population Survey of 1979 and 1983 (each matching the May supplement with individuals reporting wages and salaries in May and June) provides some insight. Between 1979 and 1983 the hourly wage gap for all part-time and full-time men and women under age 35 narrowed from 29 to 23 percent (Table 1). During the same period, young women's mean years of schooling increased somewhat more than men's and the gender gap in job tenure narrowed by .24 year. For workers aged 36–64, the wage gap narrowed less—from 40 percent in 1979 to 37 percent in 1983. At these ages men retained their slight advantage in schooling over the period, but the job tenure gap narrowed by .28 year. The percentage of employed men covered by a union agreement fell sharply over the period at both older and younger ages, substantially narrowing the sex gap in unionization.

Table 2 shows the effects of controlling for schooling, job tenure, unionization, and other variables on the wage gap in both 1979 and 1983, where the gap is measured by a dichotomous variable, female = 1, in pooled wage regressions. Changes in the mean characteristics of men and

² Note that among employed women as a whole, including those who work part time and part year, years of work experience increased somewhat; for younger women the increase was substantial (O'Neill 1985a).

TABLE 1
 Mean Wages and Characteristics
 of Men and Women by Age, 1979 and 1983

| | 16-35 Years | | | | 36-64 Years | | | |
|------------------------|-------------|--------|-------|--------|-------------|--------|-------|--------|
| | 1979 | | 1983 | | 1979 | | 1983 | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Mean hourly wage (\$s) | 6.39 | 4.54 | 7.88 | 6.09 | 8.40 | 5.03 | 11.13 | 6.96 |
| Schooling (yrs.) | 12.82 | 12.80 | 12.98 | 13.06 | 12.25 | 12.13 | 12.77 | 12.58 |
| Job tenure (yrs.) | 3.22 | 2.36 | 3.54 | 2.92 | 12.71 | 8.25 | 12.66 | 8.48 |
| Union (%) | 28.5 | 16.8 | 23.3 | 16.2 | 39.2 | 23.8 | 34.2 | 23.2 |

Source: Tabulations from the Current Population Survey, matched May and June samples for 1979 and 1983.

women account for only some of the decline in the wage gap. For both age groups, the net wage gap (row 6, accounting for all explanatory variables) is still smaller in 1983 than in 1979, although the reduction in the gross wage gap (row 1) is greater than the reduction in the net gap. Changes in other unmeasured factors must then have accounted for much of the gain. One likely candidate is total years of work experience, a variable that is not available in this data set and which likely did increase for women.³ Another possibility is career orientation. Data on college major, professional enrollment, and work expectations suggest that younger women have greatly increased their early career investments (O'Neill 1985b). It is also possible that the sharp recession of 1982-1983 affected men's earnings more negatively than women's. In the past, however, recessions have tended to be associated with a wider gap (O'Neill 1985a). The extent to which recent patterns are cyclical will be more easily evaluated when data for 1984 and 1985 become available.

The results shown in Table 2 illustrate the old problem of interpreting the wage gap and the unexplained residual. Although the explanatory variables can account for much of the wage gap—35 to 40 percent—a sizable gap is unexplained. Are the residual differences a measure of discrimination in the labor market? Since all the productivity differences between women and men have not been identified and measured, it would be inappropriate to label the residual as discrimination. However,

³ Data from the NLS show a substantial increase in lifetime work experience among women aged 25-34, comparing the cohorts reaching these ages in 1967 and 1978. In addition, these younger women may be investing more in human capital since work experience coefficients in wage equations were found to have risen over the period (O'Neill 1985a).

TABLE 2
 Female Coefficient in Pooled Hourly Wage Regressions
 with Different Specifications, 1979 and 1983^a

| Independent Variables | 16-35 Years | | 36-64 Years | |
|--|-------------|-------|-------------|-------|
| | 1979 | 1983 | 1979 | 1983 |
| Female Co,1 | -.324 | -.240 | -.502 | -.464 |
| Plus schooling, race, part-time, urban, region, marital status, potential experience | -.257 | -.191 | -.428 | -.377 |
| Plus job tenure | -.247 | -.182 | -.390 | -.339 |
| Plus union and firm size | -.239 | -.184 | -.380 | -.337 |
| Plus 9 industry categories | -.219 | -.160 | -.349 | -.300 |
| Plus 11 occupation categories | -.200 | -.157 | -.314 | -.290 |

^a Regression of log n hourly wage, where the wage is derived as usual weekly wages and salary divided by usual weekly hours. The Female = 1 if the person is female. The variable is always significant. Potential experience is defined as current age minus age of school-leaving. The source is the Current Population Survey matched May-June samples for 1979 and 1983.

some may feel that certain independent variables (such as union membership or even job tenure) may reflect discrimination and should be interpreted cautiously (Cain 1984).

Are Women's Occupations Underpaid?

The large difference in the occupational distributions of men and women is well documented. The reasons for this difference and its consequences for the wage gap are less well understood. Although it is often asserted that the occupations women pursue result from discrimination, not choice, no satisfactory theory of discriminatory assignment has been proposed that can explain why women should be placed in certain occupations. Some predominantly male occupations are menial and low-paying (e.g., farm laborers). Some predominantly female jobs have high social status and pay above-average wages (nurse, teacher, librarian). And some jobs that resemble work done by women in the home are still performed by men in the market (cook, dishwasher).

One need not invoke discrimination, however, to explain gender differences in occupation. Women and men may evaluate job characteristics differently because of differences in career expectations and in the priority placed on home responsibilities. Several studies have found support for this view (see Polachek 1984). Expected labor force absences measured by expected fertility have been found to explain much of the male-female difference in college major (Blakemore and Low 1984). The atypicality of an occupation held in one year was found to be strongly

related to work plans and plans to be a homemaker held five years earlier (O'Neill 1983). Typically female jobs have particular characteristics that also make it easier to combine work in the home and in the market—part-time work, no unusually long workweeks, long summer vacations. Women's jobs also differ in environmental characteristics. They are less likely to be hazardous, to require heavy lifting, and to be outdoors. These factors may reflect physical differences as well as early socialization.

Several studies add a variable measuring the percent female in the occupation to a wage equation to determine whether this factor affects wages. In summarizing a few such studies, Polachek (1984) notes that the earnings gap attributable to the proportion female in the person's occupation is typically small—4 to 6 percent in two different studies. In another study, O'Neill (1983) finds mixed results, depending on the data and the model used. Using data from the CPS aggregated into over 300 occupations, this study finds that going across occupations, a 10 percentage point increase in the percent female (*PF*) in an occupation was associated with a modest 1.5 percent decline in pay. Using individual data from the NLS, the study found a significant negative effect on wages as *PF* increased from 0 to .5, but a significant positive effect as *PF* increased from .5 to 1. Varying effects were found for different groups—for example, older, younger, black, white. It is quite possible that *PF* reflects characteristics of occupations or individuals that are unmeasured in the particular analysis. It is notable, however, that in no case has *PF* been found to account for the major portion of the male-female wage gap. In sum, there is no strong empirical evidence that women's occupations pay less because women hold them, and the conceivable magnitude of the effect of occupational distribution falls far short of the large role assigned it by comparable worth supporters.

This does not mean that comparable worth, if implemented in a state or a firm, would have a small effect on pay scales. Job evaluations on which comparable worth judgments are based typically do not control for the measurable individual or occupational factors that are related to pay in the market. Instead they assign points for factors that the evaluating group deems worthy. This procedure is not likely to produce the same results as an economist's regression analysis.

The Coming Decade and Implications for Comparable Worth

Several developments point to a narrowing of the wage gap and a decline in occupational segregation. Striking increases in work experience have occurred among women under the age of 35 and marked changes have been observed in their career expectations. These changes have already been translated into higher earnings for women and a narrowing

of the wage gap. A change in the occupational distributions of these younger women has been one mechanism by which these higher earnings were achieved. During the 1970s there was a substantial increase in occupational integration by sex as young women entered mixed and traditionally male occupations (Beller 1984, Shaw 1983). Dramatic changes in schooling patterns among women suggest that these trends will continue (O'Neill 1985b).

The increase in women's career advancement over the 1970s was attained in part through changes in marriage and fertility patterns. Women are marrying later. In 1983, 25 percent of women aged 25–29 had never married compared to only 10 percent in 1970. These changes in marriage have been accompanied by reduced fertility. An important question is whether this pattern will continue if economic growth should raise income levels in the next decade more rapidly than during the stagnant 1970s. Rising income levels could increase marriage and fertility (Easterlin 1973); on the other hand rising wages of women could increase their labor force participation and dampen incentives for marriage and children (Butz and Ward 1979).

Among older groups the wage gap has remained large, again reflecting women's earlier choices about family roles. These mature women were the mothers of the baby boom generation and their high fertility reduced early work experience and schooling. The legacy of these choices affected their options later on when a large percentage entered the labor force. Those who interpret these patterns as evidence of discrimination, rather than of choice, see comparable worth as a way of compensating these women (Beller 1984).

It is difficult, however, to redistribute income through artificial wage hikes. Just as increases in the minimum wage have never been an effective way to reduce poverty, comparable worth will not work as compensation for past discrimination. Wages that are artificially boosted will reduce demand in traditionally female occupations. Those that retain their jobs and benefit from the pay hike are likely to be the best educated and the most experienced, not necessarily the victims of discrimination. Moreover, the wrong signals would be given to women (and men) who are choosing occupations. If premiums are not associated with occupations currently considered difficult or unpleasant, incentives to enter them will be blunted. Comparable worth is, therefore, at variance with earlier concerns of the women's movement for improving women's access to the occupations of their choice. The implementation of comparable worth would reduce women's own incentives to be integrated in the workplace, and without those incentives the progress that has been made could never have occurred.

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DISCUSSION

ROBERT E. WILLIAMS
McGuiness & Williams

Unlike the other panelists, I am not an economist. I'm a lawyer whose interest in this issue has developed primarily as a result of proposals that would elevate comparable worth to the status of a legal requirement. From this perspective, it appears to me that Dr. Hartmann and her colleagues have done a valuable public service in compiling the "Agenda for Basic Research on Comparable Worth" which she described in her presentation. I could not agree more strongly with her conclusion that "[n]early every aspect of the comparable worth strategy would benefit from further scholarly examination."¹

My law partner, Ken McGuiness, who also serves as President of the National Foundation for the Study of Equal Employment Policy, wrote last spring, in the foreword to the foundation's monograph on comparable worth,² that the debate on this issue "has too often confused the undisputed merit of pay equity as a goal with the concept of comparable worth as a method of achieving that goal." And this confusion, he said, "has hampered objective discussion of the very serious practical problems that need to be addressed" in connection with comparable worth.³

Dr. Hartmann's "Agenda for Basic Research" brings into sharp focus the problems and issues that *need to be addressed*. It constitutes the most complete summary I've seen anywhere of all the *unknowns* that currently surround comparable worth. As such, it ought to be mandatory reading for every legislative body and regulatory commission that is even thinking about adopting, without further study, any measure that would make comparable worth a binding legal requirement.

The extent of this unfinished research agenda makes it clear that we are not ready yet—if, indeed, we ever will be—for legislation or regulations that pay rates be proportional to job evaluation point totals. As the

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¹ Heidi I. Hartmann, Patricia Roos, and Donald J. Treiman, "An Agenda for Basic Research on Comparable Worth," p. 3.

² R. Williams and L. Kessler, *A Closer Look at Comparable Worth* (Washington: National Foundation for the Study of Equal Employment Policy, 1984).

³ *Id.*

remarks of all the panelists this morning indicate, we simply don't know enough at present to justify the imposition of such a requirement.

- We don't know what portion of the male/female pay gap, if any, is the result of discrimination.

- We don't have any truly objective methods for comparing the worth of different jobs, and because the methods we do have are not objective, we can't really say that any existing system of job evaluation is "bias free."

- We don't know what economic and social consequences would result from imposing comparable worth requirements.

- We don't know whether, or for how long, the wage gap will remain in existence in the absence of mandatory comparable worth. (Although Dr. O'Neill's presentation certainly gives us grounds for optimism that the gap will continue narrowing significantly.)

But a clear recognition of how much is *not known* about wage differences and wage determination mechanisms should help us to avoid blindly adopting new "solutions" that could do more harm than good.

Last June, at the U.S. Civil Rights Commission's "consultation" on comparable worth, I was asked by Commissioner Mary Frances Berry what objective I thought was served by advocating a "narrow" construction of the laws governing wage discrimination. My response was that, first, what I was advocating was not necessarily a *narrow* construction, but rather a *careful* interpretation of those laws. Secondly, and more importantly, the objective is not to deny or delay the achievement of pay equity, but rather to ensure that we approach that goal through means that will *work*, and not cause more disruption and problems than we solve. This, in my view, is why we need to pursue the research agenda first.

The courts addressing comparable worth generally have taken a careful approach. Of course, we have all read about Judge Tanner's decision in the *Washington State* case.⁴ But the important thing to recognize about that decision is that, to the extent Judge Tanner treated the state's job evaluation study results as evidence of discrimination, his holding appears to be contrary to the law of the circuit in which it is currently awaiting review. The law of the Ninth Circuit was announced last July in *Spaulding v. University of Washington*,⁵ wherein the court of appeals said, "Evidence of a pay disparity between jobs that are only comparable says little about discrimination." The other federal appeals courts that have considered comparable worth have reached essentially

⁴ *AFSCME v. State of Washington*, 578 F.Supp. 846 (W.D. Wash. 1983).

⁵ 740 F.2d 686 (9th Cir. 1984).

the same conclusion,⁶ as have most of the federal district courts.⁷ Judge Tanner's decision is simply an aberration.

It appears, therefore, that if comparable worth is ever to be elevated to the status of a legal requirement, it will have to be through new legislation. And in that context, Dr. Hartmann's agenda of unfinished research issues could have a real impact. There should be opportunities, as the legislative process unfolds, to make legislators aware of how many fundamental questions remain unanswered, and how insufficient our current body of knowledge is to support new legislation in this area.

But, you might ask, what are we going to do while all this research is going on? Can we simply tell women and others who feel they are being paid inequitably to shut up and wait until the research is done?

I don't think we have to do that. I think we can refer them to the mechanisms that are already available to workers who believe they are unfairly underpaid. One of those mechanisms is the existing body of laws against employment discrimination—what Professor Killingsworth calls "the 'old time religion' of Title VII."⁸ Another is the option of collective bargaining. Another, certainly, is job evaluation. I fully agree with Dr. Hartmann and the NRC Committee that job evaluation procedures *can* be a valuable tool for dealing with the pay equity issue, but *only* if they are used the way job evaluation was designed to be used—that is, within a consensual framework as a process for promoting mutual agreement about what jobs are worth, not in the courtroom as a means of proving or disproving discrimination.

Finally, even if comparable worth is never made mandatory, it seems to me that the body of research Dr. Hartmann's "Agenda" envisions would be enormously valuable. Answers to the questions she poses should help employers to develop compensation systems that not only satisfy employees' concerns about pay equity, but also serve management's needs by promoting more efficient allocation of human resources, providing more effective motivation, and eliminating counterproductive practices based on misinformation or simple lack of information.

So whatever position one takes in the debate over comparable worth, I believe there are ample reasons to support the research called for by Dr. Hartmann's agenda, and she and her colleagues are to be commended for their work in developing it.

⁶ E.G., *Lemons v. City and County of Denver*, 620 F.2d 228 (10th Cir.), cert. denied, 449 U.S. 888 (1981); *Christensen v. State of Iowa*, 563 F.2d 353 (8th Cir. 1977).

⁷ E.G., *Gerlach v. Michigan Bell Tel. Co.*, 501 F.Supp. 1300 (E.D. Mich. 1980); *Martin v. Frontier Fed'l St & L Ass'n*, 510 F.Supp. 1062 (W.D. Okla. 1981); *Power v. Barry County*, 539 F.Supp. 721 (W.D. Mich. 1982); *Conn. Employees Ass'n v. State of Connecticut*, 31 FEP Cases 191 (D. Conn. 1983).

⁸ Mark Killingsworth, "Economic Analysis of Comparable Worth and Its Consequences," p. 188.

DISCUSSION

PAULA B. VOOS

University of Wisconsin-Madison

As our chairperson requested, my remarks will be focused on the paper by Mark Killingsworth. That paper opens with a discussion of the intellectual relationship between comparable worth proposals and the theory of compensating differentials. Killingsworth's insight is that proponents of comparable worth could utilize the theory of compensating differentials to argue that wages should be based on skill, effort, responsibility, and working conditions, insofar as that theory is understood in a normative sense. Most proponents of comparable worth, in contrast, have emphasized an institutional view of labor markets, have argued from the importance of job evaluation for setting wages in large internal labor markets, and have discussed the need to make job evaluation gender-neutral in order to use it to eliminate discriminatory wage differences. Consequently, while I wish to make a few observations about the model presented in the first part of the paper, in my view that model is at best tangentially related to the contemporary debate over comparable worth.

According to the theory of compensating differentials, the *long-run* market valuation of any job characteristic will reflect both the contribution of that characteristic to labor productivity (the demand side) and the preferences of the *marginal* person in the labor market (the supply side). The theory does not ignore demand and it is not invalidated by heterogeneity of worker preferences. However, if preferences are heterogeneous, a job evaluation system (or another compensation-setting institution like collective bargaining) which registers the views of the *average* employee, may set remuneration for any job characteristics differently from that which would be set by the market.¹

In the short run, the price for any job characteristic may deviate from the long-run, compensating-differential price, given short-run changes in either supply or demand. The paper cites the example of wages for French and Spanish translators in a city which had recently experienced

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¹ Job evaluation mechanisms in practice probably do not utilize either the view of the average employee or that of the marginal; this is a simplification made for purposes of exposition, following Killingsworth. For a discussion of the actual operation of job evaluation procedures, see Schwab (1984).

an influx of Hispanics. Even if skill, effort, responsibility, and working conditions in the two jobs were precisely equal, as is assumed by the author, in the short run the market wages in the two jobs could be very different. This does not disprove the theory of compensating differentials because that theory is about the long-run tendency to wage equality, given a period in which workers have sufficient time to change their labor supply between the two occupations. For translators, the long run envisioned by the theory might be more than one generation.

As the paper indicates, men and women may have very different distributions of preferences for certain job attributes. This would not invalidate either the theory of compensating differentials or the claims of the proponents of comparable worth, however. Suppose that, on the average, men were considerably less adverse to "outdoor work" than women. This supposition would explain why a low proportion of women would be found to be employed in jobs requiring "outdoor work." It would not explain why wages are consistently found to be higher for heavily male occupations, other things equal including that portion of the wage differential associated with "outdoor work."

Ironically, the case for comparable worth is strengthened if men and women have very different distributions of preferences for certain job attributes. That occurs because the alternative to comparable worth is a long-run program to reduce occupational segregation of women by having women integrate into predominantly male occupations (elevating the supply of labor to male occupations, reducing the supply of labor to female occupations, and thus reducing wage inequality).

The author is on firmer ground in the second section of the paper. There he points out that raising the cost of employing low-wage, predominantly female labor would tend to reduce the employment of such labor. Consequently, while some women would benefit from higher earnings after the implementation of a comparable worth program, others would suffer from disemployment. The magnitude of the adverse employment effect depends, of course, both on the elasticity of demand for labor and on the extent to which a comparable worth program raised wages in the predominantly female jobs.

The few econometric studies that have estimated these effects indicate that the disemployment effect would be fairly small, at least in the U.S. public sector (Ehrenberg and Smith 1984, Johnson and Solon 1984). More research is needed in this area—in particular, research that would indicate the size of the disemployment effects under different alternative assumptions about the impact of comparable worth on wages and about the elasticity of demand for labor.

Moreover, it needs to be recognized that in the public sector the elasticity of demand for labor is a result of a series of political decisions about the desired level of public services, the composition of such services, and the mode of producing each particular government activity. Those who support comparable worth need to be aware of the potential disemployment effects accompanying their program if they do not also argue for the additional revenue to pay for higher wages without reducing public-sector employment.²

While the studies to date of the Australian experience are controversial, it does seem likely that comparable worth would have greater employment effects in the private sector, as Killingsworth contends. If further research substantiates large adverse effects on female employment, comparable worth might be paired with other programs designed to counteract this undesired side-effect. For instance, job placement and retraining programs aimed explicitly at displaced female workers might be instituted; such programs could emphasize traditionally male skills and placement in predominantly male occupations in order to pursue the goal of reducing occupational segregation, if that is a desired outcome.

Finally, in his oral presentation of this paper, the author characterized job evaluation systems as "arbitrary." I would take strong exception with that. Job evaluation systems already exist in many organizations, partly because the firm needs to satisfy employee concerns about internal pay equity in order to guarantee morale and motivate employee performance. In other words, job evaluation systems arise partly because firms need to assure workers that their compensation decisions are not arbitrary. Job evaluation systems are widespread also because the market wage for many jobs is simply not evident to either employers or employees. As Schwab (1984, p. 54) puts it, "Constraints on both employers and employees exist so that markets provide little direct information about appropriate wage levels and differentials for many jobs."

At the same time, current job evaluation practices are far from perfect. Comparable worth, in my view, is a demand that current job evaluation procedures be modified in order to make more systematic comparisons across major job categories typically held by male and female employees. Economists will produce better evaluations of the likely effects of comparable worth if they ground their research in an understanding of how job evaluation systems actually operate.

² Changes in the method of producing particular public services (the mix of labor and capital and the mix of occupations within labor) might still lead to a minor adverse effect of comparable worth on female employment. However, the effect is likely to be small if the level of public services is maintained.

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DISCUSSION

LOREL E. FOGED

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In her paper entitled “The Pay Gap and Occupational Segregation: Implications for Comparable Worth,” June O’Neill provides an informative analysis of what has happened to the wage gap over the years. Her analysis derives from a perspective quite different from my own, employing the human capital approach to explain changes in the wage gap over time. This approach is premised on the existence of competitive markets and all the usual assumptions regarding competition associated with the neoclassical approach. Considering the human capital approach typically explains less than 50 percent, at best, of the wage gap, it is not surprising that this same approach cannot fully describe all the changes in the gap over the years. The reason for this inadequacy is that the pay gap is largely due to the distribution of women across various occupations. The human capital approach may be more useful to describe individual pay differences within occupations.

The paper addresses three issues, each of which I would like to comment on: the narrowing of the gap, whether traditionally female jobs are underpaid, and the relevance of comparable worth policies.

June O’Neill commented that the most recent narrowing of the pay gap could turn out to be related to the 1981–83 recession and therefore cyclical. I do agree that the narrowing of the gap may have been caused by the recession because, unlike previous recessions, this recession most strongly affected prime-age white males (those working in our declining industries such as steel, auto, and rubber). Thus, the decrease in the pay gap may reflect not an improvement in the economic status of women, but a decline in the economic status of men. Unfortunately, this result may not be only cyclical, considering that many of these displaced men have not returned to work or have returned to lower paying jobs. If this is the case, the statistical narrowing of the gap is not an indication that women are better off, but may in fact reflect an overall decline in the welfare of working men and women.

June O’Neill also documented that the pay gap is smaller for women under 35. I would like to expand on this fact by asking, how will these

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young women fare down the road? Will the gap for this cohort remain stable, improve, or widen as the group ages? Internal labor market policies adverse to women workers could effectively prevent them from moving ahead as quickly as men, causing the gap to widen over time.

As to whether predominantly female jobs are underpaid, June O'Neill embraces the concept that women have freely chosen to enter these occupations, despite low pay levels, because of certain characteristics of the jobs (shorter hours, long summer vacations, part-time work) which complement expected family obligations. The choice of occupation, however, is seldom free, but is subject to a myriad of constraints ranging from socialization to lack of educational support to economic necessity. Furthermore, the characteristics attributed to women's jobs apply in only some cases. Nurses, telephone operators, and waitresses have long hours, shift work, overtime, little vacation, and lack of control over work schedules. These and other jobs entail hazards such as mental and physical demands, not recognized in jobs held by women but which are presumed to deter women from entering predominantly male occupations. Most men, in fact, do not work in jobs subject to adverse physical or environmental conditions, yet women have not entered these jobs either.

I would also like to state my disagreement with June O'Neill's point that employers do not have the ability to collude or depress wages because of the strength of competition. As noted by Mark Killingsworth, several such incidents have been uncovered. Competition may have worked to raise the salaries of engineers, but we know the wages of nurses, who have been in demand for years, remain depressed.

June O'Neill's position on the relevance of comparable worth policies is based on her belief in competitive markets free of discrimination. With this basis, it is true that comparable worth does not make sense and would amount to, as June notes, an artificial wage hike for jobs that are properly paid according to the market. If, however, one believes, as I do, that discrimination does exist and that jobs held by women are not correctly paid, then comparable worth is not an artificial wage hike, but is a means of properly compensating the labor resource for the value of its marginal product. True, discrimination is difficult to prove, but we do know that unfettered competition is not the rule, least of all in labor markets. The value of comparable worth policy is not so much to compensate victims of past discrimination as to prevent continued inequities and inefficiencies in the years ahead.

One final note: I was surprised at the statement that comparable worth would be a disincentive to work, for any policy that increases pay surely creates an incentive to work.

I would also like to make one brief comment on Heidi Hartmann's paper on research needs. Heidi noted that she did not set out priorities because each group would have its own priorities. I would like to take this opportunity to say that the priority, from the point of view of Labor, would most certainly be to develop alternative methods for achieving comparable worth and identifying the costs and benefits of each. Despite any problems in the current state of current research, women are eager to take action now and will take the necessary steps, whether or not the best supporting research is available.

X. DISSERTATION ROUNDTABLE I: INDUSTRIAL RELATIONS IN THE U.S.

Collective Bargaining and Occupational Health and Safety*

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This study tested the relative importance of factors hypothesized to affect the content and enforcement of contract language related to workplace health and safety. Factors were categorized according to their effect on (1) worker response to hazards, (2) union response to hazards, (3) bargaining power, (4) employer response to hazards, and (5) enforcement of contract language.

An in-depth case study of the South Bend-Mishawaka, Ind., divisions of the Bendix Corporation was conducted. Observations related to the role played by specific factors at Bendix were cross-validated in nine additional studies of organized workplaces. The following conclusions were generated from patterns observed across the case studies.

1. Lack of information about workplace hazards and concern for job security are significant determinants of worker preferences. These, in turn, affect union bargaining priorities and contract enforcement in such a way that safety and health issues are deemphasized.

2. Incentives to employers to eliminate safety and health hazards are such that contract language providing for an enforceable union role in monitoring safety and health is generally not favored by employers.

3. Bargaining power affects the strength of safety and health language as it does other contract language. Bargaining power variables that were important determinants of the adequacy of safety and health language in these studies included the level of organization of the relevant workforce, industry concentration, and union militancy.

* This dissertation was completed at the University of Notre Dame.

4. Bargaining dynamics favor union concession of noneconomic demands before economic demands. As a result, even where there is a close economic pattern, safety and health language may vary considerably.

5. Given a changed economic climate or industry structure, rigorous enforcement by unions of safety and health contract language may cause employment reductions. Union officials and workers consistently cited increased employer mobility and industry competitiveness as factors affecting willingness to grieve safety and health issues.

These conclusions have implications for Occupational Safety and Health Administration (OSHA) policy advocating private-sector initiatives to monitor and abate workplace hazards. Given union concerns for the economic consequences of OSHA standard enforcement, private-sector initiatives may result in less thorough compliance with standards than would rigorous OSHA enforcement.

The study indicates that contract language may not be a reliable proxy for bargaining power. An accurate assessment of bargaining power would incorporate consideration of union ability to enforce contract language that was obtained through pattern bargaining or which reflects an economic climate or industry structure that has changed.

Finally, the study suggests that instead of, or in addition to, making concessions at the bargaining table, in the attempt to lower labor costs and maintain membership employment levels, unions may temper enforcement of contract language. It was clear in these case studies that workers and union officials recognized the possible repercussions in terms of plant closing and out-sourcing of grieving safety and health problems. To explain patterns of plant closings and employment reductions, it might be helpful to address the frequency with which workers and unions use this strategy.

Union and Nonunion Industrial Relations Systems At the Plant Level*

ANIL VERMA
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Of the various processes that have influenced the growth of the nonunion sector in the U.S. economy, managerial decision-making in industrial relations remains one of the least understood and researched. Current literature on managerial inputs into industrial relations offers explanations that describe changes during some periods well, but not adequately for others. This dissertation develops a framework in which long-run changes may be understood in terms of management response in industrial relations. Briefly, the main thesis is that industrial relations systems respond to pressures for change at two levels. In the short run, the need to reduce uncertainty in managing the economic enterprise requires managers to make pragmatic adjustments in industrial relations. This results in relative acceptance or tolerance of unions from time to time. In the long run, however, it is management's philosophical opposition to unions that guides the strategic choices in industrial relations.

This thesis follows a case study of one large conglomerate company in the manufacturing sector which is currently half union and half nonunion. The evidence shows that the company's current strategy of union avoidance does not represent any shift in management philosophy. Rather, the current strategy capitalizes on new human resource management policies that make both good business and employee relations sense and appear effective in reducing the incentives for employees to unionize.

The nonunion strategy is carried out by opening new plants in low labor-cost regions and keeping their size small enough to allow for implementation of an alternate human resource management system. The alternate human resource management system is based on: (1) wages and benefits being competitive in the local labor market rather than matching union or overall industry levels, (2) structure of compensation that

* This dissertation was completed at the Massachusetts Institute of Technology.

emphasizes fewer job classifications and wage grades and in some cases uses pay for knowledge or all salaried payment systems, (3) work organization and human resource allocation rules that emphasize flexibility in assigning jobs to workers and in moving people across jobs and skills needed for efficient production, and (4) extensive communication with employees and involvement through active participation in small task-related groups.

As more new nonunion plants are opened, the union sector is affected in two ways. First, there are pressures to moderate growth in wages relative to the nonunion sector. Second, resources within the firm begin to flow away from the union sector to the nonunion operations. The speed with which resources are pulled away from union operations depends upon the firm's strategic choice. Even in firms that have been historically more tolerant of unions, as is the case for this firm, the nonunion sector attracts more investment because of the lower costs and higher flexibility in production. Over a period of time, union plants which are older and, therefore, in greater need of infusion of new capital, receive less and less capital which, in turn, makes them even less competitive. A cross-sectional study of comparative efficiency of union and nonunion plants can, therefore, be misleading.

In this study, cross-sectional analysis of wages and work systems has been supplemented with a historical profile of the evolution of the two systems of industrial relations. The imperative for a methodology of union-nonunion comparisons is that a full understanding of these differences must combine historical and cross-sectional methods so that differences observed at a point in time can be related to the differential evolution of the two systems.

Managerial Efficiency, Unions, and Productivity: An Integrative Analysis of Productivity at Manufacturing Plants*

BRIAN BEMMELS
University of Alberta

The decline in productivity growth over the last decade has stimulated much research into the underlying forces that determine productivity. This research has come from several academic disciplines including economics, industrial/organizational psychology, management, and industrial relations. However, research from these various disciplines is often mutually exclusive. That is, the factors affecting productivity which are the focus of research in one discipline are often ignored by research in another discipline (and vice versa), despite the fact that the same fundamental problem is being addressed. The objectives of this research are to develop an integrative research framework incorporating elements from each of the various strands of productivity research and to investigate empirically the influence of each on productivity.

The economic literature provides a sophisticated theory of production focusing upon the contributions of capital and labor inputs to production. The focus of most of the empirical work has been on aggregated or industry productivity trends or cross-sectional analysis. Productivity literature from industrial organizational psychology and management has generally been experimental, focusing upon the impact of certain changes in managerial practices or organizational structure on the productivity of employees. Practices such as employee training, goal-setting, performance appraisal and feedback, pay for performance, and participative management have been found to have a significant impact on employee productivity. A third body of literature has focused upon the influence of labor unions and labor-management relations on productivity. This literature

* This dissertation was completed at the Industrial Relations Center, University of Minnesota.

provides conflicting theoretical predictions concerning the impact of unions on productivity, accompanied by conflicting empirical results as well.

An integrative theoretical framework is developed incorporating elements from each of these strands of productivity literature. An economic production function including capital, production labor, and nonproduction labor as input factors is used as a starting point for the theoretical development. This is expanded and modified to include the influences of managerial efficiency and unionization on production. Managerial efficiency is defined as a composite measure reflecting the efficiency with which management utilizes its human resources in the production process. The theory is operationalized by assuming a translog functional form for the production function. Numerous tests are developed relating to the theory of production and the impact of managerial efficiency and unionization on production.

Data for the empirical analysis were collected by surveying a sample of manufacturing firms in the United States. Manufacturing plants are the unit of observation, and complete data were obtained for 46 plants. Output is measured as value added and the capital, production labor, and nonproduction labor inputs are measured as dollars of cost. Factor analytic techniques provided three measures of managerial efficiency, reflecting (1) participative management and goal-setting, (2) performance appraisal and feedback on performance, and (3) pay for performance. Unionization is measured as the percentage of production workers unionized at each plant.

The principal findings of the research are:

1. Pay for performance has a positive and significant impact on productivity. Labor input is measured as dollars of labor cost to account for variation in labor quality across plants. Thus, this result is interpreted as indicating greater output per dollar of capital and labor cost under pay-for-performance schemes.

2. The other measures of managerial efficiency (participative management and goal-setting, and performance appraisal and feedback) are not significantly related to productivity.

3. Unionization has a negative and significant impact on production. However, the union effect is nonlinear. That is, the negative union impact is greatest at plants that are partially unionized, and is closer to zero at plants that are fully unionized. Since labor inputs are dollars of labor cost, this result could reflect union-induced compensation increases that are not reflected in product price increases as well as actual productivity changes.

4. Unionization diminishes the positive relationship between pay for

performance and productivity. The estimated percentage increase in output due to pay-for-performance schemes at fully unionized plants is only one-fifth of the comparable estimate for nonunionized plants.

5. No support was found for the "internal organization matters" hypothesis. This relates to the question of how the union impact on productivity operates. According to this hypothesis, the union impact operates through union-induced changes in managerial practices and organization. However, no relationship was found between the measures of managerial efficiency and unionization.

6. The results also indicate that the union effect on productivity operates through a downward shift of the production function. The marginal productivities and relative marginal productivities of the capital and labor inputs are unaffected.

XI. DISSERTATION ROUNDTABLE II: INDUSTRIAL RELATIONS IN AN INTERNATIONAL SETTING

Impact of Foreign Direct Investment on Industrialization, Labor Markets, and the Labor Movement in Newly Industrializing Asian Countries*

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The purpose of this research was to examine the impact of foreign direct investment (FDI) on labor markets and the labor movements in selected newly industrializing Asian countries, namely, Hong Kong, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. However, this required a proper understanding of the effects of FDI on the economies of these countries because the general economic conditions constitute an important environment for labor markets and the labor movement.

Following a discussion of the theoretical model of economic development postulated by William Arthur Lewis (1954), the thesis first notes some of the model's untenable assumptions. It then develops the argument that conscious efforts of governmental elites to attract foreign capital may have become instrumental in bringing about industrialization in the newly industrializing Asian countries. Of various forms of external capital, FDI was assumed to have had a stable and positive effect on economic growth and employment expansion. An econometric analysis with pooled data

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for the seven countries for the period 1970–1979 provided empirical evidence supporting the hypothesis that FDI contributed to output and employment growth in the Asian host countries.

Rapid economic growth and employment expansion were the important objectives of these industrializing Asian countries. Since FDI helps to achieve these goals, the governments provided various incentives to foreign investors in the hope of increasing the level of inflows of FDI. They also attempted, with varying degrees of success, to create a climate for maintaining industrial peace. How the labor movements were affected by this process was the next question investigated.

Industrialization is largely determined by the speed and style of capital accumulation. As countries progress through the industrialization process, they move from one structural state to another and the dictates of development change along with this movement. These changes, in turn, generate different requirements of capital accumulation. But the philosophy of the ruling elites and their policies on industrialization have a considerable effect on the capital accumulation process (Kerr, Dunlop, et al. 1960). It was therefore thought logical to relate capital accumulation requirements as created by the dictates of development at various levels of structural transformation and as perceived by governmental elites to the evolution of patterns of industrial relations.

The thesis examined the development of labor movements and the evolution of patterns of labor-government relations. It identified three different patterns of labor-government relations in the newly industrialized Asian countries—political, repressive, and accommodative. An analysis of the qualitative evidence pertaining to government policies on FDI and on labor relations indicated that relatively lesser industrialized countries such as Thailand and the Philippines had very favorable investment incentives policies but rather repressive public labor policies. In contrast, other newly industrialized countries such as Singapore maintained their favorable investment incentive policies but shifted the emphasis of their public labor policies from repressive to accommodative in the late 1970s. All countries had a political pattern of labor-government relationships and a lesser concern with investment incentives to attract FDI, or to enhance capital accumulation, before the repressive pattern emerged.

In many cases alliances between labor and government were forged in the course of independence movements in developing countries and existed for some time thereafter. However, concern with industrialization in the aftermath of independence and the related requirement for capital accumulation caused breaks in these alliances. A growing need to attract FDI by means of various incentives led these governments to impose

checks on free labor movements. Thus they formulated and imposed rather repressive labor policies.

In some countries, as the industrialization process progressed, the pressure for capital accumulation eased and the governments relaxed some of the repressive policies while trying, at the same time, to subordinate the interests of organized labor within broader national industrialization programs (Kassalow 1978). With industrialization came new wealth which, in turn, could benefit workers as governments implemented wage policies with a view of improving income distribution. As a consequence, labor and governments again moved closer together, but in a different and more accommodative relationship. Thus, the varying intensity of the need for capital accumulation provided the link among the three patterns of labor-government relations.

The thesis thus identifies a systematic relationship among political, repressive, and accommodative patterns of labor-government relationships and low, moderate, and high stages of industrial growth which, in turn, are related to low, moderate, and high levels of FDI inflows. The theoretical implication of the analysis and findings is that a new model of industrial relations has evolved in newly industrializing Asian countries, and this new model is the product of the dynamics of Asian industrialization which achieved momentum largely because of the input of FDI in association with the central role of the governments of these countries in the industrialization process.

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A Comparative Study of Union Officials' Views on International Trade Policy*

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The value of scholarly research to policy-makers, according to Kenneth Dam, lies in providing a perspective against which contemporary events can be understood and likely consequences of particular policy initiatives assessed. The purpose of this paper is to afford a perspective on union views of international trade policy. The perspective is developed through a comparison of several AFL-CIO unions' switch from supporting to opposing trade liberalization, and the consequent reversal on international trade policy by the AFL-CIO as an organization.

In pursuing this study, I rely primarily on the publications and proceedings of the organizations under scrutiny, as well as on recollections of participants involved in the redefinition of their organizational interests. The latter are obtained through in-depth, unstructured interviews. To a limited extent, the work of other scholars and writers contemporary with the developments under examination have been useful, but for some exceptions, as caution against presuming too much about union officials' motivations and objectives.

On few issues is the AFL-CIO in greater agreement, and more at odds with conventional wisdom, than on international trade policy. Solidarity against trade liberalization is a dramatic reversal of its previous qualified endorsement during the decades surrounding the reunification of the AFL and the CIO.

Between the merger and passage of the Trade Expansion Act of 1962, the AFL-CIO supported trade liberalization as beneficial economically and politically for workers in the United States and abroad. Objections were raised by ceramics, leather goods, novelties, shoes, and textiles unions representing workers and communities bearing the concentrated costs of trade liberalization's purportedly diffuse gains. The objections

* This dissertation was completed at the University of Texas at Austin.

were met by trade liberalization supporters with provisions for international labor standards, peril point/escape clause provisions, and adjustment assistance.

During the Kennedy Round negotiations of the General Agreement on Tariffs and Trade, doubts about trade liberalization's beneficence and the adequacy of its adjustment provisions emerged within AFL-CIO's affiliates previously wholeheartedly in support of the AFL-CIO promotion of international trade. For the garment unions it involved reexamination of support for trade liberalization as part of a longstanding commitment to internationalism, as tariff reductions precipitated crises within their industries. In other organizations, like the United Steelworkers of America, debate raged between those who had benefited from export markets and other members whose earnings, employment, and standards were increasingly threatened by import competition.

Multilateral reductions of tariffs resulting from the Kennedy Round induced severe problems for industries, workers, and their unions, IAM and IUE, experiencing import discipline and concomitant relocation of subassembly and final assembly abroad. Unions in industries removed from direct import competition, like the building trades and public employees, began to consider trade liberalization implications for their markets and standards of living.

The United Automobile Workers' departure from the AFL-CIO left the CWA as the major proponent of trade liberalization within the Federation. Qualified support of trade liberalization swung quickly to opposition, with the AFL-CIO advocating foreign investment controls and import quotas. Introduction of the Foreign Investment and Trade Act of 1973, known as Burke-Hartke, provoked a torrent of criticism by economists and others of the AFL-CIO stand against trade liberalization. The Federation found itself isolated legislatively as Burke-Hartke was defeated and the Nixon Trade Reform Act of 1974 passed despite its wholesale condemnation by the AFL-CIO.

Criticism of the AFL-CIO's and its affiliates' opposition to trade liberalization by economic scholars and contemporary writers took two tacks. The first interpreted the AFL-CIO position as representing its members interests over those of other workers outside manufacturing (presumed the AFL-CIO's membership base) or outside the United States, where production had relocated. In contrast, the second form of criticism perceived the AFL-CIO as failing to represent its members' interests as consumers, who would presumably obtain trade liberalization's diffuse benefits in excess of its concentrated costs for them. According to these interpretations, the unions of the AFL-CIO either had churlishly decided to ignore the interests of others in pursuit of their members'

interests or had forgotten the members' long-run interest in short-sighted preoccupation with the immediate effects of trade liberalization on labor standards and labor organizations.

Without allies, as business generally had reversed its earlier protectionist stance, the AFL-CIO found it difficult to get a hearing for its case against trade liberalization. Nonetheless, the return of the UAW found that union, along with the CWA, aligned among trade liberalization's strongest opponents with the AFL-CIO.

The reversal on trade liberalization amounts to more than AFL-CIO's members' interests being gored after fattened by trade liberalization during Pax Americana in the two decades following the Second World War. The AFL-CIO and its affiliates did not forget or ignore trade liberalization's beneficence during that period, as criticisms proposed. Rather, both those directly experiencing import discipline and others removed from its immediate impact rediscovered the destructive effects on labor standards and labor organizations of import competition and its inducements for relocation of production. With the tariff reductions of the Kennedy Round GATT, opposition to trade liberalization spread from labor-intensive consumer goods producers to more capital-intensive durable makers. Effects within their industries and communities spread to touch other workers in building trades, services, and public employment as employment, earnings, and standards were disciplined by imports and production relocation.

Ideological commitment to internationalism slowed the learning process among some unions. These were unions that had benefited from export markets through trade liberalization while U.S. influence economically was unchallenged during the postwar era, ending with the Kennedy Round and the end of the dollar's status as a reserve currency in 1971. The AFL-CIO had learned the consequences for workers of trade liberalization but found itself at a disadvantage both in dealing with legislation pursuing it and in offering an alternative analysis of its effects, and those of international monetary developments, on standards of living in the United States.

The perspective outlined in this study suggests that a one-sided focus on the consumer effects of trade liberalization provides a distorted image of its impact on labor standards and labor organizations for unionists as workers and consumers. In addition, this analytical inadequacy can only be rectified by reconceptualization of the determination of working and living standards along the lines of the Swedish LO's solidarity wage or even Marx's value of labor power, relating standards in import-competition industries to those of workers in industries removed from trade liberalization's import discipline and relocation of production. Finally,

policy-makers, intent on cooperation with unionists in dealing with resurgent international competition, ought to recognize that the fundamental divergence from the conventional wisdom on trade liberalization represented by union views is a matter of neither short-sightedness nor license.

The Disclosure of Information to Workers in Multinational Enterprises*

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Previous studies of the impact of multinational enterprises (MNEs) on industrial relations have identified four major concerns: (1) MNEs may hurt union organizing efforts in home and host countries, (2) MNEs may reduce strike effectiveness, (3) decisions affecting subsidiaries may be made at the home office, and (4) workers may lack adequate and/or accurate information about the MNEs. The purpose of this research was to identify the types of information about MNEs that is collected by unions, the sources and uses of that data, criticisms of available information, and recommendations for improvements. Managers of the same companies identified the information that they provided to the unions, criticisms that they had received about the data, concerns about making information available, and acceptable and unacceptable solutions to the problems. The managers were also asked to identify the types of information about international operations that they collected in preparation for negotiations with unions.

Unions need information to negotiate effectively with management and administer the agreement. Data are also necessary to respond to the problems that may be caused by MNEs, as previously identified. Workers may lobby for national laws, such as local-content requirements, regional codes and laws, such as the European Economic Community's disclosure directives, and international codes, such as the Organization for Economic Development's code of conduct. In addition to political pressures, unions in more than one country may attempt to bargain with the MNE simultaneously; unions in the headquarters country may attempt to intervene at the home office on behalf of host country workers; workers may try to mobilize public opinion against certain actions by MNEs such

* This dissertation was completed at The Pennsylvania State University.

as shifting production to low-wage countries; and unions may share information about the operation of MNEs worldwide. Contract negotiations and administration and political and international labor activity in response to the concerns about possible adverse effects of MNEs require adequate, accurate information about the companies.

Methodology

This study focused on the auto industry because the International Metalworkers' Federation (IMF) has been the most active of the international trade secretariats. Within the IMF, world auto councils have been established for each of the major companies. These councils facilitate the international exchange of information by unions through publications and meetings.

Ford, General Motors, Chrysler, and American Motors were selected because they are all MNEs. Ford and GM have operations throughout the world. Chrysler and AMC are primarily North American companies, though each has minority interests in other foreign automotive plants. By studying only one industry, differences that may arise due to variations in collective bargaining practices were eliminated. Using only U.S.-headquartered companies controlled for variations in management style due to nationality differences at the headquarters of the MNEs.

U.S. and Canadian United Automobile, Aerospace and Agricultural Implement Workers of America (UAW) leaders were interviewed during September 1982 and January and February 1983. A common union, coordinated bargaining, geographic proximity, and language similarity have facilitated the development of a pattern of information exchange between the two countries. However, the Canadian union has become more autonomous for several reasons: (1) nationalistic feelings have increased in Canada; (2) the Canadian union is gaining maturity as evidenced by the fact that it has led the U.S. union on some issues, affected U.S. agreements, and set more of its own programs; (3) there are philosophical differences between the two countries' workers, with the move to the right in the United States and labor support of the socialist party in Canada; and (4) during recessions, priorities shift to jobs. This sample, then, provided evidence of international labor activity and pressures against it due to national differences.

Headquarters industrial relations managers were interviewed in February and March 1983. They were selected because they have access to corporate-wide, as opposed to subsidiary-only, data, and because they help to establish policies regarding disclosures to subsidiary managers and to unions.

Results

The companies are the major source of information collected by the UAW in the United States and Canada. Data are obtained from annual reports and other public sources as well as trade journals. Additionally, management has disclosed some information to the union on a confidential basis.

Union leaders in the two countries and managers agree that corporate disclosures have increased in recent years. The reasons cited for this trend were the economic condition of the auto industry and changing labor-management relations.

Union leaders continued to criticize management for failing to provide adequate information about international operations. Specifically, they would like more detailed disclosures of costs, profits, and productivity for each bargaining unit. Additionally, they would like to know the companies' predictions of future economic and industry trends and the companies' plans for the future in time to participate in decisions. Management argues that it is difficult to determine when, in the planning process, it is appropriate to provide information to the union and worries that such disclosures would hurt the companies' competitiveness.

Union leaders recommend several methods for achieving better access to corporate data, including: labor representation on the companies' boards of directors, establishment of labor-management consultative groups, expanded disclosure laws and codes of conduct, and opening the companies' books to the union. In Canada, where disclosure laws are less extensive than in the United States, union leaders favored expanded disclosure requirements over labor representation on the board or the formation of labor-management groups. They argued that the labor representatives may not receive the same information that other members get and that labor-management groups are often a tool of management. The managers oppose labor representation on the board and opening the books to the union, and supported labor-management groups and codes of conduct only when the company got something in return.

Governments also provide information to unions. This was especially true of Chrysler, as a result of the loan agreement in the United States and Canada. In Canada, the UAW gets additional information from the government's review board for MNEs operating there.

The IMF is another source of information about MNEs. Booklets describing corporate operations and working conditions by country and company are published periodically, supplemented by reports on special topics. The UAW has found IMF data to be too superficial. More useful information would be the length of time that workers throughout the world need to work in order to purchase specific products. Host country

workers' complaints are channeled through the IMF to the UAW, so that U.S. representatives can attempt to intervene on behalf of those workers at the corporate headquarters. Management, though, argues that the UAW is not authorized to represent host country employees. In general, the managers contend that industrial relations are decentralized and there is no need for international labor organizations.

Even though managers argue that industrial relations are decentralized and negotiations are based on local conditions, some evidence indicates otherwise. To prepare for bargaining with the U.S. UAW, Ford compiles information about sourcing patterns, labor costs, and labor agreements worldwide. At both GM and Ford, some members of the corporate industrial relations staff are responsible for monitoring foreign operations and providing advice to subsidiary managers.

DISCUSSION

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Beginning in the mid-1960s, a marked expansion occurred in the total volume of world trade. This phenomenon had profound consequences both for the United States and for its chief trading partners—Europe, Japan, and the newly industrializing countries (NICs) of Latin America and southeast Asia. The proliferation of trade opened up new opportunities for growth in the world economy, while at the same time producing serious problems of excess capacity. Companies increasingly engaged in multinational operations, and this created both instability and opportunity by quickening the international flow of capital, technology, and goods.

Each of the dissertations that I have been asked to discuss deals with the impact that these developments have had on organized labor. Two of them examine the views and practices of American unions; the third analyzes labor relations in southeast Asia, which, ironically, is a region whose exports have caused problems for a number of American unions.

Dr. Sharma's dissertation attempts to explain the wide variation in government policies toward unions in several southeast Asian NICs. He found that during the early stages of industrialization, governments in these nations seek high levels of foreign direct investment in order to promote growth. Since foreign investors are attracted by stable labor relations, governments essentially are forced to repress labor union activity or else forfeit foreign capital and technology. At some point, however, industrialization becomes self-sustaining and there is less dependence on foreign investment. That is the point at which governments relax their repressive labor policies.

Sharma's explanation is elegantly simple. But it disregards the fact that southeast Asian governments have had other reasons for repressing union activity than the need to attract foreign capital. First, there has been the desire of oligarchic leaders to stamp out independent bases of political opposition. Of course, this could be a response to indirect pressure from foreign investors, who frequently are less interested in workplace stability than in political stability and protection from nationalizations, although Sharma did not pursue this possibility. Second, domestic employers—

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fearing that unions will hurt export-led growth by unduly raising wage levels—have successfully pressed for public policies to contain union activity. Because of these factors, one does not always find a clear relationship between a country's growth stage and its labor relations policies. Domestic considerations can cause the government of a relatively industrialized nation to suddenly revert to rather harsh anti-unionism, as occurred in South Korea during the early 1970s.

The Korean example suggests that labor policy in parts of southeast Asia has a cyclical character not captured by Sharma's somewhat melioristic model. When governments repress their nation's labor movements, they unwittingly fertilize the soil of political opposition. At some point (occasionally after prods from foreign governments), more liberal policies are adopted to head off unrest and ensure continued stability. These policies are maintained until such time as the authorities again decide that "things have gone too far."

A final, minor point: I wish Sharma had analyzed whether foreign aid and military assistance facilitate or inhibit public policies favorable to unions in southeast Asia.

The second dissertation, by Dr. Shields, is a case study of the disclosure practices of multinational corporations. Dr. Shields interviewed officials of both the UAW and the American auto companies, and found a growing tendency of these companies to disclose to the union information about their international operations. However, the UAW still is not satisfied with the quality and quantity of data supplied by management.

Interestingly, Dr. Shields found some significant differences of opinion between the Canadian and American branches of the UAW on the issue of corporate disclosures. The Canadians were more suspicious than the Americans of management's motives for releasing data on international operations. Also, the Canadian UAW favored strict disclosure laws, whereas the Americans preferred a more cooperative approach to the problem. These findings indicate that there was more behind the recent split of the two union branches than labor cost differentials and a desire for national autonomy.

An issue that the study fails to address is the reason why the UAW is interested in obtaining these data. Does the union wish to bolster its strategic bargaining ability in North America, or does it view these data as a step toward international labor cooperation along the lines envisioned by the International Metalworkers' Federation (IMF)? These need not be mutually exclusive objectives, although they lead to rather different approaches to the disclosure issue, and may require different kinds of data. Dr. Shields found that the IMF was a poor source of information on the automobile multinationals, which suggests that the national unions

belonging to the IMF compete more than they cooperate, at least when it comes to information-sharing. It will be interesting to see how the Canadian and the American autoworkers deal with this problem in the future.

A related but slightly different matter that did not come up in the study is the relative quality of information disclosed by the foreign multinationals that now manufacture motor vehicles in the United States, and the extent to which their home country unions supply data to the UAW. Also, how does the fact that Japanese companies have fewer tiers of management affect the ability and willingness of their organized American subsidiaries to disclose information to a union?

We hope there soon will be similar studies conducted in other industries, and these will allow researchers to compare the effect of variations in multinational production strategies on the information needs and bargaining objectives of national unions. Presumably a union bargaining with a company that relies heavily on multisourcing and production switching confronts different problems than one dealing with a less integrated firm.

Closely related to the problems raised by bargaining with multinational enterprises are the complex political issues that surround international trade. Dr. Donohue's dissertation examines the views held by American union leaders on trade policy and suggests ways for unions to popularize their currently unfashionable position favoring strict limits on trade.

One of Dr. Donohue's most interesting findings is that American labor never has had a monolithic view of trade issues. During the 1950s and early 1960s, the AFL-CIO generally supported free trade, as did many of its affiliated unions (with the exception of those in labor-intensive manufacturing industries). Donohue shows how this liberal stance shifted as a result of several factors, including: the multilateral tariff reductions imposed by GATT's Kennedy rounds in 1962, the dollar devaluation of 1971, and Nixon's 1974 Trade Reform Act. By the mid-1970s, American union leaders firmly supported greater restraints on imports, thus making unions a prime target of economists favoring continued trade liberalization.

Donohue stresses that organized labor needs to come up with better arguments to counter the economists' claim that free trade generally is beneficial to the consumer. He proposes that union leaders direct more attention to the corrosive effects that free trade has on labor standards. In this regard, he undoubtedly would find Dr. Sharma's dissertation to be of interest.

One argument made by Donohue is that the AFL-CIO's previous

stance in favor of free trade owed much to its belief in international labor solidarity, and that this belief was responsible for the organization's rather slow embrace of protectionism. Yet a cynic could easily claim that the shifts in labor's positions are better explained by self-interest and the influence within the house of labor of unions from capital-intensive industries. During the 1950s, America's capital-intensive products did well in world markets, despite the dollar's high value, and imports posed little threat to these products at home. As is well known, all of this changed during the 1960s and 1970s with the increase in international industrial capacity and world levels of trade.

In order to sway public opinion, Donohue thinks that organized labor must come up with an effective reply to the claim that its trade policies are damaging to consumers, a group that includes its own members. While I agree with this, I believe that Donohue underestimates the intellectual challenge that labor faces in this area. Proponents of free trade argue that protectionism destroys more jobs than it creates and poses serious dangers to international economic stability. Labor must challenge, if it can, the claim that a shift by the United States to more protectionist policies might set off a chain reaction of "beggar thy neighbor" policies, as occurred in the early 1930s. Finally, unions must answer the criticism (some of it coming from within their own ranks) that they have over-emphasized the job loss caused by imports, and not given sufficient attention to more important, but less easily solved, problems such as the relatively slow growth of domestic demand for capital-intensive products.

This morning's dissertations are an encouraging sign that younger scholars once again are grappling with comparative labor issues and related topics like the impact of international trade on collective bargaining. Those areas undeservedly have been considered the backwaters of industrial relations research during the last 15 years, although the present crisis of the labor movement in North America and Western Europe is changing that prejudice. The mass production industries that once were the stronghold of organized labor are reeling from the intense competition offered by Japan and the NICs. Unions and employers in these industries are searching for policies that will allow them to adapt to, and thrive in, the new competitive environment. These dissertations—each in its own way—contributes to that search.

DISCUSSION

SHELDON FRIEDMAN

International Union, UAW

The diverse topics covered by the dissertations summarized in this session are unified by a common theme: the increasing internationalization of once-separate national economies, and the implications of this powerful trend for workers and their unions, in the U.S. and abroad. Few subjects are more timely or have greater importance to the labor movement today, and as such all of the panelists are to be commended for their choice of topic.

Basu Sharma examines the impact of attempts to attract foreign direct investment on the evolution of labor policies in several Asian countries. His central finding appears to be this: in the countries studied, repressive labor policies generally emerged as part of a national economic development strategy to attract foreign direct investment. In some cases, such as Singapore's, repression of the labor movement subsequently eased as industrialization proceeded, but in nearly all cases repression intensified compared with an earlier period during which labor had often been a partner in the struggle for national independence.

Professor Sharma finds that foreign direct investment did appear to stimulate economic growth in the countries studied, in the sense that countries more successful in attracting foreign investment tended to grow faster than countries which were not. It should be noted, however, that there are alternative strategies that produce equivalent growth without heavy reliance on foreign direct investment; the example of Japan comes to mind.

This discussant has no reason to doubt Sharma's central finding. However, that finding raises several critical follow-up questions. First, were repressive labor policies *necessary* to attract foreign direct investment? How strong is the evidence that most or all of the foreign investment in the countries studied would not have taken place anyway, absent repressive labor policies? Even apart from the vital issues of human rights, social justice, and economic democracy, it is certainly possible that the observed labor policies mainly resulted in lower wages and worse conditions for workers in the host countries, and higher profits

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for the multinationals, with little impact on the rate of foreign investment. If so, adoption of repressive labor policies could actually have been counterproductive from the standpoint of economic development.

Second, what was the role of multinational corporations in promulgating and enforcing repressive policies? Were they merely passive beneficiaries, or did they play a more active role? What was it that made the governments of these Asian nations believe that repressive labor policies would help them attract foreign direct investment? This raises the larger question of the link between industrial relations systems and political systems in these countries, and the relationship of multinational corporations and U.S. government policy to both. Sharma's excellent analysis would have been further strengthened by examination of these topics.

The finding that developing Asian countries are using repressive labor policies as a conscious strategy to attract foreign direct investment should be of concern not only to workers in those countries, but also to U.S. and other industrial country trade unionists. The threat posed by these repressive policies to U.S. workers' jobs and living standards is clear and direct. These findings give new urgency and fresh support for proposals to achieve fair labor standards and respect for trade union rights internationally. Possible tools for achieving these goals include mandatory license requirements for out-going investments by U.S.-based multinationals, denial of G.S.P. and other trade and tariff preferences to goods and services imported from countries which do not observe fair labor standards or adequately protect worker and trade union rights, and expanded scope and enforcement of multilateral standards such as the OECD code of conduct governing multinational corporations. If Sharma's dissertation moves us closer to these elusive objectives, it will have been a job well done.

Janice Shields looks at disclosure of information to workers and their unions by multinational corporations, focusing on auto companies and the UAW, in the U.S. and Canada. She concludes that divergent views of corporate disclosure by the UAW's U.S. and Canadian branches epitomizes differences in strategy and outlook which subsequently caused the Canadian leadership to advocate secession from the U.S.-based international union.

While much else in Professor Shields's presentation is commendable, this particular conclusion is questionable. This is not the place for analysis of the UAW of Canada's probable secession: suffice it to say that any U.S.-Canadian difference in views of corporate disclosure can more appropriately be viewed as disagreement about tactics, not strategy.

It is also questionable whether U.S. and Canadian trade unions differ regarding the desirability of improved corporate disclosure laws. There

may be tactical differences related to judgments about political feasibility and priority relative to other more immediate concerns, but certainly there is no difference of opinion about the desirability of improved corporate disclosure laws as a long-term objective.

The finding that managers support guidelines for multinationals such as the OECD code is also questionable. This may be true in the sense that corporations prefer unenforceable guidelines as an alternative to legal requirements, but it is not true that they scrupulously observe voluntary guidelines. Moreover, U.S. corporations even tend to resist extension of guidelines, as witnessed by their recent reaction to the Vredling Plan. At their request, a bill was introduced in the U.S. House of Representatives that would have made it easier for U.S.-based corporations doing business in Europe to avoid complying with that Plan's modest guidelines.

Turning to Shields's discussion of the adequacy of the International Metalworkers' Federation (IMF) data, she reports that the "UAW found it too superficial." Certainly, like most things in life, the IMF's data could be improved, but their reports and publications also contain much useful information. International comparisons of labor time required to purchase various commodities are in fact published by the IMF. However, since the data are submitted by union researchers working independently in different countries, there is no assurance of consistency in this important data series.

On the matter of the Chrysler board seat, we didn't "get the idea" from the corporation's prior offer to U.K. trade unionists. Rather the UAW used that offer as an argument in support of a board seat for U.S. Chrysler workers.

Finally, the paper would have been strengthened by a better overview of the importance and uses of corporate information to unions and their members. If you see collective bargaining as an extension of democratic decision-making to the workplace, it is vital that the "electorate"—workers—have access, through their unions, to sufficient information to make informed collective bargaining decisions. In industries like auto, the union has a legitimate interest in (among other things) investment and production plans; data on sourcing, profits, pricing, and productivity; detailed analysis of the reasoning that underlies these figures; as well as relevant geographic, plant and product line breakdowns, and international comparisons. Corporations resist disclosing such information primarily because they fear it will be used to pressure them to reverse or modify corporate decisions. "Knowledge is power," and the struggle over union access to corporate information is fundamentally a struggle about the power and effectiveness of the trade union movement.

Peter Donohue analyzes the evolution of views on international trade

policy by the AFL-CIO and its affiliates. Space constraints prevent me from commenting in depth on his interesting analysis, but his main theme that U.S. unions have *not* been acting short-sightedly or contrary to the interests of their members or the public by advocating an activist international trade policy is highly commendable and deserves the widest possible dissemination.

XII. CONTRIBUTED PAPERS: COLLECTIVE BARGAINING

The Arbitrariness of Arbitrators' Decisions*

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Critics of arbitration complain that there is no way to predict the decision of an arbitrator, or to anticipate its rationale (Ross 1957, Jones and Smith 1964, Wrong 1982). And attitudes toward arbitration have been characterized as varying from "profound cynicism to amused tolerance" (Aaron 1957, p. 19). Research in arbitral decision-making tends to support these criticisms, generally indicating conclusive findings only when reasons for discharge have been considered.

Traditionally, the research has involved published awards, allowing many arbitration decisions to be considered. Unfortunately, this has revealed more about the grievant's characteristics than the employer's and has precluded consideration of the characteristics of the grievance procedure in general and specific events which preceded decisions to arbitrate. Perhaps most troublesome, published decisions (except in Canada) are not representative of all cases (Stieber, Block, and Corbitt 1983). In this study we examine all arbitration decisions rendered in five refineries over a five-year period, allowing systematic consideration of the characteristics of the grievance process in general and the employer in particular.

Arbitral decision-making studies may be divided into (1) research focusing on the reason for discharge and the ultimate award, and (2) research emphasizing the impact of employer and grievant characteristics.

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We link the two areas, providing a systematic and analytical view of arbitrators' decision-making processes and greater insight into factors associated with reinstatement.

The Research

Holly (1957) and Jones (1969) concluded that management's poorest record was associated with discharges due to insubordination. Teele (1964) and Jones (1969) reported a high incidence of reversals for cases concerning job performance. Two other studies, however, found a relatively low probability of reinstatement (Holly 1957, Stieber, Block, and Corbitt 1983) when job performance was the issue.

Cumulation of results across studies provides a best estimate of the probability of reinstatement, depending on the issue in dispute. These estimates indicate discharges for rule violations should be inversely associated with reinstatement, discharges for dishonesty and discharges due to job performance should be unrelated to reinstatement, and discharges due to insubordination should be positively related to reinstatement.¹

Researchers also have examined the circumstances surrounding the arbitration hearing and the characteristics of the actors involved. Adams (1979, p. 51) found that grievants are less likely to be reinstated when the delay between discharge and arbitration was greater than six months. Stieber, Block, and Corbitt (1983) and Stieber and Block (1983), viewing employer and grievant characteristics as predictors of the decision to reinstate, analyzed AAA and FMCS discharge cases in Michigan during 1979. Other than attorney representation and an indication of whether the case was published, none of the factors considered were significant, including the type of employer, occupation or sex of the grievant, submission of post-hearing briefs, and seniority.

The Model

Daugherty's (1966) criteria for the assessment of "just cause" of a company's disciplinary action require sufficient proof of an allegation. The proof must be gathered through an investigation by individuals who are not assuming the roles of judge and jury and through an investigation that includes an opportunity for the accused employee to present his or her side of the story. These widely applied criteria and our general model suggest a two-step decision process in discharge cases. First is a determination of guilt or innocence. A finding of guilt triggers consideration of mitigating and extenuating factors which can modify a discharge to a lesser penalty.

¹ These estimates are available from the authors on request.

Reasons for discharge are our best available proxy for the first step of the decision process—the determination of guilt or innocence. In consideration of the second step, mitigating factors such as seniority and the administration of progressive discipline will be considered.

Method

Our sample was drawn from five Southwest petroleum and/or chemical refineries operated by four separate companies. Each refinery had 1000–1100 employees represented by one of four different locals of the same international union. Of 183 discharges during 1975–1981, 37 were appealed to arbitration and thus comprise our sample.

Data were analyzed by discriminant analysis. The DECISION of the arbitrator to reinstate the grievant or to sustain the discharge constituted the dependent variable. Positive relationships with a predictor should be interpreted to mean that the predictor is positively associated with reinstatement.

Reasons for the discharge were coded as four dummy variables: *DISHONESTY*, *INSUBORDINATION*, *JOB PERFORMANCE*, and *RULE VIOLATIONS*.

The most frequent reasons given by arbitrators for reinstating previously discharged employees were a generally satisfactory record and the likelihood that the employee had “learned his lesson,” making the employee worthy of a second chance (Stone 1969). Thus, arbitrators would be expected to view past work behavior as a predictor of future work performance. Unions (companies) would be expected to emphasize (downplay) an untarnished work record. Disciplinary history, expected to be inversely associated with reinstatement, is represented by the number of written *WARNINGS* and the number of *SUSPENSIONS* received during the 12 month period before discharge.

Arbitrators consider factors that are not explicit in the collective bargaining contract (Adams 1979). Seniority and prior discipline influence the assessment of “just cause.” Senior workers have had the opportunity to demonstrate the ability to perform acceptable work. A higher trigger threshold for discharge may thus be applicable. While senior workers may have a lower probability of being disciplined than their junior counterparts, once discharged, senior workers with an unusually poor work history may have a poorer chance of reinstatement.

In practice, does a senior worker have a poorer chance for reinstatement than a junior worker? Perhaps not. Because arbitrators have been admonished to consider seniority and progressive discipline as mitigating factors, the modification of discharges to lesser penalties is not uncommon

even with a grievant's admission of guilt (Prasow and Peters 1983, pp. 289-99). These opposing effects may cancel each other, resulting in no detectable relationship between seniority and reinstatement. The sign on *SENIORITY*, months of work experience prior to the discharge, is thus indeterminant.

When there is a record of progressive discipline, company and unions have a higher expectation that arbitrators will uphold a discharge. Repeated warnings should suggest that the employee has not learned from past mistakes and does not deserve another opportunity. The administration of progressive discipline by the company should be inversely related with reinstatement. *PROGRESSIVE DISCIPLINE* was considered to occur whenever increasingly severe discipline was administered by the company for infractions prior to the event that triggered the discharge.

Three additional mitigating factors are considered. Following Adams (1979), the delay in months between the discharge and the arbitration hearing was expected to be inversely associated with reinstatement. Interviews with union and management representatives indicated that decisions appeared to be systematically associated with the sex of the grievant and with marital status. *SEX* and *MARITAL STATUS* were thus considered as possible mitigating factors.

Results

Table 1 reports the results. If the mean value of a variable for the reinstated group is higher than for the group denied reinstatement, a positive discriminant weight is implied. If lower, a negative relationship is suggested. To the extent that arbitrators consistently decide cases on the basis of one (or more) of the factors, higher means and lower standard deviations for the *REIN* (reinstatement) group than for the *DEN* (denied) group would result. These effects would not be expected to be widespread, however, since arbitrators do not systematically single out one (or several) mitigating factors when deciding a case. Nevertheless, evidence of this effect was found on *MARITAL STATUS* and, to a lesser extent, on *SEX*. In general, the data support the observation of company and union officials that female grievants were less likely and married grievants more likely to be reinstated.

The outcome of 87 percent of the cases is correctly predicted by discriminant analysis.² Important predictors of the decision, represented

² Since only two groups are involved (the arbitrator decided either in favor of the grievant or not), only one discriminant function can be identified. The variables were entered using the WILKS stepwise procedure whereby the variable with the largest overall multivariate F constituted the criteria for entry. When this procedure is used, previously selected variables may lose their discriminating power and be dropped from the equation because they are

TABLE 1
Two Group Discriminant Analysis
Denials (DEN) Versus Reinstatements (REIN)

| Variable | (1) Mean for All n = 37 | (2) Sign | (3) Mean for DEN n = 17 (σ) | (4) Mean for REIN n = 19 (σ) | (5) Discrim- inant Weight |
|-----------------------------------|----------------------------------|-------------|--|---|------------------------------------|
| Reason for discharge | | | | | |
| <i>DISHONESTY</i> | .19 (.40) | ND | .05 (.24) | .32 (.48) | +.23 |
| <i>INSUBORDINATION</i> | .19 (.40) | + | .18 (.39) | .21 (.42) | -.05 |
| <i>JOB PERFORMANCE</i> | .19 (.40) | ND | .18 (.39) | .21 (.42) | +.73 |
| <i>RULE VIOLATION</i> | .41 (.50) | - | .59 (.51) | .26 (.45) | — |
| Disciplinary history | | | | | |
| <i>WARNINGS</i> | .70 (.85) | - | .94 (1.03) | .53 (.61) | -.63 |
| <i>SUSPENSIONS</i> | .44 (.69) | - | .41 (.71) | .47 (.70) | — |
| Mitigating factors | | | | | |
| <i>SENIORITY</i> | 60.4 (58.1) | ? | 40.1 (26) | 80.6 (73) | +.80 |
| <i>PROGRESSIVE DISCIPLINE</i> | .30 (.46) | - | .18 (.39) | .37 (.50) | +.73 |
| <i>MARITAL STATUS</i> | .70 (.46) | + | .59 (.51) | .84 (.37) | +.68 |
| <i>SEX</i> | .14 (.35) | - | .17 (.39) | .11 (.32) | -.51 |
| <i>HEARING DELAY</i> | 12.2 (9.7) | — | 12.6 (7.4) | 11.8 (11.5) | — |
| % cases correctly predicted = 87% | | | | | |

Note: ND means "no expected difference." Numbers in parentheses are standard deviations.

by the magnitude of the discriminant weights, were *SENIORITY* and *PROGRESSIVE DISCIPLINE*. The importance of *SENIORITY* in this equation was unexpected, given that high seniority could have worked to the grievant's disadvantage. The magnitude and direction of the *PROGRESSIVE DISCIPLINE* weight, +.73, was not expected.

SUSPENSIONS did not make a significant contribution and thus was dropped from the equation. Entry of three reasons precluded entry of a

redundant and are adequately represented by other variables included in the analysis. The reason variables (job performance, dishonesty, insubordination, and rule violation) were forced into the equation first. These variables were considered to be causal antecedents to the mitigating considerations.

fourth reason variable, *RULE VIOLATIONS*. Also dropped from the equation was *HEARING DELAY*, which had a discriminating value that was too small to qualify for retention.

Discussion

Three findings merit discussion. First, no relationship between *DELAY* and *DECISION* was found. Second, there was a surprisingly strong, positive association between *PROGRESSIVE DISCIPLINE* and reinstatement. Third, there was an equally strong positive relationship between *SENIORITY* and reinstatement.

Our results imply that unions need not be concerned about pressing for expedited hearings. This finding contradicts Adams (1979). The difference might be explained by a higher relative weighting of insubordination cases in Adams's work (24 percent of his sample). We expected that grievants discharged for insubordination would be significantly more likely to be reinstated. Our results also indicated a positive correlation between *DELAY* and *INSUBORDINATION* ($r = +.32$). If a similarly high correlation was characteristic of Adams's sample, the finding of a significant bivariate relationship between *DELAY* and *DECISION*, without controlling for *INSUBORDINATION*, could have been a sample artifact.

The progressive discipline finding presents the most serious challenge to "conventional wisdom." It would seem to support critics who claim the arbitration process is arbitrary. The finding is so contrary to expectations that we would not be surprised if other researchers obtained different results. Yet, logical explanations for this result exist.

Where employees (including those with significant service) do not have clean work histories, there are times when companies focus on the past record to the exclusion of due process rights associated with the "last straw" event that triggered the discharge. Consider one of the cases in our sample. A junior female refinery employee with three warnings and two suspensions complained about a work assignment which resulted from her failure to perform work properly. The supervisor handled the failure by administratively reassigning the job to the employee (otherwise she would have been rotated to another job) rather than by discipline. Her complaint about the reassignment triggered a series of events whereby the failure to do the work properly, two other infractions about which the supervisor had warned her but otherwise took no action, and her past record became the basis for discharge. While the company had focused on the entire record, the arbitrator focused on the final incident. He reinstated the grievant with full back pay, finding that the employee had a contractual right to complain about the work assignment without having the complaint become, in effect, the trigger for a discharge.

Industrial relations managers have suggested that sometimes companies may discharge employees whom they hope to be rid of for infractions for which sufficient proof is difficult to obtain or which they realize may not be serious enough for discharge in the arbitrator's judgment. The investment in an admittedly questionable arbitration case is deemed worthwhile because of strong feelings that the grievant is a disruptive force.

The decision to retain an unwanted employee may present higher costs to the company than dismissal, even if unjust. The risk of having a discharge not grieved or sustained in an arbitration hearing may be viewed as less detrimental than the cost of retaining an unwanted employee. Only 91 of the 183 discharged employees grieved. Twenty-six (26) grievances were resolved prior to arbitration, and 28 were dropped by the union.³ Thus there was a one-in-five chance that a discharge case would be heard by an arbitrator and only a one-in-ten chance that the grievant would be reinstated. From management's point of view, there is a high probability that a discharge will not be rescinded. Perhaps the risk of reversal provides the needed incentive to management to indicate to the arbitrator that progressive discipline had been administered prior to the discharge.

Now consider the performance of the seniority variable. Its positive sign in the discriminant analysis could be a selection artifact. Junior workers with excellent work records may be less likely than senior workers with equally good work records to grieve discharges since the junior employees have less invested in their jobs. Where employment opportunities are perceived as favorable, highly marketable junior employees may view the search for a new job as less troublesome than contesting the discharge and going through many months of uncertainty until an arbitration award is rendered.

In addition, senior employees have more motivation to preserve their jobs and thereby retain the advantages that go with seniority. Even if a senior employee has been guilty of an infraction, the employee and/or the union may be convinced that the seniority factor may be determining in reducing the discharge to a lesser, job-saving penalty, even if only reinstatement without back pay. Thus the magnitude of the positive relationship between seniority and reinstatement would be smaller if junior employees with excellent work histories were no less likely to grieve to arbitration than junior workers with poor work histories.

Arbitrators' decisions probably appear to critics to be arbitrary because they have not been studied within the context of the grievance

³ Resolved grievances resulted in reinstatement with a lesser penalty; the discharge prevailed if grievances were dropped.

procedure. Relative to all discharges, our results suggest that a smaller proportion of arbitration cases involve junior employees with good work histories and that probably a disproportionate number of cases going to arbitration lack due process.

The most compelling explanation for this finding may be found in the weight accorded seniority and due process by arbitrators. Seniority may simply count for more in arbitration than companies believe it should. Arbitrators, union officials, and company officials view discharges from very different perspectives. All parties might agree on which criteria are applicable, but disagree on the weights to be given those criteria. Our results suggest that, relative to the weights attributed by companies, arbitrators probably consider past work history less important and give more weight to the specific circumstances that triggered the discharge as well as to seniority. As long as there are differences in the way the relative weights are perceived, there will continue to be "surprising" decisions rendered by arbitrators and concern with the process.

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Employment-at-Will and the South Carolina Experiment

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Currently, one of the most controversial issues in the field of industrial relations is "employment-at-will." Should employers lawfully be permitted to fire employees at any time and for any reason, or should the right of employers to discharge employees be of a more proscribed nature?

During the past decade or so, the "at will" rule has come under attack as being anachronistic and unsuited to economic realities such as structural unemployment prevailing in the latter part of the 20th century (Note, Reforming 1983). Further, the rule's continued application has created a glaring disparity of rights between unionized employees who, under collective bargaining agreements, traditionally can be discharged only for "just cause" and other groups who are protected to some degree by Title VII of the Civil Rights Act of 1964 and other legislation, and the vast majority of employees who are afforded no protection from "unjust dismissal" (Summers 1976).

Consequently, there has been a strong push, by scholars and some practitioners, to reform the "at will" rule so that it conforms more closely to current economic realities. While there has been some minor state legislative action in this area (Gould 1984, Michigan 1981), the primary battlegrounds for change of the doctrine have been state courts challenging the continued application of the "at will" rule.

State Court Litigation and Its Problems

State Court Cases

It should be noted that despite the recent state court challenges, the "at will" doctrine remains generally applicable throughout the nation (Shepard and Moran 1982). Recent court decisions, for example, based on the "at will" rule, have upheld employee discharges for reporting a superior for soliciting and receiving kickbacks, for refusing to falsify medical records,

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and for warning superiors that one of the employer's products was not adequately tested and constituted a serious danger to consumers (Hitchcock 1983).

Nevertheless, some state courts have in recent years made significant inroads into the traditional "employment-at-will" rule. Decisions limiting the rule have rested essentially on three legal theories: a public policy exception based in contract or tort law, a finding of an implied-in-fact contractual right to continued employment, and a finding of an implied-in-law covenant of fair dealing and good faith.

The most widely accepted limitation on the "at will" rule is the "public policy exception." At the present time approximately 20 state judiciaries recognize an exception to the mandates of "employment-at-will" for employees who are discharged for reasons deemed to contravene fundamental principles of "public policy" (Wotring and Lewis 1984). The "public policy exception" has generally been applied in three categories of cases: (1) those involving an employee being fired for refusing to commit an unlawful act such as committing perjury at a trial, (2) those involving an employee being discharged because of the employee's performance of an important public obligation such as jury duty, and (3) those involving an employee being dismissed for exercising a protected statutory right or privilege such as filing for worker's compensation (Note, Protecting Employees 1983).

Exceptions to the "at will" rule based on implied-in-fact contracts and implied-in-law covenants of fair dealing are fewer than those based on public policy grounds, but are of increasing importance. With respect to the implied-in-fact contractual rights exception, various courts have read into the employment relationship a contractually based promise by the employer to refrain from arbitrary dismissal (*Toussaint v. Blue Cross and Blue Shield of Michigan* 1980). Finally, courts in three states, California (*Cleary v. American Airlines* 1980), Massachusetts (*Fortune v. National Cash Register* 1977), and Montana (*Gates v. Life of Montana Insurance Co.* 1983) have established an implied-in-law covenant of a fair dealing exception to the "at will" rule, based on a judicial finding of a contractual duty of good faith and fair dealing in the employment relationship.

Problems with State Court Litigation and Reform

Despite the bold inroads that some courts have made, there are problems inherent in addressing the continued viability of the "at will" rule in the state courts. Beyond the uncertainty involved in addressing the issue under various theories and on a case-by-case basis, there are important philosophical questions when state judges are permitted to make decisions about such significant public policy concerns. Such

“legislated” changes in public policy may best be left to state legislatures (Note, *Limiting the Right* 1982). Moreover, litigation is often costly and time-consuming. The average employee, much less one who was recently fired, simply cannot afford to challenge an employer’s decision in court (Note, *Protecting Employees* 1983). Further, the courtroom may not be the best place to resolve issues of this type. Court litigation is an adversarial process, plaintiff vs. defendant. An employee seeking reinstatement to his or her previous job or simply a good reference may not be well served by such a procedure.

For all of the above reasons, and others, various commentators have argued that the “at will” issue must be addressed by state statutes and that individual cases must be resolved by means other than courtroom litigation. Clyde Summers (1976) and Jack Stieber (1979), for example, have both argued that states should adopt statutes protecting employees from “unjust,” that is, not for “just cause,” dismissal and providing employees the right to have such cases resolved by an impartial arbitrator. Under the Summers and Stieber proposals nonunionized employees would enjoy essentially the same right as employees covered by collective bargaining contracts.

Therein, however, may lie a problem. First, as Cornelius Peck (1979) and Stephen Goldberg (1981) have observed, unions may not be particularly enthralled with the idea that all employees, by statute, would receive the same grievance procedure protections that unions have been using as a key selling point in attempts to recruit new members. Indeed, extensions of such protection might well, as Benjamin Aaron (1982) has predicted, have an inhibiting effect on union growth.

In addition, as Julius Getman (1979) and others (Catler 1983) have argued, there may be problems, absent the existence of a representative union, with obtaining employer compliance with arbitral decisions and protecting reinstated employees from employer retaliation. The presence of the union may well serve as a buffer and monitor of actions between the employer and individual employees, and their absence may help render arbitration an ineffective remedy in “at will” disputes involving unorganized employees.

Further, one may certainly expect many managers to resist the idea of having a third-party arbitrator, with binding decision-making power, making decisions with respect to their workforce—decisions they feel only an employer should have the power to make. Finally, grievance arbitration procedures, particularly in unionized settings, have been criticized for becoming increasingly expensive, prolonged, and legalistic (Brett and Goldberg 1983).

In the midst of all this debate and rhetoric, one state, South Carolina,

has engaged in nonbinding mediation of employee discharge disputes. The South Carolina experiment, to which we now turn, may indeed hold promise for other states.

The South Carolina Approach

Background

Section 41-17-10 of the South Carolina code (1976) grants the state's Commissioner of Labor or his agents broad powers to deal with "industrial disputes" that arise between "employers and employees or capital and labor." They are given the power to investigate said disputes, to ascertain their cause or causes, to make findings of fact with respect to them, and to try to remove misunderstandings between the parties and induce them to reach an agreement. Specifically, Section 41-17-10(f) of the Code states that the Commissioner or his agents should "in general remove as far as possible the causes for industrial disputes . . . and induce an amicable settlement of them."

Nowhere, however, does the Code define the term "industrial dispute" to encompass cases involving employee discharges. Indeed, the notion that employee discharges are to be subject to state conciliation procedures is not mentioned anywhere in the relevant statutory provisions or legislative history.

Nevertheless, by way of broad executive interpretation of statutory mandates, South Carolina has embarked on one of the boldest innovations in the field of industrial relations in the United States today. Within the State Department of Labor it has established a Division of Labor/Management Services (LMS), and one of the principal duties of this 11-year-old division is to mediate "at will" employee dismissal cases. Its 1983 budget was \$268,319 (S.C. Acts 1983).

LMS Operation and Procedure

Comprehensive public information concerning the operation of LMS is not currently available, but the authors were able to obtain some details from a variety of sources including (1) internal agency reports for the period 1978–1983, (2) personal communication with the agency's director and several staff members, (3) a fiscal year 1981 in-depth study of randomly sampled LMS cases conducted by research colleagues at the University of South Carolina, and (4) analysis of an independent survey of 740 South Carolina households participating in a 1980 University of South Carolina consumer panel. Collectively, this information has revealed that while the state's LMS employee discharge mediation program may lack explicit statutory authority, it certainly has not lacked for activity.

Each year LMS is contacted by approximately 3000 workers seeking

information in regard to a complaint against their employer. Approximately 90 percent, or 2700, of these complaints involve instances of involuntary termination or discharge (see Table 1).

TABLE 1
Summary of Annual LMS Case Resolutions

| | | |
|------|---|------|
| I. | Stage 1 | |
| | • Initial complaints/contacts | 3000 |
| | • Initial complaints/contacts involving involuntary employee termination or discharge | 2700 |
| II. | Stage 2 | |
| | • Initial complaints/contacts involving involuntary termination within LMS's jurisdiction and subject to further agency investigation | 1350 |
| III. | Stage 3 | |
| | • Cases in which agency decides to pursue mediation/conciliation after initial investigation has been completed | 675 |
| | • Cases in which LMS achieves positive modification of terms of employee's discharge by employer | 338 |
| | Employee reinstated | 136 |
| | Employee given "good reference" | 112 |
| | Employee given "clean record" | 88 |
| | Employee awarded money damages or other remedy | 2 |
| | • Cases where LMS achieves no clear modification of terms of employee's discharge | 337 |
| | • Employer refuses to change position | 168 |
| | "Positive referral counseling" is made in case | 169 |

LMS's first step is to determine whether it has jurisdiction over the complaint. It refers grievances involving allegations of race, age, sex, national origin, or religious discrimination in employment to the South Carolina Human Affairs Commission, and it does not handle complaints from government employees or employees of unionized firms. Finally, the agency declines cases involving probationary employees or those of individuals who first file complaints more than 90 days after the incident occurred.

In their initial screening of complaints for jurisdiction, LMS staff members assemble information from personal conversations with complainants and from "investigation reports" or complaint forms completed by most of these individuals. On the basis of this information, about half of the complaints are screened out and, where appropriate, referred to another agency. This leaves, on an annual basis, about 1350 involuntary termination cases for further consideration and investigation by LMS.

At this stage the cases are assigned to one of the agency's five full-time

conciliators who makes sure the complainant, if he or she hasn't already done so, fills out a formal "investigation report" or complaint form. In this report the complainant formally states the nature and circumstances surrounding the complaint.

The conciliator sends a copy of the completed form, along with a letter, to the complainant's former employer. The letter requests the employer to review the complaint and the circumstances leading to the employee's discharge and to send the LMS a statement of the results of his or her findings. The letter also stresses that the purpose of the LMS is to seek fair, equitable, and amicable treatment for employees and employers in South Carolina. LMS has essentially a 100 percent response rate from employers to this letter, and when faced with employer recalcitrance, it can legally compel the requested information.

Upon receipt of the employer's response to LMS's letter and the employee's complaint, the conciliator handling the case is faced with the critical decision of whether to pursue the case further. In about half the cases that reach this procedural stage, the LMS accepts the employer's rationale for termination and drops the case, making no further effort to persuade the employer to modify his or her position. In the remaining half of the cases, the conciliator attempts to obtain, through vigorous mediation and conciliation, some consensual modification of the employee's discharge.

The agency is able to obtain clear consensual modification of the terms of the employee's discharge in approximately 50 percent of the cases that reach the mediation/conciliation stage. The employer agrees to reinstate the discharged worker in approximately 20 percent of such cases. Indeed, employee reinstatement is by far the most common remedy achieved by LMS. The next most frequent remedy achieved is obtaining agreements from given employers to provide discharged employees with "good references." This occurs in about 17 percent of the cases and usually involves the former employers writing positive reference letters for discharged employees.

This latter result is to be distinguished from cases where LMS is able to get the employer to "clear" the former employee's record, which is the remedy achieved by the agency in approximately 13 percent of the cases it decides to mediate or conciliate vigorously. A former employer's agreement to "clear" the record of a discharged employee does not involve the employer's putting his or her foot forward and providing the employee with a positive reference. Instead, it merely involves modification of the employee's personnel record. The goal is to insure that this record will not serve as a barrier to the employee's obtaining a new job should, for example, a prospective employer inquire about the former

employee. Finally, in only a handful of cases does the agency obtain money damages or other relief for the discharged employee.

Finally, the conclusion, based on the above statistics, that LMS is unsuccessful in obtaining modifications of the terms of the employee's discharge in approximately 50 percent of the cases it actively pursues is somewhat misleading. In only about 25 percent of such cases is there a complete stalemate, where LMS is unable to obtain *any* modification of the employer position. What happens in the other 25 percent of such "unsuccessful" cases is that LMS does engage in what it terms "positive referral counseling." This involves a determination by the agency that while the case is technically within its jurisdiction, it would be more efficiently handled by an attorney or another government agency. In such instances LMS conciliators meet with and counsel the complainant with regard to the agency's posture regarding the case and arrange for referral of the case to what is perceived to be a more appropriate entity or individual. No data are available regarding the later disposition of cases in which LMS makes "positive referral counseling."

Summary and Conclusion

The majority of American employees continue to be "employees-at-will." They can be fired at any time and for any reason. In recent years, however, the "at will" employment rule has come under increasing criticism as being anachronistic and unsuited to modern economic realities, but finding workable solutions to the problem of "at will" employment has proven difficult.

The State of South Carolina, however, has embarked on a novel approach to the issue. Its Department of Labor, through its Labor/Management Services Division, engages in the mediation of "at will" employee discharge cases. The agency's successful resolution of a high volume of cases, particularly in the context of its extremely low profile, speaks well for the viability and potential of the LMS approach as a possible model for other jurisdictions. In formulating a comprehensive solution to the "at will" problem, the South Carolina experiment is one that should be studied more closely.

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Determinants of the Decertification Process: Evidence from Employer-Initiated Elections

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The topic of union representation elections has received a great deal of attention by researchers in economics, psychology, sociology, and industrial relations. In particular, there have been numerous studies of why workers join unions and on the factors that appear to influence the outcomes of union representation elections. However, there have been relatively few studies of why workers subsequently choose to decertify a union as their bargaining agent through an RD election and virtually no empirical studies on the outcomes of employer-initiated representation elections, or RM elections as they are referred to by the National Labor Relations Board (NLRB).

The majority of union representation elections are employee-initiated certification, or RC, elections; however, the proportion of decertification elections, both employee- and employer-initiated, has been rising since the passage of the Taft-Hartley Act in 1947. Nevertheless, decertification elections represent, in both numbers and voters participating, less than 10 percent of the numbers of and voters in certification elections. We have concentrated in this paper on employer-initiated decertification elections for several reasons. When the Taft-Hartley Act was passed, it was viewed as a threat to union organizing activities; yet there have been no attempts to measure how “successful” employers have been in getting a union decertified. Second, factors that influence the outcome of an employer-initiated election may be very different from those that influence an employee-initiated election. This is due partially to the fact that the NLRB sets out very specific criteria for an employer to justify holding an election. Employers cannot as a rule demand a decertification election

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without producing substantial evidence to the NLRB as to why they do not believe the union is representative of the bargaining unit. Finally, one might expect a different attitude on the part of local employees and the national union to an employer-initiated election rather than an employee-initiated election.

In this paper we shall examine a number of factors which may influence the outcome of a decertification election filed by an employer. In the following section we describe some of the legal issues surrounding the RM process, in Section II we discuss possible determinants of the outcome of this type of election, in Section III we present our empirical findings on the factors that appear to influence decertification, and in Section IV we summarize our findings and compare them with those of other studies of union representation elections.

I. The Legal Framework of the RM Election Process

Under Section 9(c)(1)(B) of the National Labor Relations Act (added by the Taft-Hartley Amendments), an employer may file a petition with the NLRB requesting an RM election in one of two situations: (1) when the employer whose labor force is not now unionized files a petition in response to a union's request for recognition, and (2) when the employer whose labor force is unionized questions the majority status of the labor organization that is currently representing the work group.¹ Elections conducted under scenario (1) are essentially employer-initiated certification elections and are a counterpart to RC elections. Elections conducted under the circumstances outlined in scenario (2) are essentially employer-initiated decertification elections and are a counterpart to RD elections. Most of the controversy in the legal literature relating to RM elections arises in the context of elections that contest the majority status of incumbent unions.

If the employer has a good faith doubt as to the continuing majority status of an incumbent union, he may proceed along one of two courses of action: (1) he may withdraw recognition of the union when the contract expires, or (2) he may petition the NLRB for an election to test for the union's majority status not more than 90 days or less than 60 days before the contract expires. In either case, the employer will be asked to furnish the NLRB with evidence that the union no longer represents a majority of the employees in the bargaining unit. This evidence requirement by the NLRB has been in effect since the 1965 *U.S. Gypsum Co.* ruling. The decision as to how much proof is necessary to substantiate an RM petition

¹ In a very small number of cases, RM petitions are filed where the employer seeks to have the Board assert jurisdiction in a case before a state labor relations board.

(thus justifying an election) is left to the discretion of the NLRB regional director. The regional director's decision is not litigated in a hearing as an unfair labor practice case might be, but is considered an administrative decision (NLRB 1974, p. 64).

The types of objective data that are required by regional directors before processing RM petitions may include the following: personnel reductions, high employee turnover, changes in the composition of the bargaining unit following a strike, a request by a majority of the employees that the employer discontinue bargaining, statements by unit employees to the employer that they do not desire continued representation by the union, an admission by the union that it no longer represents a majority of the employees, a petition by unit employees expressing a lack of desire for continued representation, and a downward trend in the number of employees authorizing dues deductions (Lewis and Krupman 1979, pp. 126–19). It should be noted that any one of the above types of evidence standing alone may not be sufficient to substantiate the filing of the RM petition.

II. Determinants of the Outcome of RM Elections

Given the above discussion of the legal framework of employer-initiated elections, it is not surprising that any empirical work that attempts to model the outcome of elections of this type is more descriptive than the empirical work on why individuals join unions. Given the NLRB's criteria for sanctioning an employer-initiated election, it is perhaps more surprising that some employers do not succeed in decertifying a union once given permission by the NLRB to hold an election. Nevertheless, once an employer satisfies the regional office that there are grounds for an election, there are a number of factors that may influence whether or not the union is successful in maintaining itself as the recognized bargaining agent.

One factor that we anticipate will influence the outcome of an employer-initiated decertification election is the size of the election unit. If the unit is small, normal turnover is more likely to alter substantially the composition of the original bargaining unit. But this explains only why an employer may be successful in convincing the NLRB to hold an election, not necessarily why the employer would be successful in the decertification action. Unit size might affect the outcome if relatively fewer resources are spent on small units and workers then feel "abandoned" by the national or international union.

Given the broad latitude granted to regional directors in making decisions about the sufficiency of evidence necessary to substantiate an

RM petition and the variety of criteria which may go into these decisions, it is expected that there may be some variance among regions in the granting of elections in response to an employer's RM petition. Those regions with directors who require substantial evidence before allowing an election to take place will probably have a higher percentage of decertifications, *ceteris paribus*. It also has been suggested (Anderson et al. 1979) that, given the greater difficulty of organizing in the South, decertifications are more likely to occur in the South than in the North. However, it could be argued that while greater hostility toward unions in the South makes it more likely that an employer will petition the NLRB for an election, these employers are also less likely to be successful in deposing those unions that have overcome the odds and won recognition in the first place.

A third factor that may be associated with the outcome of employer-initiated decertification elections is the industrial classification of the employer. Those industries that are subject to high employee turnover, such as wholesale and retail trade, or are in decline, may be more likely to decertify. A related argument is that election outcomes may be different for different functional groups of employees. For example, we might expect to observe that employees in craft unions may be less likely to decertify an incumbent union due to the lifelong attachment that many craft workers have to their unions. For them the union represents not only a bargaining agent but a "professional" organization.

A fifth factor that may affect the outcome of these elections is the type of union that currently has the status of incumbent. Some (Anderson et al. 1979, Krislov 1979, Sandver 1980) have argued that the Teamsters union is becoming the target for more than a random share of decertification elections. If the Teamsters union is being targeted, this could mean that their overall resources are becoming increasingly taxed, and this may make it more difficult for them to battle successfully an employer-initiated election.

Finally, the state of the local economy may play a role in the probability of an employer successfully decertifying an incumbent union. It is argued in the literature on certification elections that when unemployment goes up, union bargaining power decreases. Therefore, if the union's bargaining power weakens with unemployment, rank-and-file members may not be as supportive of the union in the decertification election.

Clearly, there are individual variables, such as the rate of change of wages for employees in the bargaining unit which may influence the outcome of an RM election. However, we are constrained by the data

available to us and can examine only the above factors. Nevertheless, these variables should give us some additional insight into the employer-initiated decertification process.

Before we present our empirical results, we should emphasize that there are two types of employer-initiated or RM elections—those that involve an incumbent union and those that do not. These two types of elections are quite different, and it is the RM election involving an incumbent union which is the source of controversy and therefore the focus of this study. Unfortunately for persons attempting to use summary data published by the NLRB in its annual reports, these two types of elections are lumped together, thus rendering any study of elections involving only incumbent unions impossible. However, in this paper we incorporate data gathered from NLRB monthly election reports (from January 1977 through September 1981) which do distinguish whether or not there is an incumbent union.

The data in Table 1 summarize the number of RM elections held in each of the NLRB's regions and subregions during the time period we examined. In addition, the percentage of elections won by the unions is noted in Table 1.

TABLE 1
RM Election Data 1977–1981 by NLRB Region

| Region | # Elections | % Won ^a | Region | # Elections | % Won |
|---------------|-------------|--------------------|---------------|-------------|-------|
| Boston | 6 | 50.0 | Seattle | 65 | 23.1 |
| New York | 7 | 14.3 | San Francisco | 57 | 8.8 |
| Buffalo | 5 | 60.0 | Los Angeles | 48 | 10.4 |
| Philadelphia | 1 | 0.0 | Newark | 4 | 75.0 |
| Baltimore | 10 | 20.0 | Houston | 0 | 0.0 |
| Pittsburgh | 12 | 33.3 | Indianapolis | 3 | 33.3 |
| Detroit | 10 | 40.0 | Memphis | 7 | 0.0 |
| Cleveland | 8 | 25.0 | Denver | 8 | 25.0 |
| Cincinnati | 8 | 0.0 | Phoenix | 10 | 40.0 |
| Atlanta | 23 | 34.8 | Brooklyn | 4 | 25.0 |
| Winston-Salem | 5 | 0.0 | Milwaukee | 13 | 23.1 |
| Tampa | 0 | 0.0 | Los Angeles | 47 | 19.2 |
| Chicago | 16 | 18.8 | Oakland | 38 | 5.3 |
| St. Louis | 8 | 25.0 | Peoria | 5 | 20.0 |
| New Orleans | 4 | 0.0 | Portland | 34 | 11.8 |
| Ft. Worth | 19 | 10.5 | Honolulu | 2 | 50.0 |
| Kansas | 12 | 16.7 | Minneapolis | 27 | 37.0 |
| TOTAL | | | | 529 | 19.6 |

Source: NLRB Monthly Election Reports.

^a Note that "won" means that the union remains the recognized bargaining unit.

III. Empirical Findings

The results of the data analysis are given in Table 2. The dependent variable in Model 1 was specified as the percentage of yes votes received

by the union in the decertification election. In Model 2 the dependent variable was specified as a dummy variable, assuming the value of 1 if the union won the election and 0 otherwise. Since we are estimating a model

TABLE 2
Empirical Results: Employer-Initiated Decertification Elections
With an Incumbent Union (1977-1981)

| Variable ^a | Model 1 Estimates ^b | | Model 2 Estimates | |
|-----------------------|--------------------------------|---------|-------------------|---------|
| Constant | 0.25 | (3.30) | -1.08 | (-2.25) |
| West | -0.05 | (-1.21) | -0.35 | (-1.25) |
| Northeast | 0.10 | (1.51) | 0.51 | (1.34) |
| South | -0.05 | (-0.79) | -0.31 | (-0.76) |
| Mining | 0.20 | (1.43) | 1.05 | (1.38) |
| Construction | -0.10 | (-1.27) | -0.82 | (-1.30) |
| Manufacturing | -0.04 | (-1.03) | -0.31 | (-1.04) |
| Service | 0.05 | (0.91) | 0.25 | (0.81) |
| Professional | 0.27 | (2.73) | 1.29 | (2.39) |
| Office | 0.13 | (1.85) | 0.75 | (1.85) |
| Other | 0.04 | (0.94) | 0.27 | (1.00) |
| Eligible voters | 0.0001 | (0.61) | 0.0006 | (0.60) |
| Unemployment | -0.009 | (-0.82) | -0.06 | (-0.80) |
| R ² | 0.06 | | | |
| Number of cases | 524 | | 524 | |

^a Other variables which were included in the estimation but which were never statistically significant and had *t*-values less than 0.5, include Trade, Industrial, Craft, Truck, and Teamsters. This was true for both models.

^b Asymptotic *t*-tests in brackets.

in which the union is either successful in remaining the recognized bargaining agent or not, we must describe this outcome in probabilistic terms. Unfortunately, traditional multiple regression can cause several difficulties. The first is that ordinary least squares can produce fitted values of the (0,1) dependent variable greater than 1 or less than 0. The second is that since the dependent variable takes only the values of 0 and 1, linear estimation is inefficient. For these reasons we have used logit maximum likelihood estimation to identify the determinants of the probability of a union remaining the recognized bargaining agent in an employer-initiated decertification election. The results of the data analysis are presented in Table 2.

The first category of variables, the regional variables, indicate that unions in the Northeast received both a higher percentage of yes votes in employer-initiated decertification elections and won more elections than unions in other parts of the country. Although the significance of this effect is somewhat marginal ($t = 1.51$), this does suggest the possibility

that there may be different standards used in the processing of RM election petitions from one region to another.

While none of the industrial variables is significant, there are two types of election units which seem to consistently give unions a higher percentage of yes votes—professional and office employees. Given that these two groups are more likely to have been recently certified, it may be that employers of these types of workers are more anxious to attempt to decertify unions representing these workers, but support for the union is still high.

Previous studies have found that the Teamsters won fewer *employee*-initiated decertification elections, and the smaller the unit size, the less likely the union was to win (Sandver 1980, Anderson et al. 1979). However, our findings indicate that neither of these variables is significant *employer*-initiated elections.

Finally, the local unemployment rate does not appear to have any effect on the outcome of RM elections. This finding is somewhat surprising given both the dramatic rise in unemployment over the time period covered by the data and the increases in unemployment in certain highly unionized sectors of the economy. Apparently workers use considerations other than the local unemployment rate in making the decision to retain or reject their union when a successful petition is filed by their employer.

IV. Conclusion

The results from the data analysis show some interesting and potentially valuable findings for further research. For example, one result that deserves to be explored in greater depth is the fact that employers fail to decertify the incumbent union significantly more in the Northeast than elsewhere. At the same time there appears to be a negative effect in the West and a dramatic concentration of RM elections on the West Coast—54.7 percent of all RM elections. Only an analysis of criteria used by the various regional directors in making their decisions in processing the RM petitions can answer this question—an analysis beyond the scope of this paper. It should be noted, however, that an NLRB Task Force in 1976 found that there were differences in standards used in processing RM petitions from one region to another (BNA 1977, p. 31). Although the Task Force recommended that a set of common standards be used in all NLRB regions, this recommendation was not adopted by the Labor Board.

A second finding of this research is that outcomes in employer-initiated decertification elections appear to be determined by a collection of factors different from those in employee-initiated decertification elections. For example, in the RD elections studied by Anderson et al.

(1979), they found that no unit-related factors were associated with the outcome of the election and that decertifications were more likely to occur in trade and less likely to occur in service industries. We, on the other hand, found significant effects for professional and office worker units and no effects for the trade and service industries. With these conflicting results in hand, perhaps additional research should be devoted to exploring the decertification process in its totality, recognizing that decertification can be set in motion by the initiative of both the employees and the employer.

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DISCUSSION

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All three papers presented in this session are interesting attempts to deal with some of the more difficult subjects in the area of collective bargaining. Perceptions by the parties of arbitrariness on the part of arbitrators, job insecurity, and decertification elections certainly qualify as subjects of concern for both policy-makers and practitioners.

The Rodgers and Helburn paper on the arbitrariness of arbitrators' decisions has the advantage of using raw material from company files, rather than, as is more common, merely relying on published arbitration awards. In their oral presentation, the authors said that they have even better data on the way in future studies. The most important finding, in my judgment, is the importance of seniority to reinstatement. When added to the weight given to presumed breadwinner status (married persons and men being more likely to be reinstated), we may indeed have a "mercy" standard being applied by arbitrators to reinstatements to a degree which might surprise managers.

There are several questions about the Rodgers and Helburn study which might be dealt with by them in their continuing research in this area. First, it would seem necessary to distinguish between "major" and "minor" offenses in viewing the effects of such variables as progressive discipline and disciplinary history. Progressive discipline is irrelevant in major offense cases and only found in minor offense cases, leading perhaps to a confounding of the type of offense with the progressiveness of discipline. Second, it would seem that seniority, marital status, sex, and perhaps other variables would affect reinstatement only *given* a finding of guilt. It is a different question entirely to ask what effect these variables have on *both* the finding of guilt and the penalty, especially when these are not separated. The authors did state in their oral presentation that their further research will deal with this problem. Last, it seems to me that there are some anomalies in the interpretation of the discriminant analysis, with little attention being given to some significant findings.

The Bierman and Youngblood paper on employment-at-will and the South Carolina conciliation system is of interest chiefly because it presents some preliminary data on this unique system. As Bierman and Youngblood

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say, it is truly an innovative experiment. My main reservation about the paper is what I believe to be its somewhat excessive enthusiasm about the experiment's success. First, I believe that data covering a longer period of time would show a slightly lower percentage of reinstatements. Second, to characterize the pursuit of the case by the conciliator as "vigorous," and the referral counseling as "positive," is to give an unwarranted rose color to the reality. Sometimes the conciliation/mediation is vigorous. Sometimes it is not. Simply telling an employee that nothing can be done for her by the agency and that she must employ a private attorney to pursue the matter further may not be "positive."

What is unfortunate about the exaggeration of what the South Carolina system achieves in reinstatement and referral is that it tends to obscure its real accomplishments. These accomplishments lie, in my opinion, in the rather effective use of moral suasion to obtain good references and clean records for discharged employees. It is of real worth to persuade substantial numbers of South Carolina employers to refrain from interfering with the chances of discharged employees to obtain other employment. In the industrial relations environment of South Carolina, the least unionized state in the nation, anything that improves the lot of employees is of importance. The South Carolina Department of Labor's work in obtaining good references and clean records has without doubt benefited many employees who would otherwise have had no recourse at all.

The South Carolina conciliation system is not a substitute for collective bargaining or a labor court. It works by moral suasion and, sometimes, by the illusion that the Department of Labor has more authority than it actually has. It has no legal authority to force the employer to do anything but provide information. It is expecting too much of such a system that it serve as a model for solving the employment-at-will problem. It is, instead, a good, effective system for pleading with employers to be more reasonable.

The paper on determinants of the outcomes of decertification elections initiated by employers, by Lynch and Sandver, is an interesting exploration of this type of election. The descriptive data provided on RM elections by region and the multivariate analysis results are suggestive of potential lines of further research. I have no quarrel with their method. Difficult problems with the data were handled well. However, as the authors recognize, there is not much here in the way of substantive results.

The heart of the problem with the results of this study is the disjunction between the hypotheses and the findings. Union wins are hypothesized to be associated with unit size (+), region of the country (South, -), industry (Trade, -), occupation (office clericals, -; craft, +),

union type (Teamsters, -), and unemployment (-). None of these hypotheses was confirmed. Significant results opposite the predicted direction were found in the cases of office clerical and craft occupations. What was found in addition was a positive impact of being employed in mining, and being in the Northeast. While this may lead us to wish to explore the reasons for these relationships, it does not help us understand why they exist.

The source of the difficulty in the paper may be the lack of any clearly developed theory to guide hypothesizing. The absence of a theory base continues to plague research on decertification as well as on certification.

XIII. THE INDUSTRIAL RELATIONS SYSTEM IN TRANSITION: FINDINGS OF A THREE-YEAR STUDY

U.S. Industrial Relations in Transition: A Summary Report*

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For the past three and one-half years members of our research group have been engaged in a series of related research projects designed to (1) update our understanding of current practices in industrial relations at the level of the firm, (2) assess and interpret the changes in practice that have been occurring over a number of years, and (3) reformulate industrial relations theory based on our empirical findings in ways that better explain the dynamics of the U.S. industrial relations system. A variety of interim publications have reported various aspects of our work, and we are presently drafting a final book that draws together our findings and highlights their theoretical and policy implications (see the bibliography for a partial list of publications from this project). The purposes of this

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paper are to summarize the main conclusions of our research and contribute to the emerging debate over the causes, characteristics, and future consequences of the rapid and widespread transformations occurring in the U.S. industrial relations system.

The Strategic Choice Framework

To understand these transformations requires going beyond a description of the recent visible changes in collective bargaining. Instead it is necessary to analyze the historic and dynamic evolution of industrial relations in both the union and nonunion sectors of the American economy. The theoretical framework that we have developed for this task stresses the interactions between environmental forces and the values and strategic choices of management, labor organizations, and government policy-makers. Moreover, the framework recognizes the importance of the interrelationships among three levels of industrial relations activity within the firm: (1) the workplace level where individuals and workgroups interact with supervisors, local union representatives, and coworkers on a day-to-day basis, (2) the middle tier where collective bargaining or personnel policies are negotiated or designed, and (3) the highest level of strategy formulation where long-run values, business strategies, and priorities are established. A more complete description of this framework will be provided in our final book. The sections to follow highlight how we use this framework to interpret the historic evolution and contemporary features of U.S. industrial relations in the private sector.

Foundations of the Industrial Relations System

We use the term "industrial relations" to describe the broad values, laws, institutions, and practices that govern employment relationships, and in this way our research domain overlaps with that proposed by John Dunlop in his seminal book, *Industrial Relations Systems*. Where our framework differs from Dunlop's is through its emphasis on the need to consider both the critical features that structure U.S. industrial relations and the dynamic interplay between union and nonunion employment systems.

With regard to the critical features that shaped collective bargaining in the postwar years, we believe the driving forces were New Deal legislation, the policies of the World War II Labor Board, and the views of the Board's administrators who thereafter moved on to private positions as leading scholars, mediators, and arbitrators. Four characteristics of the postwar industrial relations system are central to understanding the current transformation of that system.

First, the passage of the National Labor Relations Act (NLRA)

reflected a choice of collective bargaining as the cornerstone of labor policy. As such it implied a choice of the middle tier of our three-tiered framework as the preferred focus of labor-management negotiations and interactions. Orderly representation procedures were designed to insure that collective bargaining would diffuse to any setting where a majority of workers expressed a preference for this process, and it was hoped that the continuity of the bargaining relationship encouraged by the law would lend stability to the relationship. Thus, with the law's passage, unions were expected to achieve a more stable and lasting place in the American economy than they were able to attain in prior decades.

Within this collective bargaining relationship the principle evolved that management was free to make basic entrepreneurial and managerial decisions. The role of unions and collective bargaining was to negotiate and enforce contracts over the impacts that managerial strategies had on wages, hours, and other conditions of employment. But unions were not expected to intervene directly into the formation of the firm's basic business decisions.

A second key feature of this industrial relations system that evolved over time at the workplace level of industrial relations was a "job control" form of contractual regulation. Job control unionism is characterized by highly formalized and comprehensive contracts enforced by a grievance arbitration system, a work organization system in which individual worker rights and duties are tightly specified and linked to specific jobs, and strict lines of demarcation that separate bargaining units from each other and from supervisory work. Industrial democracy in this model takes the form of industrial jurisprudence delivered through the day-to-day enforcement of the contractual rights and responsibilities of each party.

A third feature of the post-New Deal industrial relations system was the expectation that macroeconomic policies would provide a supportive economic climate for collective bargaining. A commitment to expansionist fiscal and monetary policy followed from the Keynesian theory that the depression was caused by underconsumption and inadequate purchasing power. Activist government demand management was expected to provide the economic growth and expanding markets that would support the union and management wage policies that dominated collective bargaining.

Those wage policies relied heavily on the principle of wage comparisons and standardization across broadly defined product markets and steadily increasing real wage levels. The bargaining outcomes produced by these wage policies were consistent with the macroeconomic environment as long as markets were expanding and unions were successful in

organizing a sufficient portion of these markets so as to spread union wage levels across competitors. Hence, as long as unions were able to “take wages out of competition,” the economic outputs of collective bargaining were accepted by employers as tolerable.

A fourth characteristic of the system was a political environment in which unions defended the principles of free enterprise and rejected a fundamental transformation of the capitalist system. Labor’s political platform favored social and labor policy improvements that both benefited all workers and set a floor on which collective bargaining could build and expand. In return, management was expected to accept the rules of the game embodied in the NLRA. That is, while management was not expected to give up its historic philosophical opposition to unions, unionized employers were expected to adapt to collective bargaining by professionalizing their industrial relations functions and by seeking innovative ways to manage effectively and productively within the bargaining system.

By and large the system evolved in ways generally consistent with these expectations between 1930 and 1960. But after 1960 a number of new management principles and practices began to evolve quietly and set the stage for the recent, more visible changes in collective bargaining. As we argue more fully below, management has been the driving force and major catalyst for the changes occurring in U.S. industrial relations over the past 25 years.

Evolution of the Nonunion Model

The dominant industrial relations system of the 1930 to 1960 period was collective bargaining and job-control unionism. In contrast, the dominant development of the post-1960 period has been the slow but steady growth of nonunion human resource management systems. While nonunion employment relationships have always existed for a majority of white-collar and managerial employees, and for some blue-collar workers, throughout the 1940s and early 1950s the rapid growth of unions in the private sector and the shock effects of the innovations introduced under collective bargaining set the standards for nonunion personnel systems (Slichter, Healy, and Livernash 1960; Jacoby 1985).

During the formative years of the postwar collective bargaining system, however, a number of major companies were able to avoid unionism—for example, IBM, Motorola, Eli Lilly, Sears Roebuck, and Delta Airlines. The policies that these firms instituted obviated the need for unionism through the establishment of comprehensive personnel policies. The role of these “union free” companies is extremely significant in that they illustrated that it was possible to operate nonunion in the U.S.

These companies also provided the experimentation and experience that led to the development in the 1960s and 1970s of a full-fledged nonunion human resource management system, and a system that spread throughout the economy.

These observations lead to one of the central conclusions of our research—that somewhere in the 1960s the leadership and innovative position shifted from union to nonunion employment systems. As collective bargaining matured along with industries where unions had successfully organized in the previous decades, the stability produced by professionalized union-management relations became less responsive to growing environmental, organizational, and workforce pressures. These pressures included rapid inflation, international competition, declining union organizing effectiveness, and slowdowns in U.S. productivity and product market growth. Meanwhile, in defiance of these pressures, management bargainers emphasized maintenance of the status quo and unions continued to stress wage comparability and improvements in real wages (Freedman 1979, Kochan 1980). A number of studies have documented the resulting increase in the relative wage effect of unions during the 1970s. For the 1950s and 1960s, the relative wage effect was 10 to 15 percent; by the end of the 1970s it had grown to 25 to 30 percent (Flanagan 1984).

Why and how did an alternative nonunion human resource management system emerge during this period? What were and are its central characteristics? A major part of our research seeks answers to these questions. We will be able to provide only a brief overview of our conclusions here.

To answer the question of why the nonunion sector expanded rapidly after 1960, it should be recognized that the majority of American managers never abandoned their philosophic opposition to unions. Rather, the growth of unionism seemed inevitable in the 1940s and 1950s. The costs to management of opposing unions were too high to merit the risks and instability needed to exploit nonunion alternatives. However, as new industries began to emerge and grow in the 1960s and 1970s and as existing firms began to take advantage of the improved transportation system and lower costs of the Sunbelt, the number of new plants opened on a nonunion basis increased.

The “greenfield” (nonunion) site strategy fit growing firms and those that had flexibility in site location. In industries where firms were locked into specific sites (e.g., steel) or geographical markets (e.g., construction), the emergence of the nonunion sector came more slowly and in some cases came through new entrants such as mini-mills in the steel industry.

At the same time as economic restructuring was beginning to intensify,

the growth of white-collar and managerial employees, along with pressures from government regulations, elevated the status and influence within management of a new group of human resource professionals. Unlike their industrial relations staff colleagues, these professionals stressed the application of behavioral science training and skills designed to manage and motivate *individuals* rather than the legal and industrial relations skills needed to negotiate and arbitrate collective bargaining disputes. The emergence of these new professionals increased the feasibility of implementing a new model of employee relations. This new model was more consistent with top management values and more adaptable to the changing environment when compared to the collective bargaining alternative.

The new nonunion model consists of personnel systems that either match union wage and fringe benefit levels in labor markets where unions dominate or pay wages higher than competitive norms in rural or southern labor markets (but wages that are lower than the union rates found in the more highly unionized markets). At the workplace, the new personnel systems emphasize greater flexibility in job design and work organization, more extensive communications and participation in task-related decisions, and other behavioral science strategies designed to increase the commitment, loyalty, and job satisfaction of employees. As a result, employees have fewer incentives to unionize.

One key agent involved in the delivery of human resource management is the first-line supervisor. Companies following this model devote considerable resources to the selection, training, and support of supervisors, although not always with complete success. In addition, the sensitivity and commitment of the plant manager to innovative work practices often is a critical determining factor in the success of those practices.

At the corporate level, the firms implementing these strategies often elevate human resource executives to the top staff position in employee relations, in some cases by displacing the industrial relations executives who had occupied the top position during earlier periods. Moreover, because of the pressures of government regulations, the tightness of managerial and technical labor markets, and the importance of innovative human resource management policies, these staff specialists are more likely to be brought into longer-run strategic planning and business decision-making processes than their industrial relations counterparts.

Thus, the nonunion human resource management system that emerged has characteristics at all three tiers of industrial relations activity that differ markedly from more mature collective bargaining systems. It is important to note, however, that we are not arguing that *all* nonunion plants or firms evolved in this way and use the sophisticated and

comprehensive personnel systems described above. Nor had *all* growing and expanding unionized firms in the post-New Deal period followed all aspects of the collective bargaining model. What is clear, however, is that the pattern-setters of each respective period followed these different models.

Although our research is not able to provide precise estimates of the scope or magnitude of these new nonunion systems at various points in time, there is ample evidence of their effects on the collective bargaining sector. Our case study data and quantitative data collected in two Conference Board surveys of managerial labor relations practices clearly document the success of corporate union-avoidance strategies (see Freedman 1979 and forthcoming). Furthermore, these data show the roles economic restructuring and workplace innovations played in helping to keep unions from organizing new facilities opened since the 1960s. This pattern is especially strong in the more decentralized and partially unionized firms that did not negotiate centrally with a dominant union capable of neutralizing the union-avoidance strategy.

Specifically, the Conference Board data show that significant declines in union membership occurred between 1977 and 1983 in firms that (1) assigned a high priority to union avoidance as a labor relations strategy, (2) opened new plants, (3) introduced workplace innovations in nonunion facilities, and (4) lacked the presence of a dominant union representing employees anywhere in the firm. Our case study data also document a huge gap between the average ages of union and nonunion plants within a sample of decentralized corporations that experienced significant growth and diversification after 1960. Moreover, the Conference Board data demonstrate that our case study findings generalize to a large sample of manufacturing and nonmanufacturing firms. These factors help explain the steady decline of unionism, particularly in partially organized firms over the course of the post-1960 time period.

Within these general trends we discern other influences that are harder to quantify. For example, companies similarly situated adopt different strategies with respect to how aggressively they seek to expand their nonunion operations. At one extreme are firms that seek to operate on a nonunion basis only in new plants while they continue to invest in existing organized facilities. Other companies slowly shift product lines and employment away from core (union) to satellite (nonunion) facilities. Then there are some companies that work actively for the decertification of unions. The choice of a strategy appears to hinge on such factors as the outlook of key decision-makers, risk preferences, and the counter strategies of the particular unions that are involved.

With regard to the workplace-level performance of union and non-

union systems, qualitative case study and plant-level quantitative data lead us to conclude that the performance of workplace-level industrial relations systems can significantly affect the economic performance of the firm. Furthermore, in the companies that we have studied where there are both union and unorganized plants, the unorganized plants currently have higher economic performance. In these firms the advantages held by nonunion plants arise from the fact that they tend to be newer, have lower labor costs, greater flexibility in work organization, more communication, and more worker participation in production decision-making.

We stress, however, that the performance advantage of unorganized plants is partially a function of plant age and work systems. Our findings do *not* imply that there is an inherent performance disadvantage caused by the presence of a union. Instead, they imply that the current performance advantages of nonunion operations exert tremendous pressure on unionized establishments, in companies with both types of plants and more broadly in the economy. This competitive pressure was exacerbated by the recession of the early 1980s and triggered an unparalleled amount of change in traditional collective bargaining practices. Some of our research therefore focuses on understanding the response by the union sector to these pressures. One objective of that research is to determine if these responses close the gap between union and nonunion performance, provide the groundwork for unions to recapture the leadership role in personnel practices, and/or reverse the decline in union membership.

Changes in the Unionized Industrial Relations System

The most visible set of changes in collective bargaining in the 1980s occurred in the middle tier of the system through what has come to be known as concession bargaining. Since this topic has been discussed at recent IRRA meetings (Cappelli 1982 and 1983), we will only summarize our major conclusions concerning its overall effects on the unionized industrial relations system.

Concession bargaining has introduced major changes in the bargaining process and bargaining outcomes. Significant bargaining process changes include a decentralization of bargaining structures, new forms of communication during and regarding negotiations, and an increased role for top financial and operating management in the bargaining process. Since these process changes alter many long-standing and formerly institutionalized practices, we suspect that they will have greater long-run significance than many of the more well-publicized pay and work-rule concessions. The bargaining outcomes that are likely to have lasting effects are those that involve an expansion of the bargaining agenda. These include agreements that provide employment guarantees or work-rule changes

that significantly alter the organization of work. In some cases, concession bargaining appears to be part of labor and management's experimental efforts to introduce an industrial relations system far different from traditional practices. It is revealing that some of the changes made in work organization in these more far-reaching experiments move unionized systems closer to the features of some of the most innovative nonunion systems.

It is no accident that union systems are moving in this direction. The important changes occurring at the workplace level of industrial relations are designed to compete with the higher levels of participation, flexibility, and lower costs of nonunion alternatives. Our research has examined a large number of workplace efforts under way in the union sector, again through a mixture of case studies, surveys, and econometric analyses (see Katz, Kochan, and Gobeille 1983; Kochan, Katz, and Mower 1984; Katz forthcoming). On the basis of this work we conclude the following:

1. Quality of worklife (QWL) processes and other participatory processes diffuse slowly across organizations and rarely have diffused to the point where all, or even a majority of, workers participate in the QWL process on a continuous basis.

2. QWL processes appear to be successful in improving the level of trust and motivation of employees for a period of time. The maintenance of these attitudinal improvements on a continuing basis, however, depends on the extent to which QWL programs are either reinforced or jeopardized by events that occur at the higher levels of collective bargaining and strategic decision-making. Major layoffs, management demands for concessions, conflicts over union avoidance or recognition in nonunion facilities, etc., can all threaten the continuity of improved workplace relations, slow or stop the diffusion of the QWL process, and lower the contributions of QWL to organizational performance.

3. The independent contributions of QWL to organizational performance, at least as measured by such things as labor costs and product quality, are rather marginal. However, QWL processes that include modifications in the organization of work have had a more significant positive impact on costs, productivity, employment, member satisfaction with union performance, and other performance measures.

4. Not all QWL processes are successfully institutionalized and move beyond the experimental stage to become a lasting feature of the unionized industrial relations system. Those most likely to become institutionalized are ones where:

- a. the local union is an active joint partner with management in the process;

- b. the process produces tangible improvements in organizational effectiveness for employers and employment or income security for the workforce; and
- c. management and labor union officials see the process as an integral part of their longer-run strategies for running the business and representing their members.

Thus, it is clear to us that the *combination* of innovations in employee participation *and* work organization can and have helped to close the performance gap between union and nonunion systems. But, while progress is being made in selected settings, the magnitude of the improvements and the rate of diffusion of these changes have not been sufficient to stop the continued erosion of union membership and coverage.

This conclusion leads to one of the major implications of our research for the labor movement: It will take significant changes in union strategies to counter further union declines and to recapture the innovative position in U.S. industrial relations.

Some unions have begun to respond to this challenge. While we do not have a great deal of empirical evidence from our research on the nature, amount, or effects of new union representational strategies, several options that are currently in the trial stage or are under active consideration can be briefly highlighted. It will remain the task of future research to evaluate their effects.

Experiments with New Union Strategies

One way unions can more directly influence management strategy is found in the increasing number of firms that share information and consult with union leaders about major business issues, competitive costs, technological changes, or other factors affecting the long-run employment prospects. This type of information-sharing often has grown out of concession bargaining in industries such as airlines, autos, and retail food. Another way unions can gain on-going access to managerial decision-making is for unions and workers to obtain one or more seats on the board of directors of their firms. Again, examples of this are found in some airlines and other firms that have experienced significant financial crises and economic restructuring.

A more direct but less continuous response is what we would call strategic bargaining—that is, negotiations that specifically involve trade-offs of changes in wages, benefits, or other contractual provisions in exchange for new investment or employment commitments. A recent example is the agreement between General Electric and the International

Union of Electrical Workers (IUE) in Lynn, Massachusetts, in which the company agreed to build a "factory of the future" in Lynn, whose workers would be IUE members, in return for major changes in the way work is scheduled, jobs are organized, and compensation is determined. Xerox and the Amalgamated Clothing and Textile Workers Union negotiated a 1983 agreement that guaranteed employment continuity for three years in return for both fringe benefit concessions and the right to allow QWL teams to explore changes in work organization and practices before subcontracting out noncompetitive work. The key features of these types of strategic bargains is that they build on and reinforce the sharing of information and the improved workplace relationships that have grown out of QWL processes. These bargains thus provide a more coherent link across the changes being introduced at different levels of the industrial relations system.

Still another type of joint strategic initiative is found in industry committees or joint processes such as the Joint Labor Management Committee in the Retail Food Industry and the International Masonry Institute. Both committees have engaged in high-level discussions and joint research projects, some of which have produced tacit or explicit agreements over changes to be encouraged at more decentralized levels of bargaining.¹

Perhaps the most significant form of strategic bargaining is found in cases where firms voluntarily recognize unions in new plants and the parties jointly agree on the design of new work systems and contractual relationships. General Motors and the United Automobile Workers Union have a number of such new plant agreements in place. Project Saturn (the joint GM-UAW study exploring alternative ways to build small cars) is of enormous scale, with the UAW already extensively involved in business decisions, thereby making it an extremely important example of such processes. Phillip Morris and the Tobacco Workers have a new plant in Alabama operating with jointly planned innovative work practices. Such agreements will test whether new plants designed with up-to-date technology and with a flexible/high-participation workplace industrial relations system can match or better the performance of new nonunion plants. Evaluation of these experiments can be accomplished only after

¹ The "market recovery" programs in the construction industry currently are receiving considerable attention. Other examples of this type of program have appeared in the past with many similar characteristics. In all these cases the relevant industry is under considerable economic pressure and the industry is only partially organized, but a dominant union is involved. The more long-standing examples of these programs involving the Amalgamated Clothing Workers (men's clothing) and the ILGWU (women's clothing) need to be better understood to predict the prospects for ongoing industry-level recovery programs.

significant experience and comparative data are amassed, which takes time.²

New organizing strategies are also emerging using variants on the theme of "corporate campaigns" designed to neutralize employer opposition to unions during organizational drives. Efforts to gain greater control over the use of pension funds are under way in some unions and industries. Again, at this point we can cite only isolated examples of how various union representatives are attempting to gain greater access to and influence with the corporate executives who make the value judgments and strategic decisions that affect the long-run character of the industrial relations systems.³

Conclusions and Implications for the Future

Our theoretical framework emphasizes that industrial relations outcomes are not predetermined by environmental forces, but are the product of interactions among the environment and the strategic choices of the parties. It should be kept in mind, however, that these "choices" are not made by single monolithic representatives, are not always consciously thought-out or planned decisions, and are constrained by various environmental conditions. Consequently, the U.S. industrial relations system will continue to display considerable diversity in the future as it has in the past.

Given the above caveat, we believe there is a central contradiction in the current operation of U.S. industrial relations. Leaders from all parts of society, including many corporate executives, are calling for an expansion of cooperative efforts at the workplace. They are also asking union leaders and members both to support these cooperative efforts and to continue moderating their wage demands. At the same time the dominant trend in strategic business and industrial relations decision-making at the highest levels within firms is to shift investments and jobs to nonunionized

² In addition to joint experiments with management, a number of internal strategic debates, analyses, and experiments have been initiated within the labor movement. Clearly, the decision to endorse a presidential candidate early in the primary season for the 1984 election must be viewed as one example of an AFL-CIO strategy shift. At least two international unions (the Communications Workers and the Bricklayers) have undertaken strategy planning exercises to explore the long-term prospects of their unions. Furthermore, the AFL-CIO has established a Future of Work Committee chaired by the Secretary Treasurer. The committee has met with a variety of experts and gathered a great deal of data to help consider alternative directions for the future of the labor movement.

³ The new union system is characterized by a neo-craft approach at the workplace level, market-based collective bargaining, and a high degree of consultation on strategic matters. But it is too early to tell whether such a configuration can endure in the U.S. While such a system has some similarities to Japanese enterprise unionism and West German co-determination, it necessarily has distinctive U.S. qualities so as to fit with the special history and environment of the U.S. We are mindful of somewhat similar cooperative efforts that eventually failed, such as various "mutual survival programs" and "creative collective bargaining" initiatives.

employment settings. Moreover, government policies are not creating an environment in which the labor movement can feel secure about its future as a viable force in American society. It is hard for us to see how unions can continue to act cooperatively in this environment while their basic security is being questioned and undermined. Thus, if the environmental and strategic patterns of the past decade continue, we would expect (1) further shrinkage of unionized employment and membership, (2) more pressures on union leaders to withhold their support for cooperation and innovation at the workplace, and (3) more frequent confrontations between unions and companies as unions interpret their situation as one of a life or death struggle for survival.

As (or if) private-sector union membership continues to erode, we can expect a gradual weakening of the threat effects of unions on organized firms. As a result, we would expect a slowing of the rate of innovation in human resource management policies in nonunion firms *unless or except in those situations where* the declining union threat is offset by significant pressures from labor market shortages, government regulations, or top corporate executives committed to innovative policies. Innovative non-union policies also are more likely to continue and even expand where the economic contribution of these innovations is high and creates a momentum of its own. Whether at some point the net outcome of the declining threat effect from unions produces a resurgence in demands for unionization or some new employee representational structure within nonunion firms depends on the strength of these countervailing forces.

The contradiction between cooperation and union avoidance is strongest in partially unionized firms. However, similar contradictions among the three levels of industrial relations activity may emerge in unorganized firms as their plants, business units, or industries move to advanced stages of their life cycle and experience more significant pressures for labor cost modification. To avoid these problems, unorganized firms will need to (1) prevent the increasing rigidities in work organization that are associated with age, (2) keep compensation costs low enough to discourage new competitors from entering their markets, and (3) plan orderly adjustment mechanisms for their workers when economic and organizational restructuring intensifies.⁴ Again, we would expect that only those firms whose top executives maintain a strong commitment to progressive human resource management values and are supported by strong human resource staff professionals will be likely to avoid the development of internal

⁴ For example, a number of high technology firms have told us that the biggest challenge they face in the next several years is continuing to deliver employment security in the face of rapid economic change and low natural attrition rates.

contradictions in later stages of their life cycle. Those nonunion firms whose sole competitive advantage is the payment of low wages sooner or later are likely to face significant interest in unionization among their workforces.

Deviating from this dominant pattern will be the variety of innovations in the most highly unionized firms where union avoidance is not a short-term viable alternative for management. The prospects in these settings depends on the ability of workers, unions, and managements to integrate strategies and practices across the three levels of industrial relations. Such an integration would have to build on current efforts to introduce innovative work systems, moderate the growth in compensation (in some cases through the introduction of some form of contingent compensation), and expand high-level consultations between executives, staff professionals, and union representatives over long-term business, investment, and employment stabilization strategies. The success of this strategy will be greatly affected by future macroeconomic developments. Another deep recession will enhance the pressures on employers to shift to the dominant union-avoidance strategy outlined earlier. At the micro level the success of a cooperative strategy is dependent on the ability of employers to identify a market niche (or some alternative competitive strategy) so as not to have to rely on being a low-cost producer. Viable cooperative firms are those that are high productivity/high wage competitors.

For American unions to avoid anything but continued erosion of membership will depend on their ability to (1) promote cooperation and innovation at the workplaces where they currently represent employees, (2) link continued workplace cooperation and innovation to involvement and influence in the strategic business and government decisions that affect long-run employment and membership security, and (3) pursue new organizing strategies.

Although cooperation and innovation at the workplace *and* an effective presence in strategic business decision-making are necessary, they are unlikely to be sufficient to stimulate a resurgence of American unionism. For, if previous resurgences of the American labor movement are a guide (the 1930s for the private sector and the 1960s for the public sector), significant union growth also would require a combination of major changes in the political, economic, and social environment; new legislation that fosters or supports new forms of representation; and the stimulus of a rival form of unionism or representation from outside the existing union structure.

In summary, we predict a continued deterioration of the traditional New Deal model of industrial relations, some increased pressures on nonunion human resource management systems as they age and mature,

and intensified competition and conflict alongside efforts to sustain cooperation and innovation within both systems. The net outcome can only be predicted or explained by more specific modeling of the interactions among environmental forces, values, and strategic choices. We invite our research colleagues to join us in developing and evaluating these more specific models. We also encourage those who will make these strategic choices to engage in open discussion, debate, and analysis of their long-term effects on industrial relations and American society.

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DISCUSSION

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We have been treated to a thoughtful, provocative discussion from our colleagues at the Sloan School, who have given us a useful portrayal of new aspects of personnel policy and labor-management relationships. My ideas come out somewhat differently.

True, the newly developing aggressive interest of top corporate executives in workforce management policy is partially a reaction to the union environment of the post-World War II era, but a greater influence has been the impact of economic necessity and a new set of economic environmental factors. Perhaps there is an element of nonconfidence in traditional corporate labor relations leaders, but far more important is the realization that being competitive has become so difficult that better, more effective, and less costly use of people is a challenge that can no longer be relegated to second or third place on the list of corporate priorities.

More efficient use of union and nonrepresented people at every level requires radical policy changes. Ways are needed to compensate employees in a manner which facilitates better utilization while constraining inappropriate increases. Workers and their unions must share in joint aggressive programs aimed at bolstering the competitive effectiveness of the enterprises.

The major influences changing labor relations are related to globalization of the economy, heightened competition, and explosive technology—in short, to a very new economic climate.

If new influences do reduce the impact of unions, it is less likely to occur because of management planning than because unions fail to respond to new requirements for a viable labor-management strategy.

Let us look at the scene from that type of perspective.

The characteristics of the labor market are undergoing great change. While employers are trying to constrain the size of their workforce, the overall manufacturing share of the labor market is headed toward the five to ten percent range by the end of the century, if not sooner. This profoundly affects the shape of labor relations. One dare not underesti-

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mate the drastic labor-displacing consequences of the computer, robot and unmanned technology which are certain to be the hallmark of the last years of this century.

The search for means to use manpower more effectively leads to revised concepts of managing and compensating employees, including such matters as flexible work assignments, knowledge-based wage systems, and gain sharing.

These policy approaches cannot be explained away as anti-union or ideologically based, but rather arise from the immediate and pragmatic needs of the firm. When the CEO sees the need for a more effective competitive strategy, he looks for a way to reduce employment costs. He is usually willing to work out a suitable relationship with the union based on achieving greater productivity and better quality and service. While the union was not his idea, having it, he lives with it.

Cutting wages is a direct route to lowering costs, but not necessarily the soundest. It is usually preferable to reduce the size of the organization and use the workforce more effectively. Such approaches tend to be permanent. Wage cuts are less certain; they can weaken enthusiasm and often lead to demands for restoration when employees see some black figures on the financial statement.

To improve manpower utilization, many firms are deserting the management techniques typified by the Taylor school. For several decades it was assumed that rigid job assignments best served the interests of efficiency. Many managers now believe that blue-collar employees can master what to do and how best to do it without detailed, routinized instruction or supervision. Present-day blue-collar workers can do their own managing, not of personnel but of the process and the technology. Computers further this trend since the basic information required to make decisions increasingly comes from the computer, not from front-line supervisors.

As a consequence, a number of traditional policies are being reconsidered, such as reliance on precise descriptions of job duties and procedures, use of pay structures based on the relative value of the work performed, internal training mechanisms to enable employees to master the next job in the promotion ladder, and even the process for arriving at work-related decisions.

Some firms are even eliminating nonessential layers of management. They are seeking flexible job arrangements and pay systems based on ability rather than merely the task. Increased attention is being given to upgrading employee knowledge and ability to keep up with new technological and method changes. Forms of employee participation are being developed which go beyond the limited scope of quality circles. There are

efforts to develop worker decision-making responsibility in contrast to merely eliciting suggestions. Firms are experimenting with employees exercising broader initiative and even some policy-making input.

Rationalizing organizations creates fears and resistance among blue-collar, white-collar, and management employees who are uncertain about their own fate. Some firms forestall such fears by taking special pains to achieve their objectives through retirement incentives, transfers rather than dismissals, and the use of attrition.

Restructuring of workplace roles has special consequences for front-line supervision. The elimination of traditional functions can make the foreman little more than a disciplinarian, a function which ought to be reevaluated. Some firms are doing just that, even experimenting with peer discipline. These experiences have not been sufficiently digested as yet, but we do know that the traditional methods of imposing discipline are expensive, time consuming, adversarial in nature, and contradict efforts to promote cooperative attitudes.

Efforts to reduce manpower usually cause major labor-management confrontations as members face permanent job loss. The result has been effort to expand forms of job security, increasingly seen as necessary to achieving worker cooperation in improving productivity and reducing manpower.

A strategy of workforce rationalization is greatly aided by worker cooperation. It can make sense for unions to advocate better ways of doing things. Giving workers greater power over their work tasks is not an imposition, but rather an innovation employees usually welcome. There is much untapped potential in the nation's workplaces. Getting at it is not only a challenge for management but also requires some rethinking of traditional union perceptions.

Compensation

If employees are expected to give their all for the firm, they must feel they are being appropriately compensated and can participate in the successes of the firm.

How much compensation is appropriate is a judgment call to which employees can relate more realistically if they are fully acquainted with the business. What is the appropriate level of employment costs obviously depends on how one assesses what is the appropriate allocation of all the resources and income flow. If employees are part of the dialogue concerning allocation, they can better appreciate the various needs that exist such as capital investment, research and development, a good managerial and technical staff, and access to required supplies and materials.

This is not to suggest that a complete consensus on pay levels is likely, but the more knowledge the union has, the better it can address reality and the easier it is to pursue realistic strategies. It is worth noting that the time for information to flow is not in the midst of a dispute, but rather on a continuing, on-going basis.

Pay levels are only one phase of the compensation issue. If employees are to feel comfortable about performing in a flexible manner, there must be rethinking of the traditional system of job descriptions and resulting wage rates attached to a specific set of duties. A system of basing wage rates on such factors as knowledge and ability can reduce tensions over whether a particular task falls within "my job."

Just how pay can be related to the ability of individuals is no simple matter. We need to closely follow the experiments that are now in place. Moreover, much can be learned from the experience in many firms where craft and maintenance workers are paid on a knowledge basis. No matter what task the craftsman performs, he gets a rate reflecting his own mastery of the total job. Such knowledge-based wage practices have been in wide use over many years in plants where the wage system is otherwise geared to measuring the content of each job.

Beyond hourly rates of pay, the question of incentive pay schemes is emerging anew as a major preoccupation in the labor-management field. We see a rehash of traditional debates over incentive versus nonincentive systems, but with a greater emphasis on broad measurements for calculating incentive pay. The units for measurement, once as narrow as possible, now are often quite wide—a whole crew, an operating unit, even a department.

A word of caution: While incentives in the name of gain-sharing have taken on renewed glamour, there remain many examples of excellent performance achievements without them. For instance, United States Steel and the Aluminum Company of America each has a rolling mill built by the same firm from the same basic blueprints. One uses traditional incentives and the other has never done so. Alcoa would insist that its nonincentive system produces quite satisfactory results. US Steel would resist scrapping the existing incentive system. The culture and the tradition may have more to do with this issue than some intrinsic advantage or disadvantage of one approach over the other.

A wide variety of plans include pay variables relating to the state of the business in order to achieve greater adaptability to the ups and downs in the business. Such payment devices can strengthen the sense of employee identification with the business, often a plus for encouraging improved performance.

Some would argue that these devices should not be necessary; the

employee stake is already clear. His job, his seniority, his benefits, the ability of the firm to pay are all dependent on the firm's performance; that should be enough. Whether some system of management conduct and leadership including comprehensive sharing of information could develop the desired morale and identification is far from certain.

Most gain-sharing approaches run into complications. If compensation is tied to job performance, the performance can be fine but the outcome for the business dreadful. Price factors alone can produce such a result.

Odd problems arise; for example, a group of workers can receive increased incentive earnings in the steel industry because the business has declined. This can occur when a low level of operations causes force reductions; since it is common to base pay on a total manhour factor, the force reduction can result in increased earnings for the surviving employees.

Tying compensation to profits raises difficult questions. How is profit to be defined? If the firm is multiplant, does one measure the profit achievement of the plant or a set of plants? If the firm includes diverse operations and many unions, relating profits to anything that is relevant to an identifiable group of workers is at best complicated and perhaps even impossible.

Profits can rise or fall due to conditions unrelated to what the worker does. Under such circumstances it is clear that part of any profit-sharing scheme must be a very thorough information flow so that employees can follow the reasons for the fluctuations.

It is possible that the heightened competitive environment will make it easier for unions and companies to develop common approaches to compensation issues since their interest in survival differs sharply from the scenario of the 60s and 70s when there was plenty to go around.

Collective Bargaining's Role

This brings us to the consideration of what role collective bargaining is likely to play in the years ahead.

Some people would question whether unions have any role; however, no one can doubt that unions will be around for years to come and therefore their role must be addressed regardless of anyone's predictions about the distant future.

Whatever the future may bring, change will vary from firm to firm, from industry to industry, from union to union, but is likely to occur over a long span. Meanwhile, the parties are confronted with their immediate needs in an existing economy in which union involvement is a very large factor.

A crucial issue for unions is how they can perform in an environment

of hostility, shrinking membership of major unions, and increasingly complex labor-management agendas.

The conventional wisdom assumes that increasing wages and benefits is the cornerstone of the union's function. Success or failure, victory or defeat are measured in terms of how much increase is won.

My own experience suggests that other issues are often more important than wages, specifically issues such as job security, the makeup of benefit packages, actual working conditions, parking availability, eating facilities, the state of rest rooms, and so forth. If labor-management relations are to function effectively in a changing environment, the simplistic evaluation of union performance by measuring wage and benefit increases must somehow be abandoned.

I recall a steelworker district director some years ago who prided himself on being a wizard negotiator. Without a doubt the contracts in his area were the best in the union. But before long he became known as the director who negotiated the highest wages for a rapidly declining number of employed members. He kept winning battles but losing wars, members, and jobs.

The interests of members depends on many factors more subtle than how much wage will be earned when there is work. The way in which the employee lives during his working hours and the ability of the employer to continue to provide steady and productive employment are the overriding issues that go far in determining the health and validity of the labor relations process.

In addition to overuse of wages as a barometer of union effectiveness, we tend to equate union success with size and with ability to deliver votes in elections. This approach is more relevant to the European experience than to our own. The American labor movement is not trying to capture political power or change the economic system. The power that is meaningful in labor relations depends on how the workforce and the management relate to each other.

Actually, labor relations decision-making is moving more toward the firm level and even the plant or operating unit level. This is especially so when considering the issues, seemingly mundane, which cause worker interest in unions, such as job security, detailed wages systems, and how the work site is managed.

American unions will not become political in the European sense. Union members will look to their organization for work-related leadership rather than for political leadership. When union policies coincide with the tastes of the members, the unions seem politically potent. It would be as if unions claimed that labor support for FDR was a result of union effort

when, in fact, FDR commanded the troops and, if anything, aided the organizing efforts of unions merely by association.

The health of American unions will depend on the outcomes of labor-management relations. Even notions that unions can grow by virtue of skillful organizing campaigns are overdrawn. Union growth results much more from public perceptions than from organizing skill. The CIO's sudden growth in the New Deal days was not the result of organizing skill but of favorable worker perceptions. The staff people had trouble getting out of the way as workers stormed the union gates insisting on gaining admission.

If unions are seen by workers as helpful to their hopes and ambitions, expansion is more likely than if workers associate unions with strikes, conflict, plant closings, noncompetitive practices and the like. Most employees are seeking good jobs under good conditions, not some holy cause or a vehicle through which to harass management.

It would be folly also to think that management efforts to thwart unions can be unrelated to corporate leaders' perceptions of what role unions actually play. Many major corporate leaders accept the union in good faith because good relationships have been achieved. Many managers see unions as useful vehicles for communication, for accommodating conflicting employee interests, for constraining inappropriate management practices, and for adding effectiveness in the pursuit of public policies germane to the firm.

Some observers confuse management efforts to advance their own perceptions as crass anti-unionism, union-busting, and the like. While there is enough corporate hostility to unionism to go around, this ought not be confused with the conduct of a management which is pressing its position in bargaining. That, after all, is the name of the game.

True, many firms are pursuing union-free strategies and some have been quite successful. Many newer firms and newer industries have retained union-free status, but the returns are not in yet. Time and stability often help produce the very conditions that lead to unionization. I do suggest that unions will be more likely to grow if they are not engaged in unrelenting and sometimes ill-advised struggles against management.

If the availability of wages, benefits, and job security are dependent on the health of the firm, then unionized workers cannot neglect to affirmatively seek ways to make the enterprise more effectively competitive. To play that role, the agenda of bargaining must undergo drastic change.

When the union convenes to adopt its policy, the chairman traditional-

ly asks members what they would like. That is not unlike the store Santa Claus asking the youngster on his knee what he wants for Christmas. The appropriate policy-making needs in collective bargaining have gone beyond that point. Both parties have a more challenging assignment than putting forth pipe dreams and then exchanging proposals and counter-proposals.

The parties need to identify the needs and experiences of employees, of the labor-management relationships, of the progress of the business, of the projected needs of the enterprise; this adds up to a tall order. Hard work and competent personnel are needed. Mutual trust is important. A sophisticated appreciation of the respective roles of labor and management is essential.

Are these objectives realistic? Much progress has been made in some relationships. Others are working their way through thorny paths seeking improvements. Many—in fact too many—unions and managements have no interest in new concepts.

Some thoughtful managers feel that it is mainly their responsibility to change the environment. They insist that it was management that got us where we are and must find the way out. They also concede that the political structure of unions makes aggressive initiatives on the union's part difficult; managers on the other hand have considerable freedom once the top corporate leadership gives the go signal.

The precise nature of changes in labor-management relationships will vary widely. Such variation is inevitable. While discussion of new initiatives and new programs is essential, the participants in refashioning their strategies will necessarily customize their own responses. While people can learn from each other, they still must resolve the particulars of their own situation.

Studies can prove that negative things happen in the labor-management universe, but it seems to me to be more useful to identify the progress, the successes, and the lessons that might be learned from innovative experiments.

The society will somehow adapt to change. It would be best if change is made with reasonable skill and good will rather than with bitterness, hostility, and counterproductive resistance. The one thing that will not and cannot happen is a re-creation of the past; that is often wished for but never realized.

DISCUSSION

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We are pleased to be asked to comment on the question of transition of the American industrial relations system, and on the MIT studies presented in this session. The MIT studies are a substantial body of interesting and valuable research. We applaud the timeliness of the studies and the wide varieties of research methodologies used—including statistical analyses, case studies, and discussions with union and management participants in the nation's industrial relations.

We feel that this research is important for three reasons. First, it attempts to link exhaustive field research on current practice to the development of a new theory of the functioning of an industrial relations system. Unfortunately in recent years, most case analyses have been atheoretical and much theory has had far too little practical relevance. The MIT project is a welcome attempt to bridge theory and practice.

Second, the authors' notion of a three-tiered system of industrial relations—the workplace, the level of collective bargaining, and the strategic levels of policy formulation within both unions and management—demonstrates the links between the three levels, instead of studying them in isolation. Perhaps the researchers are beginning to close the artificial gap created by many labor economists and academics of what has been called micro- and macro-organizational behavior. As most perceptive practitioners recognize, it is critical to understand all levels of the labor-management interaction and their linkages. The MIT research has provided definitive evidence that this type of multilevel analysis is not only possible, but also that it will reap increasing insights into the functioning of industrial realtions.

Third, their research demonstrates the historical relationship between the industrial relations systems of both union and nonunion firms. Changes in one system have precipitated changes in the other. For example, the research demonstrates that unions emerged to change relations between employees and management in unorganized companies. The resultant improved conditions of employment in union firms forced changes in the management of nonunion firms. Subsequent better manage-

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ment practices in nonunion firms—the authors call them human resource policies—are forcing changes today in the industrial relations of union firms. Few analyses have better demonstrated the dynamics of this interplay.

While we applaud the authors' research, we have some reservations about their conclusions. We feel that much of what the MIT study has identified as a dichotomy between union and nonunion industrial relations systems may be better understood as an old industry/new industry dichotomy. For example, patterns of relations in new high technology firms differ considerably from those of traditional heavy industries. The differences are consequences of different labor markets, skill levels, and workforce expectations as well as resulting from management ideology or reaction to the dysfunctions of union-management relations. Their basic premise is not incorrect; it merely needs to be refined.

In addition, we would like to clarify their notion of an industrial relations system and the circumstances under which it changes; we feel that their view is far too static. Second, their theoretical conclusions suffer from an American bias; many of the management responses they describe are only possible under American labor law. Their theory could greatly benefit from a wider comparative perspective.

A Dynamic Industrial Relations System

An industrial relations system, as John Dunlop described it, is part of the larger social system. Just as society is constantly evolving, so is the industrial relations system. Labor and management are conscious actors who make choices in a dynamic system which changes through a pattern of external *challenge* and *response*. Therefore, in order to understand the present system in transition, we must analyze the contemporary challenges to the system coming from the larger context as well as how the actors have responded. The three challenges are demographic, technological, and economic.

The first two challenges, demographic and technological change, are linked. First, there are new groups in the labor force with different expectations. A majority of women work and, with automation, soon these groups and service-sector employees will dominate the workforce. Traditional blue-collar work, for which the American labor law has functioned best, will continue its decline. Labor and management's response to these two challenges should be examined.

For example, unions must acknowledge the changes in the workforce and respond with new ways of organizing the new groups. If they fail to do so, unions will decline and the industrial relations system will be drastically altered. In response to the need for automation, many unions

have already shifted from strict adherence to a job security orientation to greater emphasis on employment security.

Management's response has been varied. In some cases, new or nonunion firms have been created for greater flexibility to respond to the competitive challenges; rigidities in the older unionized firms in some cases had impeded many firms' ability to respond to competition. In other cases, management developed innovative human resource policies. The authors of the project imply that the capacity of the nonunion or new firms to innovate their human resource policies depends on the existence of the union threat. Without that threat, they will slip back to the cheaper, more adversarial practices. We disagree. We feel that many of the more innovative nonunion companies evolved their practices not only to preempt unionizing efforts, but also in response to the demographic and technological challenges. With innovative human resource policies, these companies have prospered; the best managed new or nonunion firms are unlikely to abandon what in fact may have given them their competitive edge. We also believe that many of the new policies they have developed will become permanent fixtures of the American industrial relations system.

The most serious contemporary challenge to which the actors in the industrial relations system must respond is the economic and competitive one. Changes in the economic environment have led to a decline in the competitiveness of many American firms; the adjustments labor and management may make to respond to the challenge, however, may be too little too late.

The economic challenge comes from new competitors and new conditions of competition. The new competitors for many of our traditional industries, many of which are unionized, are often Japanese and Third World firms; our steel, automobile, rubber, and consumer electronics industries face this threat. Other firms are facing competition from new products or nonunion American producers. Changes in the American regulatory environment have also changed the barriers to entry in certain industries. Nonunion firms have entered the market and some unionized firms have opened nonunion facilities, going "double-breasted" in industries such as coal, trucking, and the airlines. With far lower labor costs and newer production facilities, these new competitors have gained a growing share of the world and American markets. Our older, largely unionized facilities must respond to this long-term challenge.¹

Labor and management in these industries have attempted to cut

¹ Important elements of this argument can be found in our book, *Industrial Relations in Transition* (New York: Wiley and Sons, 1985).

costs, especially labor costs, in order to be more competitive. There have been three responses to the economic challenge. The earliest response was the development of quality of working life programs. As one part of the MIT project demonstrates, these QWL programs have been very successful in improving job satisfaction and product quality; however, claims that they have lowered costs have not as yet been substantiated. A second joint labor-management response to the competitive challenge has been concession bargaining. To cut labor costs directly, in some industries wage rates have been lowered or their rate of increase slowed; flexibility in workrules has been negotiated. Unfortunately, these cost-cutting measures are unlikely to be sufficient to make union firms cost competitive with their new competitors. Labor costs can never be lowered enough to match Third World levels; massive capital investments would be required to modernize production facilities.

The third response to the competitive and economic challenge to unionized firms has been the further development of a nonunion alternative. In their articles, the MIT authors have called this response union-avoidance, union-busting, or the development of human resource policies and strategies. Although we do not feel that these terms describe the same phenomenon, nor do we necessarily endorse any of them, we feel that this is likely to be the most prevalent response given the present economic and political environments.

The Need for Comparative Perspective

The results of the MIT research would be more enlightening for the study of industrial relations systems had they benefited from wider international comparisons. Under the same set of competitive and demographic pressures, other national systems have responded differently. We feel that these differences are important for making generalizations about how industrial relations systems are changing.

There are two major explanations for the differences: the different legal framework for industrial relations, and the role of public policy. Peculiarities of the American system of collective bargaining have allowed management to seek a nonunion alternative or not to recognize unions. In most other Western nations, going nonunion to cut costs is not an option. Instead, many European employers have sought to cut costs through subcontracting work or labor, although in many cases this, too, is regulated. How does this approach compare to the United States' approach in terms of cutting labor costs or maintaining the integrity of the industrial relations system?

The second explanation for the different responses in other industrial relations systems is the role public policy plays in regulating the conditions

of employment and the nature of relations between labor and management. In many cases, when faced with a competitive challenge, a company will be forced to make a social choice rather than operating from a rigid competitiveness orientation. Sometimes, as in the cases of many European steel industries, either protectionism or social adjustments for displaced workers is provided by the government.

A System in Transition

An important matter for our attention is what are the form, structure, and content of the system toward which our country's industrial relations are evolving. Collective bargaining has a different function in a society where only a minority are union members. Rather than merely establishing employment conditions for just a small group, collective bargaining also provides leadership to a much larger group in the labor force. Its importance is not lessened to the degree declining union membership suggests. Unionism still casts a long shadow over the nonunion majority. As we discussed above, nonunion employers ordinarily model their labor practices after those of unionized companies, if only in the hope of persuading their nonunion employees that they do not need union representation.

In this environment union leadership has reduced reliance on collective bargaining as the primary method for setting standards for the American workplace. Like European unions, they have turned increasingly to the government. In a series of major statutes passed in the 1960s and early 1970s, Congress, with union encouragement, has protected the pensions, safety and health, and privacy of employees at the workplace, whether they are union members or not. It has also protected the civil rights of minorities, women, and the handicapped, again in large part due to union urging. In so lobbying, unions have benefited all employees, but probably made union membership less attractive to many people. "If Congress and the courts protect us at work," why do we need a union?

Collective bargaining has also seen its broader role in society changing. Its role is changing at the industry level where unions can no longer count on representing employees in all significant companies in an industry. In autos and steel, for example, there are now major companies in the U.S. marketplace which are headquartered and produce abroad, and whose employees are not represented by American unions. In trucking and construction, for example, there are now large nonunion American companies competing with unionized companies. This is of great significance to the union strategy in collective bargaining because if its major competitors are not unionized, then too much success at the bargaining table can put union companies out of business. When all companies in an industry are

unionized, the union is freer to ignore the competitive impact of its actions.

At the company level, unions must now be concerned that management may move its plants to the nonunion South and West, or even out of the country. At the plant level, each facility is potentially in danger of being closed if it becomes too expensive as compared to foreign or domestic nonunion plants. Finally, these pressures reach the shop floor level where employees are concerned about job security and supervisors about cost competitiveness. In the union-management counterbalancing system, each side was principally concerned with its own contest for power over the other. The new competitive environment directs the attention of both management and labor toward the survival or success of the plant.

For unions, job consciousness today does not mean further efforts to hobble management's discretion, but means instead concern for the competitive position of a unionized plant or even a unionized company vis-à-vis its competitors. In consequence, unions have learned to make concessions, to give breaks to management, and to permit greater flexibility in management direction of the workforce. In turn, unions seek greater protection for employees in case of threatened layoffs, and a greater role in consultation with management about business developments and their impact on employees.

These objectives are generally not furthered by threats of strikes, slowdowns, or the use of economic pressure. If a plant or company is in danger of being forced out of business, a strike will only hasten that result. As for management, it should not let itself be blinded by a philosophical opposition to union presence in its firms. Managers must realize that a competitiveness orientation does not always imply union-avoidance or union-busting; the financial cost and the loss of employee and societal good will must be considered before choosing such a strategy. Management should also not ignore the advantages a union may bring to a firm's productivity.

Both sides must discover a means to make changes in work practices and to resolve disputes without jeopardizing the business's health. Their choices will determine what the industrial relations system will look like and whether American industry can meet the competitive challenge.

DISCUSSION

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Kochan, McKersie, and Katz construct a scenario laying out an anti- or nonunion drift within American management. In my terms of reference, KMK document management's dislike of unions. I make a modest effort to explain why. Although this drift has been in the making for perhaps two decades or more, it has been brought to a flash point by two back-to-back recessions.

The decisive question which KMK raise for me is this: Why are American employers unique in the advanced industrial world in waging a continuous war of attrition against unions in particular and unionism in principle? Western European unionism shares with the Americans the same checkered history of victimization, violence, and union-busting, but with this significant difference: Once the European unions proved their right to exist, employers as a class came to terms with unionism as an institution.

Indeed, the founding fathers of industrial relations in the U.S.—John R. Commons, Harry Millis, William M. Leiserson, William H. Davis, Edwin Witte, et al.—confidently predicted that once the Wagner Act established the legitimacy and legality of unions and collective bargaining, employers, being rational men, would gradually see the inherent superiority of collective bargaining over other methods of dealing with employees. In this script unfair labor practices would gradually disappear. Only questions of representation would need to be decided; that is, whether the union did, in fact, represent the majority of employees in an appropriate bargaining unit.

We know that it didn't work out that way. Unfair labor practices continued to mount. Union victories began to decline and at some point defeats began to outnumber victories. Moreover, with the hindsight of a half-century now, there was never really a time when mainstream management came to terms with the active, institutional presence of a union at the bargaining table and on the shop floor.

What made it *seem* as if they had was the emergence of the state as union ally, as embodied in the Wagner Act, and its affirmation by the quintet of U.S. Supreme court decisions in 1937. But no sooner did the

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Court arrest the civil disobedience which employers practiced against the act from 1935 to 1937 than the public policy commitment to unionism was weakened by state right-to-work laws and the Taft-Hartley law of 1947.

The same body of law that permitted industrial unionism to become a pervasive force in the economy was also the law—as amended—which allowed the filing of decertifications and unfair labor practice charges. Wagner, Taft-Hartley, and Landrum-Griffin had the weakness of their strengths. They provided the instrument through which unions rose, but the instrumentality that ousted them as well.

The other development which made it seem as if management had come to terms with its unions was the rise of a cadre of professional labor relations specialists within the management corps. Again, professionalization proved to be a double-edged sword. Professionalization which brought about equilibrium eased the way for a new generation of human resource professionals helping to create a brave new nonunion world.

To be sure, the era of good feeling coincided with the long Kennedy-Johnson expansion and reached its high point before American markets got the full brunt of imports from the recovered European and Japanese economies. The Great Recession of the 1980s touched a management raw nerve that had been throbbing below the surface for at least a decade or more. When a former chief negotiator for U.S. Steel formed a committee for a union-free environment during the campaign for reform of the labor law, the union people knew that the time of reckoning had come.

To return to the question—why *are* American employers different from their European counterparts? Europeans have always understood that there are class differences and that they matter. Americans have never really accepted the idea of class. The notion that employees need a union to protect them from their employers had always struck employers as literally un-American. Therefore, in the European ideology, there is nothing unnatural in recognizing the union as the proper spokesman for its class. Similarly, there is nothing strange or alien about the state's role in the social order. The American tradition is more individualistic: Ronald Reagan could run and be elected on a platform of “get the government off your back” and, whatever the reality, the state is an alien force in the American ideology. It is *not* for most Europeans, including European employers.

While European employers may disagree with this or that detail of state regulation, or they may view with alarm the fact of too much regulation, the *principle* of regulation in the labor market is taken as a fact of life.

Now, it also may be true that European employers have not experi-

enced the full impact of an active union presence on the shop floor. Most employment relationships are either regulated by law, not infrequently enacted by what the Swedes would call “bourgeois” governments as antisocialist countermeasures; or the terms of employment are set by regional or industry negotiations, in which cases labor conditions are standardized and extended throughout a competitive area even if the enterprises are not direct parties to the agreement.

This means that European managements are probably freer to run their own shop and office floor than are American managers. The paradox is, of course, that the ideologically conservative American unions have penetrated more deeply into “management rights” than have the anticapitalist European unionists.

Now, it is probably true that European management’s efficiency consciousness is less highly cultivated than the Americans’ and that Europeans are more willing to trade off increments of efficiency for increments of social peace. Unionism is thus more of an affront to American managers than it is to the Europeans.

There is a hard-nosed quality about American management. It is less inclined to tolerate unionism. The spirit of antiunionism runs stronger than in the more “civilized” European employers, once they decide to recognize unions.

To the extent that codetermination, industrial democracy, quality of working life, workers’ councils, wage-earners’ funds, etc.—important in virtually every Western European country—have affected management’s right to manage on the shop floor, there have been problems. None of these measures, it should be noted, has been the product of negotiations: they are, rather, the products of legislative enactment, invariably by social democratic governments. Moreover, the “transactions” which these programs generate are “positive sum,” “cooperative” in character. The German workers’ council, for example, representing employee interests does not necessarily assume an adversarial or “zero-sum” posture.

The point is that European managements see a variety of union faces: adversarial, cooperative, political, and ideological. The sort of *entente cordiale* or social-contract relationship that had existed between the labor movement and employers has, however, been broken, first by the end of the high-growth era which had blunted the union pressure for redistribution for a generation, and then by wage-earner fund proposals which seemed to breach the truce on capitalism vs. socialism that had been the implicit basis of the postwar social contract. But if the *entente cordiale* is now less cordial, given Western Europe’s straitened circumstances, it is hardly conceivable, nonetheless, that the union-free environment could

figure as a major issue in Western Europe. Even the miners' strike is a sporting mutation in Britain, a country which comes closest, perhaps, to entertaining the notion of a union-free environment.

As to the viability of the antiunion strategy in the U.S., I have the following questions:

1. Does the success of an antiunion strategy endanger the social equilibrium of the democratic order, considering that unionism is everywhere in the world essential to that equilibrium?

2. Is it likely that a liberal human resource management strategy can exist absent the countervailing presence of unionism?

3. Is it likely that the vacuum created by the union retreat will be filled by public regulation? So the strategic choices will not be between a union and a union-free environment, but, eventually, between public regulation or collective bargaining.

If the external and internal industrial relations environments are viewed as a system, let us say, then it is hardly likely that the union or collective bargaining variable can be manipulated without affecting the other variables in now unforeseen ways that can have drastic consequences for the social peace and social stability.

I thank Kochan, McKersie, and Katz for this paper and for the supporting papers in the larger volume for two reasons: first, because I think I can footnote my observations of fact relating to antiunionism, labor law, union growth and decline to the authoritative papers in the support research volume; second, to the extent that judgments and values are an issue, KMK have been provocative and relevant to the issues that are being fought out in the real world.

XIV. MILITARY ECONOMICS

Army Recruiting in a Turbulent Labor Market*

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Considerable research in recent years has demonstrated a close relationship between unemployment rates and Army enlistment rates (Dale and Gilroy, 1983a,b, 1984, 1985; Dale, 1983, 1984a,b). This research has stimulated interest in studying the business cycle to try to predict the impact of future economic changes on Army recruiting. This paper is a discussion of some of the unfavorable demographic trends the Army faces. We conclude that if Army pay and benefits keep pace with the private sector, and sufficient recruiting resources are available, the Army can continue to meet its recruiting objectives.

The Outlook

The most desirable male recruits are those high school graduates who finish in the top half of the Armed Forces Qualification Test (AFQT) and are ranked in mental categories I through IIIA. These recruits are referred to as "GSM 1-3A's." The Army also accepts those who score in the 50th–70th percentiles on the AFQT (Category IIIB), and it accepts a limited number of those who score in percentiles 70–91 (Category 4). The bottom 9 percentiles (Category 5) are rejected.

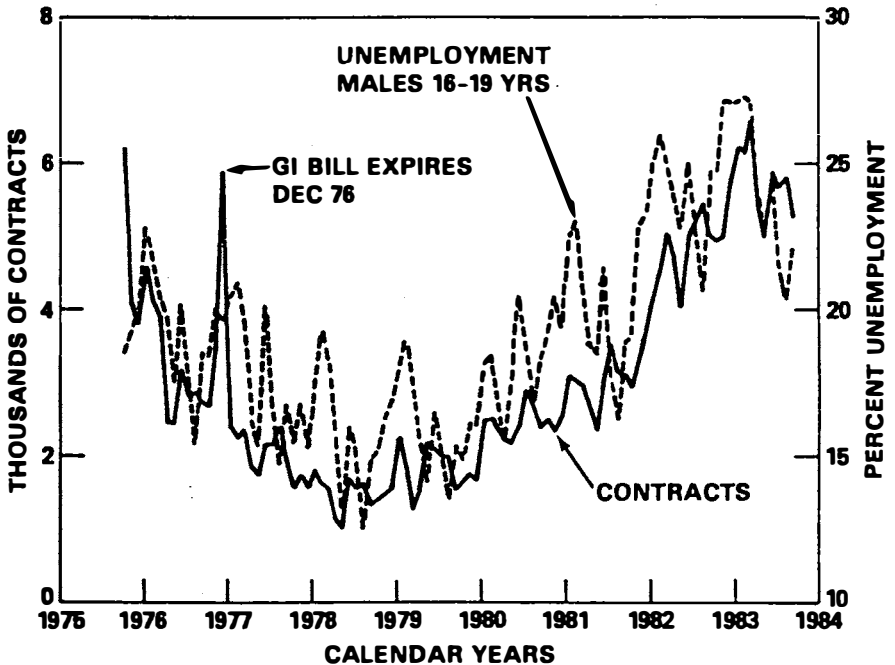
The close relationship between unemployment rates and enlistments of high quality males is shown in Figure 1. The Army can expect to face

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FIGURE 1

ARMY GSM 1-3A ENLISTMENT CONTRACTS PLOTTED VS TEEN MALE UNEMPLOYMENT RATE



increased difficulty recruiting high quality males as the economy improves. In addition, the total supply of young males will fall over the next several years, as shown in Figure 2, which will also make recruiting more difficult.

Binkin (1984, p. 33) attempts to measure the relative increase in recruiting difficulty by making some assumptions about college attendance rates, physical disqualification rates, etc. We modified Binkin's table to make it Army-specific, and to include only high quality males, as shown in Table 1. The resulting "index of recruiting difficulty" is plotted in Figure 3. Other things being equal, recruiters will have to work 23 percent harder in the late 1980s to achieve their mission, due to unfavorable demographic trends.

Not only must the Army consider unemployment and demographic trends, it also must allow for the fact that potential recruits who sign enlistment contracts may not ultimately fulfill their contracts. Under the

FIGURE 2
**PROJECTED MALE
 POPULATION AGES 16-19 AND 20-24**
**DEMOGRAPHICS ARE
 UNFAVORABLE FOR THE REST OF THE DECADE**

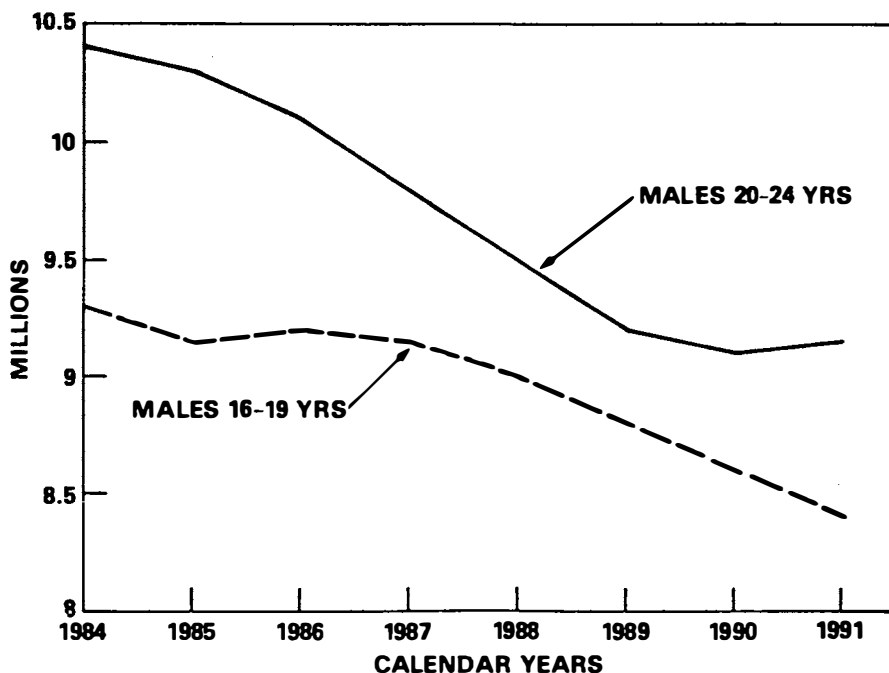


TABLE 1
 Proportion of High Quality Males Required
 for Military Service, Selected Periods, 1981-1995

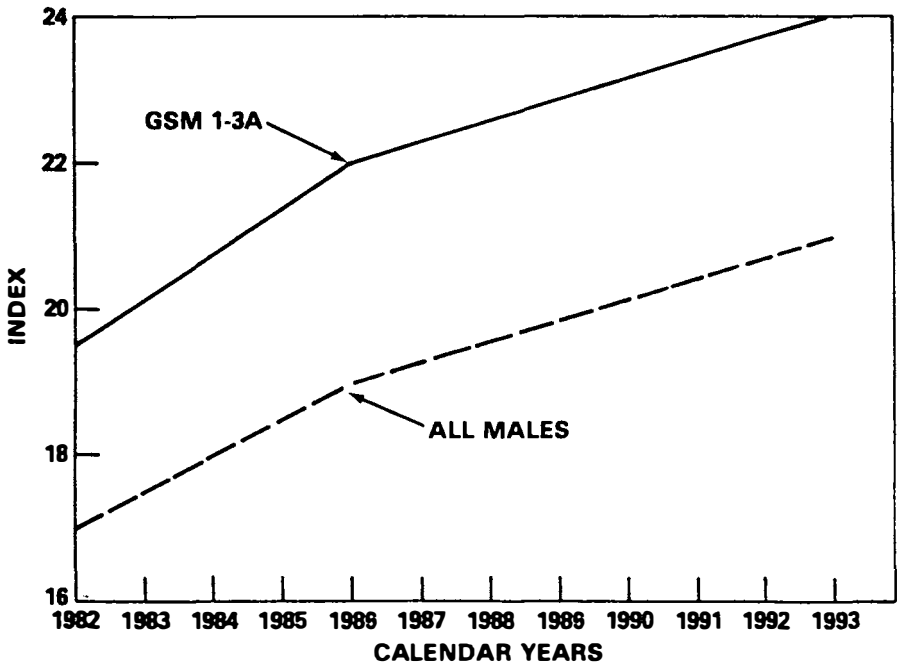
| | Annual Average in Thousands | | |
|---|-----------------------------|-----------|-----------|
| | 1981-1983 | 1984-1988 | 1991-1995 |
| Total 18-year-old males | 2049 | 1827 | 1637 |
| High quality and available male pool | 466 | 412 | 378 |
| Total Army high quality male requirements | 91 | 91 | 91 |
| Active forces | 76 | 76 | 76 |
| Reserve forces | 15 | 15 | 15 |
| BIRD Index | 19.5 | 22 | 24 |

Source: Binkin (1984, p. 33), modified to include high quality Army males.

Notes: BIRD = Binkin's Index of Recruiting Difficulty. The larger the Bird Index is, the more unfavorable are the recruiting demographics. High quality requirements are mental categories I-III, including high school nongraduates.

FIGURE 3

INDEX OF RECRUITING DIFFICULTY
A HIGHER INDEX MEANS INCREASINGLY UNFAVORABLE
DEMOGRAPHICS



delayed entry program (DEP), enlistees may delay their accession date up to one year after signing an enlistment contract. In recent months over 10 percent of all potential recruits have failed to fulfill their contracts.

Potential recruiting shortfalls for high quality Army enlistees are shown in Table 2, using an economic scenario from the Congressional Budget Office. The details of the forecasting method may be found in Dale (1984b). The projected shortfalls are not large enough to necessitate a return to the draft, provided that sufficient recruiting resources are made available to enable the Army to penetrate tightening labor markets. A recent study by Dale (1984a), using linear programming methods, concludes that an additional \$65 million in recruiting expenditures by 1989 could eliminate the shortfall.

TABLE 2
 Projected Shortfalls of Army Enlistments,
 High Quality Male High School Graduates,
 Thousands of Contracts

| Fiscal Year | Unemployment Rate | Projected Contracts | DEP Loss | Net Accessions | Accessions Needed | Projected Shortfall |
|-------------|-------------------|---------------------|----------|----------------|-------------------|---------------------|
| 1985 | 6.7% | 53.6 | 3.8 | 49.8 | 58.7 | 8.9 |
| 1986 | 6.6 | 53.5 | 3.8 | 49.7 | 65.0 | 15.3 |
| 1987 | 6.4 | 53.2 | 3.7 | 49.5 | 65.0 | 15.5 |
| 1988 | 6.3 | 52.8 | 3.7 | 49.1 | 65.0 | 15.9 |
| 1989 | 6.3 | 52.5 | 3.7 | 48.8 | 65.0 | 16.2 |
| 1990 | 6.3 | 52.4 | 3.7 | 48.7 | 65.0 | 16.3 |

Sources: Unemployment projections are from the Congressional Budget Office, (1984). Projected contracts are from Dale (1984b).

Notes: DEP loss = expected number of delayed entry program participants who do not ultimately access. Net accessions = projected contracts less DEP loss. Accessions needed are October 1984 estimates from the U.S. Army, based on Administration budget projections. Projected shortfall = accessions needed less net accessions.

Labor Market Dynamics

Potential recruiting shortfalls have increased the Army's interest in the dynamics of labor markets. Labor market supply equations are usually straightforward, but recent work by Day (1982, 1983), Benhabib and Day (1981), Grandmont (1983a,b), Jensen and Urban (1984), and Mandelbrot (1983) has shown that even relatively simple equations may have very complicated dynamic patterns. Jensen and Urban, in particular, have constructed a simple labor market model in which slight changes in initial conditions can lead to radically different changes over time. They implicitly made some rather unrealistic simplifications, such as assuming wage flexibility. Nevertheless, this increases the possibility that more sophisticated systems of equations would have even more complicated dynamics. Their central point is that labor markets may be much more unstable than has heretofore been realized.

The inherent instability of many types of economic systems is significant because it means that recruiting shortfalls such as the Army experienced in the late 1970s could suddenly reappear if there are only minor changes in initial conditions. The exact motivations for why people enter the Army are imperfectly understood. For example, pay increases in the early 1980s helped eliminate recruiting shortfalls, but surveys showed that many recruits had been completely unaware of the dollar amount of basic pay. This led to speculation that recruits were responding more to the favorable publicity about the pay raises and the feeling that military careers were becoming more respectable than to the pay raise itself.

The implications for Army policy are that pay and benefits should be steadily increased to keep pace with the private sector. Pay freezes, followed later by catch-up raises, may not be successful in eliminating recruiting shortfalls because of the permanently altered changes in behavioral patterns that can arise from the perceptions generated by a pay freeze. The mathematics of turbulent systems tells us that we cannot determine at what point such changes may occur.

Conclusions

Continued success of Army recruiting is not guaranteed. Recent research suggests that labor markets may have far more unstable dynamic properties than has heretofore been realized. Thus, if military pay does not keep pace with civilian pay, or if propensity to join the military drops for any reason, economic or noneconomic, Army recruiters could again suddenly find themselves unable to fulfill their missions. We conclude (see Table 3) that gradual pay raises and steady increases in the recruiting

TABLE 3
Summary of Key Ideas

-
- There is a close correlation between unemployment rates and Army enlistments of high quality males.
 - The youth population will decline sharply over the next decade.
 - Labor force supply may vary erratically, according to initial conditions.
 - The most prudent course for the Army is to maintain pay comparability and allocate adequate resources to recruiting in tightening labor markets.
-

budgets are the best approach to overcoming unfavorable demographic trends in the years ahead.

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Determinants of Labor Productivity In the Military*

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Since the advent of the All-Volunteer Force (AVF) in 1973, the military research community has devoted much effort toward improving personnel management in the areas of accession and retention. Although not all factors have been quantified, we are able to estimate, with some accuracy, what draws and retains personnel of differing characteristics to the AVF. Our success in obtaining new recruits hinges largely on four factors: the ratio of military to civilian pay, the civilian unemployment rate, the number of recruiters, and the advertising budget. For reenlistment, the main determinants are military pay relative to civilian pay and the civilian unemployment rate. With knowledge of these factors, we can provide reasonable predictions of enlistments and reenlistments.¹

The serious gaps in military manpower research are on the demand side of the market. Who should the military seek to recruit and retain? How do military personnel substitute for each other? What makes personnel productive?

To address these questions we analyze supervisory assessments of first-term enlisted personnel. For these personnel we estimate the net productivity or learning curves, trying to explain what factors make recruits learn faster: ability, schooling, the particular job, or time on that job.

The Measurement of Military Output

It is not surprising that the demand side of the market for military personnel has been neglected.² First, there is no tangible output to

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¹ For example, see Warner and Goldberg (1982), Gotz (1980), and Daula and Smith (1984).

² The exceptions are the estimates of the effects of maintenance activities on readiness, described by Horowitz and Sherman (1977). Unfortunately, only a small portion of military activities lend themselves to such easily identifiable output measures.

measure. Second, since the military uses explicit fixed-length employment contracts, no one would suggest that the enlistee's productivity is identified by his current wage.³

On-the-job training (OJT) in the civilian sector has often identified with the slope of the earning/experience profile. An explicit employment contract in the military clearly breaks the linkage between spot marginal product and spot productivity. Lazear (1981) and others, however, have argued that the link is broken even in the civilian sector. Implicit contracts between private-sector employees and their firms are sufficiently pervasive as to make it impossible to relate earnings profiles to the time path of productivity (see Medoff and Abraham (1981)).

With employment contracts, either explicit or implicit, how can researchers measure the productivity of employees? We offer one approach here, using survey data the Rand Corporation collected in the mid-seventies.⁴ (For a full description of these data, as well as an analysis of the appropriate mix of first-term and second-term personnel for the Air Force, see Albrecht (1979).) Data were collected in two surveys. First, 19,000 randomly selected first-term recruits in selected occupations were sent questionnaires that requested the names of three immediate supervisors. Next, "net productivity" estimates were collected from these supervisors for the individual recruits at different points in time.⁵ All net productivity assessments were relative: the net productivity of the recruit at time t relative to the net productivity of the average specialist within the occupation after four years at the duty station. Net productivity is -100 percent if the individual requires full-time supervision by a four-year specialist; +100 percent if the individual is as productive as a specialist with four years of experience.

Before discussing our empirical results, it is appropriate to address the potential problems caused by the subjectivity inherent in supervisory evaluations. The most serious type of bias arises from the fact that each supervisor denominates his evaluation in his own particular currency, utilizing individual-specific notions of the mean and variance of performance. Cooper and Nelson (1976) call these two sources of systematic bias "location" and "scale" and point out that they do not disappear even with large sample sizes. Our approach recognizes that supervisors have

³ Basic military pay, defined on pay tables, is determined by military rank and years of service. It rises very little over the first four years (in 1984 the basic pay of enlisted personnel in their fourth years of service was 138 percent of the basic pay of new recruits).

⁴ These are formal instruction costs and wages while in training (1979 dollars). See Angier and Driscoll (1982).

⁵ Net productivity is the contribution of the recruit to unit output. It is negative if the recruit and the supervisor together produce less than the supervisor would have produced without responsibility for training the individual.

systematic differences in the scale and location of their evaluations. We control for these differences in the productivity regression equations with two variables, *DIFF* and *VAR*. These variables are constructed out of supervisory answers to questions concerning the productivity of the “typical” recruit.

Specifically, for each of the 15 jobs, consider an individual, *i*, with a supervisor, *j*. Let *TYP_j* be supervisor *j*'s assessment of the typical recruit at time *t*, and \overline{TYP} be the mean assessment of supervisors in that occupation of the typical trainee at time *t*. Then, for each individual:

Proxy for location bias: $DIFF = TYP_j(2 \text{ years}) - \overline{TYP} (2 \text{ years})$

Proxy for scale bias: $VAR_i = \frac{TYP_j(1 \text{ month}) - TYP_j(4 \text{ years})}{\overline{TYP} (1 \text{ month}) - \overline{TYP} (4 \text{ years})}$

The sign on *DIFF* should be positive; supervisors who believe that the typical recruit is more productive than their peers believe him to be will also tend to rate particular individuals as more productive.

Scale bias, on the other hand, refers to perceived differences (larger or smaller) between the best and the worst performers. Individuals who have a large value of *VAR* have been evaluated by supervisors who see large differences in the growth of the typical recruit over the first four years at the duty station. To capture this scale effect, we enter both *VAR* and *VAR* interacted with time on the job; the sign on *VAR* should be negative, and the sign on the interaction variable (*VARTJ*) should be positive.

Empirical Work: The Learning Curve Regressions

We estimated the time path of net productivity for first-time trainees in 15 Navy occupations. The regressions control for time at the duty station (*TJ* and *TJSQ*), time in the Navy before the first duty station (*T*), intelligence test score (*AFQT*), high school graduation (*HSDG*), and the subjective bias variables discussed above (*DIFF*, *VAR*, and *VARTJ*). In addition, we control for observations with missing data with a series of dummy variables (*AFQTFLAG*, *DIFFFLAG*, and *VARFLAG*) and for supervisors who did not understand the concept of net productivity (*TEST*).⁶

Individual learning curve results for three Navy jobs are displayed in

⁶ Regressions that omit observations if the supervisor did not understand the concept of net productivity are available from the authors of this paper. The results are similar to the regressions reported here. A longer version of this paper can be found in Quester and Marcus (1982).

TABLE 1
Net Productivity Regressions

| | Electrician's Mate (Nuclear Submarine) | | Electronics Technician (Nuclear Submarine) | | Radioman | |
|---------------------------|---|-----------------|---|-----------------|------------------|-----------------|
| | Co- efficient | t- statistic | Co- efficient | t- statistic | Co- efficient | t- statistic |
| <i>TJ</i> | -3.30 | (11.8) | 3.09 | (10.2) | 3.67 | (20.4) |
| <i>TJSO</i> | -.05 | (-13.7) | -.06 | (-14.4) | -.06 | (-23.6) |
| <i>AFQT</i> | .19 | (2.0) | .39 | (4.7) | .16 | (3.8) |
| <i>AFQTFLAG</i> | ^a | | ^a | | 1.34 | (.7) |
| <i>HSDG</i> | ^a | | ^a | | 3.55 | (2.3) |
| <i>T</i> | .95 | (9.1) | 1.06 | (7.7) | .50 | (6.9) |
| <i>TEST</i> | 4.40 | (1.9) | 8.40 | (2.9) | 5.36 | (3.7) |
| <i>DIFFFLAG</i> | 16.98 | (3.0) | -9.40 | (-1.9) | -3.88 | (.7) |
| <i>VAR</i> | -48.08 | (-7.9) | -57.58 | (-8.6) | -38.12 | (-13.1) |
| <i>VARFLAG</i> | -13.62 | (-2.4) | 10.37 | (2.2) | 7.55 | (1.4) |
| <i>VARTJ</i> | 1.29 | (6.2) | 2.03 | (9.0) | 1.46 | (13.9) |
| <i>DIFF</i> | .35 | (8.1) | .25 | (5.7) | .54 | (21.7) |
| Constant | .84 | | -25.38 | | 17.06 | |
| <i>R</i> ² | .54 | | .60 | | .54 | |
| Number of observations | 1591 | | 1357 | | 3071 | |

^a The AFQT variable was not missing for any observations for Electrician's Mate or Electronics Technician. In these same occupations, all personnel are high school degree graduates.

Table 1. The corrections (*DIFF*, *VAR*, *VARTJ*) developed to control for systematic differences across supervisors in the location and scale of their evaluations perform very well. All have the correct sign, and all are significant at the 99 percent level. The variable *TEST* has the value one if the supervisor did not pass the net productivity concept quiz; otherwise it is zero. Supervisors who did not understand the concept systematically rated the productivity of their trainees higher than did supervisors who understood the concept.

Even a cursory inspection of these results suggests that Navy personnel take considerable time to learn their jobs and become productive. Moreover, reasonably sharp differences in the growth of productivity emerge. In part, this is due to the length of formal training. While the average seaman (an occupation without specialized training) arrives at his first duty station after about 2.5 months in the Navy, the average nuclear electronics technician, because of extensive schooling, does not arrive at his first duty station until almost 17 months after entering the Navy. Even then, substantial OJT is required.

Figure 1 illustrates the learning curves for nuclear submarine electronics technicians (ETs) and general-duty seaman (SNs). The curves are drawn holding all characteristics except time on the job (*TJ*) at their mean

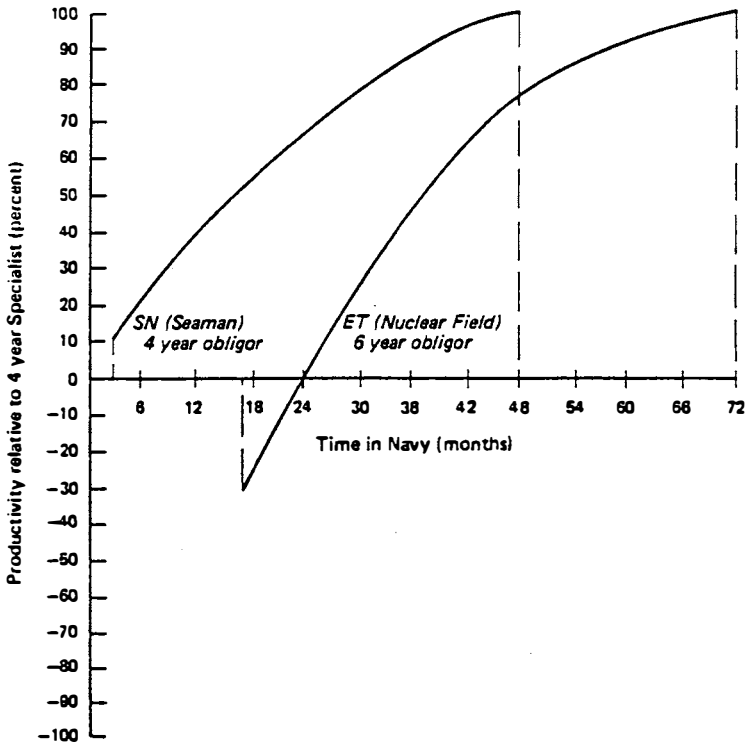


FIG. 1: THE TIME PATH OF PRODUCTIVITY OVER THE FIRST ENLISTMENT TERM

values. While an SN after two years in the Navy is almost 70 percent as effective in his job as one with four years of experience, a nuclear ET with two years in the the Navy has only reached the zero net productivity level. In short, the nuclear ET has reached the point at which his contributions to output just balance the output lost because supervisors must spend time supervising him.

Because the ET's training takes so long, during his entire six-year enlistment he produces less than a third of the output that would have been produced by a specialist with four years of work experience. Moreover, these figures, and the regressions from which they are derived, abstract from both formal training costs and attrition. As suggested earlier, for a nuclear ET graduate in 1979 these training costs were more than \$30,000.

Higher AFQT scores and high school graduation appear to be posi-

tively related to productivity, but the magnitude and statistical significance of these effects should be interpreted cautiously. The allocation of recruits to Navy jobs is not random and, indeed, is based on many of the same characteristics that influence performance. While it is theoretically possible to obtain unbiased estimates by controlling for the occupational selection process, standard "selection bias" techniques are not appropriate here because for most Navy jobs the ability and schooling distributions are truncated on both the upper and lower tails.⁷

Implications and Conclusions

A key policy variable related to the growth of productivity during a career in the Navy is the mix between careerists and first-termers. The Navy and Air Force have traditionally had larger proportions of experienced personnel than have the Army and the Marine Corps. Whether the current mix of recruits to experienced personnel is optimal, however, is a question that has not been effectively addressed.

To address issues of whom the military should recruit, whom it should retain, and how it should distribute these personnel, much more work on the demand side is necessary. If we are to address the demand side of personnel questions with the degree of sophistication with which we address supply questions, we need to think hard about what data we need and whether experimental data are required.

This is an area of research that is of interest to labor economists within and without the military research community. The relationship of experience and personnel characteristics to marginal productivity, and of productivity to wages and wage contracts, is not well understood. This work represents an initial step in the exploration of this issue, but a substantial research agenda remains.

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Military Spending, Technological Change, and the Use of Capital and Labor

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[T]here was little difference between civilian and military technology for most of American history. The skills demanded of the soldier during a less sophisticated period of warfare were very similar to the skills of the citizen living in a predominantly rural society. During the early period, muskets, cavalry accoutrements, and artillery pieces were the prime elements of military material, and with the exception of the latter, these were also useful civilian articles in a frontier-minded society where hand weapons were common household equipment on a par with plows and livestock. Military transportation called for horses and mules, and these also fulfilled civilian transportation needs, as did, later, the railroads. Virtually every item of military equipment had some civilian use, and vice versa, so there was almost complete exchange of military and civilian technology.

—Kranzberg (1969, pp. 156–57)

While there have always been technological advances undertaken directly for military use, throughout most of history the nature of warfare essentially reflected available technology. World War II, however, marked a turning point in the attitude of the military away from the customary reliance on methods and equipment that had been used in previous wars toward the assiduous application of science and technology to the design and production of more powerful, more accurate, and increasingly integrated and automated systems of destruction. Since the Korean War there has been a commitment to maintaining research and development and new production even in peacetime.

World War II also marked a turning point for the U.S. in other ways. The war ended a decade of economic depression and was followed by

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the most prosperous times in the country's history. The U.S. stood at the height of its economic and political power precisely at the time that the Soviet Union, Western Europe, and Japan were in ruins.

The U.S. continues in most assessments to be the preeminent military power, but in the last decade there has been a clear slowdown in the economy. While technological change continues to increase the productivity of capital and especially of labor, the improvements have not kept pace with those of, say, the Japanese who have benefitted from both a systematic national approach to industrial strategy and a relatively small military burden.

While the postwar power of the Soviet Union is based essentially on its military strength, the power and prestige of the U.S. have been based not only on military strength but also on remarkable scientific and technological achievements and the ability to provide to our citizens the highest standard of living in the world. At the present time, a wise strategy for enhancing our international position, not to mention our safety and survival, is to concentrate on strengthening the civilian economy rather than endlessly modernizing and expanding the arsenal. This will require a high-level commitment to the systematic application of science and technology both to the analysis of economic options and to the business decisions that govern civilian production.

This paper explores in a preliminary fashion a small part of this agenda: it examines technological change in military production and in the economy as a whole over the past two decades and includes projections about technological change through 2000. While today's military products are highly specialized, they ultimately depend, like other production, on labor, capital, and raw materials. For this analysis of technological change, we compute the changing total requirements of capital and labor to produce the military bills of goods and the total final bills of goods, distinguishing the impact of changes in the composition of final deliveries. The input-output computations presented in the final section of the paper use the database compiled for and described in Leontief and Duchin (1984a,b). We hope that future work will use more refined data about both the structure of military final demand and the input structures of sectors producing essentially for military end use.

The Use of Capital and Labor

As the production of any good or service is increasingly automated, the amount of fixed capital (that is, plant and equipment) used by the average worker in its production, or the capital to labor ratio, invariably increases. The capital to labor ratio for any sector of the economy is computed as a weighted average that takes into account the different

outputs produced and the various technologies adopted by the plants and offices included in that sector. According to the technologies being put in place in 1977, the sectors with the highest capital to labor ratios (in terms of an 85-sector classification similar to the 2-digit SIC) included the extraction (\$514,000 in 1979 prices) and refining (\$233,000) of petroleum, the mining of various metals and chemicals (for example, over \$200,000 for nonferrous metal ore mining), and services like utilities (\$763,000), communications (\$306,000), and transportation and warehousing (\$112,000). Among sectors with the lowest capital to labor ratios were construction and apparel (both under \$10,000), furniture and scientific instruments (both under \$20,000), and services like retail trade (\$10,800). While the numerical ratios change, these sectors also ranked among the highest and lowest, respectively, in terms of the technologies of 1963.

With the passage of time, the relative importance of different goods and services changes and new ones are introduced. New products, while they may economize labor in the sectors in which they are used, are likely to depend heavily upon human labor and use only small amounts of fixed capital in their production since the characteristics of the product and the production process and the size of production runs are not yet clear. Often a new product is introduced by small, new establishments which can afford to hire labor, which can be laid off, but not to invest in fixed capital. As the product matures, the capital to labor ratio tends to increase. A good example is provided by the computer and semiconductor sectors for which the capital to labor ratios in 1963 technologies were under \$6000 compared to \$29,000 for the economy as a whole; in 1977 technologies, they were \$56,000 and \$36,000, respectively, compared to \$46,000 for the economy as a whole (all in 1979 prices). By contrast, some items, of which specialized military hardware is typical, are systematically characterized by short production runs and changing specifications which result in a labor-intensive production process.

Computer-based automation tends to increase the capital to labor ratios in the production of both goods and services and in both mature and new sectors. The automation of office work, the backbone of many of the large service sectors, has barely begun. While the automation of manufacturing has already proceeded for several decades, new prospects for increased flexibility in the use of fixed capital, including programmable control of machine tools and robots and their integration, will improve the cost-effectiveness of fixed capital in many cases, for example in the production of military hardware despite short runs and changing specifications.

In the automation of a given production process, the capital to labor ratio generally increases because human labor is displaced by fixed

capital, that is, the labor to output ratio falls while the capital to output ratio grows. However, while automation invariably economizes labor, it may reduce capital requirements as well. Still the capital to labor ratio is observed to grow since the percentage saving in labor generally exceeds that in capital. It may also happen that while capital per unit of output increases, labor per unit of output does not decline. This may be the case, for example, when a manufacturing establishment installs pollution abatement equipment, when a sector steps up its marketing activities, or when the care of a hospital patient involves increased use of diagnostic equipment.

The capital to labor ratio is an aggregated measure that unfortunately does not distinguish between different types of capital and labor. However, the significance of the ratio as an economic parameter is that it has a direct technical interpretation and is relatively stable, and the reasons for its variation (discussed above) are few in number and relatively well understood. While the ratio for a given sector fails to take account of intermediate inputs, the capital to labor ratio for the production of a given final bill of goods is a comprehensive measure in that it includes the factor requirements for all inputs. In the following section we report some results about the capital to labor ratios underlying military and total final deliveries in the U.S.

Results

The average U.S. worker in the private economy would have required just under \$30,000 worth of fixed capital (in 1979 prices) to produce the 1963 total final bill of goods using technologies being put in place in 1963. While the mix of outputs to produce 1963 military deliveries was very different, the average capital to labor ratio is about the same. Using 1977 technologies, the capital to labor ratio for the total final bill of goods increases to \$41,000, while for the production of the 1977 bill of military goods and services it is almost \$46,000 (in constant 1979 prices).

These numbers are shown along the banded diagonals of panels A and B of Table 1. Also shown are the results of other computations where the bill of goods for each benchmark year is combined with the technological assumptions—that is, input-output matrices—of every other benchmark year. We see, for example, that the 1967 military bill of goods would have required \$29,709 worth of capital per worker if produced using 1963 technological assumptions and \$69,070 using the technological projections for 2000. There is no systematic change across the rows of panels A and B of Table 1, and the entire increase in capital per worker is explained by technological change and not by the changing composition of the bill of goods.

TABLE 1
Capital to Labor Ratios
(Dollars, in constant 1979 prices, per worker)

| Technological Assumptions | / Bill of Goods | | | |
|---|---------------------|---------------------|---------------------|---------------------|
| | 1965 | 1967 | 1972 | 1977 |
| <i>A. Capital per Worker to Produce Military Deliveries</i> | | | | |
| 1963 | \$29,091 | \$29,709 | \$29,627 | \$28,146 |
| 1967 | 32,377 | 33,147 | 33,089 | 32,041 |
| 1972 | 41,903 | 43,050 | 43,101 | 42,309 |
| 1977 | 44,370 | 45,664 | 45,870 | 45,617 |
| — | | | | |
| 1990 | 55,365 | 56,712 | 56,746 | 56,448 |
| 2000 | 67,556 | 69,070 | 68,834 | 68,356 |
| <i>B. Capital per Worker to Produce Total Final Deliveries</i> | | | | |
| 1963 | \$29,796 | \$30,019 | \$30,052 | \$28,529 |
| 1967 | 32,534 | 32,783 | 32,823 | 31,432 |
| 1972 | 39,088 | 39,498 | 39,658 | 38,403 |
| 1977 | 41,222 | 41,681 | 41,817 | 40,669 |
| — | | | | |
| 1990 | 49,544 | 50,109 | 50,060 | 48,847 |
| 2000 | 59,257 | 59,943 | 59,642 | 58,275 |
| <i>C. Capital to Labor Ratio for Military Deliveries Divided by Capital to Labor Ratio for Total Final Deliveries</i> | | | | |
| 1963 | .98 | .99 | .99 | .99 |
| 1967 | 1.00 | 1.01 | 1.01 | 1.02 |
| 1972 | 1.07 | 1.09 | 1.09 | 1.10 |
| 1977 | 1.08 | 1.10 | 1.10 | 1.12 |
| — | | | | |
| 1990 | 1.12 | 1.13 | 1.13 | 1.16 |
| 2000 | 1.14 | 1.15 | 1.15 | 1.17 |

The ratios of capital per worker for military deliveries to capital per worker for total final deliveries are shown in panel C of Table 1. The military ratio is fully 12 percent larger by 1977; its relative growth is due mainly to technological change (monotonic increase down the columns) reinforced by the simultaneously changing compositions of the two bills of goods (monotonic increase across the rows). While we have not made computations with projected future bills of goods, under the impact of projected future technologies this margin will widen even further.

In 1963 the production of a million dollars' worth of military final deliveries required about 8 percent fewer workers and 8 percent less fixed capital than an equal value of total final deliveries. By 1977, military production still required about 8 percent fewer workers, while capital

requirements had gradually grown to 103 percent of the average for the economy as a whole. Thus, over this period military production required increasingly more capital, but not less labor, relative to the economy as a whole.

In almost all cases the later technologies require both more capital and less labor for the production of any given bill of military or of final deliveries than the earlier technologies: by and large, technological changes between 1963 and 1977 and those projected for 1990 and 2000 substitute capital for labor. One noteworthy exception is that projected technological change between 1977 and 1990 will increase the capital requirements to produce any benchmark bill of military goods without reducing the number of workers.

Of the capital stock required to support military final demand through domestic production, about 10 percent is held by the petroleum extraction sector, 40 percent by manufacturing establishments, and 45 percent by service-sector establishments. (Of the capital held by service sectors, almost two-thirds is accounted for by transportation and warehousing, communications, and utilities.) For total final deliveries (net of imports), about 7 percent of the stock is held by agriculture, 20 percent by manufacturing, and 65 percent by the service sectors. (Capital stock held by the petroleum extraction sector does not appear important here both because petroleum use per dollar of final deliveries is lower than its use per dollar of military deliveries and because imports are netted out of total final deliveries.) The systematic shift in these percentages, with the transition from 1963 to 1977 technologies and the changing composition of the bill of goods, is the growth in the proportion of the stock held by the service sectors, from 43 to 47 percent for military final deliveries and from 60 to 68 percent for total final deliveries over the period 1963–1977.

As to the sectoral distribution of employment required to produce the military bill of goods, there was a significant shift over the period 1963–1977 from manufacturing to services; however, in 1977 less than 40 percent of the employment was in service sectors compared to almost two-thirds for the economy as a whole. Military production requires a disproportionately large share of professionals, mainly scientists and engineers, and of skilled and semiskilled workers, mainly the metalworking occupations. It involves a disproportionately small percentage of service and sales workers.

In summary, it appears that technological change increases the overhead and/or improves the “quality” of goods and services sold to the military but does not improve the “efficiency” of production, in terms of the use of capital and labor, relative to that of the economy as a whole. In addition, structural changes projected for 1990 may not improve economic

efficiency for the production of the military bill of goods even in absolute terms; that is, the production of the benchmark military bills of goods will require more capital but not less labor than with the technologies of 1977.

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DISCUSSION

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The topic of military economics is a broad one. The three papers cover three diverse areas of this field, and finding a common theme among them to use for comparative review is difficult. As a discussant, this leaves me with a problem. How can I summarize and then criticize such a broad body of work of these three studies in only ten minutes? Like most discussants, my solution to this dilemma is to choose some specific points in each study of interest to me and hope that my observations on these points are also of interest to you.

Army Recruiting in a Turbulent Labor Market

Let me start with Chuck Dale's paper. By now a number of researchers have followed the original lead of John Johnston and Martin Binkin in pointing out the coming difficulties in military recruiting. The combination of a hoped-for continued economic recovery and a certain decline in the size of the eligible youth cohort makes the recruiting picture for the late 1980s and early 1990s a bleak one. The Army, the service which traditionally has experienced the most recruiting difficulty, is understandably the most concerned.

As I understand Chuck's argument, it centers on two points. First, the large body of research in this area has not really taught us much about the behavior of military recruits. Second, because of potential instability in the market for military recruits, the best policy prescription is a gradual increase in recruit pay and recruiting resources instead of sporadic attempts to fine tune the enlistment incentive package. This is sort of a Chicago-school approach to military recruiting.

I share Chuck's concern about complicated economic models of enlistment behavior. Experience has shown the parameter estimates of these models to be quite sensitive to specifications. In an earlier paper Chuck correctly labels multicollinearity among the major policy instruments to be the primary cause of this sensitivity. In fact, Chuck chooses a simple technique—a variant of the Box-Jenkins ARIMA time-series projection methodology—for the construction of his projections. He finds these

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projections to be quite comparable to the projections arrived at by other military enlistment analysts who use quite different projection techniques.

At this point, I part company with Chuck's argument. I do not believe the construction of well-identified economic models is a necessary precondition for successful management of military recruiting.

Secondly, more evidence needs to be presented to demonstrate the actual instability rather than the mere mathematical possibility of instability in the military recruiting market before policy-makers can be expected to initiate policy remedies to correct for the instability. For myself, I am struck by the remarkable consistency which has typified the forecasts of future military enlistments over the past few years and the relative success of these forecasters in predicting actual enlistment levels. Such a forecasting record certainly does not intuitively correlate with an unstable system which is highly sensitive to small policy-induced shocks.

The reason I am so concerned about the policy prescription of Chuck's work is that it could entail a very expensive increase in military pay. The probable way in which such a prescription would be implemented would be a continuous increase in military pay relative to civilian pay over the next decade. In my view such a general increase in military pay for all recruits would exacerbate the amount of rent already being received by many of these recruits. A preferable policy in my view is to meet any shortfalls which develop at the end of the decade with a flexible bonus package which selectively addresses specific occupational shortages.

Determinants of Labor Productivity in the Military

With Alan Marcus and Aline Quester's paper we jump from the well-lit supply side of the military manpower street to the dimly lit demand side of the same street. Unlike military enlistment behavior which has been studied to death, Marcus and Quester follow the lead of Rand's Bob Gay and Mark Albrecht to study changes in military productivity during the first term of service.

Obviously, efficient use of military personnel depends just as much on knowledge of demand relationships as it does on knowledge of supply behavior. It has always mystified me why economists have so carefully avoided doing much research on the demand for military personnel. Marcus and Quester cite the conventional wisdom that first "they are stymied on how to measure military output," and second that "data often exhibit . . . small variation in the input measures."

In fact, possible output measures are numerous. For support activities, output is directly measurable in terms of meals served, forms processed, buildings built, etc. For combat activities, Stan Horowitz has used data on whether systems are operational or not to proxy for output. Other

measures of output for combat activities include ratings of units in field exercises or actual experience from Vietnam or Korea. The final type of output measure is subjective supervisory ratings drawn from either personnel files or from special surveys of the type used by Marcus and Quester.

The assumption that little variation in input data exists is based largely on the observation that military units are manned according to standard manning tables. In fact, in some careful studies of the actual manning pattern of units, then Rand analyst Craig Moore found considerable variation in the types of personnel manning identical Air Force units. Variation occurred both across time and across Air Force commands.

Of all the possible approaches to measuring military productivity, I am most troubled by the use of subjective supervisory ratings. Any procedure which first must test the observers to determine the accuracy of their observations and then must include the observations of those observers who fail this test leaves some margin for error in interpreting the results. Additionally, Marcus and Quester are burdened by substantial amounts of missing data and the necessity to introduce a number of variables which adjust for the inherent subjectivity of supervisory ratings.

Despite these limitations, the results they arrive at are intuitively plausible. They find that substantial differences exist in both the level and time path of growth in the productivity of personnel across military occupations. These results again serve to buttress the case for managing military personnel on the basis of their skills rather than on a general forcewide basis.

Military Spending, Technological Change, and the Use of Capital and Labor

Faye Duchin's paper analyzes the process of technological change and compares the impacts of technological growth on sectors producing military goods with the same impacts on the entire economy. She accomplishes this analysis through detailed projections of the amounts of capital and labor required per unit of output in each sector of the economy through the year 2000.

She finds that the average producer of military goods was slightly more labor intensive than the economy as a whole in 1963, but by 1977 used 12 percent more capital per worker than the rest of the economy. This trend is certainly good news for DOD. Defense acquisition managers have worried for years about undercapitalization in the production of defense goods. Many of the Carlucci initiatives for reforming acquisitions processes were designed precisely to increase the capital-labor ratio used in the production of defense goods.

What is puzzling about Duchin's results is that, although she projects that the use of capital will increase more rapidly in the defense sector than in the rest of the economy, labor productivity is not projected to increase relative to the rest of the economy. In other words, relative to nondefense goods, defense-goods production is projected to become less efficient. I presume this projection would not be good news to defense acquisition managers. It certainly gets the attention of those of us at GAO worrying about such matters.

The rub is, of course, why this might happen. Duchin presents a number of reasons in her paper about why such a result is plausible. For the economy as a whole she mentions regulatory requirements for environmental capital investment or increases in the quality of goods produced. Other possible explanations more germane to the defense sector itself could be inefficiencies introduced by defense contracting procedures which offer little incentive for firms to reduce their costs of production or the lack of any market discipline penalizing inefficient firms since the defense department seems to be equally likely to buy products whether or not they are efficiently made.

In considering each potential explanation, I am at a loss to understand what structural shifts occur post-1977 to alter these historical trends. Although I am usually reluctant to appeal to the academic's favorite refuge—the suggestion that more research is needed—I think in this case this course is clearly warranted. The causal factors behind any relative change in inefficiency within the defense sector demand further study.

DISCUSSION

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The Dale Paper

Charles Dale's paper draws needed attention to some unfavorable developments for Army recruiting in the near future. The issues he raises are the strains these anticipated demographic and economic factors will place upon the All Volunteer Force, and what can be done to deal with them. Dale maintains that projections of the supply of recruits which are based upon econometric forecasting methods are subject to a wide margin of error, due to the dynamic properties of these models. He recommends instead a simpler approach to meeting Army recruiting needs, based upon an index of recruiting difficulty and some (presumably) well established relationships concerning the number of recruits and civilian unemployment, military pay and benefits, and recruiting budgets. By employing this latter approach, he believes that the Army can fulfill its recruiting needs.

I have two major concerns with this paper. The first is that recruiting needs are tied to a rather narrow demographic source. A potentially large reservoir of additional personnel is not considered. The second concern is that the author merely asserts rather than demonstrates that there is a viable alternative to econometric models in projecting the supply of recruits.

Dale's analysis begins with a simple demonstration that there has been a direct relationship between the unemployment rate and the number of new Army recruits over the past two decades. He suggests that the unemployment rate is headed down, and Army recruiting difficulties will therefore intensify in the near future. The corresponding graph seems to show, however, that since 1982 the number of new recruits and the unemployment rate have moved in opposite directions. Whether this suggests that the relationship between these variables has changed, or whether some intervening developments are responsible, is a question that needs to be considered.

Dale then examines the unfavorable demographic development the

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Army faces in the near future. In particular, the number of young males available is projected to decline. The index of recruiting difficulty he develops to quantify this effect is informative, getting the point across about having to recruit from a smaller pool of traditional eligibles. What the index does not examine, though, is the large pool of potential substitutes that are available to satisfy the Army's personnel needs. Recruiting from a larger pool is an alternative to recruiting more intensively from the current pool, and this alternative cannot be dismissed unless it is shown that the latter is clearly not cost-effective.

From where might the Army draw additional recruits? An obvious possibility is using greater numbers of females to fill certain Military Occupational Specialties (MOS). Higher retention rates for personnel currently in the Army represent another means whereby recruiting requirements could be reduced in the near future. More civilian workers might be substituted for Army recruits. And the Army could become more interested in those who score in the lower half of the AFQT test. New educational technologies raise the possibility of providing such persons with inexpensive remedial training to raise their proficiency.

These potential sources of new recruits are surely large, and they could more than compensate for the projected rise in the recruiting difficulty index (about 20 percent) shown over the coming decade. Of course, Army recruiting difficulties could be even greater than indicated if other branches of the Armed Services intensify their own recruiting efforts. But that seems to be an additional reason for considering these other sources of potential labor supply.

Dale's numerical projections of anticipated shortfalls are constructed for only one scenario, and the method of construction is not explained in his paper. As a result, it is difficult to evaluate these projections. The author maintains that the Army can meet this shortfall through a suitable pay and benefits package, and with enough dollars allocated to recruiting activities. Without an econometric model to suggest how this pay and benefits package should be set, however, we are left in the dark as to what this would cost or how the Army could estimate the appropriate package. So while the econometric approach can certainly be criticized, this is not a sufficient reason to dismiss that approach in the absence of a viable alternative.

The Duchin Paper

Duchin's paper demonstrates that the ratio of capital to labor in the production of military goods has been growing more rapidly than throughout the remainder of the economy. She develops some informative

tables to show that this has been due in part to compositional change in goods purchased by the military and other sectors of the economy. But it is also due in part to the differential nature of technological change.

After a preliminary discussion of the relationship between technology and military requirements, the analysis begins with a description of the life-cycle input requirements of a product. Duchin explains how production of a new good may initially be labor intensive, but subsequently evolves into a capital-intensive method. I found this description quite relevant in assessing the claims that are sometimes made about the job-creating potential of certain new products. Since this application is not discussed, I am not sure how the description relates to the major points she is trying to make.

I also have some concerns about the interpretation of the empirical results in this paper. The author maintains that if the composition of output is held constant from year to year, observed changes in the capital intensity are due to technology. However, the analysis does not recognize that the capital to labor ratio will be affected by changes in the relative prices of these factors over time. If the price ratio has not remained constant, then what has been identified solely as the result of technological change is actually due to a combination of technological change and change induced by varying factor prices. If the price of labor has risen more rapidly than the price of capital, for example, then the measure of the effect of technological change will be biased upward. The converse also holds.

Another reason which may account for some of the differential growth in capital intensity that is not considered is the use of imported goods. Armchair hypothesizing suggests that the U.S. currently imports many goods which have capital-intensive methods of production (e.g., automobiles, electronic equipment). These imports tend to lower the capital intensity throughout the economy compared to what it would have been in the absence of imports. However, capital-intensive military hardware is not imported, so the capital to labor ratio could be rising more rapidly in that sector apart from technological change.

I suspect also that the estimates that are presented may be sensitive to the choice of the base year which is used in deflating the monetary measures of capital and output. It would be useful if the author identified how sensitive the results were to this choice. And there is the usual problem that the quality of output goods and capital goods has changed over time. Few authors, of course, attempt to deal with biases introduced by the latter problem, but it should nonetheless be recognized.

My last question concerning this paper is what use can be made of the results. Knowing the behavior of the capital intensity of a sector over

time, or the impact of technological change on that intensity, is a legitimate academic interest. But there are several obvious policy-related extensions of these results. How much will have to be spent in the future just to maintain the current level of military production? What do the results imply for determining how extensive should be the acquisition of the latest military hardware? And what do they imply for job creation and employment? In particular, how many jobs will be created by a given level of spending on military goods, and what skills will be required? Finally, can or should these results be used in answering such questions?

The Marcus and Quester Paper

Marcus and Quester's paper is nominally concerned with the issue of productivity in the military. More accurately, it is concerned with one element in the much broader problem of productivity, namely job performance. Analyses of military job performance have been conducted by other social scientists, notably psychologists specializing in "human factors" research, but Marcus and Quester's paper is one of the first by economists in this important area. It represents a useful addition because it introduces the powerful human capital model and the corresponding regression analysis into the area to provide quantitative estimates of the influence of schooling, training time, and innate ability on job performance.

The major technical problem the authors must confront is that they do not have an objective measure of job performance. Instead they must rely upon the supervisors' assessments of the individuals involved. Since each individual in the sample has three different supervisors reporting on him at different points in time, finding a common yardstick to rank these assessments is a difficult task. It is an even more difficult task when the ranking system must be of a cardinal rather than an ordinal nature, as is required here.

The authors recognize that some supervisors typically rate their workers more highly than do others. This is a simply "mean" or average effect which has been handled adequately via the use of the *DIFF* variable. More difficult to deal with is the problem that some supervisors typically view the growth of an individual's performance in a job over time as being much greater than do other supervisors. Marcus and Quester attempt to control for this problem via the inclusion of a relative wage variable (*VAR*) in the regression model. However, this variable is defined for the entire range of performance under consideration (one month to four years). There is thus an implicit assumption that a supervisor's views on performance improvement over the entire period accurately mirrors his view over shorter intervals. (That is, supervisors

who see the greatest improvement over a four-year period are presumed also to see the greatest improvement over a one-year, two-year, or three-year period.)

Do these two “correction factors” adequately remove elements of subjectivity from the performance ratings? I believe the appropriate response is “who knows?” It is easy to imagine cases in which a supervisor systematically rates individuals with more education or more ability more highly, regardless of job performance. Such instances of biased reporting will not be random, and they will not be controlled for by the variables the authors have constructed to standardize for subjective differences in supervisors’ assessments. Given the manner in which the dependent variable was created, I am also concerned about whether the appropriate regression procedure has been employed. (Can the disturbance term be presumed to be independent and normally distributed?) I would have welcomed some discussion of this point.

Despite these difficulties, I believe the results pass the criteria of plausibility. The relationships they imply between schooling and job experience according to occupation appear to be quite reasonable. I am unaware of any other study that has provided such a systematic approach to the problem and yielded such believable results.

XV. IMPACT OF THE WORLD RECESSION ON LABOR RELATIONS: INTER-COUNTRY COMPARISONS

Responding to Technological Change in the Newspaper Industry: A Comparison of the United States, Great Britain, and the Federal Republic of Germany

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This paper outlines recent developments in union organization in the newspaper printing industry in three countries—the United States, Great Britain, and the Federal Republic of Germany. Although access to state-of-the-art technological innovations was fairly equal in the three countries in the past two decades, the degree to which printing industry workers have been able to retain control over the immediate labor process varies considerably. Much of the variability in response to the changes in newspaper technology is a function of adapting older organizational styles to new circumstances. Whereas workers' interests formerly were well served by a craft unionism model, the urgency of moving toward an industrial unionism model is becoming apparent.

The classic craft model of industrial organization is best exemplified by the situation in the United States and Great Britain prior to the onset of the major technological changes of the past two decades. Craft unionism in newspaper printing typically has been one in which workers in each of the major crafts in the industry—compositors, stereotypers, platemakers, and press operators—are required to undergo separate apprenticeships

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and become members of separate unions. I will argue that there are two intermediate phases in the transition to industrial unionism: a *quasi-craft model*, best exemplified by the *current* position of American printing unions, and a *quasi-industrial model*, which the situation in Great Britain approximates. The *industrial model* of union organization, historically rare in printing and similar industries, is best demonstrated by the Federal Republic of Germany throughout the entire post-World War II era.

In a longer version of this paper I discuss at length the nature of the product market in newspapers, the evolution of craft control of the labor process, and the impact of the new technology on labor-management relations. For now, I provide a brief discussion of the configuration of union organization that has evolved in the three countries.

From Craft to Industrial: Three Scenarios

The United States

Traditionally, one could expect to encounter as many as ten unions in a single major metropolitan newspaper in the United States. While this situation still exists in a few papers, the trend has been either toward merger of major craft unions in printing or decertification of one or more bargaining units in a given plant. Today there are three major unions in the printing industry: the Newspaper Guild (Guild), composed of journalists, editors, and a few white-collar workers; the International Typographical Union (ITU), composed mainly of composing room and mail room workers; and the recently created Graphic Communications International Union (GCIU), composed of pressroom and ancillary workers. A capsule summary of the recent mergers in the industry follows:

1964—The International Photo Engravers Union of North America affiliated with the Lithographers and Photoengravers International Union.

1972—The Lithographers and Photoengravers International Union merged with the International Brotherhood of Bookbinders to create the Graphic Arts International Union.

1973—The International Printing Pressmen's and Assistants' Union of North America and the International Stereotypers, Electrotypers, and Platemakers Union merged to create the International Printing and Graphic Communications Union.

1979—The International Mailers Union affiliated with the International Typographical Union.

1983—The International Printing and Graphic Communications Union merged with the Graphic Arts International Union to create the Graphic Communications International Union.

A casual survey of the ITU's *Typographical Journal* over the past ten years reveals the reasons for the spate of mergers and for the current

disarray among workers in the American printing trades. New technology has radically altered traditional roles among the various functions of the newspaper, eroding craft jurisdiction over many jobs and creating the need for a more united front against employers. Nowhere has this been more true than among composing room workers of the ITU where technological advances threaten to make all composing room functions extinct within the next generation. Rhetorically, ITU leaders have been calling for the formation of "one big union" in the entire printing industry, but old cleavages have proved difficult to overcome.

After the successful merger with the Mailers in 1979, the ITU twice was unsuccessful in attempting to negotiate a merger with the Guild. The second failed attempt in 1983 set the tone for a turbulent year in which the national leadership of the union as well as the rank and file became deeply divided over the union's future course. The incumbent president sought to merge with the International Brotherhood of Teamsters, a noncraft union that spans many industries. Others, fearing that the ITU identity would be lost in the Teamsters, sought a merger with the other major craft union in the industry, the newly formed GCIU. In the regular election for the executive board in 1983, the incumbent president and his plan for merger with the Teamsters were voted out. But the president, seeking to close the impending deal with the Teamsters, asked the union's canvassing board to overturn the election results on a technicality, which it did.

However, the National Labor Relations Board stepped in and ordered a new election. In a separate action, six disgruntled ITU members were granted an injunction, blocking the vote on the Teamster merger pending the outcome of the new election. The election was held in July 1984, resulting in the anti-Teamster challenger and many of his supporters being voted into the union leadership. The new president immediately recanted all past negotiations with the Teamsters and vowed to pursue merger negotiations with the GCIU. Shortly thereafter there were claims that the Teamsters were "raiding" ITU locals. In December 1984, in a decertification election at the Cleveland *Plain Dealer*, the Teamsters gained representation rights from the ITU in the composing room and mail room (Sabath 1984). The ITU's leadership warned that this was part of a national campaign by the Teamsters to gain a toe-hold in the printing industry at the expense of the ITU (Austin 1984).

The prospects for the transition to an industrial union in the American newspaper industry are not good. A large segment of the labor force remains unorganized. Longstanding rivalries among composing room and pressroom workers do not bode well for an ITU-GCIU merger. Differences among journalists and composing room workers over jurisdiction of cold-type technology remain a point of friction between the Guild and the

ITU. The current configuration of union organization can be labeled a quasi-craft model because, instead of many craft unions in the industry, there are now only three. However, the contentiousness inherent in the classic craft system is still evident. Each of the three unions continues to be organized along occupational lines and (in the case of the ITU and the GCIU) there are continuing sources of internal friction based on previous organizational structures (e.g., between mail room and composing room workers in the ITU).

While there are perhaps many reasons for the failure of American printing unions to retain their previous control over the labor process, an important factor is the belated and defensive nature of the merger pattern. The printing unions, particularly the ITU, were slow to react to the changes wrought by the new technology and, as a result, turned to merger out of desperation *after* questions of jurisdiction over the new technology had already been decided on a plant-by-plant basis. Hence, lacking a coordinated bargaining strategy at either the national or local levels, the unions were vulnerable to the actions of the publishers who were much more coordinated.

Great Britain

On the surface, the structure of union organization in Britain appears very similar to that of the United States. Whereas there were 12 major unions in the newspaper industry in 1948, there are currently three (Marshall 1983, Gennard and Dunn 1983, Griffin 1984). The union encompassing most of the skilled craft occupations is the National Graphical Association (NGA). Most of the ten major unions which ultimately affiliated with the NGA did so by 1967, *prior* to implementation of the new technology on a mass scale in British newspapers. The single union that held out past 1969, the Society of Litho Artists, Designers, Engravers, and Process Workers (SLADE) ultimately affiliated with the NGA in 1982. The second major union, the Society for Graphical and Allied Trades (SOGAT) resulted from the merger, dissolution, and remerger of two major unions. If one traces back far enough, one can see that SOGAT is the culmination of 35 previous mergers, including workers from all parts of the industry—distributors, warehouse workers, and maintenance workers. SOGAT is more industrial in orientation than the craft-oriented NGA, but it is currently the largest single union in the printing industry of any country in Europe (Marshall 1983). The third union in the British newspaper industry, the National Union of Journalists (NUJ), organizes journalists and editors. More so than its counterpart in the U.S., the Guild, the NUJ seeks a broad-based membership of all white-collar workers in the industry.

In contrast to the U.S. printing unions, the British trade unions have exhibited a considerable degree of solidarity in their stance on new technology. The NGA and NUJ have established joint committees dealing with technology issues. In general, the journalists have supported the NGA's contention that composing room workers should maintain jurisdiction over direct input of newspaper material into VDTs. This is an important departure from the American situation where this issue has remained a divisive factor between the two groups. A critical feature throughout the British experience has been the unions' ability to maintain a de facto industry-wide solidarity at critical points in time in contrast to the relative disorganization of employers. This was clearly evident in the case of the 11-month strike at the London *Times* where workers joined ranks to support the NGA's contention that they should control direct inputting (Griffin 1984). During the strike, in which the *Times* was unable to continue publication, a committee was formed within the Trades Union Congress (TUC—the British equivalent of the AFL-CIO) to coordinate labor strategy among the different unions and in other parts of the country. The victory that was ultimately achieved at the *Times* solidified ties between the NGA and NUJ and set the pattern for other conflicts in Britain. Essentially, composing room workers have retained the right to control the input of all material into VDTs, which is critical in the leverage they have with publishers.

The de facto industry-wide solidarity demonstrated in the British case suggests that the union configuration there is a quasi-industrial one. While the resemblance to a quasi-craft structure is apparent, the British unions are much closer to the ultimate goal of achieving an industrial union structure. In 1977 the NGA and SOGAT agreed to a pact concerning jurisdictional rights that has permitted them to coordinate their efforts to organize the unorganized portion of the industry. The NUJ and the NGA have been holding merger negotiations since 1981. All three unions endorse the notion of eventually achieving one union for the printing industry. Going even further, the NGA has advocated the creation of one union for the entire print and nonprint media industry. Pursuant to this goal, they have begun cultivating linkages with the Association of Broadcasting Staffs (ABS) and the Association of Cinematograph, Television, and Allied Technicians (ACTT) (Gennard and Dunn 1983). By contrast to their American counterparts, the British trade unions have displayed considerable far-sightedness in anticipating the impact of technological changes in their industry and responding accordingly.

The Federal Republic of Germany

The industrial relations system in Germany is unique in several

respects. First, the entire German economy is organized on the “one industry—one union” principle. The largest labor organization—the German Trade Union Federation (DGB)—consists of 17 industry-based trade unions, one of them being the Printing and Paper Workers Union (IGDP). This union bargains collectively for all workers in the printing industry except journalists—composing room workers, pressroom workers, clerical workers, and even security and maintenance personnel. Journalists are represented by a second union, the DJV, but they work in close association with the IGDP because their interests are melded together at the plant level by codetermination. Second, individual workers are not required to join the unions (i.e., there is no closed shop), but all workers abide by the collective bargaining agreement made on their behalf. Third, through the German model of codetermination, workers and employers are represented on the boards of all sizable firms. Workers are also represented at the plant level by works councils, which are worker advocate units elected by workers. All workers (including those who do not belong to the union) have a vote in electing worker representatives to the board and to the works councils. Most plant-level decisions are processed through the codetermination model which insures a broad degree of worker participation at all levels of decision-making. Fourth, employers are generally represented in collective bargaining by one or more employers’ associations which are also industry-specific. Employers’ associations frequently operate at both the state and national levels; this is true in the printing industry. Fifth, total breakdown of collective bargaining is rare because of complex mediation processes. A by-product of this institutional arrangement is that strike activity is comparatively rare in Germany and that the workers’ right to strike is countervailed by the employers’ right to lockout (Ehm 1982, Romer 1979).

Effectively, then, German newspaper industry workers are represented by two unions—the IGDP and the DJV. But because of the coordination they exhibit in collective bargaining and other matters, the German trade union movement approximates the industrial model. The two unions must bargain in tandem in an effort to balance the interests of the various occupational groups under their jurisdiction, a task that sometimes proves unwieldy in an industry in which craft lines are still visible. However, as technological advances began to erode traditional craft distinctions in the 1970s, the industrial model proved a fortuitous instrument for maintaining worker solidarity and preventing the loss of control over the labor process.

In 1975, when the threat of OCR and VDT equipment became apparent to the IGDP, they requested negotiations with the employer association in printing (BD). The BD and the state-level associations

stalled for nearly a year, but eventually the talks began. Nearly a year after the IGDP's original request, the BD entered negotiations over the implementation of new technology. At this point the IGDP and the DJV made a joint proposal for rules governing the utilization of the new equipment, basically centering on the restriction of hours which journalists could work on VDTs and upon the maintenance of wage scales for composing room workers who move to VDTs. After several months of fruitless negotiations and employer counteroffers, the union requested mediation of the dispute. In November 1977 the IGDP rejected the mediators' proposals. After a brief renewal of the negotiations, talks were broken off by the BD. Having exhausted every alternative, the IGDP voted overwhelmingly to conduct strikes at five of the largest newspapers on February 28, 1978. In retaliation, the BD ordered 25 of its remaining plants to begin a lockout, hoping to divide the workers who were striking from those who were locked out. But because of the disunity among the employers, only seven of the 25 firms followed the lockout order. On March 2, the IGDP and the BD simultaneously ordered a strike *and* lockout at all printing firms, which remained in force for most of the month. Finally, on March 28, 1978, the employers capitulated and signed a five-year contract which implemented most of the demands of the IGDP and the DJV. Among the key features of the agreement were job security measures, health/safety measures for working with VDTs, and a "social plan" for displaced workers, or retraining and reassignment to a job *agreeable to the worker*. Composing room workers were "upgraded" to salary status with no detrimental impact on their overall income (Ehm 1982).

Ultimately, the industrial model worked to the advantage of the German print workers because it created a basis for achieving a uniform and comprehensive agreement on printing technology nationwide. In contrast to the American and British situations, craft demarcations did not inhibit the process of adjustment as technology was introduced. Also, contrary to the American experience but somewhat akin to the British, publishers displayed confusion and disunity that ultimately led to a technology agreement favorable to the printing industry workers. Because of the industrial level of negotiations, the German agreement was more comprehensive and holds better prospects for a permanent solution than either the American or British examples. For all of these reasons, the industrial model seems a more desirable approach for adapting to rapid technological change in the newspaper industry.

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Labor Relations in Local Transit: A Tale of Two Cities, Rome and Chicago

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When Italy and the U.S. are used in multicountry comparative studies in industrial relations, attention is usually focused on the private sector, where there are significant differences in collective bargaining structures and goals, in the shape of conflict, and in trade union ideology. Unionism and collective bargaining have, however, been growing in both countries outside the private sector, particularly among service and public employees. Comparisons in these two areas are difficult because of significant differences in the legislative environment. A further problem is that collective bargaining often is not present in the same sectors in the two countries. In many cases, particularly in the U.S., collective bargaining developments in the public sector are recent, and they are often the result of reduced public resources. When this occurs, it is not possible to assess how collective bargaining has changed with the recession.

The topic of this paper is local transit, where these difficulties are minimal. The research, based on my own field studies in both cities, deals with the entire set of labor-management relations in a 30-year period. In order to stay on the panel topic, I will focus on how the two systems reacted to economic recession. First, there will be a brief presentation of the environment, the dimension of the economic crisis faced by the two systems, and the actors' response to it. At the end I will draw some theoretical implications.

The Environment

Any comparison is more fruitful if certain variables are held constant, while others that are the object of the research are different. As it is possible to see from Table 1, the two systems operate a comparable level of bus and vehicle miles, while other variables are different due to forms

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of manpower utilization. Both systems are large. The Azienda Tramvie e Autobus Comunale (ATAC) of Rome is the largest in Italy, and the Chicago Transit Authority (CTA) is the second largest in the U.S., after New York.¹ This is important because fiscal crises and transit deficits grow with city size. The two systems are publicly owned (in Chicago since 1947 and in Rome since 1909). Collective bargaining in both has a well established pattern and a long history that goes back to the turn of the century. In the U.S., collective bargaining in local transit is widespread, partly because it was mostly in the private sector before 1965 and partly because of special legislation and judicial interpretations. Among the municipal sectors, it is closest to private labor relations (Stern et al. 1977, Miller 1983). In the case of Italy, transit has also always been allowed a local agreement beyond the national one. This has an obvious impact on the nature of management and union interaction, and it facilitates the comparison with the U.S. where local agreement is the rule. Finally, the technology is identical: this is not common in comparative analyses because differences in capital equipment, products, and skill levels are often present.

TABLE 1

| Year 1980 | Roma-ATAC | Chicago-CTA |
|---|-----------|-------------|
| Miles of directional roadways | 1,097 | 1,503 |
| Total vehicle miles (000) | 74,982 | 137,369 |
| Total bus miles (000) | 74,982 | 87,771 |
| Vehicles | | |
| Bus | 2,683 | 2,440 |
| Rail | — | 2,420 |
| Total employees | 16,188 | 12,771 |
| Bus drivers | 9,667 | 5,651 |
| Total vehicle hours (000) | 8,471 | 10,978 |
| Total motor bus hours (000) | 8,471 | 8,759 |
| Total unlinked passengers (millions) | 1,078 | 538 |
| Derived Statistics | | |
| Motor bus hours/bus drivers | 876 | 1,550 |
| Operating speed (miles per hour) | 8.8 | 10.02 |
| Labor cost/operating expenses | .81 | .78 |
| Revenues/operating expenses | .16 | .50 |
| Vehicle miles/bus driver (at Chicago operating speed) | 8,780 | 15,020 |

Source: ATAC and CTA records.

¹ CTA also operates rail rapid transit which in Rome is much smaller and is under a different authority. For our purpose, however, the difference is of no consequence because CTA has separate data for bus and rail.

The Economic Recession and Its Consequences

Within the public sector, besides the traditional core governmental functions, there are two major groups—municipal services and national publicly owned corporations. The latter are usually exposed to worldwide competition, and the economic recession has timing and other effects similar to those in the private sector. In the case of municipal services, however, the crises started earlier and were related to long-term issues linked to the fiscal crisis of the cities and to the problem of how much service should be subsidized. More importantly, no role is played by outside competition or product change.

Local transit crises faced by the two cities were part of a general worsening of local transport finances. In the U.S. as a whole, operating deficits (revenue minus expenses) reached \$4.5 billion in 1982, which is also the level of public operating assistance which covers about 60 percent of operating costs. Deficits started only in 1968, but in constant 1980 dollars public assistance grew dramatically—almost eight times between 1970 and 1982. Because labor costs on the average are over 70 percent of operating costs, labor practices have been subject to much scrutiny and controversy (Perry and Angle 1980, Pucher 1982). According to a recent study, 43.3 percent of the total rise in operating deficits between 1970 and 1980 is attributable to higher labor expenses due to both increasing labor unit costs and a decline in productivity. The remaining deficit is accounted for by a decline in fares (27.5 percent), an increase in vehicle miles operated (15.9 percent), and rising fuel costs (9.8 percent) (Pickrell 1983, p. 24).

Local transit in Italy, which has always been public, is also characterized by increasing deficits, particularly during the 1960s and early 1970s. Between 1960 and 1975, the operating ratio (revenues/operating costs) declined from .88 to .23 and remained at about that level in the following years. Labor costs in Italy also constitute about 70 percent of total costs.

In Chicago, total revenue did not cover costs beginning in 1971, and the operating ratio decreased from .97 in that year to .61 in 1981. However, I intend to focus on labor costs in both the U.S. and Rome rather than on the deficits as such, which could be the result of a choice of opting for low tariffs or the consequence of unfavorable policies toward public transportation in urban development (Yago 1984).

In constant 1972 dollars, the labor cost per employee increased steadily by 4.4 percent each year after 1950 to its peak in 1979 when hourly wages for bus operators also peaked; moreover, deficits also increased dramatically in 1979—28 percent over the previous year in constant dollars. Productivity (measured as vehicle miles per employee)

was, instead, declining, and in 1979 it was 15 percent lower than ten years earlier. It is not surprising, then, that in 1979 the new mayor of Chicago, Jane Byrne, at the time of contract renewal, decided to take steps toward reversing the disconcerting trend.

In Rome the operating ratio was already .96 in 1950 and declined steadily to a low of .14 in 1976. In constant 1970 lire, total cost per employee increased up until 1977, when it was 3.2 times the 1950 cost. Productivity was stagnating even during the seventies when ticket controllers began to be eliminated by attrition and the shift to one operator per bus got under way. In terms of bus hours per bus driver (a measure that is independent from changes in operating speed and not influenced by the shift to one operator per bus), the result in 1976 was 2.3 less than in 1950 and, on average, 77 percent less than in Chicago. It is important to underline this striking difference, explained in part by the fact that in Italy, in any sector and particularly in the public sector, wage differentials are small and wage levels cannot be increased beyond a certain level. Bargaining power, however, manifests itself in hidden benefits and management toleration of low productivity (for instance at ATAC during the 1970s there was an average of 38 working days lost by each employee every year due to sickness alone).

The Showdown and Its Consequences

In Chicago the two locals of the Amalgamated Transit Union (No. 241 for bus and No. 308 for rail), which together represent 77 percent of the total number of employees, were asked to make changes in a very favorable cost-of-living escalator. This had been obtained in 1955, when Richard Daley was mayor and during a period of low inflation, and it provided for a percentage increase in the hourly wage equal to the percentage increase in the consumer price index for Chicago. Because agreement could not be reached, the controversy, according to the legislation that established the CTA, should have been settled in arbitration. The union, however, called a strike that lasted three and a half days (until December 16, 1979) when the CTA asked for and obtained an injunction from the circuit court. The issue was later settled by an arbitrator who established that the increase would be one cent per hour for every .35 point increase in the price index.

With this change in the cost-of-living escalator, the hourly wage for the bus drivers declined 10.7 percent in constant 1972 dollars between 1979 and 1982. The ratio between bus operator hourly wages and the average manufacturing wage went from .63 to .67; the CTA deficit also declined 66.7 percent in the following year.

There were no improvements in productivity measured as vehicle

miles per total employees; bus hours per operator, however, increased, possibly to compensate with overtime for loss of income. Improvements in productivity could, perhaps, have been achieved if part-time drivers had been used during peak hours; in fact, the 1979 agreement had a clause allowing management to hire up to 66 part-time drivers, but this option had not yet been exercised.

In the years following 1979 the CTA's financial condition remained poor, and in the 1981 contract the union agreed to reduce the size of the pension fund.

In the case of Rome, one has to take into consideration the interaction between national and local levels in decision-making. In Italy, since the fifties, employees in the transit sectors together with a few others have had a very favorable clause in their national contract. This clause makes it possible to put automatically into the basic wage each year the increase obtained with the nationwide system of wage indexation. This is particularly important for a variety of fringe benefits that are based on the basic wage.

In 1977 (under a government that had Communist Party support for the first time), wage moderation and more flexibility in the use of working time were exchanged for an economic policy that should have reduced unemployment among the young and in the South and increased professional training and social security coverage. One of the consequences was the elimination of the special indexation. This strategy was accepted by all three unions that at the time formed a unitary federation. At ATAC the relative strength of the major unions in the election for the factory council in 1978 was CGIL 42 percent, CISL 27 percent, and UIL 20 percent. There are also other small unions, but they had little support. When the 1977 change was decided upon, there was very little that the three most representative unions could do, and at the local levels, too, they were convinced of the advantages of the strategy pursued at the national level. In fact, when the local agreement was renewed in mid-1978, the unions made few wage demands and concentrated their efforts on transportation policy. It should be said that the new political climate was very visible in the city administration when, during the same period, a left-wing coalition was in power for the first time.

The policy of wage moderation did not pay off at the national level, and the political majority that had sustained the government changed in 1979 when the PCI went back to the opposition. In Rome, however, a "municipal social contract" was still holding up. The employees, however, were increasingly dissatisfied with the loss of their relative advantages, and in 1980 an independent group of bus drivers began a series of strikes that were very successful among all operators. Each protest lasted only a

few hours but had dramatic consequences for the already critical traffic conditions. Finally, in 1981, the mayor, going above the heads of the leadership of the leading unions, had to grant a wage increase worth three-quarters of an hour's overtime pay each day.

The protest, nonetheless, did not come to an end. One small independent union, whose membership had swelled to about 2000, tried to exploit the employee dissatisfaction and continued the protests during 1982 and 1983. This time no concessions were made, and the major union (CGIL, with new leadership) regained support. An agreement was signed in 1983 which provided wage gains and reductions in working time that were to be matched by productivity increases.

The 1977 changes in Rome reduced the total cost per employee by about 9.8 percent in the following five years, partly because the social security contributions were also reduced. The hourly wage per bus operator in fact declined only 2.8 percent because their protest resulted in their being able to extract concessions from the mayor and to slow down the decline. A positive development was that productivity increased 3 percent after 1980 because the wage increase was tied to presence at work.

The Actors' Logic of Action

What kind of rationale guided the actors in the two settings, where both were faced with shrinking resources? With regard to city policy, which is decisive in shaping management action, the main difference is that in the U.S. the relationship between fiscal crisis at the local level, taxation, and voting behavior is more direct than in Italy. In the U.S. as a whole in 1980, 61 percent of local government funds come from their own resources. In Chicago there is a special local tax earmarked for transit, which in fiscal year 1980–1981 provided 77.2 percent of total public assistance and only the remaining 22.7 percent came from the federal government (U.S. Department of Transportation 1982, pp. 2–7, 2–14).

In the case of Italy, only 11.3 percent of local revenues in 1980 came from the local administration's own resources and the rest is composed of grants from the central government. All of the assistance for transit in recent years has come from the central government. One consequence is that fiscal responsibility at the city level is reduced, with little effect on voting behavior. In the U.S. the mayor can challenge the unionized municipal sector if he/she believes that support from rebellious taxpayers is more important. When the Italian government pursues a policy of labor-cost restraint, even if there is consensus among the leading unions, the cities are faced with the opposition of autonomous groups of employees; in critical sectors where their bargaining power is strong, the

city has to give in and redistribute municipal resources and/or put pressure on the central government for more funds.

If we consider union action, the crucial differences originate in the form of union representation. In the U.S. the union has a monopoly on employee representation in the established bargaining unit that cannot be easily challenged. When the union is faced with cost-cutting measures, it can adopt a conflictual or cooperative attitude based on a set of variables such as its relationship with the city council, the dimensions of the crisis, and the availability of alternative benefits. Especially if the union decides to cooperate, it may be faced with intraorganizational strife; however, the dissenting minority groups have limited action available. This allows the union leadership to see the results of cooperation and to act in consequence. At CTA, the two bargaining rounds in 1977 and 1979 represent conflictual and cooperative action, respectively. In both cases the unions were able to determine the actual behavior of employees. One possible consideration is that while at the national level in the U.S., the social contract or other forms of union and government coordinated action cannot be easily achieved (Flanagan 1980), there are conditions at the local level that make it possible: autonomy of local government, decentralization of bargaining, and the strong involvement of unions (especially in the public sector) in local politics.

Conditions for cooperative action on the part of unions and government in Italy are more favorable at the national level. There have been periods of concerted action in 1977–1979 and in 1983 (Regini 1984).²

At the local level in Italy, however, conditions for cooperative actions are less favorable. One reason is the centralization in government and in collective bargaining. The case of Rome, together with analogous situations in many other cities, also shows that the form of union representation prevents long-term cooperation with city government during economic crises. At the national level, the most representative unions, when acting together, are not easily challenged and barriers to entry for dissenting groups are high. At the local level dissatisfied employees can easily organize themselves and, because there are no limits on strike action, they can build strong bargaining power.

Fragmentation in employee representation has a large impact on many other aspects of union behavior (for instance, union democracy or the nature and dynamics of strikes) that it is not possible to pursue here.

² They were only partially successful. In the first instance, cooperation ended because the unions thought that government was not delivering on its promises. In the second instance, after one year of cooperation a breakdown occurred in the unitary federation because the unions disagreed among themselves in their assessment of government proposals and policy.

Similarities between the two cases explored here which contrast with the situation in the private sector are: (1) employees have a much more difficult time accepting a reduction in their income without the more imperative market constraint; (2) the tradeoff between low wage increases and more job security has no appeal because stability of employment is already a feature of public-sector jobs; (3) a union strategy of compensating lower income gains with greater job control is difficult to put into effect because increased industrial democracy in the public sector may be seen as conflicting with rather than adding to political democracy; and (4) in both cases the struggle of employees in the publicly owned services failed to attract and involve user protest over service reduction, as had been envisaged by many in Italy and the U.S. (O'Connor 1973).

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The Crisis in the World Steel Industry: Union-Management Responses in Four Countries*

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The steel industry in the Western World entered a period of crisis beginning in 1974 during which output fell from 494 million metric tons to 398 million metric tons in 1982. Despite a modest recovery in 1983, production is still well below the 1974 levels.

It is generally agreed that recovery to the 1974 output will not take place in light of the changing conditions of the steel industry in western countries. These include foreign competition, the construction of excess capacity, and shifts in the structure of domestic consumption; virtually everywhere in the West the ratio of steel required for each additional unit of gross national product has been declining. The cutback in production as well as the closing down of older, less efficient capacity have also drastically reduced employment. Employment declined in the U.S. steel industry from 512,000 in 1974 to 243,000 in 1983. For the same period, the decline in Britain was from 191,000 to 64,000, in the Federal Republic of Germany from 232,000 to 154,000, and in France from 158,000 to 91,000.¹

Steelworkers tend to be among the leading wage earners in these countries, and this is especially true in the U.S. where hourly compensation peaked at \$22.74 in 1982 and declined slightly in 1983 to \$21.19, a result of "concession bargaining." While compensation for steelworkers is high in other countries relative to that in other industries, it is well behind the U.S.; hourly compensation for German steelworkers was \$11.31 in 1983, in France it was \$9.45, and in Britain it was \$7.93. In percentage

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¹ These figures and those in the subsequent two paragraphs are taken from unpublished series on the steel industry prepared by the U.S. Bureau of Labor Statistics.

terms, German steelworkers earned 53 percent of U.S. steelworkers' compensation, the French earned 45 percent, and the British 37 percent.

At its peak in 1982, steelworkers' compensation was nearly twice the level of the average U.S. manufacturing employee—this differential having increased steadily during the 1970s. It compared with a 9 percent differential for German steelworkers, 22 percent for the British, and 23 percent for the French.

The greater differentials enjoyed by U.S. workers (compared with other manufacturing employees) are in part a tribute to the bargaining power of the United Steelworkers union. They also reflect differences between U.S. and European industrial relations systems. In Western Europe collective bargaining agreements usually cover all of the manufacturing sector, although unionism may be uneven from industry to industry. In the U.S. the great majority of manufacturing employees are *not* covered by collective bargaining agreements. As a result, in Western Europe wage and fringe movements (many of the latter largely dependent on government action) move more evenly across the entire manufacturing sector, leading to narrower differentials in compensation between industries. (Of course, factors other than collective bargaining also influence interindustry differentials.)

Adjusting to the Steel Crisis: Policy Differences Between Countries

While similar conditions have confronted each of the countries, their responses in down-sizing steel capacity and the workforce have differed, reflecting different traditions and labor systems. France, in keeping with its *étatist* tradition, has intervened strongly to direct the restructuring process and to help support important benefits for displaced employees. It also eventually nationalized its major steel companies.

The German government, in the mid-70s, reiterated its policy of "no subsidies" for the industry and criticized its European neighbors for subsidizing their steel companies. However, under pressure from regional and trade union forces beginning in the late 1970s, the German government began a steady flow of subsidies into the Saar steel companies. In self-defense against the interventionist actions of other West European governments, Germany now seems to be moving to a wide-ranging plan for restructuring and merging major steel companies.

In both France and Germany, steel operations tend to be more sharply regionalized than in the U.S., and in each case powerful regional and effective union pressures helped bring about heavy state intervention.

In Great Britain, although basic steel operations have been nationalized for many years (in the form of the British Steel Corporation—BSC), with the onset of the crisis of the late 1970s, Mrs. Thatcher's conservative

government has pursued a generally “hands-off policy,” letting the market determine the ultimate size of the British steel industry. Over the protests of the trade unions, the government has sold off bits and pieces of BSC, sometimes in the form of joint ventures, and it seems committed to “privatizing” all or a large part of BSC.

The U.S. government has also persisted with a largely “hands-off policy” with regard to the steel industry. From time to time the government has intervened to a degree to reduce the rising flow of steel imports to the U.S., but such intervention has generally been much less than the industry and the union have demanded.

Looking at the past seven or eight years, one would have to conclude that the political strength of the union movement in Great Britain and the U.S. has been much less than that in the other two countries as far as exercising pressure on government in behalf of the steel industry. The growth of the nonunion steel sector—some of the so-called mini-mills—has become an additional source of weakness for steel in the U.S. While space prevents us from making any detailed treatment, it is important to note that France, Germany, and Great Britain are all members of the European Economic Community—EEC—and are subject to extensive regulation of their coal and steel industries by that Community. Under the Plan Davignon adopted in the late 1970s, ultimate authority for restructuring and down-sizing European steel on a company-by-company basis was delegated to the EEC itself. The plan also provided various forms of assistance to displaced steelworkers; under it, for example, the EEC bears some of the costs of early retirement plans for these workers.

France

With the onset of the French steel employment crisis of the late 1970s, companies and unions moved to major new agreements in 1977, 1979, and 1984 to cope with the great decline in steel employment. Generally speaking, in dealing with displaced employees the parties have chosen to rely on attrition and early retirement. Between 1977 and 1982, when by one European estimate French steel employment fell by 30,000, less than 1700 of these terminations were by layoff and dismissal.

When layoffs have to be made, the first step is early retirement of employees over age 55; these retirees receive approximately 70 percent of their previous gross pay. (Government helps meet the cost of early retirements; in some cases help is also received from the EEC.) If further layoffs are necessary, employees between ages 50 and 55 are placed in the “suspended activity” status and receive approximately 75 percent of their gross monthly salary. (Cost-of-living adjustments are made periodically for those in early retirement and “suspended activity.”) Employees in

both categories continue to be eligible for sickness and accident insurance, company housing, company vacation colony rights, etc. Regular social security retirement pay, available after age 60, usually replaces close to 80 percent of previous earnings.

Companies usually have the option of offering employees transfers to other steel plants when displacement cannot be avoided. Transferred employees in the same company retain their previous wage classification for at least 24 months, after which employees transferred to lower classifications are indemnified up to 80 percent of their loss. Transferees over age 50 must suffer no loss. Special grants and loans are provided to help meet moving expenses (relatively few transfers have been made as steel employment has steadily weakened).

In a further effort to preserve employment in the steel industry, the parties agreed in 1982 to put into effect a "fifth shift" for continuous operations workers. In effect, a 33-hour 36-minute workweek was established under this agreement. Lower salaried employees were protected from wage loss, while higher paid workers received slight wage reductions as hours were reduced. Workers continue to be employed on an 8-hour day, but they are given enough free shifts in the course of the year to average out to the reduced (33 hr. 36 min.) workweek.

While these sweeping measures eased the burden on displaced workers, their communities and the unions within them protested as steel regions in the North and East declined, and young workers tended to migrate out. Therefore, early in 1984 when the Socialist government of President Mitterrand announced new plans for additional shrinkage of the steel industry, major demonstrations were organized, especially in the East where the bulk of the cuts were projected. As the demonstrations' storms subsided, however, most of the unions accepted a new agreement with the industry and the government. (Despite the opposition of the Communist-controlled CGT union, the agreement went into effect.)

Under this July 1984 agreement, early retirement benefits continue to be extended to workers aged 50 to 60. Recognizing that new job cuts could not be absorbed by merely retiring workers over 50, the new agreement provided special training for some of those displaced. Under these "reconversion clauses," employees are entitled to two years of training and benefits (70 percent of previous earnings, like those for "suspended activity" status). If trainees have not found jobs within two years, employers must in the course of that time or at its expiration make them two offers of permanent jobs, at least one of which must be within the steel basin in which they had been employed.

Clearly, French steelworkers have been offered a wide range of

protection as the industry has been shrinking. As unemployment has risen to new heights generally in France, these benefits have provoked some concern among employees displaced in some other industries, where similar benefits are not available. The weakness of unions in small companies makes them a lesser threat than in steel, where strong unionization and regional pressures combine to support what, to an outsider at least, looks like a formidable and costly array of benefits. It should be added that this range of benefits was first begun under a conservative French government and then extended, and somewhat enlarged, by the present Socialist government.

Federal Republic of Germany

In Germany steel employment adjustment hinges on the role and activities of the Works Councils which are mandated by law in German companies, and whose members are chosen by vote of the employees. Under 1951 and 1972 laws, before major employment adjustments can be made, the company and the Works Council must agree upon a Social Plan. Consequently, adjustments will vary somewhat from company to company, unlike the more generalized process in France.

In 1979, for example, the Thyssen Company, confronted with the need to reduce employment, negotiated a Social Plan with its Works Council. Prior to this, Thyssen and the Council had agreed upon a work-sharing plan under which the regular 40-hour week was cut to as low as 30 hours in some departments to avoid layoffs. Under this arrangement workers received 30 hours of full pay as well as unemployment compensation (approximately 68 percent of regular net pay for the lost 10 hours plus a small supplement from the company to close an additional part of the wage-loss gap. France, too, has a similar combination of work-sharing and unemployment compensation, but the German steel industry seems to make greater use of this device).

Faced with the need for further employment savings, in 1979 the company and the Council negotiated a Social Plan under which a number of workers were moved into early retirement at age 59. Employees would receive unemployment compensation plus a company supplement which would leave them at about their previous net pay for one year. Technically, employees might be offered new jobs outside of steel which could jeopardize their unemployment compensation, but the difficulties of providing new employment for 59-year-olds, and the informal cooperation of government officials, rendered such possibilities almost nonexistent. At age 60, under German law, employees would be eligible for early retirement (ordinarily these benefits are not available until age 63, but

where restructuring is involved, the age drops to 60). In addition, employees would be eligible for modest company pensions upon retirement.

Employees transferred to other jobs under the Thyssen Plan were guaranteed their full salaries for one year. Compensation guarantees for longer periods of time were made for older and long-service employees. Social Plans such as these run for fixed contract periods and then expire. Presumably if a new crisis arises, a new plan must be negotiated. Similar plans have been negotiated in other German steel plants as personnel had to be reduced. In some, early retirement provisions have been set as low as 55 years and even at 50 years of age.

The German metalworkers union has generally not pressed for an overall national restructuring agreement. It has feared that such a national approach could deal death blows to steelworkers in peripheral areas. The steelworkers did lead a major strike against the industry in 1978 seeking a 35-hour week. Strong opposition from the employers defeated this effort. In 1984 the German Metalworkers Federation, of which the steelworkers are one section, conducted a strike in the metal fabricating industry which ended with agreement on a 38½-hour workweek. Presumably this will eventually be applied in the steel industry.

The United Kingdom

In the first decade or so following nationalization of 13 major steel companies to form the British Steel Corporation, the new company enjoyed reasonably stable and peaceful relations with the various unions with which it bargained. (BSC deals with a number of different craft and general workers' unions that represent different classifications at different locations, although one union, the Iron and Steel Trades Confederation—ISTC—does represent close to 50 percent of BSC employees.) The onset of the steel crisis by the late 1970s raised new and difficult adjustment problems. Labor relations and the industry were also influenced by the shift in management policy which accompanied the coming of the conservative government of Mrs. Thatcher in 1979.

Slicing away obsolete capacity in what was Europe's oldest steel industry would have had a troubling impact on labor-management relations under any circumstances, but the new chairman of BSC, brought in by the conservative government, initiated new personnel policies that created friction with the unions.

For example, following the earlier nationalization of the industry, BSC had appointed some union members to sit on its Board of Directors. The new Board chairman took the position that he had the ultimate right to

pass on any worker nominations to the Board. This brought him into conflict with some of the unions who saw this as a blow at their goal of independent union input into company policy. Today only one union official serves as a Board member, and he has been retired from active union work for a number of years.

This British experience contrasts with worker participation on German steel company boards which, it is generally conceded, had widened consensus between the parties and helped ease individual company employment adjustments. It suggests that particular institutions or practices may be less important than the general framework and spirit of labor-management relationships.

Adding to the tension in steel labor relations in the United Kingdom has been the company's policy of moving to decentralize wage negotiations from the national level to a plant-by-plant approach and to tie future increases closely to productivity gains. It has persisted in this policy despite union objections, and settlements have been based on a variety of criteria. In some plants wage increases have been geared to value-added improvements, in others they are dependent on raw material input, and in still others they are tied to a reduction in manpower or in manhour per ton at a particular plant. The leading union in the industry, the ISTC, argues that these arrangements leave workers very uncertain about the continuity of their wages.

Major fringe items such as work hours, pensions, and sickness pay are still negotiated at the national level, and although they are negotiated separately with each union or certain groups of unions, they tend to be uniform across the company.

By 1979 BSC was resolved to move forward with a policy of drastic plant closings of what it judged to be obsolete works or parts of steelworks. Despite the opposition of the unions to such closings, the Corporation proceeded to negotiate special termination agreements on a works-by-works basis.

Some efforts were made to transfer displaced employees to continuing operations, but in the face of far-reaching shutdowns, few transfer opportunities were available. The traditional resistance of British workers to moving even a short distance also contributed to relatively few transfers.

The severance terms negotiated with various unions (jointly, works-by-works) provide significant benefits beyond those established under national legislation and/or by the EEC. The national Redundancy Payments Act of 1965, as amended in 1979, scaled termination of worker benefits to their previous service and age. For example, a worker who

started his employment with BSC at age 36 would be entitled to 19½ weeks of pay. As part of the works' termination agreements, BSC agreed to increase these payments by an additional 50 percent.

A combination of regular unemployment compensation benefits and special benefits for steelworkers under EEC are also available for displaced workers who find no jobs, or whose new jobs pay less than their old (BSC) jobs. These are intended to bring displaced workers' compensation up to 90 percent of previous earnings and are available for maximum periods ranging from 104 to 130 weeks, depending on the worker's age.

Workers transferred to other steel jobs are guaranteed pay equal to that on their last jobs for from 20 to 26 weeks (varying with their age) and thereafter from 70 to 122 weeks at 90 percent of their previous pay (again depending on their age). Similar types of EEC unemployment assistance are available to displaced steelworkers in other member countries, including France and Germany.

In addition to the foregoing, there is an additional tier of severance payments for terminated workers which was negotiated as an integral part of the 1979 closure agreements. These payments vary moderately, from works to works, but under them employees have generally received payments varying from 16 to 20 weeks, although in individual cases of long service, employee payments range as high as 48 to 50 weeks. In some instances benefits carried over from earlier agreements also provide additional payments, usually for about £300 per worker. The termination agreement also provides payments in lieu of notice and accumulated pay benefits (usually 9 weeks) for terminated employees.

As just one example of what the aggregate value of such provisions might be, an employee severed from the Lanarkshire Works under the agreement of November 5, 1979, who was age 50 with 20 years of service, would be entitled to benefits which could come to as much as 1½ years of full pay.

The United States

Although the U.S. steel industry resembles that of Western Europe in a number of respects, it differs in several important areas. To begin with, there is the significant rise of the so-called mini-mills, which use a somewhat different process (relying on scrap metal and electric furnaces) and have cut into the markets of the major steel companies. A majority of these mini-mills operate on a nonunion basis. They pay a combination of wages and bonuses close to those paid in union companies, but their fringe benefits appear to be well behind those in basic steel collective agreements. The presence of important nonunion domestic steel is one characteristic distinguishing the U.S. from Europe.

Another distinguishing characteristic is the strong tendency of many major U.S. steel companies to transfer capital and move into other industries. The decision by U.S. Steel Corporation to purchase a major oil company several years ago is one example. Moreover, unlike the cases in continental Western Europe, the U.S. government has taken no initiative to try to consolidate or merge declining steel operations.

In the absence of European-type legislation controlling layoffs and plant closings, the United Steelworkers have bargained with major companies to establish a considerable range of benefits and protection for steelworkers who face displacement. These vary a bit from company to company, but we use the collective agreement between the union and the U.S. Steel Corporation for illustrative purposes.

Employees with two or more years of service who are laid off and are not eligible for pensions are given priority over other applicants for employment at other of the company's steel plants located within a limited geographical area. Such employees are also eligible for relocation allowances. At the new plant, a transferred employee is subject to the rules and conditions of employment at that establishment, including the wage rates in effect there. Except for vacation-pay computation, his seniority record begins anew at the new plant. (Presumably, his old seniority would also continue to apply to his company-pension status.) Employees who are laid off and meet eligibility requirements are entitled to special weekly compensation benefits, which supplement state unemployment compensation benefits. Such (SUB) benefits vary in accordance with previous earnings, but in any week in which a government unemployment benefit is received by an employee, his SUB weekly maximum benefit is \$170 (\$185 as of August 1, 1985, plus \$1.50 per day additional for each dependent up to four). For weeks when an employee is not eligible for government benefits (presumably, when he has exhausted unemployment compensation), he can draw SUB benefits up to a maximum of \$220 weekly (\$235 as of August 1, 1985), plus \$1.50 per dependent up to four. SUB benefits are available for most employees for up to 52 weeks. Employees who have 20 years of continuous service are eligible for an additional 52 weeks of benefits.

These SUB benefits are financed by a fixed company contribution into a Trust Fund. When the Fund falls below a specified level, employee benefits are reduced, and if a specified minimum Fund level is later reached, SUB payments are suspended except for senior employees (noted below). Company payments into the Fund continue, and when its financial position is restored, benefit payments resume. As employment has declined, fund levels also have declined, although the union has negotiated increases in company contributions.

Notwithstanding this maximum liability, benefits are not to be reduced or eliminated for employees with 20 or more years of continuous service and can be only partially reduced for employees with 10 years or more of service.

Special early retirement benefits are provided for employees whose service is broken by a plant, department, or subdivision shutdown. Under the basic steel collective agreements, some six different combinations of company pension, regular unemployment compensation, and SUB options are available to employees whose jobs are terminated. One survey concludes that as a result of these options only workers "who are under age 41 and have less than 20 years of service" lack some kind of lifetime income protection. The others, by the combinations just referred to, with the addition of social security after age 62, "are afforded income security from the time of layoff through death."² These benefits vary according to the option for which the employee is eligible.

As we have already noted above, over the years the Steelworkers union and steel employers established an impressive level of wages and benefits for employees in the industry. By 1982 the ratio between steelworkers' compensation and all wages in manufacturing stood at 1.95 to 1. (This compares with a ratio of 1.34 to 1 in 1970.) With operations drastically reduced and foreign competition posing a great threat, the steel companies approached the unions in 1982 to negotiate some economic concessions in order to reduce operating costs (some concessions had been won earlier by companies in the auto, meatpacking, trucking, airline, and some other industries). An agreement was finally reached in February 1983, which included deletion of cost-of-living adjustments due between May 1981 and July 1984, with resumption of cost-of-living adjustments under certain conditions after August 1, 1984. A temporary wage cut of \$1.75 per hour was also part of the agreement, and Sunday premium pay was cut from time and one-half to time and one-quarter, but was to be restored on May 1, 1986. For employees eligible for at least two weeks of vacation in 1983, the vacation was cut one week, and one paid holiday was also eliminated.

To limit steel companies' moves to diversify their operations outside the industry, in the 1983 agreement the union negotiated a pledge from the companies that they would "apply any savings" from the concessions to the "needs of . . . existing facilities." The companies were forbidden from using concession savings "to invest in other business segments" and agreed to provide "adequate information to the Union on savings obtained," so that the union could "verify compliance."

² Survey by Carnegie-Mellon University researchers, as reported in *Daily Labor Report*, August 30, 1983.

The weakened position of the U.S. steel industry has led to fairly close cooperation between the union and major companies in campaigns for relief from foreign imports as well as certain environmental regulations. In a special Memorandum of Understanding on Joint Efforts in 1983, the parties agreed that only by "acting together" can they "solve . . . some of their mutual problems."

Conclusion

The steel industry and its employees in the four countries under study seem to have undergone a common experience in the past decade as far as reductions in production and employment are concerned. However, different government policies have been addressed to the industry's problems on the continent of Europe (Germany and France, in our paper) as opposed, for example, to policies in the U.S. and the United Kingdom.

Differences in government traditions and policies have led to different methods and programs for dealing with worker displacement. In France and Germany, and to some extent in Great Britain, compensation from government (including the EEC) as well as union-management measures have been adopted to ease the problems of displaced workers. France and Germany have resorted heavily to early retirement of older (over 50) steelworkers as a means of minimizing layoffs and dismissals. In Great Britain and the U.S., where employers' freedom to terminate and discharge has been less constrained, layoffs and dismissals have been more common. To help offset the effects of such income loss in the U.S., unions and employers have constructed a rich fabric of "private" benefits in the framework of collective agreements, to help ease the problems of worker displacement.

DISCUSSION

WILLIAM D. SOLOMON

Graphic Arts Employers of America/PIA

The past three years have been highly unusual. Industrial relations activities in the United States, including the printing industry, have passed through one of the most turbulent and stormy periods since the wave of unionizations 60 years ago. Events are occurring at a fascinating pace, perhaps faster than ever before.

The printing industry is an exciting industry. According to the U.S. Department of Commerce, there are about 50,000 printing and publishing firms in the United States today. The industry ranks sixth in the number of employees, seventh in total dollar payroll, eighth in value added by manufacturing, tenth in value of shipments, tenth in dollars invested in capital expenditures, and eleventh in average hourly earnings. Despite its high ranking among manufacturing industries, printing and publishing is still primarily a craft-oriented industry, composed of thousands of small establishments (82 percent of commercial printing plants in the U.S. today have fewer than 20 employees). The industry is highly entrepreneurial. Most companies are privately owned.

In the wake of the last three years of turbulence, a major question today is whether we will return to collective bargaining as usual or whether we have entered a new, largely unexplored area of industrial relations—in the printing industry as well as all industries.

Before you ponder that question, let's take a look at just a few of the factors that have made such a major impact on the labor relations climate since 1981. All are aggravated or caused by the massive impact of the introduction of technological improvements.

Decline of Union Memberships

The only reason this is mentioned first is that it is probably the most written about and gives some insight into problems of unions overall as well as the graphic arts industry. The litany is familiar—unions are losing members and now make up approximately 17.8 percent of the “productive” workforce in the U.S. compared to perhaps double that figure during the height of membership. Put another way, a major nonunion

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plant in the auto or airline industry would have been unheard of in the 1960s; today the operation of a nonunion company is common. The graphic arts industry is no exception. According to AFL-CIO figures, total membership losses for all graphic arts unions in the U.S. between 1971 and 1983 is 110,000, or 35.8 percent of 1971 membership strength. Where there were five major craft unions in the industry just 13 years ago, there are two now. These two are presently discussing merger.

Despite what appears to be a slow economic recovery, there is no strong indication at present that union strength will suddenly shoot up again soon. Unlike the steel industry which, as we have already heard, has seen a drastic *decrease* in employment, employment in the commercial printing industry is *rising* at a relatively steady 1.7 percent per year. This means there are more people employed in the printing industry every year, but fewer are unionized.

Going hand in hand with union membership losses are figures showing that unions have lost more than half of the union certification elections for several years now, down to just a little over 40 percent at present. Thus union organizing has not kept pace with the losses, despite priority status among labor organizations.

Still another indication of difficulties unions faced in recent years is the fact that 1983 marked a continuation of a trend toward union merger that began in 1978. Since 1978 there have been 24 mergers of major unions, or 30 percent of all mergers that have occurred since 1955.

Deregulation Is In

Hand in hand with a general feeling expressed by Board and Court decisions that collective bargaining parties ought to be left alone to talk to each other is the mood today that deregulation is in: regulation is out. That means government, formerly seen so often as a third party at the bargaining table, wants management and labor to settle their own problems. Adding insult to injury, labor's vaunted political clout with Congress has waned as the mood of the country continues to move in a pro-business direction.

Pattern Bargaining

The printing industry has often followed collective bargaining trends set in other industries. Big-ticket settlements in the steel and auto industries resulted in abnormally high settlements in our own industry. Through the 1950s, 1960s, and 1970s, this translated into an annual improvement factor of roughly 3 percent with adjustments (generally upward) for cost of living, additional holidays and vacation time, and increases in health and welfare benefits on top of wages, normally packaged up in a

two- to three-year contract. All this was during an era when most companies were unionized and negotiated the same or similar packages. Major costs were passed on or absorbed. While all this was going on, there were significant structural changes occurring, leading into the 1982–1984 recession, the worst since the Depression of the 1930s. Old-time thinking and bargaining no longer was the rule of the day and costs, given the dynamic growth of a nonunion competitive sector in an extremely competitive industry, could no longer be passed on. We suddenly saw contracts opening early, with many givebacks and restructuring of the workweek, wage freezes and cuts, elimination of cost of living allowances, deferments or diversions to cover health and welfare costs, and cost containment areas, all reflecting what had already occurred in Big Steel or Big Auto. We didn't need to read the newspaper to find out we were in a recession. This "follow the leader" type bargaining (this time toward smaller-size settlements) had a profound, perhaps devastating, impact on the next point.

Breaking Up of Multiemployer Bargaining Units And the End of the Domino Impact of Big City Bargaining

For years the printing industry followed not only leaders in other industries, but larger cities within our own. What was set as a pattern in large cities eventually found its way into contracts in smaller bargaining units in smaller cities. This resulted in a reasonably high level of uniformity in graphic arts settlements in an industry which has no national collective bargaining agreements. Formerly, international unions had been able to essentially mandate conditions into contracts by seeking patterns in larger cities first, then the same or similar conditions in smaller cities at a later date. There is nothing unusual about this. Trends of all types are typically set in large, urbanized areas. The break-up of pattern bargaining came also (aided considerably by the advent of massive technological improvements) with many employers seeking separate negotiations, seeing themselves as a "technological entity" different from all other employers.

While this caused major problems for labor, it has been no picnic for employer associations either. While some cities held firmly together in multiemployer units, most have slowly broken up, with some cities showing complete disintegration of former units into as many pieces as there are employers in town, a tremendous strain on both union and management resources. At any rate, gone at least for now are the days of monolithic bargaining. There are virtually hundreds of individual packages in the industry today.

Employer Preparation

Small employers often do not have resources to plan negotiations properly nor spend as much time as the union does at collective bargaining. Much has changed in the last three years, with employers seeing advantages in being prepared. While no employer wants a strike, it has been a newly emerging pattern that where a strike does occur, employers seek to operate during the work stoppage for, if no other reason, survival. This echoes a trend seen nationally with larger companies such as AT&T, Continental Airlines, and Greyhound.

Owners of small companies are coming to believe that survival depends on not giving in to every union demand and are therefore better preparing for collective bargaining long in advance of contract expiration. In connection with this, there seems to be a direct correlation, at least in the strikes that occurred in the 1982–84 era, between an employer's decision to operate during a work stoppage and eventual company survivability and profitability.

Changes in the Structure of the Workplace

Although much of the subject matter of this conference relates to this, I should mention that while media attention has focused on wage and other concessions by unions, a subtle but more permanent and far-reaching change may be found in the way management of the 1980s handles people. Management of small companies has been able to capitalize on the wave of new programs of quality circles, employee participation, and other innovations. Management (at least in forward-looking companies) no longer looks at employees as “raw material.” In the interest of time, I need not elaborate on this point, but leave it for others to cover.

Merging of Crafts

As mentioned by another speaker, unions in the printing industry have been craft-oriented through history. Technology has simply done away with many of the old-line crafts and has blended job functions so that it is difficult at times to determine where the old craft stops and the new job begins. To be sure, the job is still there—it's just tougher to tell whose job it is or should be. Graphic arts unions have been extremely slow to grasp “industrial type” organization over “craft-oriented” organization. While many labor officials see the shortcoming in this philosophy and are seeking to change, old ways die slowly and there is a real question whether and how fast graphic arts unions can adapt to changes technology has made for us, whether they (or we) like it or not.

Breaking Down of National/Local Relationships

In the old days, a monolithic international union often laid down rules for local unions to follow. In the breaking-up of pattern bargaining, multiemployer bargaining, and the craft-oriented system, control is passing again to the local level. It is now employers and unions at local levels seeking to fix what's wrong on an individual company or city basis with little attention to what goes on at a national level, particularly in a localized industry such as printing. International unions which have capitalized on this trend by turning more autonomy and authority back to the locals have, to an extent, been beneficiaries of this trend. Unions that have not and have attempted to retain international control over the local bargaining process have suffered.

Public Perception/Reception of Unions

In the present day mind of the public, unions are often viewed as a culprit, whether or not the blame is deserved. Unions have been faulted as the sole reason for everything from company failures to major recessions. All this may pass, and history tells us the pendulum does swing, so no quick 10-minute review of what's happening in the United States today in the graphic arts industry would be complete without a bit of caution that history can and does repeat itself, and companies choosing to take advantage of the present situation labor finds itself in may find their thinking to be short-sighted.

As one labor editor put it, "Labor's ark is leaking." That may be true, and management may be in the driver's seat for now, but that gives us no right, nor do we deserve, to be overconfident. To be so will merely cause the pendulum to swing back faster.

DISCUSSION

JAMES G. SCOVILLE
University of Minnesota

Our Australian colleague, Joe Isaac, once suggested that the history of the labor movement might be viewed as a continuing quest for escape from the laws and customs on tort liability. These three papers remind us that the success or problems of particular labor organizations may stem from attempts to escape the laws of economics and competition. Certainly the current turmoil in the three industries discussed stems in part from radical changes in the impacts of competition and technological change on them. It is in this vein that I will confine myself to a few comments on the analytical implications of the three papers.

Mike Wallace has contributed an extremely useful introduction to printing industry adaptations in the U.S., Britain, and West Germany. The radical changes of technology have erased the foundations for the multiplicity of crafts in the printing business; in the ensuing readjustments, it would seem that strong patterns of “industrial” union organization can have a facilitating effect on labor’s ability to have a voice in industrial governance. However, to an economist, the mere mention of the word “industry” cries for the term to be defined; we recognize that different degrees of horizontal integration can affect the practical definition of an industry. It would seem to me that the concept of “integration” may have some value in understanding what we see in the industrial relations arenas. Thus the 1983 efforts of the proud and ancient ITU to merge with (of all things) the Teamsters represent an attempt to “forward integrate” toward some people who still have some bargaining power. At least for the moment, you can’t deliver newspapers without truck drivers. Similarly, the success of the German industrial union in dealing with the printing industry may have something to do with “backward integration”: back to the people who make the paper and even cut down the trees. To paraphrase John L. Lewis, “you can’t (yet) cut trees with a computer.” Especially in contexts of a small number of industrial unions (i.e., similar to the German or Swedish systems of industrial relations), explicit consideration of the degree of forward and backward integration by unions (and employers) should add to our understanding of adaptation to economic and technological change.

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Claudio Pellegrini has given us an intriguing, if as yet preliminary, review of the comparative response to financial problems of two labor-intensive local product market monopolies: the Chicago and Rome public transit systems. One of the principal differences in the milieu in which these two organizations operate relates to the very different levels of access of the two local government entities to "own" sources of finance: the Chicago system collected a reasonable share of its costs in tax or fare revenue (even though that share was falling); the Rome system collected virtually nothing. Not surprisingly, in Italy it would seem that the proposed solution came from the central government and trade union confederations, with the needed revenues coming from the same central source, the national government. However, with little input into the proposed solution by local union activists, the day-to-day labor relations problems seem to have escaped solution.

Ev Kassalow, about to become our president, is faced with the awful task of distilling his paper to some general conclusions: no happy holidays for him. He has given us an extremely thorough review of the recent history of adaptation in the steel industries of the U.S., Britain, France, and West Germany. The first contrast of note may sound surprising: unlike the U.S., the other three countries still have a steel industry; in the U.S. we have some companies which, as one of their many lines or sidelines, produce some steel. In the U.S., the companies have taken flight from the industry (with some new mini-mill firms appearing as well); on the other side of the Atlantic, the industry has been more identifiable and hence a clearer target for social policy-making on restructuring, "downsizing," and the like.

My second observation on Kassalow's paper may suggest an opportunity for additional, more substantial research. The variety of institutional arrangements, laws, even ideologies—e.g., Thatcherism in the U.K. vs. "supply-side socialism" in France—does not cover up certain similarities in policy, especially as related to issues of disemployment and training. On the other hand, both Britain and France seem to have "bitten the bullet" in terms of accepting the finality of a need for "downsizing" the industry to a smaller level of employment. In West Germany, the use of part-time employment supplemented by unemployment benefits would seem to imply some residual hope that the industry might "upsized" itself again, or at least no acceptance of the finality of the industry's shrinkage. Perhaps this difference in Germany is one of the fruits of that country's system of codetermination; if so, it would bear looking at from that perspective.

Finally, let me express my appreciation to all four panelists for bringing their papers to these meetings, and especially to Mike Wallace

(for developing the comparative side of his study specifically for this session) and to Bill Solomon for his thoughtful comments. I wish also to take note of the substantial level of attendance today and to the fact that there is a second comparative session on this year's program: perhaps the long-awaited revival of interest in comparative industrial relations has actually begun.

XVI. EMPLOYEE OWNERSHIP

The Sociology of Worker Ownership and Participation*

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In 1974 federal tax law introduced the ESOP, the Employee Stock Ownership Plan, as a new institutional form in this country. While other organizational forms of employee ownership exist, such as the worker or producer cooperative or various forms of joint-stock companies or partnerships, the ESOP form has become the predominant vehicle for employee ownership today. Under ERISA, a company gets tax incentives through deductions from its corporate income taxes for contributing cash to buy stock or actual stock to an Employee Stock Ownership Trust (ESOT), or by the ESOT borrowing money which is used for this purpose. The stock is voted by trustees who may or may not be selected by the employees, and these voting rights may or may not be passed through the Trust to the workers' actual control. When the company contributes cash, the Trust uses it to buy stock in the company. This is called a nonleveraged ESOP. When the Employee Stock Ownership Trust borrows money to establish employee ownership, the company guarantees repayment of the loan, the Trust uses the funds to buy stock of the company, and the company makes cash contributions to the Trust to repay the loan so the stock can be released and allocated to individual employee accounts. This is called a leveraged ESOP. What makes the leveraged ESOP so attractive is that, since company contributions to the ESOP are tax deductible, the company can actually deduct both the principal and the interest on the loan from company taxes. In both cases the company gets the cash value of the workers' stock, and the worker does not pay for his or her stock out of his or her savings or capital. The

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* A more detailed version of this paper is available from the author upon request.

funds to pay for the stock come out of future company profits. Legally, ESOPs are stock bonus plans and are defined as deferred employee compensation plans under the Internal Revenue Code.

The meaning of the "ownership" the worker gets will depend on the following variable characteristics of ESOPs: (a) how an employee is defined, (b) presence of voting rights, (c) how voting is structured, (d) how shares are allocated, (e) who selects the ESOP trustees, (f) the vesting schedule of the stock, (g) the manner of distribution of the stock, (h) percentage of ownership, and (i) who chooses the company Board of Directors.

The sum total of these nine factors determines the real motives, who has power, and the actual definition of ownership for that ESOP. It is, however, not easy to evaluate ESOPs since, as this structural analysis will prove, one can combine a large number of the more pro-employee control characteristics of an ESOP with simply one or two nondemocratic characteristics and end up with a largely undemocratic ESOP. David Ellerman of the Industrial Cooperative Associates in Somerville, Massachusetts, has defined the democratic ESOP and suggested a legal and philosophical basis for this form.

Estimating Trends in Employee Ownership

The impact of employee ownership on the labor economy, especially organized labor, and the expectations workers in the employee-owned companies can have about the nature of their labor relations and their rights requires some attempt to project the importance of this phenomenon. Our projections are based on a three-year review of a national newspaper clipping service of the National Center for Employee Ownership of Arlington, Virginia (NCEO), an examination of recent Internal Revenue Service (IRS) data on ESOPs, interviews with professionals in the area, projecting the same rate of growth for employee ownership that occurred in the last five years, including a 10-percent increase per year in its growth as the rough estimated effect of new tax incentives for employee ownership included in President Reagan's Deficit Reduction Act of 1984, and assuming organized labor will decline to 10 percent in the private-sector labor force in 30 years. At the present time this is the best way to gauge the development of employee ownership since the relevant studies are surveys based on small samples of companies and were mainly done in order to assess organizational features or economic performance of the firms or case studies. No study makes a detailed evaluation of worker influence in ESOPs according to the nine characteristics noted above, nor is future growth projected. NCEO estimates that there are 7 million workers in about 7000 ESOPs today. It is estimated that 1 to 1½

million of these workers are in firms that are more than 20 percent worker-owned and 500,000 workers are in a subgroup of 700–900 firms that are 51 percent plus worker-owned. NCEO has done a detailed accounting of worker buyouts to save failing firms. Contrary to popular belief fueled by excessive media attention, these represent less than 5 percent of the 700–900 worker-owned firms. This represents a 25-percent growth in employee ownership since 1981, the year for which the most recent IRS computer tapes are available, when workers in all such firms (0+–100 percent) already comprised 7 percent of the private-sector labor force. We estimate that within 30–50 years there will be more workers in companies that are more than 20 percent worker-owned than in firms that are unionized in the private sector. If trade unions decide to organize the small business sector where most of the employee-owned firms are and conceivably will be concentrated, then the growth of both movements may happen in tandem.

Employee Ownership: Factors in Its Growth

Seven factors explain increases in employee ownership. *First*, the continuity problem of successful small businesses. NCEO estimates that this may now account for as much as 60 percent of new employee-owned firms each year. Recent 1984 tax legislation excusing small business people who sell their businesses to their employees through ESOPs or worker cooperatives from capital gains taxes under certain conditions, and changes in estate taxes favoring employee ownership, will hasten this development through a leveraged or nonleveraged format.

Second, concession bargaining. This gave workers more than 20 percent equity of Chrysler, Eastern Airlines, and Capital Airlines and is spreading rapidly in the airline industry. Fifty-six percent of all manufacturing workers covered by private-sector labor agreements settled in 1983 received no wage increase or a wage decrease in their contracts, according to David and Steven Bloom of Harvard University. The comparable figure for 1980 was 1 percent. Trade unions which earlier opposed this concept are embracing it, not for its inherent qualities, but as part of a strategic decision to get involved in economic development, job creation, and job preservation. The United Steelworkers of America have now decided that employee ownership and participation is the cornerstone of their strategy for saving American steel, and union officials predict that several steel companies will be “ESOPed” in the next year.

Third, a financial and human resource management option in leveraged buyouts. This is where the tax advantage of the ESOP allows companies to borrow capital for the worker shares and then deduct both the principal and interest from their income taxes. The Kelso and

Company takeover of Scott and Fetzer and the 40-percent worker stake in the new Phillips Petroleum are examples.

Fourth, employee-ownership as a takeover defense where an ESOP can either be used as a built-in shield against a future takeover or can be used as an immediate defensive barrier as in the employee takeover of the 12,000-worker Dan River Textile Company in a battle with the Icahn Group.

Fifth, more worker-owned startups and the expansion of employee ownership in existing firms as a new direction in human resource management and by virtue of the subsidized capital of ESOP and a recent radical new amendment to the tax laws which allows banks to deduct 50 percent of their income from loans to ESOPs from their income taxes. Banks are now offering employee-owned business loans at several points under prime. The acceptability of firms with such well-entrenched public identities as Eastern Airlines using employee ownership and the success of new startups like Peoples Express (33 percent worker-owned) is encouraging an approach to the concept that is worlds apart from the fairly narrow approach of the early seventies where employee ownership plans were generally set up as supplemental benefit plans never exceeding a few percentage points of control of the company's stock.

Sixth, a strategy toward labor-management cooperation is emerging that is most typified again by the path-breaking Eastern Airlines case, where the company is combining ownership with task forces and an extensive employee involvement program throughout its system to improve productivity and manage the airline more collaboratively. Harvard and Brigham Young University have received a Labor Department contract to study this case.

Seventh, a gradual decline of our system of fixed wage compensation. A basic wage supplemented by deferred compensation taking the form of equity and a system of reward tied to increases in productivity and worker involvement may be emerging. Only very careful objective research can establish what the true potential of this trend is, whether organizational and economic claims about the employee-owned firms are correct, under what special contingencies these claims might hold, and whether such evidence has implications for business organizations in general.

The Impact on Labor Policy

In this new sector labor relations cannot and will not be regulated with the same actual effect by the traditional approach of government to labor law, unions to their function, or business in its view of management rights. Workers will own and managers and entrepreneurs will work with or for

workers in increasingly cooperative and innovative companies. A new form of business or labor organization will emerge—a *labor-business* organization. The National Labor Relations Act (NLRA) protects workers' rights to self-organization, collective bargaining, and democratic procedures to constitute a labor organization, all as government-enforced, not self-enforced, rights. From a functional point of view, where labor is both owner and worker, it might follow, given the tradition of American labor law, that the right of self-organization, collective consultation about company policy, and democratic procedures for how labor organizes itself, becomes a right *internal* to the firm and not simply of the union outside the firm.

A "free fall zone" in federal law governing ESOPs will pose a serious threat to worker rights. ESOP law says that in publicly-held companies with worker ownership, the shares *must* have voting rights, but in closely-held firms, the firms *can* be structured without workers having any right to vote their stock, even in majority-owned or 100-percent worker-owned companies. Earlier we listed the complex of ESOP characteristics for limiting these rights although current data only allow comment on voting rights. *The predominance of closely-held companies is what makes this a serious problem.* The NCEO estimates that over 95 percent of all majority worker-owned companies are closely-held. This is also true for firms 20–50 percent employee-owned. Of the estimated 7000 ESOPs, NCEO projects from available data that 85 percent do not give voting rights to the workers. Companies that are more than 51 percent employee-owned do not give workers voting rights in 43 percent of the cases according to an NCEO survey, and companies that are 20–50 percent employee-owned tend to restrict voting rights even more, although sound estimates are not available for this group. There is reason to believe that these estimates are all high since they are based on nonrandomized samples which probably overrepresented firms with worker participation, but the trends establish the reason for concern quite clearly. If, as we expect, the majority of these firms are and may be nonunionized, their workers will be unprotected as workers outside the firm *and* as owners inside the firm. Given ESOP practice, even those ESOPs with voting rights probably have present other characteristics that nullify their democratic character. The worker-owned trend will de facto be a trend towards reversing shareholder voting rights when shareholders are workers in about half the cases *by conservative estimates* and thus severely limiting worker rights when they become owners. The *Wall Street Journal* recently strongly criticized several aspects of two leveraged buyouts by Dan River Mills, Inc., a Virginia textile manufacturer, and Raymond International, Inc., a Houston engineering concern (February 21, 1984, p. 35).

Why should workers have fewer rights when their roles shift to that of owners? Employee ownership could include a political agenda of reducing worker influence the more they become involved in companies. A basic principle in the tradition of labor law in the U.S. has been government limitation of management rights where associated labor in the form of unions are present. U.S. labor law limits management rights. Why should management's rights become closer to absolute when workers own? Should workers have federally protected rights as owners, or should unions be given the right to protect workers as owners? Employee ownership law through ERISA makes the internal democratic organization of labor and limitations on management rights *simply optional* in the new labor-business organization that is emerging, in effect, deregulating the spirit, if not the letter, of our national labor policy.

Labor-Management Cooperation

A 1984 New York Stock Exchange study, *People and Productivity*, is the first broad-based survey of human resource programs emphasizing increased labor-management cooperation in decision-making or gain-sharing. One in seven companies with more than 100 employees covering half of all corporate employees have some kind of program, involving 13 million workers. The study found that 15 percent of all U.S. companies with more than 500 workers have some kind of gain-sharing plan, including employee ownership. Companies with stock purchase plans of all types including ESOPs are almost four times more likely to have quality circles than firms of comparable size in the U.S. Nonmanagement employees participate in decision-making in 63 percent of companies with group productivity programs, 70 percent of companies with profit-sharing, and 82 percent of companies with stock purchase plans. It would seem that worker ownership and worker participation, until now largely two separate trends not taking place in the same company, may be starting to merge, as Eastern Airlines exemplifies. Eastern has at least succeeded structurally in protecting labor's right to self-organization, consultation with management, and democratic procedures, when labor entered the company to share the role of entrepreneur.

In contrast to the responsible character of the Eastern case, the South Bend Lathe case illustrates that this weakening is not solely a problem of voting rights.

As part of a Cornell study of worker buyouts, including scholars from several universities in which William Foote Whyte and the author are involved, economist Charles Craypo of Notre Dame University has been examining South Bend Lathe. This is a 100-percent worker-owned firm with pass-through of voting rights. Management persuaded workers to

agree to a management-appointed board and a group of ESOP trustees that are self-perpetuating. Workers have had trouble getting the most elementary information out of the management about their company. Management originally persuaded them to give up their independently secured pension plan and view the company stock as protecting their future as a strategy to save their jobs. What emerges is not exactly job preservation. It is now alleged that management has created a South Korean joint venture through unclear institutional arrangements and transferred many manufacturing operations to that country, thereby reducing the workforce from 500 to about 150. Informed observers say that this transfer of work stands no chance of making a case before the National Labor Relations Board. ERISA and ESOPs are supposed to exclusively benefit workers. If managers participate in the plan, they are also "workers," but it is problematic to think that the method of choosing board members and ESOP trustees, and making major business decisions about the company should be totally insulated from workers in a completely 100-percent worker-owned company.

It is not clear that early employee ownership law had a clear antilabor intent. Senator Russell Long, the key drafter of the ESOP provisions of ERISA, endorsed substantial worker control in worker-owned companies and spoke about his hopes for increased labor-management cooperation during a 1982 Harvard University speech. At the time ERISA was drafted, no one could have predicted that ESOPs would emerge as far more than tax-incentive-based minor benefit plans and accounting devices and would become part of a newly emerging sector of labor-business organization whose long-term implications we are just beginning to understand. Unions may have a new role in educating and even organizing unorganized workers involved or about to be involved in such firms, including meeting a new entrepreneurial obligation as owners to increase productivity through fresh approaches to labor-management cooperation. The changes in workers' rights possible in employee ownership in the name of their interests represents a resuscitation of the old yellow-dog contract. Limitations in federal law against passing through voting rights may be seen as a form of federally sanctioned injunction against labor organization and an extension of the union as conspiracy notion. Allowing financial manipulations of various types without sufficient labor input is simply allowing unfair labor practices of a new and more specious nature. Why must a worker in a closely-held firm not have the federally regulated right to vote his or her stock that workers in a publicly-held worker-owned firm have? If the government decided that changes in the more cooperative direction in American labor relations may represent a useful innovation in

reviving productivity, competitiveness, and innovation in the economy, then it must face squarely that its own legislation may in fact encourage labor-management conflict and a return to the old labor relations. Others will argue that labor law should be deregulated and the good and the bad aspects of employee ownership should be fought out in the marketplace.

Managers and entrepreneurs and their representatives who are lawyers, investment bankers, accountants, and organizational consultants often see employee ownership as simply a financial tool, a strategic device, that is, as the ESOP Association of America's newsletter frequently says, "installed" in a company. Employee ownership may turn into a legal game of securing workers' equity participation and preventing other forms of labor-management cooperation while remaining within the narrow confines of the law. There is as yet no clear evidence that a meaningful and productive shifting of roles of labor and management is taking place.

Conclusion

The changing of roles can, however, be a source of innovation. Increased economic performance can be the result of the financial aspects of employee ownership, namely, cheaper capital because of tax incentives, reduced or flexible labor costs in competitive markets where workers and managers choose to cut labor costs or defer remuneration into invested equity, a combination of a base wage with flexible remuneration based on productivity increases, or the ability of workers to act as bankers when they reduce the cost of capital to their firm through a leveraged employee buyout. If one speaks about the relationship between employee ownership and increased economic performance as being proven and automatic, this is the only way in which the relationship can be said to be fairly direct. It should be clear that this strategy of innovation is financial and not based on a vague sense of "working harder and smarter" that employee-ownership enthusiasts often ascribe uncritically to such companies. Labor and management can custom-design informal procedures for each firm over a broad spectrum that *can* be the source of specific ideas to work harder, work smarter, or improve management, the production process, the product, the market of the firm, or the quality of working life. There is no assurance that such innovations can be simply or immediately translated into improved productivity or economic performance, but numerous case studies and the New York Stock Exchange survey suggests that there is tremendous potential here.

Employee ownership *can* be democratically organized and labor-management cooperation *can* have positive economic effects. But this

does not mean that employee ownership *will* be a form of economic democracy or that labor-management cooperation *will* create economic success.

Presently, cheaper capital, reduced or flexible labor costs, and labor-management cooperation drive the employee-ownership engine, *in that order*. The priority of cheap capital as a causal factor is a result of the identification of employee ownership with the ESOP (including other forms such as worker cooperatives which now receive similar preferred treatment under ERISA). The bottom line, however, is that the tax-based motor of employee ownership depends on the tax position of the current or projected new company. Corey Rosen of NCEO says that lower marginal tax rates of the Reagan tax initiative may make ESOPs less attractive and the initiative may seek to repeal the 1984 ESOP incentives. This consideration raises an issue that few observers of employee ownership have considered. Is it not possible that a factor called a desire for reduced or flexible labor costs or a factor called labor-management cooperation can begin to challenge cheaper capital as the major motor influencing future trends in this area? This can happen only if the cooptative aspects of employee ownership are reduced. Otherwise an alteration of the tax-incentive impact may spell a severe limitation on the future of the phenomenon. Surely the competitive, tax, and labor position of various industries may interact so that the structure of the employee-ownership trend itself undergoes substantial change depending on the unique characteristic of that industry. All the evidence now indicates that the motor for employee ownership in the steel industry is significantly different than the motor for successful small businesses facing an owner's retirement.

If broader concepts such as labor-management cooperation receive increased public support and demonstrate that they can have concrete economic impact on the productivity or performance of firms, then it is conceivable that some companies will come to view the labor-management cooperative aspect of employee ownership as equally or more important than its tax incentive to cheapen the cost of capital to the firm. In fact, while we are unable to make sound predictions on the shape of this phenomenon, it is clear that increased experience with this innovation will lead to attempts to evaluate the implications of employee ownership for each specific firm in terms of cheaper capital, lower or flexible labor costs, and labor-management cooperation. The extent to which this occurs is the way two fairly distinct social movements in the business sector in the seventies—worker participation (including the quality of working life and quality circles) and worker ownership—begin to merge as part of a larger attempt to restructure the relation between labor and

management in a significant subset of American companies. In the seventies, the tax-incentive aspect of employee ownership was like pouring gasoline on the weak fire of potential labor-management collaboration. Government's employee-ownership policy certainly turned up the flame. In the eighties, if the wood of labor-management cooperation is burning by itself, the relevance of the tax incentive may change.

This social analysis has tried to suggest how the power, prestige, and resources of labor, management, and government are at stake in the structure of employee ownership and participation and its possible future development. Our rough numerical projections require an in-depth review, but our structural criticisms raise alarming problems. If one assumes that increased labor-management cooperation is necessary to expand the private sector's competitiveness, and if employee ownership is to be part of this change and act as a catalyst for more efficient worker participation in companies, then concrete problems exist which labor, management, and government must examine closely.

The Economics of Employee Ownership*

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There is an innovative institutional arrangement emerging in the U.S. labor market today—employee ownership, with the employee stock ownership plan (ESOP) serving as its principal legal form. An ESOP is a trust fund which an employer can use to make tax-deductible contributions of company stock, or of cash for the purchase of company stock, on behalf of its employees. These contributions are held in individual accounts, the vested portion of which can be liquidated by employees only when their employment relationship is terminated.¹ Since 1974, when the legal status of ESOPs was first clarified under ERISA, the federal government has enacted ESOP legislation eight times, including the most sweeping tax incentives ever offered to employee-owned companies in the Deficit Reduction Act of 1984.² In addition to these federal initiatives, 11 states have now implemented legislation encouraging the adoption of ESOPs. Proposals for similar legislation are under debate in several other states as well.

The main purpose of this paper is to outline selected economic issues related to employee stock ownership plans. I will also present a brief statistical portrait of the incidence and growth of ESOPs in the United States in order to provide a factual basis for discussion.

A Statistical Portrait of ESOPs

The statistics reported in this section have been computed from the most recent and comprehensive ESOP data available—the 1981 Annual

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¹ For a more complete description of employee stock ownership plans, see Senate Finance Committee (1980).

² For a more complete description of the current legal status of ESOPs, see Senate Finance Committee (1984).

Internal Revenue Service Returns of Employee Benefit Plans.³ Table 1 illustrates the rapid growth of ESOPs since the passage of ERISA in 1974. In 1981, 1918 major ESOPs were in effect nationwide, covering approximately 5.2 million active employees, 90 percent of whom were fully vested. These levels represent increases in the number of major plans and in the number of plan participants by factors of 6 and 15, respectively, and at average annual rates of 22 and 35 percent, respectively, since 1973. Moreover, the number of ESOPs and employee-shareholders has continued to grow since 1981, and the National Center for Employee Ownership estimates that, by 1984, as many as 7 million employees were covered by ESOPs of all sizes. Furthermore, ESOP growth may be expected to accelerate in response to the most recent set of federal incentives, at least through 1987, when the payroll-based tax credits now available to ESOP companies are scheduled to expire.

TABLE 1
Growth of Major Employee Stock Ownership Plans^a

| Year | Number of Plans | Number of Active ESOP Participants ^b |
|---|-----------------|---|
| 1973 | 310 | 352,547 |
| 1974 | 435 | 427,546 |
| 1975 | 797 | 1,349,858 |
| 1976 | 1151 | 2,445,537 |
| 1977 | 1361 | 3,668,578 |
| 1978 | 1530 | 3,864,960 |
| 1979 | 1660 | 4,655,769 |
| 1980 | 1798 | 4,942,745 |
| 1981 | 1918 | 5,154,383 |
| Average annual (log-linear) growth rates, 1973–1981 | 22.2 percent | 35.0 percent |

^a A "major" stock ownership plan refers to a plan with a minimum of 100 participating employees.

^b These figures were computed using the 1981 data which included a retrospective question on effective plan date. Thirty-six plans which did not report the number of active participants were excluded from this calculation.

Consolidated plan assets of major ESOPs totaled \$12.4 billion in 1981.⁴ This represented an ownership stake in ESOP companies of roughly

³ All figures reported here are based in IRS returns for "major" ESOPs only—that is, plans with a minimum of 100 participating employees. Excluded are an estimated 3500 plans with ESOP features which involved fewer than 100 participants and were, therefore, not subject to annual IRS filing requirements. Because these excluded plans account for only a small percent (i.e., at most 6 percent) of total ESOP employees, their omission probably does not alter the aggregate picture.

⁴ It should be noted that asset values of the 1981 plans were likely depreciated below normal levels as a result of the 1979–1983 recession.

\$2500 per participating employee. In 41 percent of the major ESOPs in 1981, per capita assets of participating employees exceeded \$5000, although for nearly 65 percent of all active employees covered under major plans, per capita assets were less than \$1000. Aggregate ESOP income exceeded \$3 billion in 1981, 75 percent of which was made up of company contributions, with the rest deriving from accumulated interest and dividends.

Table 2 presents the distribution of major ESOPs across industries in 1981. The figures show that ESOPs have been adopted, at least to some extent, in all major industries. The figures also show that the incidence of ESOPs is greatest in manufacturing and transportation, communications, and utilities, which together account for 50 percent of all major plans and nearly 80 percent of all active employee participants. In manufacturing industries, active ESOP participants accounted for 12.4 percent of total employment in 1981. Overall, active ESOP participants in major plans accounted for 6.8 percent of total private nonagricultural employment in 1981. When adjusted for missing observations and for employees in plans with fewer than 100 participants, the overall ESOP density figure was 7.3 percent in 1981.

TABLE 2
Distribution of Major Employee Stock Ownership Plans
by Industry, 1981

| Industry | Number of Plans | Number of Active ESOP Participants | Total Private Nonagricultural Employment ^a | Major ESOP Density |
|---|-----------------|------------------------------------|---|--------------------|
| Mining | 62 | 111,608 | 1,139,000 | 9.8% |
| Construction | 76 | 37,044 | 4,188,000 | 0.9 |
| Manufacturing | 709 | 2,494,209 | 20,170,000 | 12.4 |
| Transportation, communications, and utilities | 249 | 1,557,586 | 5,165,000 | 30.2 |
| Wholesale trade | 137 | 50,914 | 5,358,000 | 1.0 |
| Retail trade | 170 | 231,713 | 15,189,000 | 1.5 |
| Finance, insurance and real estate | 249 | 437,389 | 5,298,000 | 8.3 |
| Services | 180 | 161,517 | 18,619,000 | 0.9 |
| Unclassified | 64 | 62,848 | 0 | — |
| Totals ^b | 1896 | 5,144,828 | 75,126,000 | 6.8% |

^a Source: *Handbook of Labor Statistics*, U.S. Department of Labor, 1983.

^b Totals exclude 22 plans involving 9555 active employee participants in agricultural industries, and an unreported number of active participants in an additional 36 plans.

Issues, Theory, and Evidence

The major economic issues related to employee stock ownership plans can be divided into four categories: company-performance issues, labor-

market issues, finance issues, and plan-design issues. Each set of issues will be addressed in turn.

Company-performance issues focus on whether ESOP companies are more productive and more profitable than otherwise comparable non-ESOP companies. Indeed, a productivity effect may arise under an ESOP because workers may choose to supply more effort, contribute valuable ideas, be more cooperative, or be more quality- or cost-conscious in the production process. There is clearly some incentive for such behavior in ESOP firms since greater productivity presumably translates into greater profits and, therefore, greater stock value of the workers' shares in the company. On the other hand, to the extent that the stock value of an individual employee's shares depends not only on his or her own performance but also on the performance of the entire workforce and on a host of other factors (e.g., general market conditions, random shocks, etc.), there may also be some incentive for individual employees, given any level of overall workforce productivity, to shirk from supplying extra effort to the production process. Of course, this free-rider problem, which arises naturally in the employment setting, will be bounded by the extent to which fellow employee-shareholders can effectively enforce minimum effort levels at the workplace.

While research addressing these company-performance issues has been limited, existing evidence does suggest that ESOP companies outperform otherwise comparable non-ESOP companies. For example, Conte and Tannenbaum (1978) find that a sample of 30 employee-owned companies were between 50 and 70 percent more profitable than comparable conventional companies in 1976, and that the differential increased with the percentage of equity owned by the employees. Marsh and McAllister (1981) find that a sample of 128 ESOP companies had an average annual productivity growth rate that was 1.52 percentage points higher than that of conventional companies during the period 1975–1979. Also, the Senate Finance Committee (1979) finds that productivity grew four times faster in a sample of 75 ESOP companies than in all U.S. companies as a whole during the period 1976–1978. However, more evidence is clearly needed on the magnitude of the productivity and profitability effects of ESOPs, and on the determinants of the size of these effects (e.g., industry, company size, degree of ownership, etc.).

Labor market issues focus primarily on the employment effect of ESOPs. Theoretically, there are four ways in which ESOPs may influence employment at the firm level. First, ESOPs may affect employment through their impact on the productivity of labor and capital within the firm. Specifically, within a time horizon in which capital is fixed but output is free to vary (and assuming a positive productivity effect),

employment will tend to increase since greater profits can be earned by increasing output to a higher level at which wages equal marginal revenue product. On the other hand, within a time horizon in which capital is free to vary, employment may tend to increase or decrease, as the relative increases in the productivity of capital and labor may justify some degree of factor substitution.

Second, favorable tax treatment accorded to ESOPs may create incentives for firms to increase employment. For example, if the ESOP receives direct stock contributions from the employer, the company receives a tax deduction equal to the fair market value of the contributed stock. Because there is no immediate cash outlay, the company's current cash flow is increased by the amount of the tax savings (or wage savings secured in exchange for stock compensation to employees). To the extent that ESOP employers are either liquidity-constrained or heavily discount future compensation liability, this increased cash flow may be seen as representing a fall in their cost curves. As a result, a scale effect may be induced, with a corresponding increase in employment levels. Also, tax credits associated with certain types of ESOPs (i.e., PAYSOPs) will reduce the marginal cost of labor to ESOP companies, thereby reinforcing this positive employment effect.

Third, depending on the pattern of employer contributions to ESOPs over the business cycle, employment patterns in ESOP firms may be affected. In particular, if employer contributions to ESOPs are reduced during economic downturns, total compensation will have a degree of downward flexibility that wages alone do not typically exhibit. As a result, employment reductions will be moderated since both compensation and employment will adjust during a downturn and not just employment alone. The average level of employment will be affected because employment may fall by less in downturns but will generally rise to usual levels during upswings. Moreover, because ESOPs may damp employment reductions in downturns, ESOP firms may also show greater stability of employment than non-ESOP firms.⁵

Fourth, to the extent that managerial decisions reflect the preferences of a company's shareholders, ESOP firms may make different employment decisions than non-ESOP firms. In particular, employee-shareholders in ESOP firms may be able to influence management to reward them with higher compensation and to increase or decrease employment levels relative to otherwise comparable non-ESOP firms.⁶ The magnitude

⁵ These business cycle implications of ESOPs are consistent with the set of more general employment implications of gain-sharing methods of labor compensation discussed by Weitzman (1983).

⁶ The issue of the employment and compensation objectives of 100-percent worker-owned firms has been addressed extensively in the literature on labor-managed firms. See, for example, Vanek (1977).

of this "constituency effect" will likely be affected by factors such as the fraction of outstanding shares encompassed by the ESOP, the nature of voting rights under the plan, and the nature and homogeneity of worker preferences regarding management decisions.

Overall, the net outcome of these separate theoretical effects of ESOPs on employment is ambiguous. Empirically, limited evidence tends to support the view that ESOPs increase employment. For example, Rosen and Klein (1983) report that employment in a sample of 43 employee-owned companies grew three times faster than in comparable conventional firms during the period 1973–1982. Also, the Senate Finance Committee (1979) finds that employment growth in 75 ESOP companies was triple the average for all U.S. companies as a whole during the period 1976–1978. More evidence is clearly needed in this area.

Finance issues related to ESOPs focus on the risk-sharing implications of these plans. One important concern is the extent to which the potential benefits to employees of capital ownership in an ESOP are offset by the greater risk they are required to bear under their dual roles as employees and shareholders. Indeed, one may ask, if company stock is such a beneficial investment for employees, why don't they purchase it on their own? The reason, of course, is that doing so would achieve no diversification of risk between worker earnings and worker savings. Economic theory suggests that individual employees would prefer to diversify their portfolios by, for example, investing their savings in the stock of other companies, as in pension funds. Nonetheless, the risk-sharing between workers and owners that ESOPs impose may still be justified on the grounds that external benefits arise (e.g., a productivity effect, increased job satisfaction, etc.) only when large groups of employees are required to participate. Again, this is an empirical issue which as yet remains unresolved.

A final set of economic issues related to ESOPs focuses on the efficiency implications of alternative plan designs. During the past 10 years ESOPs have emerged which exhibit considerable variation in plan eligibility requirements, vesting provisions, types of stock issues, repurchase obligations, and leveraging behavior. There have also been a fair number of changes in ESOP law itself as it pertains to tax credits, ESOP voting requirements, and the distribution of plan benefits. Indeed, the period since 1974 in the United States may be regarded historically as one of social experimentation and search for an optimal employee stock ownership arrangement. Research which identifies different types of ESOP contracts in actual practice and associates with each of them a different level of actual plan performance has yet to be conducted.

Conclusions

Since 1974, employee stock ownership plans have grown to the point of having a fairly sizable presence in the U.S. labor market. Accompanying the emergence of ESOPs is an important set of economic issues concerning the impact that ESOPs may have on company performance, labor market outcomes, financial outcomes, and social welfare more generally. Another issue relates to the government's role in promoting ESOPs. While these issues can be precisely formulated at a theoretical level, they remain largely unresolved on the basis of existing empirical evidence. Further economic research on all of these issues is strongly encouraged.

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In Search of a Theory of Formation for U.S. Producer Cooperatives: Tests of Alternative Hypotheses*

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The central question addressed in this paper is the adequacy of current theories of formation of producer (worker) cooperatives (PCs). Our principal motivation in undertaking this largely empirical evaluation is to provide a point of departure in the construction of a more robust theory of cooperative formation. On a policy plane, we believe that understanding the causative factors underlying coop formation is fundamental to any assessment of the prospects for the cooperative sector and the prospects for employee ownership in general.

Our analysis suggests that there are great dangers inherent in relying on statements about the “causative” factors for formation in individual PC cases. For example, in our reading of the literature on the individual cases, we have found 151 statements to the effect that the cooperative in question was formed due to unemployment, 65 attributing the founding to strikes, and 19 to moral, social, or philanthropic values. (There are various other “causative” factors mentioned, but none is mentioned more than seven times.) In our view, statements such as these are indicative of preexisting conditions to the formation of a coop, but say little about why forming the coop was the chosen response. In fact, the fraction of unemployed persons in the U.S. who have responded by forming or joining a cooperative is minuscule. The real question would appear to be: why did *these* unemployed persons form a coop? However, in the search

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for an explanation of this important aspect of coop history (i.e., the formation rate), several writers have suggested causative relations between the formation rate and specific objective phenomena. On the basis of our prior expectations and of the analyses reported below, we believe that such explanations have little substantive content or explanatory power.

The paper is arranged as follows: We first provide a statistical overview of the history of PC formation in the U.S. We then review several theories which have been proposed as explanatory of the history of coop formation, and, finally, we report the results of our statistical testing of these theories. Our tests make use of a large new data base reflecting most U.S. PCs formed prior to 1968.

Statistical Overview of U.S. Cooperative Formation

The history of cooperative formation has been roughly characterized by several writers (Ely 1886, Adams and Sumner 1888, Shirom 1972, Jones 1977). A central problem of all of these accounts has revolved around the adequacy of the data. In the absence of standardized terminology, different authors inevitably use dissimilar criteria in selecting PCs for inclusion.¹ Moreover, no individual or institution has collected data on PCs over an extended period of time. Consequently, even simple estimates of the total number of PCs ever formed have been difficult to obtain, and estimation of the number of coops formed in each decade varies widely from account to account. For example, Shirom (1972) claims that a major "wave" of PC formation occurred during 1837–1844, while Jones (1977) found that no PCs were formed then.

In response to these problems with the underlying data base, Howard Aldrich and Robert Stern supervised the most extensive effort to date at identifying and locating U.S. PCs. They identify 790 PCs formed prior to 1968.² Of these, 705 met our criteria for inclusion as PCs and had data over and above the name of the coop.³

¹ While the traditional PC has several easily definable features, very few organizations that one could readily identify as PCs have all of these features. For example, it is perhaps the most fundamental feature of PCs that each member has one vote. Yet a substantial minority of U.S. PCs in the early and middle 1800s assigned voting rights on the basis of amount of stock owned, in all other respects satisfying the basic definitional requirements (see Jones 1984). Another issue pertains to the purpose of the cooperative. PCs tend to be defined as organizations whose purpose is the provision of a living wage, or other similar strictly economic goals. However, numerous cooperative organizations have been all-encompassing in their goals. Some authors may have included such "communities" in their counts, while others may have rejected them. Several other issues, in addition, make operational definitions difficult.

² See Aldrich and Stern (1983) for background information on their data set. These data were integrated with a data set previously collected by Jones that contained a broader range of economic data although for a smaller number of PCs. See Jones (1979, 1984).

³ For contemporary U.S. PCs, see articles in Jackall and Levin (1984).

When the data assembled for these PCs are examined, a number of observations are apparent. First, arranging the data by years in which PCs are known to have been formed, together with the number formed in each of these years, reveals that the formation rate appears to have been quite regular. Aside from the Depression years, there is little evidence that the process was dominated by waves of formation activity interspersed with periods of inactivity. Rather, since the Civil War, there have been only 22 years in which at least one PC did not form. Usually there were a small number of formations (typically one to five), but several years stand out as highly unusual: 1850 (19 formations), 1867 (19), 1885 (34), 1886 (54), 1917 (24), and the Depression years 1932–1936 (128).

A second observation is the existence of industrial “clustering.” While certain industrial groupings are highly represented (e.g., cooperage, metal foundries, shingle-makers, and plywood manufacturing), many SICs have little representation, or none at all. A third and final “stylized fact” is that while some PCs were formed as a result of conversion from other organizational forms, the bulk—more than 90 percent—were formed as cooperatives.

Review of Major Formation Theories

It is not possible in a short paper either to present a comprehensive survey⁴ of all “theories” or to expand in detail on those actually reviewed. Rather, the following represents what we consider to be the better expressions of certain “common notions” that recur in the literature.

The more prominent view is to regard PC formation as a response to unemployment and the business cycle. Shirom (1972) argues that U.S. PC formation has responded to adverse short-run business conditions. In a theory that purports to explain the rise and fall of industrial democracy in general (and not only PCs), Buchanan (1978) argues that similar motivating factors have operated in Great Britain. The specific causal link between the business cycle and the rate of coop formation appears to be somewhat different for Shirom than for Buchanan (see also Woodworth 1981). Shirom argues that PCs have formed in (five) waves, with the first of these occurring in 1837–1844, the second in 1867–1869, the third in 1883–1886, the fourth in 1921–1923, and the fifth during the Great Depression in the 1930s. According to Shirom, each wave corresponded to a different “stage of industrialization.” However, Shirom emphasized certain “environmental forces” reoccurring in each stage, notably unemployment and lost or losing strike actions. A wave of coop formation

⁴ In particular we do not review the recent contributions of Ben-Ner (1984) and Fanning and McCarthy (1983).

results from those forces. In his view, coops were formed as a pragmatic response to cyclical bursts of unemployment.

Buchanan's analysis also emphasizes the practical nature of the cooperators' motivations, but the causal sequence differs from Shirom's. According to Buchanan, "changes in the pay-income ratio and in productivity . . . appear to produce conditions periodically that lead to a demand for industrial democracy." In particular, upsurges of interest in industrial democracy result when there is a fall in the rate of increase in average real income.

Grossman observes that coops have been formed in some cases not in response to failed strikes, but rather as a strike tactic. According to Grossman, William Sylvis saw cooperation as a weapon of combat, "a mailed fist" with which labor could "break asunder its shackles and remove from authority those who aimed at the subjugation and degradation of labor" (Grossman 1943, p. 198). While a number of PCs may have been formed in connection with strikes (particularly of the iron molders), and for the purpose of aiding in winning the strike, the question addressed here is whether this has served as a generalized motivating factor for PC formation.

In attempting to explain why the number of PCs formed has been so small in comparison with the total organizational population, and why the few that did arise were established, Aldrich and Stern (hereafter AS 1983) argue that "material incentives in the developing [U.S.] economy favored individual over collective enterprise efforts." This explanation leads naturally to the conclusion that the relatively few coops that were formed owe their origins to particular constellations of circumstances in which collective incentives dominated. Unlike Shirom and Buchanan, they focus on resistance to change in social structure as the motivating factor rather than individual material incentives. Bursts of formative activity coincide with major changes in the structure of the U.S. economy. These economic changes disrupt the established social structure and lead, in some cases, to the emergence of PCs as a buffer against these upheavals in social life.

Testing the Theories

Theories of cooperative formation may be tested in various ways. One method is to see whether or not the implications of the various theories are consistent with the three "stylized facts" on cooperative formation presented earlier. Testing at this level reveals the inadequacy of the theories reviewed. Thus no theory proposed to date has been based on the industrial clustering phenomenon nor is able to explain it satisfactorily. The view that PCs were formed in waves (e.g., Shirom) is contradicted by a formation rate that is quite regular.

A second and more rigorous method is to use statistical analyses to test specific hypotheses. We constructed time-series data measuring the principal factors stressed in each theory and correlated the rate of coop formation with each time series using univariate linear regression. We also calculated correlations of the formation rate with lagged values of the regressors, with deviations of the time-series data from fitted trends for those variables that have a natural trend, and with lagged average values of the deviations. All of the regressions were run for the entire time period(s) for which time-series data were available for the regressors, and then were repeated for the same periods but excluding 1931–1938. This was done because it is unclear whether the cooperatives formed in those years (the “self-help” cooperatives) should be classified as PCs because few of them engaged in market relations with customers, and many received government assistance. In addition, these coops represent 128/705 observations and tend to have extreme or outlying values for most of the regressor variables. Hence, from a purely statistical point of view, data from this period are likely to dominate the results whether or not they are supportive of particular hypotheses. For these reasons, we believe that the results from the data analyses excluding the 1930s are more credible than results from the analyses including this period.⁵

Shirom’s theory that the rate of coop formation has been a function of the business cycle may be tested by using the rate of unemployment as a measure of the cycle. The regression results show little support for this theory. While the current and lagged values of the unemployment rate and the average lagged time trend residuals are all significant predictors of coop formation when the years 1931–1938 are included, none is significant when these years are excluded. For the reasons given above, the contrast between these two sets of results is not surprising. While the self-help cooperatives were formed in response to the severity of unemployment in the 1930s, the regression results indicate that, for the balance of the period under consideration, the PC formation rate was uninfluenced by the unemployment rate. Moreover the coefficients on the unemployment rate variables are all negative, implying that data from a larger sample, which might yield significant coefficients, would only refute Shirom’s hypothesis more strongly.

To test Buchanan’s hypothesis, the cycle is measured using an index of industrial production. Lagged two-, three-, and four-year averages of the production index trend residuals measure the strength of the cycle. Most of the regression results using the raw income data are negative, and

⁵ The actual regressions run (including information on the sources of time-series data and measures used) are available from the authors.

either significant or border on significance. However, these results primarily reflect the time pattern of formation, with most of the formations occurring in the earlier years of the period (when the production index was low), rather than in the later years (when the production index was much higher). The real test of Buchanan's hypothesis is provided by using the residuals from the secular trend because these represent measures of the stage of the business cycle. As with the unemployment rate, the cyclical behavior of the production index shows no significant correlation with the PC formation rate when the 1931–1938 years are excluded. This is consistent with our view that the PC formation rate has been unaffected by the stages of the business cycle.

Grossman's suggestion that PCs have been formed in support of other union initiatives, particularly strikes, may be tested by using data reflecting the absolute number of work stoppages due to strikes. These data were detrended to control for the secular increase of strike activity due to growth of the economy and growth of union activities in general. While some of the regressions using the strike variable are significant, all the significant results bear negative coefficients, counter to Grossman's suggestion. While some PCs may have been formed to help striking workers with their cause, this has certainly not been a generalized phenomenon.

It is less easy to select a simple measure suitable for testing AS's hypothesis. We have chosen union membership as an indicator of response to changing social-economic conditions. Again, deviations from a fitted trend indicate higher or lower than average membership growth. The rationale for choosing this measure is that AS proposed coop formation as one of several responses to changing economic structures. Clearly, union membership growth has also been such a response, implying that there should be a correlation between the two measures if AS's theory is correct.⁶ For the period 1897–1967 our results indicate that the relationship between PC formations and growth in craft union membership, if it exists, is a weak one. None of the coefficients with a positive sign is significant at the .05 level of confidence, and the R^2 values are exceptionally low. Since the period after the 1930s has witnessed the growth of noncraft unions, we ran similar regressions limiting the period of analysis to 1897–1931. (Reliable data on craft unions were not available prior to 1897.) The results of the analysis using this truncated period again indicate an insignificant relationship between PC formations and growth

⁶ However, we note that AS's theory is not so easily quantified as the others. In light of this, we feel that the results of our analyses represent only a preliminary test of their hypotheses.

in craft unionism. But it is not clear that our regressions reject AS's hypothesis for the entire relevant period. The character of the American labor union movement, and of American society in general, may be so different in the 20th Century than it was in the 19th that our analysis may not apply to the earlier period. However, it does seem clear that 20th Century PCs have not been formed in response to sociopolitical concerns of the type that AS stress.

Conclusions

Several theories of coop formation were tested using a large new data base. We find that none of the theories reviewed can adequately explain the U.S. history of PC formation. However, the poor explanatory power of these theories is not surprising in view of the excessive reliance on authors' narrative accounts in deriving them.

We suggest that there are really two related theoretical questions that have been blurred in the literature thus far and on which future researchers should focus attention. The first question is at the organizational level and involves understanding why particular collective organizations are established. The other question involves the decisions of individuals to join or not to join a cooperative.

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Employee Ownership: Lessons Learned

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“In the United States, in most cases employee ownership occurs when there is an employee buyout of a plant being shut down.” In those words, an American student was misinforming a foreign scholar. Probably this myth has gained wide currency because this type of case involves a highly dramatic struggle that attracts widespread media attention.

In fact, according to Corey Rosen of the National Center for Employee Ownership, of over 6000 cases in which employees hold some share of ownership in companies, only about 1 percent have arisen out of employee buyouts in the face of impending plant shutdowns. Nevertheless, I shall focus on this type of case, for several reasons. With my Cornell associates, I have been tracking this type for the past ten years. Such cases illustrate important problems that may be at the cutting edge of contemporary changes in industrial relations. And finally they do add up to a significant number of jobs saved—well over 50,000—and of the approximately 60 cases, we know of only four or five where the employee-owned firm subsequently went out of business. Considering that we have been tracking these firms through the most severe recession since World War II, this is an impressive record. Examining that record has also alerted us to phenomena that may occur in cases where employee ownership has arisen in other circumstances.

Worker Expectations and Labor Relations

When workers come to share in ownership, this changes their expectations about labor relations and this, in turn, leads to changes in the nature of labor relations. In the 1970s cases, without exception, it was key members of local management, sometimes in association with community officials, who organized the buyout to stave off a plant shutdown. Workers and local union leaders cooperated passively with management, and high level union officials stood aside, not knowing what to do.

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Neither workers nor their representatives made any demands for worker participation in decision-making. However, in the general spirit of euphoria that accompanied the successful campaign to save jobs through buying the plant, they did have some vague idea that they would be treated with more dignity by management. They also believed that their views would be taken into account in managerial decision-making. When I asked the president of the blue-collar UE local in the Herkimer plant that was being shut down by Sperry-Rand whether he thought that workers or union leaders should "participate in management," he flatly stated that it should be management's responsibility to manage. But when I asked him if workers should have some "input into decision-making," he said that this was obviously what they wanted.

As the spirit of euphoria wore off and workers found that they were treated just as before, disillusionment set in. This was illustrated by the comment of the president of the white-collar union in the same plant, when I asked him, 15 months after the buyout, what had changed in labor relations. In the period of euphoria, he and the blue-collar union president had spoken enthusiastically about the new spirit of cooperation between union and management. Now he said, "You ask any worker what it means to work in that plant now. They'll tell you, 'I've got a job.' That's all. Nothing else has changed. This place doesn't run any different now than it did when Sperry-Rand owned it" (Whyte et al. 1983, p. 88).

In the 1970s we find the change from euphoria to disillusionment taking place within the first six to twelve months following the takeover. Where employee sharing in ownership came into effect long ago in quite a different climate of opinion and attitudes, the clash between worker expectations and maintenance of the traditional pattern of labor relations could remain without resolution for many years and then surface to provoke a conflict. Such was the case with American Cast Iron Pipe Company, which was turned over to the employees in 1924 by its entrepreneur-owner John Egan.

Under an arrangement that John Egan made while still alive, 12 workers elected from the shop floor sit with 5 executives on the board of trustees. After 59 years of rubber stamp complacency, the workers mutinied last year. The workers reread Egan's will and decided that they, not management, should control the company. Then they announced to fellow laborers that Acipco had improperly withheld \$24 million in bonus pay. (*Forbes*, April 23, 1984)

The outraged chief executive officer then fired the worker-trustees, who got their jobs back under court order.

So far we have seen a general failure of management to recognize that a shift to employee ownership requires a change from traditional styles of labor relations and managerial leadership. This failure is most dramatically illustrated in the case of John Lupien, the maintenance supervisor in the asbestos plant that was being shut down by GAF. Lupien was the popular hero of what became Vermont Asbestos Group. Whenever Board Chairman Lupien was asked by reporters or researchers what plans he had for worker participation in decision-making, he had a stock answer: "If you own stock in General Motors, that doesn't give you the right to run General Motors."

When I first heard this answer, it seemed to me that someone who could see a close analogy between that giant corporation and a tiny company of 150 workers who owned 80 percent of the stock, was bound to run into trouble. Indeed he did. Not long after, in response in part to worker dissatisfaction with a major decision he had pushed through the board of directors, Lupien lost control when many workers sold their stock to an independent entrepreneur whose group took over a majority of the board. In a later stage of the conflict, Lupien was discharged.

When workers and management leaders of the Herkimer plant which had become the Mohawk Valley Community Corporation met with us at Cornell within two weeks after the dramatic success of their employee buyout, I asked President Robert May whether he had any plans for worker participation in decision-making. He replied, "No, we haven't got around to that yet." Then, after a pause, as if he sensed there was something lacking in his response, he added, "Maybe we should install a suggestion box."

Management people don't have to be told that workers need some education so that they can perform the role of worker-owners. However, I have yet to encounter a manager in this situation who has volunteered the statement that management people need to be involved in an educational resocialization process. There seems to be a general tendency to take the view that I have heard expressed by several management people: "Workers should act like workers from 9 to 5 and like owners after working hours." In other words, for managers it should be just business as usual.

Views of Social Justice

Whatever its origin, a shift to employee ownership tends to change worker views of social justice. We see this in the comparisons they look for in deciding whether their pay and benefits are equitable. Under private ownership, they tend to compare themselves with other workers with similar seniority, skills, and job classifications within their own

company or within their own industry. They are well aware that people in top management are paid many times more than they; if you ask them whether such a wide salary range is fair, they might well reply that it is not, but they don't appear to give much attention to such comparisons. When the company shifts to partial or full employee ownership, the comparison of their financial and social rewards with those of higher management becomes much more salient.

I observed this shift first in Peru in the early 1970s (Whyte and Alberti 1977). Those who called themselves "the revolutionary government of the armed forces" had established by decree The Industrial Community. This was a program under which private firms were required to provide employees with stock based upon profit-sharing, along with one representative on the board of directors initially, with additional representatives to come as the workers' shares increased. Along with board representation came the right to examine the company's books and even bring in accountants and lawyers to assist in this process.

As we studied the implementation of this drastic change, we found workers and their representatives focusing with increasing vigor upon managerial perks, salaries, and benefits. They wanted to know why top management people were using company cars for their private purposes. They asked whether it was really necessary, when they travelled to another city, for them to stay in the most expensive hotel. They challenged the expenditures management was making on high-priced consultants and wanted to know why management didn't make more use of the skill and experience of employees.

My favorite illustration of this change comes from a factory in Iquitos, a city on the Amazon, close to sea level and to the equator. Worker representatives complained that it was hard to do heavy work under tropical conditions and asked management to air-condition the factory. After studying this proposal, management came back with a report that the cost not only of buying the equipment but also of operating it would be prohibitively expensive and therefore could not be considered. The worker representatives were duly impressed with management's cost figures but came back with this suggestion: "Then why don't we save the company a lot of money by shutting off the air-conditioning in the management offices?"

That Peruvian case involved no major disruption because the workers were not in a position to push their claims. We found quite a different situation in 1984 at Hyatt-Clark Industries. In buying the plant from General Motors to save their jobs, the employees had made substantial pay sacrifices. Under the terms of the ESOP, it would not be until ten years after the buyout (1991) that the workers would be able to vote that

stock. However, they did gain three members on a 13-person board of directors and have a militant union, UAW Local 736. The union's concern with financial equity manifested itself in the buyout process in a dispute over the allocation of the stock. Management proposed that the stock be distributed in relationship to compensation levels, as is customary in a management-dominated ESOP. Union pressure finally secured an equal distribution of stock, without regard to pay differentials.

The equity question remained very much alive in the process of recruiting people for top management positions. The union leaders went along reluctantly with management's contention that the job market would have to determine salaries offered. However, in the cases of all subsequent promotions and replacements, the union leaders have given careful scrutiny to high level salaries and demanded extensive justifications. At one point, when the chief executive officer announced a plan for management salary increases averaging 6.5 percent, the union leaders accepted the overall figure as reasonable, but demanded specific salary information so as to determine whether those being rewarded with higher than average salaries were really worth the increases. When the chief executive officer declined to provide this information, the union leaders on the board of directors took the case to court. Thereupon, the chairman of the board released the figures.

The most serious confrontation so far occurred in the late spring of 1984. Productivity had increased, and in the preceding quarter the company had earned a substantial profit. The contract negotiated with the shift to employee ownership had led workers to expect that there would be profit-sharing so that they could gain back some of their sacrifices. In fact they were hoping for as much as \$600 each. In a board meeting, the chief executive officer announced that the company would invest all the profits in a technological modernization program. Union President James May said that he recognized the need for further investment but argued that dashing worker expectations would have disastrous results. He argued for at least some sharing of profits.

When the majority on the board supported the CEO, the labor relations situation in the company changed abruptly. The union leaders reported that the workers might have accepted this decision reluctantly if it had not been accompanied by a program to refurbish management offices and a decision that management people could work somewhat reduced hours during the summer months, to make up for extra hard work earlier—but, of course, without any cut in management salaries.

Following these decisions productivity dropped off so that management had to resort to paying workers overtime in order to keep up with current orders. Instead of operating at a substantial profit, Hyatt-Clark

was now losing money, and the union leaders, in preparing to bargain for a new contract, were determined to push for substantial sharing in power by workers through their union.

The parties began bargaining for a new three-year contract in July 1984 against a September 15 deadline, at which time, with no contract signed, General Motors would cancel its purchase orders. Since 85 percent of Hyatt-Clark's production went to GM, failure to meet the deadline would have meant bankruptcy for the company. When agreement was still not in sight in September, GM agreed to a three-month extension but insisted that midnight, December 15, was the final date. Since the 15th fell on Saturday, the parties were able to continue bargaining until they finally settled at 5:00 a.m. on Monday, December 17.

The union secured a comprehensive structure of joint participation committees from the bottom to the top of the company—but President Howard Kurt retained veto power over committee actions. The union accepted management's offer of about a 5-percent pay increase—50 cents per hour for each of the first two years, 55 cents for the third year. The importance of the equity issue is indicated by the fact that management's pay offer had been on the table weeks earlier, but the union leaders bargained up to the deadline in a vain effort to limit office workers and management people to the same cents per hour figures.

Will Cooperative Labor Relations Save the Jobs?

As researchers and practitioners, we are inclined to overestimate the importance of industrial relations in business success or failure. Obviously, labor relations conflicts can destroy a company, and cooperative labor relations can strengthen it, but other factors may be overriding.

That is one of the principal lessons of our university involvement in research and action with Rath Packing Company and Local 46 of the United Food and Commercial Workers. The case seemed particularly important to us as the first one where the shift to employee ownership in a major company (in 1980) was engineered by the union leaders and where they secured majority control of the board of directors. Since Rath was forced into Chapter 11 in November 1983, there has been a widespread tendency to attribute the company's financial problems to a failure of worker participation and control. Since ESOP attorney Jack Curtis had made a great creative contribution in working out for Local 46 an employee stock ownership trust which achieved and protected continuing worker control of the board of directors, I was startled to hear him say in a 1984 meeting of the National Center for Employee Ownership that the financial deterioration of Rath was due to the unwillingness of workers to make sufficient sacrifices. Let's look at the record. According to Donald

Wade, Director of the Blackhawk County Economic Development Committee, which played a major role in securing the refinancing of Rath, the workers made sacrifices in pay and benefits of over \$17 million at the time of the buyout. In September 1982, the workers accepted the termination of their pension program, thus leaving all but the most senior employees unprotected. In February 1983, when the banks threatened to cut off Rath's credit unless further substantial cuts were made, 72 percent of the workers voted to accept a \$2.50 an hour "wage deferral"—the money coming back to them only in the unlikely event that Rath once again became profitable.

Throughout this period from early 1980 until 1984, hundreds of workers spent endless hours on their own time in meetings before or after shifts to work with management on improving productivity and lowering costs. This cooperative problem-solving program achieved a plant productivity improvement of at least 20 percent. However, Christopher Meek points out that, throughout this period, labor costs in production accounted for only between 15 and 20 percent of total costs. Thus a 20-percent increase in plant productivity yields only a 3 to 4 percent total gain in cutting overall costs—and that was far from enough.

The productivity gains were overwhelmed by problems in marketing, in top level administration, and in financing the company. Rath was short of working capital and had to be financed at interest rates up to 5 percent above prime—and that during a period of historically high interest rates. At the same time, hog prices were extraordinarily high during a recessionary period when the weakness of the consumer market prevented the company from passing on increasing costs to customers.

The union leaders were aware of all of these problems, but their experience and expertise were limited to the production process. Those of us who were providing applied research and technical assistance to union and management had no mandate to work on the overall problems of business administration and marketing, nor did we have the necessary expertise.

Without downgrading the importance of contributions in the industrial relations field, we have to recognize that the saving of Rath Packing Company through employee ownership—or of any company in dire financial straits—requires an integrated program of technical assistance including labor relations but extending also into various fields of business administration.

Jobs and/or a Social Movement?

If we judge simply from the standpoint of saving jobs, there is no doubt that employee ownership can and does work in many cases. If we

are concerned not only with saving jobs but also with building a social movement, there are additional and difficult problems to be resolved. Besides a viable economic base initially for each employee-owned firm, the growth of a social movement requires two additional factors: a system for maintaining employee ownership and a system for linking together otherwise isolated worker cooperatives or employee-owned firms.

How Employee Ownership Is Lost

For a social movement, the nature and form of employee ownership is of critical importance. In the past most employee-owned firms have found themselves in a Catch-22 situation: the firm ceased to be employee-owned either because it went bankrupt or because it was highly successful, but the original employee-owners had not devised a system for sharing ownership with new workers. This factor accounts for much of the decline in the numbers of the West Coast plywood worker cooperatives, which overall have been able to compete successfully with private firms in their field. On the face of it, the plywoods have appeared to have an ideal democratic structure: at the outset, only workers owned the company, with each worker owning one share of stock and only one. As such a company becomes highly prosperous, the value of each share of stock increases substantially. In this situation, what we call collective selfishness tends to take over. The original worker-owners decline to dilute their own equity and require new people to come in simply as hired labor. When the original worker-owners approach retirement, they would be glad to sell their shares of stock, but by this time the value of the shares is beyond the reach of nonowning workers.

Whether employee ownership is successful in such cases may depend upon whether we are considering the interests of the original or early worker-owners or whether we are thinking of the long-run maintenance of employee ownership. No doubt the employees of the *Kansas City Star* and the *U.S. News and World Report* believe that employee ownership has been a bonanza to them. When the profitable newspaper was sold, employees found that the market value of their shares had multiplied many times. The magazine story is even more spectacular. David Lawrence, founder of the magazine, sold it to the employees when he retired in 1962. A *New York Times* report (June 15, 1984) estimated that the average employee would receive \$50,000 and that 20 to 40 long-service and high-ranking executives would become millionaires from the sale.

A less happy tale is found in the case of one of the plywood cooperatives. In 1938 Anacortes Veneer, Inc. was established as a worker cooperative, with each worker putting up \$4,000. Publishers Paper Co.

bought out the worker-owners for \$55,000 per share in 1969. On September 28, 1981, that company closed the plant. On April 16, 1984 the plant reopened again as a worker cooperative, Anacortes Plywood, Inc. The 150 worker-owners bought back their jobs at between \$15,000 and \$20,000 each. The newspaper reports (*Seattle Post-Intelligencer*, March 29 and June 25, 1984) do not tell us whether the worker-owners today learned anything from the experience of Anacortes Veneer, Inc. to assure the long-run continuation of worker ownership this time around.

The U.S. Future

This continuity problem can be solved through applying the social policy invented by the founders of the Mondragón cooperative complex in the Basque country of Spain. (Gutiérrez-Johnson and Whyte 1977) In this phenomenally successful cooperative movement, control is based on labor rather than on capital. Ultimate power is in the hands of workers on a one-worker-one-vote basis. There is no stock. Worker initial contributions are treated as if they were loans to the company, paying interest each year to the members. These capital accounts of members remain with the firm as long as they stay on the job, and the capital accounts are increased through profit-sharing.

Students of employee ownership believe that it is possible to design an ESOP so as to come close to the Mondragón formula in securing continuity of employee ownership. However, the design problems involved in reaching this goal with an ESOP are much more complex than the Mondragón formula. Unless those designing the ESOP take care to apply the best information and ideas now available on the continuity problem, in the future as in the past financially successful employee-owned firms will come to be owned and controlled by outside stockholder interests.

Students of worker ownership have come to the conclusion that an isolated worker cooperative, like an island in a sea of private enterprises, is bound to lead a precarious existence. In Mondragón, the cooperatives are closely linked with supporting organizations. Of these, the Caja Laboral Popular (the bank) is the most important since it provides not only financing but also an extraordinary range of technical assistance in starting and maintaining cooperatives.

A growing number of practitioners in worker cooperatives and nonprofit organizations have recognized the need for linking cooperatives together and building support organizations. The linkages in the U.S. will be looser than those of Mondragón, but the surge of interest in employee ownership and the growing involvement of researchers and practitioners in the field give some promise that one day we may be able to refer to a real American worker cooperative movement.

A major factor supporting worker ownership and worker participation in management has been the striking growth of union interest and involvement in employee buyouts and shifts to partial employee ownership. In the mid-1970s, higher level union leaders were either ambivalent or hostile toward employee buyouts. By the mid-1980s some of the major unions had become involved in employee ownership.

The change is particularly striking in the cases of the UAW and the USWA. In the 1981 employee buyout of a General Motors plant to create Hyatt-Clark Industries, leaders of UAW Local 736 received no help from regional or national officials. By 1984 former UAW President Douglas Fraser had assumed a position on the board of Hyatt-Clark, and regional and national officials had provided essential assistance in the employee buyout that created Atlas Chain Company. Furthermore, we see the lessons learned earlier being applied later as James May and James Zarrello, leaders of Local 736, consulted with the prospective worker-owners of Atlas Chain, and Craig Livingston, attorney for Local 736, working with PACE (Philadelphia Area Cooperative Enterprise), put in place one of the most democratic ESOPs yet to be created.

In one of the earliest of the 1970s buyouts, officials from the international office of the Steelworkers abstained from any involvement in the design of the South Bend Lathe ESOP. When the local union members reluctantly agreed to trade their pension program for stock ownership, USWA international officials sued the company in a vain effort to void that transaction. In a 1984 meeting of the Michigan Center for Employee Ownership, the assistant to the president of USWA, James Smith, stated that it had been a mistake for the international office to refuse to participate in the design of the South Bend Lathe ESOP. He now believed that the future of the U.S. steel industry would depend in part upon the ability of labor and management to negotiate terms for worker-sharing in ownership.

The Machinists, the Airline Pilots, and the Teamsters have taken the leadership in the restructuring of the airline and interstate trucking industries as they have traded pay and benefit concessions for stock ownership, positions on the boards of directors, and (especially in Eastern Airlines) for worker and union involvement in decision-making at all levels of the companies.

United Food and Commercial Workers, through the Rath Local 46, was the first major union to take a leadership role in establishing employee ownership. Beginning in 1982, under the leadership of Wendell Young, president, Local 1357 has made the creation and strengthening of worker cooperatives in the Philadelphia area a major strategy for coping with plant and store shutdowns (Whyte 1985).

Through continuing study of cases and learning from experience, we can predict that union leaders, with their academic and consultant allies, will play increasingly important roles in the spread of employee ownership and in the democratization of management.

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XVII. THE FUTURE OF INDEXATION

Cost-of-Living Escalators: A Brief History*

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By automatically linking wages to unanticipated future price changes, cost-of-living escalators (COLAs) facilitate the use of long-duration contracts. In so doing, COLAs indirectly reduce the costs associated with labor negotiations and strike exposure. Given this feature of COLA clauses, it is surprising to discover that, although long-duration contracts have been in use since the turn of the century, very few of them contained COLA clauses until the 1950s (Table 1). This conundrum will be examined in the course of analyzing the historical development of COLA clauses.

Origins and Development

In the United States, the practice of tying wages to the cost of living goes back to the early 17th century when Colonial wage-fixing bodies set maximum wage levels according to the prices of those commodities deemed necessary for "Life and Comfort." Although this mercantilist sort of wage regulation died out by the 1700s, extensive wage and price controls were temporarily adopted during the Revolutionary War, and maximum wage levels again were fixed "in Proportion to the rates of the Necessaries of Life." Unlike modern COLA clauses, these were discretionary, rather than automatic, linkages between wages and prices. Yet one can find examples of automatic plans in the premodern world. In 1795, the English poor authorities adopted the infamous Speenhamland scale, which tied levels of monetary poor relief (actually wage subsidies) to fluctuations in the price of bread. A more comprehensive indexing

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* Due to space limitations, references have been omitted. These are available from the author upon request.

TABLE 1
Contract Characteristics
(Percentage of Contracts)

| | Escalators (Covered Workers, in Millions) | | Reopener Clauses (Conditional on Inflation) | | Deferred Adjustments | Duration | |
|-----------|---|-------|---|-----|-------------------------|-----------------|-----------------|
| | | | | | | Over 23 Mos. | Over 35 Mos. |
| 1900-1914 | 0 | — | 6 | (0) | 4 | 34 | 18 |
| 1915-1920 | 0 | — | 22 | (6) | 9 | 38 | 15 |
| 1921-1934 | 0 | — | 27 | (3) | 8 | 41 | 18 |
| 1935-1942 | 1 | — | 31 | (6) | 4 | 26 | 8 |
| 1948 | — | (.25) | 40 | — | — | 25 | 0 |
| 1950 | 2.4 | (.80) | 60 | — | — | 55 | 2 |
| 1952 | 25 | (3.5) | 60 | — | 20 | 69 | 29 |
| 1954 | 20 | — | — | — | — | — | — |
| 1955 | — | (1.7) | — | — | — | — | — |
| 1957 | — | (3.5) | 36 | — | 33 | 81 | 38 |
| 1959 | 32 | (4.0) | — | — | — | — | — |
| 1961 | 28 | (2.8) | 28 | — | 58 | 91 | 44 |
| 1963 | 16 | (1.9) | — | — | — | — | — |
| 1965 | 12 | (2.0) | 13 | — | 72 | 91 | 51 |
| 1970 | 34 | (2.8) | 12 | — | 87 | 93 | 71 |

Notes: 1900-1942: Based on data from 718 contracts in author's file. 1948-1970: COLA data are for workers under major contracts from: *Current Wage Developments* (February 1974), p. 45; BLS *Bulletin* No. 1022 (1951), p. 28, and No. 1425-4 (1963), p. 6, and No. 1686 (1970), p. 30; BLS *Report* No. 17 (1953), p. 3, and No. 75 (1954), p. 3; *Monthly Labor Review* (December 1958), p. 1350, and (December 1960), p. 1258, and (December 1964), p. 1372. Reopener, deferred, and duration data from: 22 LRRM 3 (1948), and BNA, *Basic Patterns in Union Contracts* (1954, 1957, 1960, 1966, and 1971).

scheme was put forth in 1822 by the English economist, Joseph Lowe. Lowe was disturbed by what he called the "anomalies arising out of unforeseen fluctuations in our currency," such as the fact that during the Napoleonic War, English workers' wages lagged behind rising prices, while after the war employers were unable to reduce wages as quickly as prices fell. To prevent the social conflict caused by these lags, and to give "other contracting parties the means of maintaining an agreement [over time]," Lowe proposed that wages, salaries, and rents be hitched to a cost-of-living index.

Prices and Poverty

Despite these precedents, wage adjustments based explicitly on the cost of living remained a rarity for most of the 19th century, but then began to proliferate in Europe and the United States during the two decades preceding World War I. There were two reasons for this change. First, the mid-1890s marked the end of a long deflationary period, after which prices gradually rose throughout the industrialized world. In the U.S., the consumer price trend turned upward after 1896 for the first time since the early 1800s (excluding the Civil War years). Growing interest in

the cost of living led the Bureau of Labor Statistics to publish in 1903 a detailed study of the consumption patterns of 25,000 working-class families; the following year the BLS issued a retail food price index with annual figures going back to 1890.

A number of private arbitrators and state arbitration boards began to rely on these data to decide cases in which the rising cost of living was a disputed issue. The cases typically arose in years during which consumer prices unexpectedly climbed above their trend (e.g., 1902–03, 1910, 1912–13). The awards made discretionary use of price data; none provided for automatic future wage increases tied to prices. For example, when in 1902 striking coal miners justified their wage increase demands by referring to the high cost of living, the Anthracite Coal Strike Commission simply based its award on the rise in food costs (as reported by the BLS) during the preceding three years.

Second, this period witnessed a worldwide discovery of poverty as a social rather than an individual problem. Social reformers in the U.S. published numerous studies of working-class life, including local budget studies that gave relatively precise estimates of the extent of poverty in an area. Beginning in 1890, these reformers pressed for the passage of minimum wage laws that would give workers a “living wage” sufficient to bring their families above the poverty line. Australia (1896), Great Britain (1909), and a host of other nations enacted minimum wage laws that protected unorganized workers. But *laissez-faire* traditions and union opposition prevented reformers from making much headway in the U.S.: Only 15 states passed minimum wage laws between 1912 and 1923, and these laws were limited to women and children.

State minimum wage boards periodically revised their rates in line with their own and BLS studies of cost-of-living changes for single women, although none adopted the British practice of “pegging” the minimum wage by automatically adjusting it to fluctuations in consumer prices. In addition, the budget data gathered by these boards stimulated state arbitration agencies and municipal wage commissions to do their own studies of living costs so as to determine adequate wage levels for workers under their jurisdiction. Private arbitrators relied on these data or asked university professors to compile them, as when Berkeley economist Jessica Peixotto came up with local cost-of-living figures (“two steps higher than the subsistence level”) to help settle a 1917 Oakland labor dispute. Again, however, these “living wage” awards did not provide adjustments based on future changes in the cost of living.

World War I

Until World War I, wage adjustments tied to consumer prices were a

sporadic phenomenon of rather minor importance. But this changed dramatically after 1916, and during the next four years the practice became widespread, spurred by an unprecedented annual inflation rate of about 20 percent. The cost of living was made a key factor in nearly every wage decision reached by private arbitrators, state arbitration panels, and federal labor adjustment boards such as the National War Labor Board. By taking account of the cost of living in their decisions, these boards effectuated the wartime agreement reached by national employer representatives and the AFL to maintain labor standards—including real wages—for the duration.

A typical award entailed a wage increase commensurate with the rise in local living costs, although the government boards soon realized that their awards would have to be adjusted for future price increases. As a result, many of them adopted the practice of allowing an award to be reopened after six months if conditions had changed. Sometimes a specific price increase figure was picked as a reopening trigger, although the boards usually were vague about what constituted a change in conditions. Unlike their European counterparts, none of the American adjustment boards provided for automatic future increases tied to the cost of living. They did, however, permit real wage increases (despite the informal freeze) by use of the living-wage principle, which meant setting award levels high enough to provide a “decent” standard of living. The NWLB had its own Cost of Living Section which, together with the BLS, gathered budget data from 92 localities.¹ These were used to determine “minimum subsistence” levels (unskilled labor) and “minimum comfort” levels (skilled labor) for living-wage awards.

During this period, cost-of-living clauses began appearing for the first time in union contracts.² Most of the clauses provided for a reopening of the contract if inflationary conditions changed in some way; very few were automatic COLA clauses (Table 1). Except for a Cleveland ILGWU agreement, the automatic COLA clauses all came from contracts signed in the printing and publishing industry, which had a relatively high proportion of long-duration agreements.³ These automatic COLA clauses provided for either annual or semiannual wage adjustments in line with the consumer price index (sometimes set off by a trigger).

Outside of printing, unions were highly critical of automatic COLA clauses and of arbitral wage adjustments based strictly on the cost of living, and called instead for a living wage, by which was meant

¹ Note that the wartime demand for better price data led the BLS to initiate a semiannual consumer price series in 1917, with figures going back to 1914.

² A handful of nonunion employers also used COLA pay plans.

³ Between 1915 and 1920, 50 percent of printing contracts had a duration of three years or more, versus 15 percent elsewhere.

adjustments that would permit a rising real wage. When prices began to drop after June 1920—falling by about 11 percent over the next year—even the printing unions began to criticize the cost-of-living principle. Although the printing unions attempted in various ways to circumvent the wage cuts required by their automatic COLA clauses, most arbitrators ruled against them. When the unions' contracts were renegotiated in 1922 and 1923, none contained these clauses.

1930s and 1940s

Between 1923 and 1948 there were several other periods during which prices rose above their trend. Each time that this happened—the mid-1930s, the early 1940s, and the immediate postwar years—the results resembled the World War I period. Parties with long-duration contracts responded to unanticipated inflation by adopting wage-reopener clauses, some specifically conditional on inflation; very, very few went for COLA clauses.⁴ In 1948, when General Motors and the UAW signed their historic two-year agreement containing a COLA clause, there were reported to be only 13 other agreements nationwide containing COLA clauses. Moreover, despite the tremendous publicity generated by the 1948 GM-UAW agreement, surveys found that COLA clauses were opposed by most employers (83 percent) and union leaders (92 percent). Although many parties followed the GM-UAW pattern by increasing their contract durations, those that chose to provide for unanticipated price developments did so by adopting wage reopeners rather than COLA clauses (Table 1). After taking three COLA-induced pay cuts in 1949 and 1950, even the UAW was reluctant to renew its COLA clause in 1950. Then GM offered a juicier AIF clause and the union shop, and a five-year agreement was signed in May 1950. The Korean War started a few weeks later.

The 1950s: A Turning Point

Automatic COLA clauses spread rapidly during the first few months of the Korean War. Companies in the UAW orbit matched the GM agreement during the summer of 1950. Then President Truman hinted in a September speech that COLAs would be exempt from any future wage controls. That announcement, coupled with widespread anticipation of war-induced inflation, caused another surge in COLA adoptions. More than 2 million workers were brought under COLA contracts between the signing of the GM-UAW agreement and the formal announcement in March 1951 that the Wage Stabilization Board would sanction COLAs.

⁴ During World War II, the NWLB froze COLAs and wage reopeners at the Little Steel level.

At their peak in 1952, COLA clauses covered about 3.5 million workers. As in earlier periods, these clauses tended to be found in long-duration contracts, although a significant new phenomenon was the preponderance of GM-style agreements containing both COLAs and deferred-wage-adjustment clauses.

Despite the turn to COLAs, unions and employers still were leery of them. Moreover, by the end of the war inflation rates were low and declining, and some feared a postwar deflation. Consequently, during 1953 and 1954—when inflation was running under 2 percent annually—there was a sizable shift out of COLAs. By 1955 the number of covered workers had fallen by nearly 50 percent, although this was a far cry from the wholesale abandonment of the early 1920s. In fact, although the number of workers covered by COLAs has fluctuated since 1955, it has never fallen below the nadir reached in that year (Table 1).⁵ Thus by the mid-1950s, COLAs were here to stay.

Finally, note that the continued reliance on COLAs in the late 1950s and throughout the 1960s was reinforced by a shift toward longer contract durations and a heavier use of deferred wage adjustments. Indeed, the COLA-plus-deferred combination largely replaced wage-reopening clauses in long-duration contracts (Table 1).

Opposition to COLAs

One does not have to search for reasons why the parties were so reluctant to adopt COLAs prior to the 1950s; each side repeated the same anti-COLA arguments in the late 1910s, 1930s, and 1940s. First, both employers and union leaders feared the consequences—chiefly worker dissatisfaction and strikes—of a COLA-induced pay cut. These fears were justified, given that pay cuts historically had evoked strong reactions, such as occurred in printing (and elsewhere) in 1921. During World War I, one nonunion company tried to minimize this problem by giving their employees two pay envelopes: one contained regular earnings while the other—marked “H.C.L.” or high cost of living—contained a COLA payment.

Second, neither employers nor unions liked being hemmed in by nondiscretionary wage rules such as COLA formulas. Union leaders called COLAs “a substitute for bargaining,” meaning that they expected to receive less credit from the rank and file when an automatic COLA adjustment was made than when a pay increase resulted from, say, bargaining during a wage reopening. Employers disliked the idea of

⁵ Post-1955 COLA coverage has fluctuated in line with inflationary expectations and also with unemployment rates: during the recessions of the early 1960s and early 1980s, employers were able to achieve the elimination or curtailment of COLA payouts.

guaranteeing real wage levels in advance without knowing whether future business conditions would warrant them.

Finally, unions were especially concerned that COLAs, as well as arbitral adjustments based on prices, would have the effect of freezing real wages at an inadequate level for the duration of the agreement, if not longer. To us this fear may seem irrational since unions today frequently receive intracontractual real wage increases via deferred adjustments. But historically there were good reasons to be concerned. For the 60-year period prior to the 1948 GM-UAW agreement, only one contract had ever been signed that contained both COLA clauses and deferred wage increases. And even after all the publicity received by the GM-UAW agreement, less than 3 percent of a group of managers surveyed in 1949 said that they favored both types of clauses.

Reasons for the Change

Given that the parties had criticized COLAs for so many years, what accounts for the rather sudden shift in COLA usage after 1950? There are a number of explanatory factors.

Inflationary expectations. Although hard evidence is unavailable, it is likely that long-run price expectations had changed by the early 1950s. With the exception of three slight annual dips, consumer prices increased each year between 1934 and 1950; the average annual inflation rate for the period was about 2 percent. By historical standards, this was an unusually long and strong stretch of upward price momentum. Long-run price expectations may also have been shaped by the post-1933 adoption of macroeconomic stabilization (e.g., Keynesian demand management, unemployment insurance, etc.) which decreased the likelihood of deflationary price movements. The upshot was that by the 1950s the parties had less reason than before to expect COLA-induced pay cuts.

It is also possible that increased price variability led the parties to adopt COLAs because they felt less confident of their ability to anticipate inflation correctly. Indeed, prices fluctuated more during the 1940s than during the 1910s, although the difference in standard deviations is not large (10.7 versus 8.2).

Deferred adjustments. After 1950 numerous companies adopted GM's pioneering wage formula that combined COLAs and deferred wage adjustments. By so doing, employers eased labor's concern that accepting COLAs meant accepting a real wage freeze. As at GM, management's willingness to pay deferred adjustments stemmed from an optimistic appraisal of long-term productivity trends as well as greater willingness to share productivity gains with employees.

Reopening costs. Managements also came to prefer automatic pay

mechanisms like deferred adjustments and COLAs because of the rising cost of contract reopenings. For many years union contracts were simple documents no more than a page or two in length. But by the early 1950s they had grown enormously—in both length and complexity—making them costlier to negotiate and renegotiate. Even a reopening limited to wages involved complicated and costly negotiations. Moreover, the increase in average contract durations in the early 1950s suggests that employers were seeking to stabilize industrial relations and minimize their strike costs. It is unclear whether this search was brought about by a rise in strike costs or simply by a changing, more “mature” perception of those costs. In either case, the effect was the same: there was a substitution of automatic pay formulas for discretionary and potentially destabilizing mechanisms like wage reopeners.

Patterns. For many parties in the early 1950s, collective bargaining still was a new and sometimes perplexing experience. Each side searched for models to guide them, and the GM-UAW agreements of 1948 and 1950 were exemplars. The dissemination of the GM-UAW wage formula can be attributed in part to the prominent leadership positions held by the UAW and GM in their respective communities. A related phenomenon was the wave of COLA adoptions in anticipation of wartime wage controls. By the end of the war the parties had become familiar with COLAs, and many no doubt decided that COLAs were more useful than they previously had supposed.

Concluding Remarks

What can the preceding historical analysis tell us about the future of indexation in the United States? First, note that an important set of economic and institutional changes occurred after World War II that established a strong link between COLA clauses and long-term contracts. Since most of those changes persist to this day, and since managements continue to value long-term contracts, one can reasonably expect that COLAs will remain with us in the future. Moreover, the fact that COLAs have largely been associated with long-term contracts, rather than short-duration or implicit contracts, suggests that COLAs are most likely to persist where union bargaining power is high. Second, while some employers currently view gain-sharing as a potential substitute for COLAs, unions are likely to resist anything that involves a high degree of downward wage flexibility. As occurred in printing in the early 1920s, in autos in the late 1940s, and as is evidenced by the floors in most COLAs today, there is continuing union dislike of nominal wage cuts. Of course, *that* conundrum has yet to be satisfactorily explained.

Microeconomic Models of Wage Indexation*

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Cost-of-living escalators are a distinctive feature of North American labor contracts.¹ Yet, while wage escalators play a prominent role in many bargaining situations, their use is largely confined to a small number of industries.² At the same time, the wage effects of indexation vary widely over time and across industries.³ These facts present a dual challenge to the microeconomic theory of wage indexation: to describe the cross-sectional and time-series incidence of cost-of-living escalation, and to explain the effects of indexation over time and across industries.⁴

This paper presents a review of the microeconomic theory of wage indexation, emphasizing the empirical insights and hypotheses that the theory provides. The first section describes the main results of the theory, drawing freely from a number of recent papers. The second section reviews some of the empirical evidence on the theory, based on the

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* I am grateful to Joseph Altonji for comments on an early draft.

¹ For a comparison of indexation practices and experiences across industrialized economies, see Suzuki (1980).

² As of October 1983, some 57 percent of workers in major collective agreements (over 1000 workers) were covered by cost-of-living provisions (Lacombe and Conley 1984). Sixty-five percent of these workers, however, were in one of only five industries: primary metals, transportation equipment, rail transportation, motor transportation, and communications. This ratio has remained roughly constant during the past 10 years. Furthermore, in 1979, for example, 28 percent of workers covered by escalators worked in one of only four major collective agreements: the UAW-General Motors agreement, the Steelworkers-Steel Industry Co-ordinating Committee agreement, the Teamsters-Trucking Employers agreement, and the Communication Workers-American Telegraph and Telephone agreement.

³ For example, in UAW contracts in the automobile industry, a substantial fraction of total wage adjustment is accomplished by escalation. On the other hand, in industries where escalation increases are typically restricted by a maximum level or "cap," or where escalation provisions are delayed until the second or third year of the contract, the proportion of wage adjustments due to contingent deferred increases is smaller. Time-series variation in the relative importance of contingent and noncontingent increases among escalated contracts is documented by Douty (1975) and Card (1983).

⁴ There are, of course, a number of other issues worthy of investigation and explanation. One that has received some recent attention is the choice of an appropriate price index on which to base escalated wage increases. As an empirical matter, however, wages in present-day contracts are almost exclusively linked to the consumer price index.

analysis of indexed labor contracts from the U.S. and Canada. The third section concludes the paper with an assessment of the current state of the theoretical analysis of cost-of-living escalation.

I. The Theory of Indexation

The microeconomic theory of indexation is largely focused on two issues: what determines the choice between indexed and nonindexed contracts, and what determines the degree of indexation, should cost-of-living escalation be adopted.⁵ Indexation is one of several alternatives that include long-term nonindexed contracts, and short-term (1 year or less) nonindexed contracts. In order to understand the indexation decision, therefore, it is useful to compare the structure of wages and employment under each of these alternatives. In a theoretical analysis, the costs and benefits of each alternative ultimately determine the choice of contract structure.

Under short-term contracts, wages are adjusted frequently to incorporate new information on product demand and labor market conditions. The advantage of frequent renegotiation is clear: if a downturn or upturn occurs, the parties can choose a new wage rate that re-equilibrates the supply and demand for labor. The disadvantage of short-term contracts is equally obvious: renegotiation is costly and time-consuming.⁶ As a consequence, short-term contracts are likely to arise only when there is a good chance that any predetermined wage rate will deviate substantially from the parties' *ex post* choice.⁷

Under long-term nonindexed contracts, nominal wages follow a fixed schedule of deferred increases. There are two ways, however, that wages can move from their intended path. First of all, changes in the price level can alter the *real* wage that both parties had expected to prevail. Second, unexpected cyclical or industry-specific shocks can alter the equilibrium wage and drive a wedge between the prevailing contract wage and the wage that the parties would choose if they could instantaneously renegotiate.

The risk, therefore, in a nonindexed contract is that the contractual wage differs from the equilibrium wage generated by continuous renegotiation. The costs of wage disequilibrium depend on two factors: the extent to which out-of-equilibrium wages distort employment decisions, and the extent to which the parties prefer stable real wages. Theories of

⁵ A related literature has focused on the macroeconomic implications of indexation; see Gray (1976) or Fischer (1977).

⁶ According to Garbarino (1962), the risk of strikes was a major impetus for the pathbreaking 1948 agreement between General Motors and the United Automobile Workers.

⁷ An interesting case in point is the effect of temporary wage and price controls on the duration of agreements. See Weber and Mitchell (1978).

indexation differ in their emphasis on these two sources of cost. Which is the more important empirically is an open and largely unresearched issue.

If employment is fixed, then the only disadvantage of long-term contracts is their effect on wage variability. With fixed employment, however, it is hard to imagine why the timing or variability of wage payments matters very much. Workers in secure long-term contracts can presumably smooth most of the fluctuations in earnings induced by unexpected inflation. Ex post compensation, or “catch-up,” is likely to be a very good substitute for continuous renegotiation in fixed employment situations.

If employment is variable, on the other hand, workers cannot easily recoup the real income losses that accrue through unexpected inflation in a nominally fixed contract. At the same time, if short-run employment determination depends on the contractual wage rate, the level of employment itself is subject to the vagaries of inflation.⁸ Workers may find themselves working too hard for depressed real wages in periods of unexpected inflation, and working too little at artificially high real wages in periods of unexpected deflation. The magnitude of the expected misallocation cost depends approximately on the variance of the inflation forecast error over the contract horizon.

Long-term nonindexed contracts are likewise inflexible with respect to changes in product prices or labor market conditions that occur during the life of the contract. Suppose, for example, that product demand is unexpectedly low in the third year of a contract. If the parties were renegotiating, they could temper the growth of nominal wages to compensate for the reduced demand for labor. In a long-term contract, however, wages grow at a predetermined rate. Even if there is no uncertainty about aggregate prices, therefore, nominally fixed long-term contracts introduce a risk relative to short-term contracts—the risk of being unable to respond to real shocks on the supply or demand side of the labor market. The cost of this risk is proportional to the variances of the real prices in the economy (the variances of output prices and raw materials prices), and also depends on the extent to which wages would respond to these shocks if they were actually renegotiated.⁹

An indexed contract represents a compromise between short-term contracts and long-term fixed-wage contracts. The contract wage is linked to the aggregate price level (in practice, the consumer price index)

⁸ Recently, some authors have argued that in a long-term setting, short-term employment decisions should be unaffected by the current wage rate. See Ashenfelter and Brown (1984) for an attempt to analyze this issue empirically.

⁹ A description of the model underlying the results in the text is presented in a longer version of this paper available from the author on request.

by a cost-of-living escalation formula. In many simple specifications, the theoretical cost-of-living escalator reproduces the nominal wage that the parties would choose if they knew only the aggregate price level and nothing about the state of product demand or labor market slack. In the extreme case, if the only source of uncertainty in the economy is the aggregate inflation rate, and product prices, materials prices, and wages in other sectors grow point-for-point with the CPI, then the theoretical cost-of-living escalator increases the contractual wage rate 1 percent for each percent increase in prices.

In the real economy, however, things are more complex. A 1-percent increase in prices over and above the level expected in the previous year, for example, reduces real wages in the United States by about half a percentage point. An employer who guaranteed his real wage rates by offering full indexation protection would soon find his labor costs out of line. By the same token, inflation is rarely neutral with respect to product or materials prices. During an inflationary period, some prices rise more quickly than the average rate of inflation and others rise less quickly. In industries where product prices are pro-cyclical and tend to lead the average inflation rate, the theoretical wage escalator increases wages faster than average. In industries where the prices that firms can charge for their outputs lag behind the average inflation rate, the theoretical wage escalator increases wages less quickly than average.

How does an indexed contract compare to the two alternatives of continuous renegotiation (very short-term contracts) and long-term nominally fixed contracts? First, relative to a nonindexed contract, an escalated contract insulates the real contract wage from the aggregate inflation rate. The saving in potential misallocation costs is approximately proportional to the variance of the inflation forecast error. Secondly, however, since the aggregate price level reveals some information about the level of real prices (input and output prices and the level of wages elsewhere in the economy), and since the theoretical wage escalator incorporates this information into the contract wage, there is a potential saving in the misallocation costs associated with real price shocks. In a simple model, this saving is proportional to the difference between the unconditional forecast error variances of the real prices of interest to the parties, and the conditional forecast error variances when current aggregate price information is used to update the forecasts.

Relative to continuous renegotiation, on the other hand, an escalated contract incorporates information on real price shocks only in so far as that information is conveyed by current observations on the CPI. Indexation is less costly relative to renegotiation the more information about contract-specific real prices is conveyed by aggregate prices, and the less

sensitive are fully contingent wages to those shocks. In fact, the expected misallocation cost of adjusting wages only to aggregate prices is proportional to the conditional forecast variances of the real prices (input and output prices) given the current CPI.

Some of the implications of a simplified indexation model are summarized in Table 1. The table shows the predicted effect of an increase in each of several exogenous variables on (1) the probability of choosing an indexed contract over a nonindexed contract of similar length, (2) the probability of choosing an indexed contract over a sequence of shorter contracts, and (3) the predicted responsiveness of escalated wage rates to an increase in prices. For example, an increase in the uncertainty of

TABLE 1
Implications of a Simplified Indexation Model for the Incidence of
Cost-of-Living Escalation and the Degree of Indexation^a

| Exogenous Variable | Effect on: | | |
|--|---|--|---|
| | Probability of Choosing an Indexed Over a Nonindexed Contract | Probability of Choosing an Indexed Contract Over a Sequence of Shorter Contracts | Response of Escalated Wage to Increase in CPI |
| 1. Expected rate of inflation | none | none | none |
| 2. Forecast variance of inflation | increase | none | none |
| 3. Conditional forecast variance of product price, given CPI | decrease | decrease | none |
| 4. Conditional forecast variance of materials price, given CPI | decrease | decrease | none |
| 5. Conditional forecast variance of comparison wage, given CPI | decrease | decrease | none |
| 6. Correlation of product price and CPI shocks | none | none | increase |
| 7. Correlation of materials price and CPI shocks | none | none | decrease |
| 8. Correlation of comparison wage and CPI shocks | none | none | increase |

^a The table shows the effect of an increase in the exogenous variable in each row on the phenomenon in each column. The comparative statics results are from a simple supply-demand model in which employment is determined by labor demand, given the contractual wage. In all cases, the parameters of labor demand and labor supply are held constant.

inflation, holding constant the correlation of the aggregate inflation rate with product and materials prices and wages elsewhere in the economy, increases the likelihood of choosing an indexed over a nonindexed contract, has no effect on the tradeoff between indexed and shorter contracts, and has no impact on the predicted elasticity of indexation.

II. Empirical Evidence on the Theory

Several of the implications of the theory of indexation have been recently tested, with varying degrees of success in confirming or denying the theory. It is convenient to divide the tests into two groups: those focusing on the predicted incidence of indexation, and those focusing on the predicted wage responsiveness of escalated contracts. The former makes use of two kinds of data: contract level data on the presence or absence of cost-of-living allowance clauses, and more aggregated time-series/cross-section data on the proportion of escalated contracts within an industry or sector. The latter generally makes use of contract-specific information on the rate of wage increase per point increase in the CPI.

Three recent studies of the incidence of cost-of-living allowance clauses (COLAs) have examined the correlation between escalation and the predictability of industry-specific output prices.¹⁰ In all cases, the authors have regressed a measure of industry demand (usually the industry selling price) on the current realization of the consumer price index and other predetermined variables (trends, constants, etc.). From these regressions, they form two statistics: a measure of the conditional forecast error variance of industry demand (the standard error of the regression) and a measure of the correlation between industry-specific demand shocks and the CPI (the partial regression coefficient of the CPI). All three studies confirm the prediction that the higher the conditional variance of industry demand, given the CPI, the lower is the probability of indexation. The evidence that the correlation of industry demand with the CPI affects the probability of indexation is much weaker. In fact, however, this hypothesis is not a general prediction from all models of indexation, and many simple models (including the one summarized in Table 1) actually predict no correlation between the propensity to index and the correlation of industry demand shocks with the CPI. One of the studies (Hendricks and Kahn 1983) also tests the prediction that indexation is more likely, the higher is the forecast variance of inflation. Using a measure of uncertainty from the Livingston forecast series, they find strong evidence in favor of the hypothesis.

Empirical evidence on the responsiveness of index-linked wage rates

¹⁰ Estenson (1981), Hendricks and Kahn (1983), and Ehrenberg, Danziger, and San (1983).

to the CPI is less easily interpreted. While theoretical models of indexation give rise to a simple proportional escalation formula, characterized by a constant elasticity of contract wages with respect to price increases, actual cost-of-living formulas are rarely written in this form. The responsiveness of wages to prices typically depends on when the measurement is taken: early in the contract, part way through the contract, or at the end of the contract. Elsewhere (Card 1983, 1984), I have argued that an appropriate estimate of the desired ex ante elasticity of indexation is the marginal percentage increase in escalated wage rates per point increase in the CPI as measured at the start of indexation. This measure abstracts from provisions that limit escalation increases to a maximum amount or "cap," however, and has been criticized by Ehrenberg, Danziger, and San (1983) and Kaufman and Woglom (1984) on that basis. From a theoretical perspective, cost-of-living escalators often contain a number of puzzling features, including caps,¹¹ delay provisions, and incomplete coverage in the last year of the contract. These features limit the wage effects of escalation and make it difficult to translate the theoretical notion of an "elasticity of indexation" directly to the contract data.

In spite of these difficulties of interpretation, it is interesting to consider the evidence on the measured responsiveness of indexed wage rates to contemporaneous price increases. In their study of major U.S. contracts, Ehrenberg, Danziger, and San (1983) found no evidence that the correlation of the value of industry shipments with CPI shocks is related to the marginal degree of indexation (the estimated percentage increase in wages per percentage point increase in prices, ignoring caps and delays). The analysis in Card (1984) of Canadian manufacturing contracts, on the other hand, indicates that the correlations of industry input prices and industry output prices with aggregate prices are both significant determinants of the marginal degree of indexation. In fact, the Canadian results suggest that these correlations and a measure of the industry union-nonunion relative wage explain a large share of inter-industry differences in the marginal degree of indexation. More work is clearly required, however, to examine these conclusions in the U.S. data, and to draw a closer link between theoretical models of indexation and the form of actual cost-of-living escalators.

III. Conclusions

The microeconomic theory of indexation has proved to be a useful

¹¹ Caps on maximum escalated wage increases are included in contracts covering about 22 percent of workers in major indexed contracts. This number has remained constant since about 1974, but shows considerable variation prior to then. In 1966, only 2.5 percent of workers in escalated contracts had caps. By late 1969, however, this number had grown to 75 percent of workers.

framework for the empirical analysis of cost-of-living escalation. The theory highlights the role of inflationary uncertainty as a determinant of the changing propensity to index over time. In disaggregated time-series cross-sectional analysis, at least, this insight is readily confirmed. The theory also makes an important distinction between the consumer price index and the prices of inputs and outputs and other wages in the economy. The theory predicts that indexation is more valuable relative to either a long-term nonindexed contract or a sequence of shorter contracts, the more predictable are industry input and output prices, conditional on observing the CPI. Again, this insight seems to be confirmed in several studies of the incidence of indexation across industries.

In making the link between the theory of indexation and the form of actual escalation formulas, however, progress has been more difficult. There is some evidence that the marginal degree of indexation is significantly related to the correlations between industry input and output prices and aggregate prices. Several other features of escalated contracts are completely absent from the theory, however. These include provisions to limit the effective wage increases generated by escalation and provisions that pay the same absolute COLA increases to all workers in the contract.

Finally, and perhaps most significantly, very little progress has been made in identifying the costs of indexation. Current microeconomic models provide no insights into factors that cause bargainers to prefer long-term noncontingent contracts over long-term contingent contracts. In fact, the models all predict that indexed contracts are preferred *by both parties* to nonindexed contracts of similar length. The historical record, on the other hand, indicates substantial opposition to escalation clauses in at least some bargaining situations.¹² It is difficult to interpret firms' preferences for nominally fixed wage obligations, at least in those industries where industry selling prices have more or less kept pace with inflation. In industries where the optimal degree of indexation is relatively low, on the other hand, nonindexed contracts may achieve approximately the correct wage response to aggregate inflation, with none of the administrative and political costs associated with indexation.

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¹² For example, escalation was dropped from the steel industry contracts and related contracts in the aluminum and metal container industries in the early 1960s, and was only reestablished in 1972 during the second phase of price and wage controls, when COLA wage increases were exempted from control.

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Wage Indexation in the United States: Prospects for the 1980s

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In the 1970s and early 1980s, the U.S. economy was hit by two episodes of rapidly expanding inflation—1973–74 and 1979–80—each associated with oil price increases. Much of this inflation was unanticipated by the public and resulted in sharp cutbacks in average real wages. After each period of inflation, there was a severe recession, and inflation began to decelerate (Hendricks and Kahn forthcoming). In an environment of inflation uncertainty, workers would like some mechanism to protect their living standards. One method is to shorten the period any contract is in force. Under shorter contracts, wages could be corrected more frequently for periods of inflationary surprises. However, such renegotiation is a costly process, and cost-of-living escalator clauses (COLAs) can protect workers' real wages while saving on the costs of contracting. From management's point of view, COLAs may be a source of uncontrollable increases in nominal labor costs. While COLAs could theoretically stabilize firms' real profits under certain conditions, the fact that COLAs are generally confined to the union sector in the U.S. suggests that companies in general would prefer not to have them. In addition, COLAs are most prevalent among what are generally thought to be our strongest unions: UAW, USW, Teamsters, etc. (Hendricks and Kahn forthcoming).

The inflation of the 1970s and 1980s apparently made quite an impression on union workers. As late as 1970, only about one quarter of workers under major agreements (i.e., covering at least 1000 workers) had COLAs. This figure rose to a high of 61.2 percent in 1977 and has remained relatively stable since then (Hendricks and Kahn forthcoming). Following the inflation of 1979–81, the economy went into a severe recession that had a particularly damaging effect on industries with strong

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COLAs, such as automobiles, rubber, trucking, and steel. Companies in these sectors demanded concessions from their unions in an attempt to remain competitive. While COLAs were often a target, unions typically resisted their total elimination and were more willing to take pay cuts and forgo scheduled pay increases instead.

Since 1981, inflation began to decelerate sharply (and the extent of the deceleration has been underestimated—see Hendricks and Kahn (forthcoming)). For example, in 1980 the consumer price index (CPI) rose 13.3 percent, while it has risen at only 3.9 and 3.8 percent, respectively, in 1982 and 1983 (*Monthly Labor Review* various issues). If inflation is indeed “licked,” then workers in the future may have less desire for indexation than in the recent past. On the other hand, given the virulence of inflation in the 1970s and early 1980s, workers may well be skeptical that the economy has become insulated from rapid price increases. If such is the case, then COLAs will not have outlived their usefulness.

In this paper we examine recent collective bargaining trends in COLAs and economic research on indexation and offer predictions about the future of indexation. Despite the decline in union bargaining power and the recent stabilization of inflation, there is little indication that COLAs will wither away. It will probably take many more years of predictable, low inflation rates before unions will consider giving up their COLAs.

Recent theoretical models of the demand for indexation envision labor and management as choosing an “optimal” degree ϵ of wage responsiveness with respect to prices, termed the degree of indexation (Card forthcoming; Ehrenberg, Danziger, and San 1983). This choice is made in the bargaining process by balancing out the two parties’ preferences, taking into account relative bargaining power. Recent theoretical models designed to explain the observed pattern of COLAs suggest that ϵ will be closer to one, the greater inflation uncertainty, the more union bargaining power, and the closer the firm’s value-added follows the CPI (Ehrenberg et al. 1983, Card forthcoming, Hendricks and Kahn forthcoming). In addition, if workers are more risk-averse than firms, as is likely, the workers will pay a premium to get a COLA (Shavell 1976).

These theoretical propositions and empirical findings would lead to a prediction of declining indexation in an era of declining union strength and diminished uncertainty about inflation. In the face of foreign competition, a strong dollar, aggressive anti-union strategies by employers, deregulation of key sectors, and a conservative administration, it is likely that union strength has declined in recent years. However, even though inflation has subsided since 1981, there may be a significant lag in workers’ confidence in predicting inflation. The inflation experience of

the 1970s may have increased the relative value of real wage insurance to workers—even in a period of relative price stability. This proposition can only be tested by examining recent trends in COLAs.

Recent Developments in COLAs

To assess recent trends in COLAs, we collected a sample of 1352 major contracts (i.e., covering at least 1000 workers) negotiated over the 1982–84 period, although very few 1984 agreements were available. The data source was the BLS *Current Wage Developments*. Table 1 provides information on the incidence of indexation in these contracts. For contracts negotiated in 1982, COLA coverage was virtually unchanged from that in previously negotiated contracts. This outcome occurred as virtually the same percentages of workers gave up COLAs in 1982 as introduced them in that year. Further, the percentage of workers with COLAs in contracts negotiated in 1982 (57.6 percent) was about the same as the percentage of workers in existing contracts covered by COLAs—56.7 percent (Lacombe and Conley 1984). Thus, the *flow* of new COLA negotiations was comparable to the *stock* of COLA coverage.

TABLE 1
Selected Characteristics of Major
Agreements Negotiated 1982–Early 1984

| Characteristic | Percent of Workers Covered | | |
|---|----------------------------|--------------|--------------------|
| | 1982 | 1983 | Total ^c |
| COLA in current contract (341) ^c | 57.6% | 31.7% | 46.4% |
| COLA in previous contract (890) | 57.7 | 38.8 | 49.7 |
| COLA → COLA ^b (297) | 51.3 | 31.0 | 42.5 |
| COLA → No COLA (71) | 6.5 | 7.8 | 7.2 |
| No COLA → COLA (44) | 6.3 | 0.7 | 3.9 |
| No COLA → No COLA (819) | 35.9 | 60.5 | 46.4 |
| Number of contracts | 585 | 723 | 1335 |
| Number of workers | 3.89 million | 2.78 million | 6.74 million |

Source: BLS, *Current Wage Developments*, various issues.

^a Included in Total are 27 contracts negotiated in 1984. Major agreements are those covering at least 100 workers.

^b COLA → COLA means COLA in previous and current contracts. COLA → No COLA means COLA in previous and no COLA in current contract, etc.

^c Total number of contracts of each type appears in parentheses.

In contrast to 1982, COLA coverage in 1983 slipped somewhat. Specifically, Table 1 shows that among workers negotiating contracts in 1983, 38.8 percent had COLAs in the previous contract, while only 31.7

percent had them in the new contract (an 18-percent decline for this group). On the other hand, only about 1 percent of workers without COLAs in the previous contract added indexation in 1983 negotiations. Thus, there was a modest trend away from COLAs in 1983, as inflation remained stable for the second consecutive year. However, only about 5 percent of workers with COLAs on January 1, 1983, lost them during negotiations that year, so the fraction of workers with COLAs remained virtually constant (Davis 1983). It takes a major change in the flow of COLA negotiations to affect the stock significantly.

Table 2 shows a slight trend toward increased use of caps in COLAs. For both 1982 and 1983, currently negotiated COLAs were marginally more likely to have caps than previously negotiated COLAs. Among bargaining units that had COLAs in current and previous contracts, caps were more likely to be added than taken away. Placing limits on COLA payments may reflect union weakness or reduced uncertainty about inflation. Although the incidence of caps rose, it stayed close to the existing stock of caps: from 1979 to 1983, coverage of workers by capped COLAs as a percentage of total COLA coverage ranged between 21.6 and 22.6 percent. In contrast, from 1970 to 1978, the range was from 25.0 to

TABLE 2
Selected Characteristics of COLAs
in Major Agreements Negotiated
1982–Early 1984

| Characteristic | Percent of Workers Covered | | |
|---|----------------------------|------|-------|
| | 1982 | 1983 | Total |
| Cap in previous COLA if contract was indexed (75) | 20.7% | 9.5% | 17.0% |
| Cap in current COLA (104) | 23.9 | 11.2 | 20.3 |
| Delay in current COLA ^a (53) | 18.1 | 12.6 | 16.6 |
| Diversion in current COLA ^b (24) | 7.2 | 4.1 | 6.3 |
| <i>Contracts with COLAs Now and in the Previous Negotiation</i> | | | |
| Cap → Cap ^c (40) | 14.0% | 4.3% | 11.1% |
| Cap → No cap (8) | 0.7 | 3.4 | 1.5 |
| No cap → Cap (26) | 1.1 | 6.2 | 2.6 |
| No cap → No cap (230) | 84.3 | 86.1 | 84.8 |

Source: BLS, *Current Wage Developments*, various issues.

^a "Delay" means a special contract provision to delay or cancel some scheduled COLA payments.

^b "Diversion" means a provision to divert some COLA money to pay for other benefits (e.g., health insurance).

^c Cap → Cap means caps in current and previous contracts; Cap → No cap means cap in previous contract and no cap in current contract, etc.

64.3 percent, with a weighted average figure of 31.2 percent (Hendricks and Kahn forthcoming).

Perhaps more important than the slight increase in caps is the presence of special delays or diversions of COLA payments. In the 1982–84 period, one sixth of the workers with COLAs negotiated during this period were subject to special delays (primarily in autos) and 6.3 percent were subject to diversions of COLA payments (primarily in trucking). COLA delays and diversions are essentially lump-sum transfers from labor to management given as union concessions. However, the COLA concept remains after the delay or diversion is accomplished. For example, among COLAs negotiated in this period with special delays, only 6.6 percent of the workers had COLAs subject to caps; for those without special delays, 23 percent of the workers were subject to caps. Further, among COLAs with diversions of payments, *no* workers in our sample had COLAs with maximum provisions; for those with no diversions, 21.7 percent had caps. Thus, workers appeared to be willing to pay a price in order to have uncapped COLAs.

Table 3 gives further evidence on the value of indexation to workers. The table indicates that, not surprisingly, workers with COLAs will get smaller deferred increases than those without COLAs. However, the differential in the raises was much smaller in 1983 (2.4 percentage points) than in 1982 (4.6 percentage points). In addition, the 1983 differential is lower than that in recent years (Davis 1983, Lacombe and Conley 1984, LeRoy 1982). This finding may reflect a lower anticipated inflation rate in 1983 than in previous years (see the Livingston surveys of economists' price expectations). Among those whose current contracts have no COLAs, scheduled raises are slightly larger for those who gave up COLAs in the previous contract than for workers who had no indexation in either agreement. Again, a slight compensating differential is indicated. However, in 1982 workers who added COLAs got substantially higher scheduled increases than workers who kept COLAs. Perhaps some catch-up phenomenon was evident there. In earlier work (Hendricks and Kahn forthcoming), we found a substantially higher strike incidence in the 1970–80 period among bargaining units that added COLAs than among other units. If these strikes reflected union aggressiveness rather than management aggressiveness, then the results in Table 3 may be plausible.

Among currently indexed contracts, there is a consistent 3-percentage-point differential in scheduled wage increases between the scheduled raises in favor of capped over uncapped agreements. Especially for 1983, it appears that caps are expected to pose a binding constraint on COLA payments. In addition, those workers whose capped COLAs were renegotiated to become unconstrained took an average cut (0.2 percent) in

TABLE 3
Weighted Average Annual Percentage Scheduled
Wage Increases Over Contract Life^a

| Type of Contract | Year of Negotiation | | |
|---|---------------------|------|-------|
| | 1982 | 1983 | Total |
| COLA in current contract | 2.0% | 1.8% | 2.0% |
| No COLA in current contract | 6.6 | 4.2 | 5.2 |
| COLA → COLA | 1.7 | 1.8 | 1.7 |
| COLA → No COLA | 8.0 | 4.9 | 6.3 |
| No COLA → COLA | 6.5 | 1.9 | 5.9 |
| No COLA → No COLA | 6.5 | 4.1 | 5.1 |
| <i>Indexed Contracts</i> | | | |
| Cap in current COLA | 4.3% | 4.6% | 4.4% |
| No cap in current COLA | 1.4 | 1.5 | 1.5 |
| Delay in current COLA | -0.06 | 0.5 | 0.04 |
| No delay in current COLA | 2.6 | 2.0 | 2.4 |
| Diversion in current COLA | 1.3 | 0.3 | 1.1 |
| No diversion in current COLA | 2.1 | 1.8 | 2.0 |
| <i>Current and Previous Contracts Indexed</i> | | | |
| Cap → Cap | — | — | 3.7% |
| Cap → No cap | — | — | -0.2 |
| No cap → Cap | — | — | 3.2 |
| No cap → No cap | — | — | 1.5 |

^a For contracts with cents per hour increases, average wage levels were imputed using *Employment and Earnings*, December 1982, figures for hourly earnings (\bar{W}) of production or nonsupervisory workers by 2-digit industry. To impute union wage levels, percent of the industry unionized (U —taken from Freeman and Medoff (1979)) was combined with Moore and Raisian's (1983) estimates of the union-nonunion wage differential (d). Union wage levels (W_u) were thus assumed to follow: $\bar{W} = UW_u + (1 - U) [W_u / (1 + d)]$. To compute average wage increases, the figures were then weighted by the number of workers covered by each agreement.

pay; those whose COLAs remained uncapped received 1.5 percent raises. Again, a price for unrestricted COLA protection is evident. However, those workers whose COLAs *became* capped did slightly worse (3.2 percent raise) than those whose COLAs remained uncapped (3.7 percent raise). Perhaps adding a cap was part of an overall concessionary agreement, although in our sample only 26 contracts added caps to previously unrestricted COLAs. Finally, delays and diversions of COLA payments also appeared to be part of concessionary agreements (particularly in automobiles and trucking).

Conclusions

Despite declining union bargaining power and seemingly stabilized inflation, there has been only a modest trend away from COLAs in the

1982–84 period. This trend was not strong enough to have a noticeable impact on the overall coverage of workers by COLAs. In the most strongly indexed sectors—autos, steel, trucking—workers have made concessions in order to retain unlimited COLA protection. In the latest auto negotiations, important for their showcase effects, the COLA has been kept with only minor diversions of payments (BNA 1984). In addition, the most common formulas relating inflation to wages—1 cent/0.26 or 0.3 point CPI increase—have remained intact (Lacombe and Conley 1984). Although inflation has stabilized since 1981, workers evidently are not convinced it has been taken care of for good. We therefore expect the uncapped COLA to remain a stable feature of American collective bargaining in the foreseeable future.

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DISCUSSION

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Dart & Kraft, Inc.

I would like to compliment Dan Mitchell for doing a fine job in planning today's program. He selected authors who approached indexation from three different viewpoints, producing papers that complement each other quite well.

Professor Jacoby takes a historical approach, tracing the history of COLAs and drawing inferences about COLAs and their future. Professor Card uses a theoretical approach, focusing on the microeconomic theory of COLAs and the empirical evidence relating to the theory. Professors Hendricks and Kahn, in their paper, combine a review of the theory with a careful explanation of recent experiences with COLAs. Each paper presents useful insights and is well written.

The authors of the three papers come to similar conclusions regarding the topic of this morning's session, "The Future of Indexation." According to microeconomic theory, inflation uncertainty will be the key determinant of the propensity to index in the future. History tells us that changed inflation expectations, longer term contracts, deferred adjustments, and encouragement by the federal government during the period of Korean War wage controls all explain the growth of COLAs in the United States. According to Hendricks and Kahn, despite the declining bargaining power of unions, COLAs will be a stable feature of collective bargaining in the foreseeable future because of the uncertainty and unpredictability of inflation.

In order to understand the future of indexation, it is important to understand the costs of indexation to management. Professor Card emphasizes that very little progress has been made in identifying these costs. He further points out that microeconomic models predict that both parties prefer indexed contracts to nonindexed contracts of similar length. As he indicates, historical evidence contradicts these models.

A recent article in the "Manager's Journal" column in the *Wall Street Journal* entitled "Five of the Worst Agreements You Can Make With a Union," by Charles J. Loughran, places COLAs high on the list:

The major drawback of automatic cost escalators, especially COLA's, is that the employer's labor costs can, and do, increase

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at times when the employer's profits and ability to pay are stagnant or even decreasing. The history of auto, steel and other manufacturing industries in the highly inflationary years of the late 70's and early 80's is evidence of the havoc such escalators can reap.

I do not agree with the rationale presented by Loughran since long-term nonindexed contracts can cause the exact same problem for management, that is, costs increasing because of contracted wage increases while ability to pay is declining. Nevertheless, the article is another indication of management's opposition to COLAs which contradicts the microeconomic theory of COLAs.

To understand this opposition, economists must take a longer-term view of collective bargaining beyond the expiration of a single collective bargaining contract. In addition, they must take into account the special importance of the signed collective bargaining contract on subsequent negotiations and its impact on the parties.

Practitioners recognize that items included in the contract take on a "permanency" and are very costly to change. Although, in theory, all clauses can be renegotiated once the contract expires, the fact that they have been in a written contract makes them extremely difficult to change. In addition, the longer they are in the contract, the more difficult they become to change.

By agreeing to a COLA instead of a larger deferred wage increase, management reduces its flexibility in subsequent negotiations. The COLA becomes part of its contractual or base-line costs which automatically increase for subsequent contracts unless the contractual provision is modified. Reducing the base-line cost in subsequent negotiations, including the prospectively increasing COLA payments, is much more difficult and costly than resisting newly proposed wage increases.

Management constantly strives to obtain as much flexibility as possible in its cost structure to adjust to external shocks and unforeseen events. Ironically, COLAs give management more flexibility relative to inflation during the term of the first contract, but they reduce management's flexibility in subsequent negotiations. Although managers are frequently criticized for using a short-term time horizon in their decision-making, industrial relations is an area where managers typically take a long-term view. I believe that this is an important factor explaining their opposition to COLAs.

DISCUSSION

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This is an appropriate time to review wage indexation practices. There has been a pronounced decline in inflation—albeit without a comparable decline in inflation expectations. In addition, the unprecedented difficulties experienced by several of the major unionized industries since the late 1970s prompted some changes and rearrangements in the traditional compensation packages negotiated in each of those sectors.

The papers discussed this morning plausibly conclude that COLA clauses in union contracts have emerged largely unscathed from these events, and that wage indexation will be alive and well in the foreseeable future.

In his historical analysis, Jacoby correctly identifies several reasons for the shift in COLA usage after 1950: inflationary expectations, reopening costs, deferred adjustments, and the development of collective bargaining patterns. Two other factors are worth mentioning.

The first one concerns price statistics. By the forties, the Bureau of Labor Statistics (BLS) price indices became clearly better grounded and more reliable than ever before. During that time (in 1947), BLS established a labor union advisory group, as well as a business advisory group, providing a structure to what had been up until then sporadic contacts. Labor researchers and technicians became more knowledgeable and confident of the statistics that were pivotal to the working of COLA clauses. This confidence was important, especially in light of union worries that the price index might decline and trigger wage cuts in indexed contracts. A second factor that helped the sudden and enduring increase in popularity of COLA clauses among unions was the need to go beyond wage gains. By the late forties and early fifties unions were searching for ways to shield workers from the vicissitudes of old age, illness, and unemployment. Ongoing COLA clauses, especially if accompanied by deferred increases, allowed union negotiators to turn more of their attention and bargaining leverage to the introduction and later the improvement of pensions, health care insurance, supplemental unemploy-

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ment benefits, and others—in assurance that real wages would be protected.

Hendricks and Kahn have undertaken a careful review of recent union wage developments. They conclude that unions have been successful in retaining COLA clauses in an essentially undisturbed form in spite of the turbulent conditions of the early 1980s.

According to their findings, relatively few *new* COLA “caps” were negotiated during 1982–1983, at the height of the recession-concession period—a period of declining inflation. Deferrals or diversions have been used more frequently than “caps” to “cheapen” COLA provisions. From the union’s perspective, a cap is far more disruptive than deferral or diversions. If the cap is reached within the term of the agreement, a lengthy period with no wage increases may follow—while prices keep going up. This naturally provoked restlessness and dissatisfaction among workers and translates into troublesome and difficult negotiations on the size of the first-year wage increase when the next contract is put together. In other words, the negotiation costs of post-“cap” experiences are likely to be very high. The history of the United Auto Workers (UAW) negotiations with the auto companies has produced one particularly telling example of the effects of “capping” the COLA. This was agreed to in 1967, before the Vietnam War drove prices far beyond expectations. The union’s demand to remove the “cap” in the 1970 bargaining round was ultimately successful, but the issue contributed significantly to a bitter strike of almost 70 days at the General Motors Corp. Neither the UAW leadership nor the rank and file from those days has forgotten the experience.

From the employers’ viewpoint, “caps” are not very attractive when the expectations are for more stable, lower inflation rates. Unless the level of the cap is so low that it becomes incompatible with a peaceful settlement, other ways of curbing COLA costs are more desirable. Thus, Hendricks and Kahn’s findings about the limited number of new caps negotiated in 1982 and 1983 are explained not only by unions’ resistance, but also by the fact that the employers did not push very vigorously for them.

Hendricks and Kahn’s conclusions that COLAs are here to stay is reinforced by the outcome of the 1984 auto negotiations. The shift in emphasis to job security and away from wage gains on the part of the union resulted in several changes in the compensation package. These added to the new flexible compensation provisions—for example, profit-sharing—which were first negotiated at GM and Ford in 1982.

The current wage provisions in those contracts show that, while the form of deferred annual wage increases has changed (these increases are

now paid in lump sums), recent bargaining has neither altered nor found substitutes for COLAs. This is not surprising. Inflation has abated, but workers' memories of the rampant inflation of the 1970s is very fresh. Moreover, unlike the basis for other types of wage increases such as the rate of productivity growth (the customary basis for deferred wage increases) or the company's overall performance (the basis for profit-sharing), consumer price increases are a distinct, measurable part of everybody's daily experience.

While there is solid evidence that wage indexation is here to stay, whether or not it will spread is open to question. The current expectations about productivity growth and future product demand suggest that in those sectors where COLA provisions are traditional and well-entrenched, employment will at best hold steady and possibly continue to decline. It appears that for indexation not only to linger but to grow, it must expand into other sectors in the future.

This question suggests areas of research beyond those discussed in the papers presented this morning, such as evidence, trends, and determinants of wage indexation in sectors of growing employment as well as in sectors where unionization has proceeded relatively rapidly in the last decade—for example, state and local governments. Furthermore, it would be instructive to review evidence on wage indexation trends among bargaining units smaller than the 1000-level on which BLS reports. (The experience in the smaller units probably leads to a less optimistic assessment of the future of wage indexation.)

My expectation is that indexation will indeed grow, assuming unionization growth, particularly since I don't expect the current levels of inflation to be long lasting. Also, outside of collective bargaining the concept of indexation is gaining popularity, as reflected in the indexation of the tax system which will take place starting next year. Tax indexation can be seen as public policy encouragement towards COLA clauses. Similarly, there are implications for wage indexation in the indexation of Social Security benefits.

XVIII. COLLECTIVE BARGAINING IN DEREGULATED INDUSTRIES

Railroad Collective Bargaining— Anatomy or Pathology?*

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Arthur Sampson's *The Changing Anatomy of Britain* explains the British Empire's retreat from world power as cultural infirmity; institutions and relationships matured, resisted change, failed to adapt, and became victims, not shapers, of development. Mr. Sampson cautions that without new ways of dealing with the world, the British people will become a study of pathology, not anatomy—reflections on social death, not life.

Mr. Sampson's analysis of British society offers a useful paradigm for collective bargaining in the railroad industry. Rail collective bargaining is mature, having existed in various forms for approximately 100 years. Bargaining institutions similarly have matured—multiemployer groups have existed since shortly after World War I, and the 16 standard craft union classifications have remained essentially unchanged, with only an occasional merger. Many pay and work rules, adopted during World War I, persist today. The basic collective bargaining statute, the Railway Labor Act, and federal policy toward income protection for rail workers, have endured for nearly half a century.

Recent changes in railroad regulation have improved industry fortunes over those which had prevailed since World War II, and which saw several carriers in reorganization. A new regulatory emphasis on competition brings new forces to the bargaining table. It is not yet clear whether these forces will promote long-term prosperity or a return to decline,

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* The views expressed in this paper do not necessarily represent the views of Conrail, its officers, or employees.

however, because federal regulatory changes included enhanced protection of employees from business changes. In an industry where labor costs consume most of each revenue dollar, these mixed signals have dissipated the effect of new competition on collective bargaining.

Aggregate data suggest the industry is poised on the threshold of continued decline, or innovation and growth. How labor and management respond to increased transportation industry competition, especially in national multicarrier bargaining, will profoundly affect which direction is taken, and in turn the size and composition of the industry. Recent developments on carriers reorganized under sharply focused federal support policies provide evidence for both hope and concern about whether future railroad labor studies will be anatomy or pathology.

This paper considers two forms of changing regulation that are affecting collective bargaining—economic (prices, competition, entry/exit, etc.) and governmental intervention in financially ailing carriers. These federal regulatory changes have been described adequately elsewhere.¹ This paper will describe, and analyze preliminarily, recent labor relations developments and prescribe one option for rail bargainers to consider in their effort to accommodate the new transportation industry competition.

The Results of Changing Federal Regulation

Looking Back: 1980–1984

The new competition unleashed by the Staggers Rail Act of 1980 has exacerbated the pressure on railroad collective bargaining that already had been increasing as the motor carrier industry grew and surpassed the rails' dominant position in freight transport. In the 1981–1984 national bargaining round, a national advisory Study Commission reviewed volumes of testimony and evidence, and recommended major changes in nationally set railroad operating craft pay and work rules, finding them necessary to allow railroads to compete in the new regulatory environment.

The new deregulation factor has now created an urgent and special need for the immediate acceptance of a dramatic, perhaps radical, but controlled change in the application of road/yard work rules.

The dynamics of the transportation marketplace now demand that labor and management alike look at all aspects which indirectly or directly influence the carriers ability to compete with the trucking industry and in particular the non-unionized portion. Truly, the precipitous decline in rail traffic and the

¹ See the References.

concomitant decline in rail employment of almost 1,000,000 employees over the last three decades is sufficient cause for the parties to agree that this is a prime area in which they can totally join to provide for corrective efforts to meet the needs of the industry for the 1980's and 90's. The changes adopted can be the showcase for demonstrating to the shipping public, in particular, and the public in general a spirit of mutual interest and a cooperative intent to obtain new business and provide more secure employment and an effort to bring people back to work. . . .

The Staggers Act of 1980 is an immutable fact; its impact is likewise immutable. It introduced a force that was nonexistent in all prior bargaining situations, Emergency Board and Study Commissions.

Whether recognized or not, its passage impacted the entire transportation community. Its passage forever altered the underpinnings of collective bargaining in the transportation industry. Gone is the convenience of the "pass-through" principle. Now, the dynamics of the market place must govern the success or failures of individual railroads in particular and the industry in general. Central thereto is labor cost and productivity. Labor has not been blamed therefor. Nor can it alone be expected to carry the burden of sacrifice . . . failure to take affirmative action, *whatever it may be*, can only doom much of the industry to the way of the mastodon.²

Competitive forces are local as well as national in scope, however. Customers often tell railroad management that they must change a price or service pattern, or else lose the business, and with the advent of the Staggers Act, the railroads are free to meet those pressures. This brings a supplemental, but different, pressure on collective bargaining. The industry's reliance on nationwide bargaining has left many carriers and unions unprepared to respond as swiftly to competition as the marketplace demands. The institutions, relationships, and employee expectations that are necessary to address single-customer or market-specific problems have lain fallow and caused commercial and job opportunities to be squandered.

Congress's fondness for competition as the preferred regulator of transportation service was not matched in those sections of the Staggers Act dealing with labor regulation. Congress continued the historic rail industry trend of sheltering workers from competition by expanding income protection for employees affected by structural changes in the industry that were encouraged by the Staggers Act. Congress underscored

² Report of the Brotherhood of Locomotive Engineers and United Transportation Union Study Commissions, December 8, 1983.

the firmness of its position in the Staggers Act by precluding the ICC from using its regulatory exemption power to exempt any carrier from responsibility to protect employee interests according to legal minimums.³ Recently a federal court construed labor protection as extending beyond rail employees to employees of motor carriers controlled by railroads.⁴

The Milwaukee, Conrail, and Amtrak experience with federal intervention has supplemented industry-wide developments and brought new elasticity to some railroad labor standards. Concession bargaining was necessary to maintain these rail systems and avoid the loss of thousands of jobs. Adoption of workrule forums to address increased productivity needs were required, although presently it is unclear whether these will prove of any lasting significance. Congress also caused the transfer of rail commuter services to local and state government control, including the transfer of commuter employee collective bargaining to public authorities which presumably would be more responsive to local conditions. This too involves some concession bargaining, as labor standards will be set with a local public employee frame of reference, generally perceived to be less generous than the Class I freight system.

Federal intervention also has encouraged "gain-sharing" as part of concession bargaining for private freight systems. Both the Milwaukee and Conrail wage concession agreements include stock participation rights; the former included a straight stock for wage reduction exchange. The Conrail linkage was not limited to the parties' expressions in collective bargaining agreements, but also was incorporated into federal law.⁵ Employee stock ownership has become accepted public policy for financially distressed railroads.

Looking Ahead—The Freight Service Agenda: Whither National Bargaining?

The advent of the new rail industry competition, and Conrail's prospective return to private-sector ownership, contribute to three separate, but connected, labor relations movements. There is general frustration with the role national bargaining has played in creating uncompetitive labor costs. Some carriers, especially those with large service territories, are reexamining the desirability of national bargaining, chiefly out of a concern that they might be able to establish labor standards more responsive to their new needs outside the multiemployer context. The Milwaukee's and Conrail's recent labor relations achievements, both of

³ 49 U.S.C. §10505(g).

⁴ *Cosby v. ICC*, 741 F.2d 1077 (8th Cir. 1984).

⁵ 45 U.S.C. §761(e).

which have taken place outside national bargaining, offer some evidence for critics of national bargaining.

The federal government's efforts to sell Conrail, with the underlying federally sponsored labor standards for Conrail employees, is a separate development with industry-wide ramifications. Conrail is large, representing about 20 percent of the rail industry. Furthermore, Conrail's improved finances, and growing inter-railroad competition, are reducing the tolerance of its different labor standards by both labor and other rail managements. The two developments—a desire for labor conditions more conducive to the new regulatory environment, and Conrail's return to private-sector ownership, combine to challenge the underpinnings of national bargaining.

It is useful to discuss the Conrail negotiations first because they appear to be occurring ahead of national bargaining, they may be resolved early in 1985, and they arguably offer an environment more conducive to realizing the labor standards carriers desire to address the new competition. Conrail's special circumstances have caused it to bargain independent of the national group since 1976, although its labor standards have been defined by reference to national agreements. This included the 1981–84 wage concession agreement, which established a 10 to 12 percent differential between nationally-set and Conrail rates of pay. What is especially noteworthy about the Conrail bargaining to date is that significant employee stock ownership seems to be a well-accepted element of any labor settlement. This is influenced by the 1981 wage concession agreement and federal law's preference for substantial employee ownership as part of the Conrail disposition.

What is less clear about the Conrail negotiations is whether the parties will use the extraordinary opportunity available to them to reshape railroad labor relations in the context of the Conrail disposition, or whether the lure of "industry standards" will be too great. The former outcome can be defined as one that addresses underlying industry competition issues and structural change. The latter outcome would be achieved by agreeing merely to place Conrail in national bargaining and would not be as responsive to these competitive pressures.

Proposals have been advanced to forestall Conrail's linkage to national wage standards in return for compensation contingent on company performance and increased managerial influence for rail labor, largely through seats on the Board of Directors. Informal polling reveals substantial support among workers for such an outcome. Conrail's history may be one reason for the popularity of unusual employee wage and benefit packages. Conrail employees have seen the rail industry seriously contract in the last 20 years. Conrail's workforce alone was reduced from 100,000

in 1976 to below 40,000 in 1984. Younger employees, who enjoy the already advantageous rail wages and working conditions,⁶ and who have observed the costs of decline in the auto and steel industries, largely favor stock ownership and profit-sharing over direct pay increases to promote long-term security. Similarly, many in management know that success in the new competitive environment requires more flexible work rules and understand also that some sharing of managerial freedom may be necessary to achieve that flexibility, in turn promoting management's long-term security. A sound argument can be made that Conrail's transfer to private-sector ownership provides an unusual opportunity to change fundamentally rail labor standards, enhance the company's ability to compete in the new regulatory environment, and promote prosperity for both labor and management.

Although innovation offers benefits for both labor and management, there are hurdles to surmount. The lure of national standards remains great, especially when Conrail's record financial results make the case for pay concessions facially less compelling. Railroad pay increases and rule changes have been set in some form of regional or national bargaining for nearly 50 years, and recent departures occurred only when the parties perceived termination of their company and its jobs. The predictability and competitive constraints inherent in national bargaining offer great comfort to bargainers on both sides of the table.

The environment for the Conrail sale compounds the problem. Conrail's improving finances make bankruptcy less imperative. The lack of a public consensus on an ownership structure and key political role for rail labor fosters uncertainty and could reduce the priority afforded competitive bargaining issues (cf. Koenig and Machalaba 1984, Gettinger 1984, Byrne 1984). In sum, unusual courage in both labor and management may be needed to take a path other than national standards. [At publication, the picture remained cloudy. In February 1985, Conrail agreed to return employees to industry standard labor conditions effective July 1984, but labor issues related to the sale of the company by the United States remain unresolved.]

Whichever way it goes, an early Conrail settlement could influence national bargaining outcomes. Application of national pay and work rules to Conrail, a carrier so recently dependent on federal financial assistance for its survival, could chill whatever tendency national bargainers might

⁶ Even under the wage concession agreement, the average hourly earnings of Conrail employees is nearly 50 percent greater than the BLS industry average and exceeds that for the trucking industry.

have to experiment. Similarly, acceptance of contingent compensation/power-sharing on Conrail, continuing Conrail's labor cost advantage over its rail competitors, could provide the impetus for more widespread departures from national standards in other negotiations.

National bargaining may be influenced even by less definitive results on Conrail. It cannot be gainsaid that Conrail's prosperity as well as that of the Milwaukee Road could have been achieved without extraordinary cooperation by labor and management. The hallmark of this cooperation has been a new consensus on the parties' common interest. The threat of abject collapse helped forge that consensus on failing carriers. Adroit bargaining could make the new competition a similar catalyst for nationwide bargaining.

The actual national bargaining issues are too numerous to list and address here, but some summary of the parties' positions is nevertheless useful, even if not analytically probative. The chief item on management's agenda is implementation of the National Study Commission's recommendations. This includes altering how switching work is allocated among road (intercity), local, or yard employees, and changing the basis of pay to one that is more closely connected with actual time worked. Management believes enhanced work assignment flexibility is needed to respond effectively to competitive demands, and perceives distortions in a pay system that is premised on early 20th century average train speeds, distortions that tend to inflate labor costs beyond what the market will bear.

The operating craft rail unions perceive both efforts to be concession bargaining. Given their historical orientation, any change in pay rules, whether it is called modernization or simplification, means less pay for the same work. Similarly, for them more flexible assignment of work ultimately means fewer jobs. Of course, proposals for increased pay and improved benefits also are pending.

The agenda for the nonoperating crafts seems more modest on the surface, but is no less important. Management seeks to restrain the growth in direct labor costs, moderate constraints on the application of new technology, especially communication and information processing, and, as with the operating crafts, more flexibility to assign work. Union responses sound chiefly in job preservation, improved income protection, and strict maintenance of work jurisdiction rules.

A sound case can be made that the raw materials now exist for labor and management to benefit mutually in the current round of national bargaining. The average railroad employee has been, and is, well paid—ranking in the 95th percentile of industrial workers—and recently moved

ahead of airline employees as the most highly compensated in the transportation industry.⁷ This should enable unions to explain credibly settlements favoring moderate growth in direct labor costs. Market realities, recognized by the neutral Study Commission, support work rules that increase the rails' ability to compete. The need for flexibility to manage a railroad system in the new regulatory environment with rapid technological change, and labor's essential role in cost control and work-rule regulation, similarly supports a sharing of power in workplace governance by management.

Rail labor's endorsement of these positions would not be unprecedented. The Teamsters changed prevailing standards (chiefly relaxing intercity and local driver work rules, and diverting pay increases to fund escalating benefit costs) in response to the new competitive environment under the Motor Carrier Act. The Conrail and Milwaukee agreements provide recent rail industry antecedents for more closely tying economic benefits to company performance. The recent coal and auto industry settlements, the latter marked by annual bonuses and generous profit-sharing, also offer contemporary support for these bargaining tradeoffs.

Regrettably, the structure of national rail negotiations makes such forward-looking bargaining outcomes difficult to predict. The presence of many railroad companies, with different capital and management structures, makes stock participation, profit-sharing, or bonuses tied to company performance, difficult, if not impossible, to design. Recent railroad mergers bring new dynamics to the management side of the table. Large carriers, with longer hauls and often better finances, dominate the bargaining. Smaller carriers, already concerned about perceived unfair competition by the larger railroads under the Staggers Act, and some of whose finances are not as sound, may find it more difficult to influence bargaining objectives even if their competitive situations make them more willing to experiment.

Similar structural issues confront union negotiators, as they balance the often conflicting demands of the rank and file on healthy vs. struggling carriers. Railroad operating craft unions reacted negatively, if predictably, to the National Study Commission recommendations. Union literature has been unusually aggressive and critical of the Commission and has described union goals for the next bargaining round as "no take-aways." This reinforces rank-and-file attitudes, which have been shaped over the last half-century's Congressional expansion of income protection from business and regulatory changes (see House Committee 1980), and in turn complicates achievement of gain-sharing bargaining outcomes. Also,

⁷ "Transportation in America," reported in *Traffic World*, September 24, 1984.

unlike the organized auto, trucking, and coal industries, rail bargaining is highly fragmented, with 13 different unions representing 16 different crafts or classes of workers. Rail labor history includes solid evidence of separate, but pattern, craft bargaining and firm pay relationships among the crafts.⁸ While this has contributed greatly to labor peace, it also makes major departures difficult to undertake without some form of coalition bargaining, and no such coalition is now in place for national negotiations.

Conclusion/Prescription

It is too soon for any firm judgment on how the new transport competition and federal support policies will affect rail collective bargaining over the long term, because much of the industry, and its labor relations, is in transition from an old to a new environment. Any interim diagnosis should include three points, however.

First, recent rail policy changes in the Staggers Act were pursued without much consideration for their potential effect on the rail bargaining system (Arouca and Perritt 1985). What consideration there was yielded a response characteristic of the history of rail labor legislation: increased governmental regulation of minimum labor standards by increasing the guarantees for workers affected by structural changes in the industry. One result of these policies was a diffuse message for the rail labor relations community—increased competition is preferred for the service market, but should be pursued with modest effect on employees. This cannot work when transport price and service depend greatly on a carrier's labor standards. It is taking rail bargaining longer than those in air and trucking to react to the new competition because of the ambivalent Congressional signals, and underscores the importance of worker education. John Dunlop (1982) warned of this two years ago.

This system can be contrasted with the failing railroad policy developments on the Milwaukee and Conrail. Rail bargainers at Conrail and the Milwaukee proved capable of accommodating major changes when governmental policy was clear and the cost of failure was perceived as real and near at hand.

Second, reduced standardization of rail prices and services is putting new pressure on prevailing industry labor standards. Competition inherently drives businesses to differentiate themselves from their competition. Labor standards offer one meaningful difference for companies, like railroads, whose labor costs consume a large percentage of each revenue dollar. The rail industry's national bargaining institutions are struggling

⁸ See the Report of Emergency Board 178 at 8-9 (1970) and Conrail's submission to Emergency Board 200, February 1983, on file with the National Mediation Board, Washington, D.C.

with these forces, which increasingly demand labor changes to occur as swiftly as one carrier's market does. This is a formidable task in an industry which traditionally has found comfort and strength in an "interminable" bargaining process.⁹

Third, national bargaining for Class I carriers remains, for now, the preferred forum to address the problems of competition. National bargaining's long tradition, and the recommendations of the National Study Commission that competitive problems be addressed in that manner, continue the parties in their familiar procedure. The Milwaukee and Conrail experiences offer additional evidence; departures from national standards are accommodated only as long as the carrier is perceived to be unhealthy by the workers. Workers define "standard" labor conditions with reference to national bargaining, and it is not clear whether they will embrace fundamentally different conditions, designed around one railroad's needs, over the long term.

There is at least one prescription to be offered for this transitional period that makes use of existing institutions and responds to the parties' preference to build on precedent. Such a proposal has the advantage of incremental change, and while many industry critics might eschew such solutions as insufficient, casting change in incremental terms may be necessary in an industry where certain pay and work rules have endured for over 50 years. It should be possible to continue national standards with a dynamic pay element tied to individual company performance. National bargaining could set a pay target, with companies authorized to withhold a portion each year and pay it only if certain business benchmarks are achieved. Profit or stock participation could further induce labor's acceptance of modest growth in direct labor costs. The prospect of meaningful contingent compensation can justify the new work rules management needs to operate in the new competition.

While structural impediments to this type of gain-sharing bargaining in national negotiations are high, they are not impossible to surmount. Productivity agreements recently spread throughout the industry, whereby labor cost savings through reduced train crew size have been shared via trust fund or direct salary payments. This occurred through single carrier bargaining, but a review of the agreements' terms, and the pattern, show that the outcome could have been achieved in multiemployer bargaining. Eastern Airlines' variable earnings plan also offers a useful model. Coalition bargaining needs can be addressed through uncomplicated pay proposals linked with common, or equivalent, work rule

⁹ *Detroit and Toledo Shore Line Railroad v. Transportation Union*, 396 U.S. 142, 149 (1969).

contributions. The Conrail and Milwaukee experiences show how such coalitions can arise given the right impetus.

It is reasonable to forgo optimism that such modest proposals will come to fruition in the rail industry. A good case can be made that, like in trucking, rails may be experiencing the twilight of national bargaining. But the two industries differ in at least two fundamental respects that suggest national bargaining may persist for railroads. First, rail expansion is limited because of the high costs of building new track. Second, railroads are limited largely to their own right of way, unlike trucks, which under deregulation can travel virtually anywhere the highway system takes them. Together these two facts require a high level of intercompany cooperation and coordination that national bargaining addresses. Similar views about cooperation and coordination were advanced in a recommendation that established airline trunk carriers consider multicarrier bargaining as one tool to address their competitive problems (Curtin 1982), a noteworthy development in an industry that rejected such bargaining when economic conditions were highly standardized.

The new competition means increased risks not only for the national rail bargaining community, but for all associated with rail labor relations. Much of the industry's place in the long-term transportation equilibrium is being determined in this intense, but probably transitional, period. Given the right environment, rail bargaining has shown resilience. Increased conflict and inefficiency may result if national bargaining institutions and parties fail to be effective brokers of change.

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The Changing System of Airline Industrial Relations*

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Recent changes in collective bargaining in the airline industry stand in marked contrast to the many years of stable industrial relations before deregulation. The sharpness of these changes in industrial relations and their correspondence with the restructuring of the industry caused by deregulation provide an interesting example from which to consider the economic forces that govern industrial relations. In air transport, it is not the market competition caused by deregulation as such that has changed industrial relations, but the fact that this competition was imposed on a system of bargaining created for a different economic environment. The pressures that resulted have led to an elaborate pattern of union concessions and contract changes aimed at restructuring airline labor costs. This pattern, especially the differences across work groups, is best explained by examining the characteristics of the different unions representing air transport workers and the interests of their members.

In order to examine the pressures generated by deregulation, it is useful to consider the situation that existed prior to the Airline Deregulation Act of 1978.¹ The first relevant aspect of the regulations imposed on the industry by the Civil Aeronautics Board (CAB) was that carriers were not allowed to add or withdraw flights from their schedule without the Board's permission. This restriction was designed to ensure an adequate, integrated air transport network; where existing levels of service resulted in losses, the CAB was authorized to pay subsidies to carriers in order to maintain service.

The second relevant feature of the regulated environment was that the

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¹ For an account of the CAB controls prior to deregulation, see Taneja (1976).

CAB controlled fares, typically with formulas based on distance travelled, that were uniform across carriers. Fare increases were granted by the CAB in order to maintain reasonable rates of return, and wage increases were one of the allowable costs that fare increases were granted to cover.

With respect to industrial relations, one consequence of this regulated environment was that it gave the airline unions considerable power in bargaining. Because fares could be raised to cover increased labor costs, the carriers had less reason to resist them. Increased labor costs did not necessarily put carriers at a price disadvantage, and CAB restrictions on schedules and routes reduced the elasticity of demand so that higher fares led to relatively small declines in traffic. The nature of air transportation and of collective bargaining arrangements in the industry made it possible for the unions to inflict considerable damage on the carriers through industrial action. As Northrup (1977) and Kahn (1980) point out, because it is impossible to inventory passenger traffic, carriers lose all the business they would otherwise have had during a strike. Further, passengers stay away from a carrier when strikes are threatened and even after they appear to be settled, fearing some new dispute that will interrupt their travel. The craft nature of bargaining under the Railway Labor Act also meant that the different bargaining units (pilots, flight attendants, mechanics, etc.) each had the ability to shut the carrier down (Northrup 1971, Shils 1971).

In these situations, employers may feel that the cost of contract improvements for these subgroups are small in absolute terms (affecting relatively few workers) and are worth granting to avoid strikes. Over time, the different unions were able to whipsaw the carriers and drive total labor costs up considerably. Hendricks, Feuille, and Szerszen (1980) found that union wages and contract terms in the airline industry were higher than for similar jobs in manufacturing, other things equal, in large part because the environment created by the regulations increased union power.

The carriers, however, have two protections against the potential costs of industrial action. The first was an industry strike fund, the Mutual Assistance Plan, which became more generous over time and increased management's resistance to strikes (Unterberger and Koziara 1977, 1980). The second protection came from the fact that the monopoly position that carriers often had in certain routes under CAB regulations meant that after a strike, at least some of their business would still be there.

The initial changes in the industry created by the Airline Deregulation Act of 1978 seem to have increased union bargaining power even further. The Mutual Aid Pact was legislated out of existence by the 1978 act, and any new strike fund must now meet a much more restrictive set of

guidelines. In addition, the end of CAB control over routes and schedules means that there is now no guarantee that any of a carrier's business will be there after a strike; competitors can come into one's market during a strike and take those passengers away.² At smaller carriers, however, the surfeit of pilots and other skilled personnel during the recession made it possible for carriers to threaten to break strikes by hiring replacements, possibly shifting some bargaining power back to management.³

The increased vulnerability of the carriers to strikes and the threat they may present to employment has raised the stakes associated with industrial action, and both sides are now extremely reluctant to engage in it. Indeed, one of the main developments in industrial relations since deregulation has been a very sharp drop in strike activity. The most recent data suggest that industrial action is at the lowest level in 16 years (NMB 1983), a remarkable statistic given that the industry in general and labor relations in particular are going through the most traumatic changes in their history. In general, carriers have not won concessions through industrial action; in many cases they have agreed to substantial settlements rather than confront unions determined to strike.⁴

Of course, the most important change created by deregulation is that carriers are now free to compete for markets on the basis of fares and schedules. By itself, competition should not necessarily lead to pressures for concessions; after all, the highest union wages and most stable industrial relations have historically been in industries with competitive product markets (steel, autos, manufacturing in general), some of which were extremely competitive (e.g., tires and meatpacking). Commons's (1909) famous argument suggested that in order for unions to raise wages above the market level, they must "take wages out of competition" by enforcing uniform contracts across the entire product market so that no competitor will have a labor cost advantage that can be turned into a competitive price advantage. Where the unions were able to do this, wages were protected no matter how competitive the product markets

² For example, United's markets were apparently so severely damaged by its 58-day machinist strike in 1979 that it initiated half-fare coupons to try to win back some of its business; this move sparked the industry's first major fare war which had disastrous consequences for all participants ("Fare Wars" 1981).

³ Continental replaced its striking mechanics and pilots in 1983 and unilaterally imposed lower pay rates as part of its bankruptcy reorganization plan. Kahn (1980, p. 399) noted that Century Airlines took somewhat similar action in 1931. It took advantage of the surplus of pilots and the need to cut costs and prices by forcing its pilots to resign and reapply for their jobs at half pay. This action led to ALPA's first strike.

⁴ For example, TWA won a wage freeze from its pilots in 1983, but when confronted by resistance from the machinists and flight attendants granted them 30 percent increases (over three years) with no offsetting productivity improvements ("TWA" 1983). Some argue that Eastern caved in to IAM pressure last spring in order to avoid a strike despite a great need to secure concessions ("Airlines in Turmoil" 1983).

were. In air transport, the unions have historically covered virtually the entire product market. The major national carriers, all of which are at least partially unionized (even Delta has union pilots and dispatchers) still fly over 90 percent of all revenue passenger miles; the remainder goes to intrastate and “upstart” carriers, many of which are at least partially unionized. The nonunion share of the air transport market is roughly 5–7 percent, and these airlines often do not compete in the same markets as the trunk carriers.⁵ Clearly, this kind of market coverage would be the envy of any industrial union in the country!

It would seem reasonable, therefore, to conclude about deregulation, as did Hendricks et al. (1980, p. 81), that “the industry and unionization characteristics that developed over 40 years of regulation have created a bargaining environment that should not change substantially in the near future.” Then why has the pressure for union concessions been so relentless?

Despite their coverage of the product market, unions never enforced uniform contracts across the product market and therefore never took wages out of competition through collective bargaining. CAB restrictions on routes and fares served that purpose, however, by preventing labor cost advantages from being translated into lower fares and a competitive advantage. Because of this CAB protection, there was no pressure forcing the evolution of industry-wide bargaining of the sort that had occurred in manufacturing. The unions, therefore, directed their efforts toward meeting other goals—meeting the varying needs of members at the different carriers. They did this by giving the locals almost complete autonomy, especially in collective bargaining. As a result, the bargaining structure in airlines has always been single-craft–single-employer. This type of bargaining structure was also encouraged by the Railway Labor Act’s requirement that representation be by craft, leading to a plethora of unions in the industry. Shils (1971) points out that significant industrial disputes in the industry generally involved only one union, and disputes across carriers were virtually nonexistent. This bargaining structure remains despite the creation of a special coordinating committee of air transport unions within the AFL-CIO.

As soon as CAB regulations ended and fares became competitive, wages also came under competition. Because bargaining is carrier-specific, there is no mechanism to prevent the different local unions from

⁵ These calculations are based on statistics on carrier market shares from CAB (1982). Freeman and Medoff’s (1979) estimates suggest that 89 percent of air transport production workers were covered by collective bargaining agreements in 1969–1972. Coverage of the product market was virtually complete because the organized carriers flew far more flights and typically did not compete with the nonunion carriers who were concentrated on intrastate routes.

undercutting each other's labor costs. Financially vulnerable carriers were able to secure concessions and lower labor costs from their locals who were hoping to reduce expected employment losses; their competitors were then placed at a cost disadvantage (one carrier estimated that 78 percent of its controllable costs were labor related ["As Continental" 1983]), so they also demand concessions. Soon the industry's wage structure comes apart.⁶

As in other industries, unions in airlines agree to concessions as a way to reduce potential unemployment; product demand has fallen because of rising low-price competition (here, mainly from other organized carriers), and the labor demand curve which results suggests that fewer workers will be employed unless labor costs are reduced (Cappelli 1982, 1984). Some carriers have been pushed into bankruptcy (Air Florida, Braniff, restructuring at Continental), others have at least confronted the possibility (Western, Eastern), and many have reduced capacity and laid off workers during the recession. It is not surprising, therefore, to find financially vulnerable carriers leading the concession trend. Six carriers were rated as vulnerable during the post-regulation period.⁷ All had secured concessions by the fourth quarter of 1981. Further, because of cash-flow and immediate financial problems, they went after and secured wage concessions over workrule concessions by a margin of 60 to 32. (Wage cuts generate immediate savings, while workrule changes cut average costs only down the road if operations expand or if workers can be laid off when operations contract. Unions are unlikely to agree to workrule changes in the latter instance.) In contrast, the six carriers financially strongest during this period waited much longer before they secured concessions, typically only after their competitors had done so, and secured workrule over wage concessions by a margin of 30 to 24.⁸

⁶ The great irony is that during the early years of the industry, the carriers had pushed for industry-wide bargaining that would have taken wages out of competition, but were rebuffed by the unions. Brief experiments in multicarrier bargaining with the IAM in the 1960s were abandoned (Kahn 1953, 1980).

⁷ The vulnerable carriers were Braniff, Continental, Eastern, Pan Am, Republic, and Western. The ratings were based on a variety of financial measures including current assets to liabilities and cash reserves. The financially secure carriers were American, Delta, Frontier, Northwest, TWA, and United. More recently, TWA could be seen as being in the vulnerable group.

⁸ These figures are calculated from AIRCon contract summaries through the first quarter of 1984. In many cases labor cost differences are overshadowed by the importance of other operating characteristics (schedules, equipment, etc.) in determining a carrier's competitive advantage. For example, US Air has next to the highest cost structure in the industry, yet remains one of the most profitable carriers; Braniff, in contrast, had next to the lowest cost structure before going bankrupt. Further, the ability to secure concessions from unions appears to be related to other considerations besides a carrier's vulnerability. For example, United and American have been extremely successful at securing concessions over time and are also among the industry's strongest carriers financially; Western, Eastern, and the others have been very vulnerable financially, but have over time been much less successful at securing concessions. For a consideration of these relationships, see Cappelli (1985).

There are many ways to reduce labor costs, and the contract concessions secured by carriers span a variety of areas in addition to wage cuts and freezes. The most important concessions in the industry, especially for flight crews and attendants, concern schedules. (Indeed, for these groups, contract restrictions on scheduling translate directly into pay through credits and supplements for night duty, layover time, etc. See Baitzell [1966] for a discussion of pay formulas.) About 45 percent of contract concessions in 1981–1984 dealt with scheduling issues. In contrast to other industries, there have been fewer efforts to broaden job classifications in airlines presumably because of the resistance generated from rivalries among craft unions.

For many carriers, the issue has been whether contract concessions can achieve the permanent restructuring of labor costs necessary to meet growing competition from nonunion carriers who are currently hiring new employees at roughly half the pay of their more senior colleagues at the trunk carriers. The solution has been to introduce two-tier or “B” wage scales which provide lower pay for new hires. Obviously, two-tier rates reduce average labor costs only as fast as the carrier can hire new workers—expanding the workforce or at least generating turnover. For the unions, two-tier scales represent a concession that costs the current membership nothing and which creates incentives to hire new workers, helping to eliminate the problem of workers who have been stuck for years at the bottom of the seniority ladder. (The existence of two-tier scales raises potential problems for union governance, however.) American initiated a two-tier system as a condition for future expansion in 1983. The rest of the industry hastened to join the two-tier wave; see Table 1.

Perhaps the most interesting issue in airline industrial relations is the

TABLE 1
Two-Tier Wage Plans

| | AA | DA | EA | FL | NW | OZ | PI | RC | UA | WA | USAir |
|-------------------|----|----|----|----|----|----|----|----|----|----|-------|
| Pilots | °1 | | | °1 | | | ° | ° | ? | °1 | |
| Flight attendants | °1 | ° | ° | °1 | ° | ° | ° | ° | ° | °1 | |
| Mechanics | ° | ° | | | | | | ° | ° | ° | |
| Agents | 2 | ° | ° | °1 | | | ° | ° | 2 | ° | °1 |

Source: AIRCon data.

Notes: ° = new hire scales; 1 = new hire scales will not achieve parity with scales for current employees; 2 = lower starting rates but some scales; ? = negotiations in progress. AA (American Airlines), BA (Braniff), CO (Continental), DA (Delta), EA (Eastern), FL (Frontier), NW (Northwest), OZ (Ozark), PI (Piedmont), RC (Republic), UA (United), WA (Western).

distribution of contract changes by workgroup. How interested a workgroup is in making concessions depends not only on the probability that concessions will save jobs, but also on the value of those jobs—how do they compare to alternatives elsewhere? In addition, the ability of local unions to grant concessions may depend on their autonomy from the interests of the international and on the extent of competition from other unions for their members. As Ross (1948) argued, unions may feel compelled to take a harder line in bargaining when they face competition from other unions. Together, these arguments provide a good explanation of the pattern of contract concessions outlined below.

As a group, pilots have made more concessions than all other workgroups combined—72 percent of all industry concessions (AIRCon data). In almost every case, they have been the first group to make concessions and have given up the most. The reason for this clearly seems to be that pilots have the most to lose from layoffs. First, alternative employment with other carriers would result in a sharp pay cut. Pilots who switch carriers lose their seniority and move to the bottom of the seniority pay scale at their new carrier. During the recession as many as 5000 pilots were laid off, suggesting that the ability to move to a new carrier was remote. Second, there are almost no employment prospects outside the airline industry that would make use of their skills. With respect to union characteristics, many argue that pilots identify with management and have more understanding of their problems than do other workgroups. In addition, the tremendous autonomy that the locals have in bargaining implies that they are free from pressures to maintain some industry pattern. Further, the fact that ALPA faces almost no competition from other unions seeking to represent pilots makes it easier to make sometimes unpopular decisions such as granting concessions.

The situation facing flight attendants is, perhaps surprisingly, quite different from that of pilots. While there is no market outside air transport for these specific skills, flight attendants have less to lose from layoffs than do pilots, first, because their wages are considerably less and, second, because seniority-based pay scales are less steep, making it easier to move to a different carrier (CAB 1975). Perhaps more importantly, flight attendants have historically had less attachment to their jobs than pilots; if one is expecting to move to a different job, there is less interest in making sacrifices to save the current one. The characteristics of flight attendant unions also differ from the pilots. There are as many as 11 unions representing flight attendants, and the rivalry among them is intense. Kahn (1980) noted, for example, that between 1976 and 1979 flight attendants at six carriers changed their representation. As a result,

the flight attendant unions have taken much tougher positions in bargaining across the carriers and have agreed to fewer (18 percent of the total number) and less significant concessions than have the pilots.

At the other end of the spectrum one finds the mechanics who have been the workgroup far and away the least inclined to agree to concessions. Only 11 percent of the total number of concessions in the industry were granted by mechanics, and they were typically far less significant than for other groups. From the employers' point of view, the labor cost differential associated with mechanics is not great relative to the nonunion competition because the mechanical work for the latter is typically done under contract by the larger unionized carriers. Further, alternative employment is much more available at other carriers and outside air transport (in manufacturing, for example) at wages comparable to those paid by the trunk carriers. Perhaps most importantly, the structure of the IAM, which represents the vast majority of airline mechanics, works to limit concessions. The international has the ability to nullify local agreements and has used this power to prevent concessions at individual carriers ("Airline Wages" 1984).⁹ The IAM has a strong incentive to avoid concessions altogether in order to prevent them from spreading to its negotiations outside air transport where similar settlement patterns are followed.

In many cases unions are able to secure improvements in some aspects of employment relations in return for granting concessions. These quid pro quos typically are secured in areas which do not raise current labor costs, often expanding negotiations into new areas outside the current contract. Whether unions are able to secure these improvements depends on how badly management needs union cooperation; in short, whether the unions have bargaining power (Cappelli 1984). As argued above, the airline unions still have considerable bargaining power, and it is therefore not surprising to find that they have secured an important array of improvements.

The pressures generated by carrier-specific bargaining in competitive product markets tie the interests and prospects of union members to the performance of the carrier, and the quid pro quos (see Table 2) strengthen that relationship. In addition to the fact that employment prospects are closely linked to firm performance, participation in corporate decision-making helps create commitment on the part of the workforce to the goals of the carrier; profit-sharing, stock ownership, and other arrangements provide financial incentives to pursue those goals. Together these arrangements will further the attachment of airline employees to

⁹ For example, the IAM took one of its locals to court recently in an effort to prevent a concession agreement from being approved at Braniff ("Machinists' Concessions" 1984).

their employer, perhaps making it difficult for their unions to achieve the industry-wide structure that manufacturing unions have historically used to counter wage-cutting pressures.

TABLE 2
Quid Pro Quos for Concessions

| | AA | BA | EA | FL | NW | RC | WA | UA | TWA | PA |
|---------------------------------------|----|----|----|----|----|----|----|----|-----|----|
| Explicit employment | ° | | ° | | | ° | | ° | ° | |
| Profit-sharing | | ° | ° | ° | | ° | ° | | | ° |
| Stock plans | | | ° | ° | | ° | ° | | | |
| Future pay | | | | | ° | | | | | |
| Subcontracting/double breasted limits | | | ° | ° | ° | | | | | |
| Board membership | | | ° | | | ° | ° | | | |

Source: AIRCon and popular press.

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The Effect of Divestiture on Collective Bargaining

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The Communication Workers of America is a national union, affiliated with the AFL-CIO, representing about 600,000 workers nationwide in the telecommunications and public sectors. Prior to January 1, 1984, 85 percent of our members worked for one employer—AT&T. After the court-ordered divestiture under which AT&T spun off its Bell Operating Companies, our members found themselves working for either AT&T or any of the seven regional Bell companies.

The divestiture was the result of a long series of technological and market changes that had been evolving over several decades. Growth in demand for both residential and business telecommunications services led to the expansion of AT&T to over one million employees in the 1970s. At the same time, technological change, especially the development of computer technology, blurred the distinction between the telecommunications and information processing industries. While other firms were seeking to enter telecommunications with low-cost alternatives to traditional telephone service, the giant AT&T desired to enter new areas of business outside its regulated market area, much to the dismay of smaller firms in those fields. These developments had been brought before the public in the form of an antitrust suit at the Justice Department. The Supreme Court settled this dispute by modifying the 1956 Consent Decree which had given AT&T monopoly jurisdiction over the traditional telephone service it provided, restricting AT&T from entering other fields, in exchange for regulation by the Federal Communications Commission (FCC). The recent divestiture required AT&T to divest itself of the local Bell Operating Companies, which were organized into seven regional holding companies. The Bell companies retain the local regulated monopoly for providing telephone service, but may enter new areas on a competitive basis. AT&T, consisting of the old Long Lines, Western

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Electric, and Bell Labs, retains its long distance service, now AT&T Communications, in a regulated environment, but may venture into new areas on a competitive basis.

Not surprisingly, the events surrounding the divestiture activities of the past few years have had many significant effects on collective bargaining and on our members at CWA. We are now only in the midst of the transition phase, with many substantive changes still taking place. Many of the important questions we have raised regarding employment, jobs, and bargaining remain largely unanswered, but at this time we do know which questions to ask and can focus in on key areas of concern. Not only has divestiture raised a number of issues regarding the structure of bargaining, employment security, and the nature of benefits, but it will also have long-term effects on the economic welfare of the individual worker and on the structure and character of CWA itself.

The Structure of Bargaining

In 1974 CWA at long last achieved a hard-won goal: a nationally bargained contract with AT&T and the Bell System. Prior to 1974, CWA had to bargain separately with each of the 22 Bell Operating Companies, Western Electric, and AT&T. Because of divestiture, however, national bargaining was short-lived, with CWA and AT&T negotiating our last national contract in the summer of 1983.

The immediate issue was protecting contractual and bargaining rights for the thousands of CWA members affected by divestiture. Aware several years earlier that change was ahead, CWA and AT&T included in the 1980 contract a "Memorandum of Agreement" providing employee protection guarantees for workers transferred because of reorganization within AT&T. Once the specifics of the divestiture became clearer, this agreement was amended in March 1982 to protect workers transferred due to divestiture because of reorganization or the establishment of any new entities in AT&T or the Bell companies which perform operations of the existing company. Under this agreement, such workers are protected against loss of employment, wages, service credits, conditions of employment, and collective bargaining rights for seven years from the date of transfer. The agreement was amended with two supplements in 1983 national bargaining to guarantee CWA representation and full contract rights for transferred employees. Problems had arisen concerning not only contract rights, but matching workers with an appropriate contract. Although CWA represented about 85 percent of former AT&T bargained-for workers, the International Brotherhood of Electrical Workers (IBEW) and a coalition of non-AFL-CIO independent unions represented the remaining 15 percent. Divestiture created a situation where two employ-

ees could be working side by side, performing the same job with the same title, but one represented by CWA and the other by IBEW. The two supplements specified whether certain groups of transferred employees were to "take their contract with them" or to be covered under the contract in the new location. In an additional Letter of Understanding, CWA and AT&T agreed that workers whose jobs are downgraded or are reassigned to lower rated jobs due to divestiture would maintain their current title, pay rate, and pension band throughout the life of the contract.

Although 1983 negotiations retained a national character, with all negotiated provisions extending to covered workers at AT&T and the divested Bell companies until 1986, the outcome of the contract was not unaffected by divestiture. Despite healthy profits, AT&T's final proposal to CWA was for only a 3.5 percent pay increase. Apparently management fears of increased competition after divestiture led them to make this proposal, which was totally unacceptable to the union. The result was a 22-day national strike.

Although we are only a year and a half away from the 1986 contract, the structure of these negotiations remains uncertain. At CWA we will be trying to approximate national bargaining as closely as possible. We have set up two bargaining councils to set priorities, one for AT&T and the other for the Bell companies. Previously we had one Bell System Bargaining Council. We would prefer to negotiate as few contracts as possible and are now in the process of discussing with the companies the possibility of having regional contracts. So far, only Bellsouth and possibly Nynex have agreed to regional bargaining. At best, we would need to bargain eight contracts, one for AT&T and seven more for each of the regions. At worst, we would bargain 21 contracts, one for AT&T, one for Nynex, one for Bellsouth, and one for each of the remaining operating companies.

The breakup of the bargaining structure creates significant problems for CWA in collecting and organizing data for bargaining. Over the years we have built up a substantial data base and foundation for working with AT&T during negotiations. The many shifts in people and jobs that have already occurred render much of our data unusable. We will have to build up contacts in each company and region with which we bargain to acquire the appropriate data. In many cases our company counterparts are new on the job or unfamiliar in working with bargaining data, a function which has been handled by AT&T in the past. There is no longer a central location to provide us with one set of data for the Bell regions and companies. We will have to start from scratch with each company and conduct our own regional and national aggregation and analysis of

data. Although the companies are required by law to provide us with the data we need for bargaining, anyone who has been through this process knows that the data typically dwindle in, one piece at a time, with numerous omissions and ambiguities, making our task all the more difficult.

Wage and Benefit Issues

Once the bargaining structure is in place, the key problem will be to insure uniform wages and benefits for our members under different contracts across the country. This task will grow increasingly difficult as time goes on.

Not only wages, but also job titles, job content, and lines of promotion will differ from company to company. Many jobs and promotion lines have already been split apart with divestiture, but new changes will occur as companies enter new areas of business. The problem is particularly disturbing at AT&T Information Systems (AT&T-IS) where the rapid creation of new jobs makes it extremely difficult to ensure proper compensation, let alone lines of promotion.

Three of the benefit plans have been restructured because of divestiture: the pension plan, the Bell System Savings Plan, and the Employee Stock Ownership Plan. Prior to 1980, all Bell Operating Companies and AT&T had the same pension benefits, but the plans were managed separately in each company. In 1980 negotiations, the plans were split into management and nonmanagement plans and the nonmanagement plan was restructured to provide defined benefits. At the same time AT&T merged all the plans into one fund for investment purposes.

Divestiture necessitated that the plan and its assets once again be split into separate plans for each of the seven regions and AT&T. The most significant effect on CWA workers was the discontinuance of portability of pension benefits for workers who would have moved between an operating company and AT&T or between companies in different regions. Before divestiture, a worker who transferred, for example, from Atlanta to Seattle could transfer pension credits from Southern Bell to Pacific Northwest Bell. After December 1, 1984, any worker who left Atlanta and was hired by Pacific Northwest Bell would not have been entitled to transfer his or her pension credits. Fortunately, CWA overturned this part of the divestiture plan through a rider to the Deficit Tax Reduction Act of 1984. The amendment restored universal portability for the predivestiture Bell System workforce.

Another effect on the pension plan may be a shift in actuarial assumptions caused by a differing size and composition of employment in

the various companies. Larger and "younger" companies may be better able to afford benefit improvements than will smaller companies with a greater proportion of older workers, thus causing a widening diversity of pension benefits over time, for both current and future retirees.

The Bell System Savings Plan had a similar fate. Despite stipulations in the plan requiring plan termination and subsequent cash and share distributions in the event a company ceases to be a subsidiary of AT&T, AT&T instead chose to divide the plan assets among AT&T and the seven regions. Plan participants who are transferred during the true-up period would have their plan assets rolled over to the plan in the new company, with the portion held in stock of the old company swapped for an equivalent share of the new company's stock. A similar change was in store for the ESOP, with the plan being split into eight separate plans and workers transferred to a different company receiving shares of stock from the new company.

Although the medical and life insurance plans do not require any major splitting of assets because each company has its own contract and carrier, workers may be affected if they transfer to a company where insurance rates or medical costs are higher, causing increases in premiums. Over the long term, differing local cost conditions and the varying financial statuses of each of the companies may result in a divergence of benefits for our members.

Until we are able to achieve some form of uniform bargaining structure with AT&T and the 22 operating companies, many contract provisions will grow increasingly dissimilar. Over the years we have been able to standardize many of our contract provisions through national bargaining. Divestiture will begin to reverse that process. We are in a much more difficult situation than we were in with pattern bargaining prior to 1974. At that time, the pattern was set and followed, for the most part, between companies all within the same corporate structure. AT&T as well as CWA had an interest in maintaining some degree of uniformity across the Bell System. After divestiture, however, many of the Bell regions and companies, freed from the central control of AT&T, are eager to go it alone, confident that they can improve on the past. These companies will have no interest in following a pattern or coordinating negotiations with other companies, although this may change after one or two rounds of bargaining. In addition, the entry of AT&T and other companies into new areas of business and new markets, both domestic and international, will lead to a divergence of bargaining environments in the companies, reducing the likelihood of pattern or coordinated bargaining.

Future Implications

In addition to the direct effects of divestiture on collective bargaining and the contract, the breakup of AT&T has had a significant impact on the internal structure and style of CWA, AT&T, and the Bell companies, with implications for the nature of long-term bargaining relationships.

Although divestiture forced changes upon the managements of AT&T and the Bell companies, in some ways the change was not unwelcome. New technology and increased international competition had gradually been rendering AT&T's traditional top-down management inefficient. The companies were required to shift from a regulated, bureaucratic monopoly to a competitive, efficient, profit-making enterprise in just a year's time. In an effort to streamline the corporate structure, thousands of managers have been offered and have accepted early retirement, resulting in the desired flattening of the hierarchical organizational structure.

The managers who remain face the difficult task of drastically changing their style of management. The practice-following, order-giving supervisor of the old Bell System will not be effective in the new competitive environment. Today's manager must be a problem-solving strategist who works with employees to achieve the best results rather than merely monitoring them and following directives from above. The tightly structured control may have been sufficient in the old stable environment of guaranteed markets and cross-subsidization, but it is not flexible enough to meet the unprecedented challenges of a competitive world market in telecommunications.

The union found that it, too, had to change in order to effectively serve its members in the new environment. In 1981 CWA set up a Committee on the Future to examine the changes taking place both internally and externally at CWA and to make recommendations concerning appropriate strategic options and restructuring. In a special convention in 1983, the union reviewed and voted on the Committee's recommendations. In 1984 the convention voted to implement a revised structure, enabling the union to address the changes taking place in the industry.

Like management, the union must change its traditional reactionary style to meet future challenges in a proactive manner. Union representatives must amend their role as grievance-handlers to become strategic problem-solvers. The realm of issues confronted by the union has expanded from contract interpretation and bargaining to include such complex issues as technological change, job design, and the quality of working life. This transition will require increased awareness and education within the union.

Organizing has also received a renewed emphasis within CWA. In 1980 CWA set up a national organizing department to coordinate and enhance our efforts. As our membership dwindles within AT&T and the Bell companies because of drops in employment, we have at the same time organized nearly 80,000 public workers in New Jersey, Texas, Ohio, and Missouri. We are also seeking to organize workers employed by the new, nonunion subsidiaries opened by AT&T and the Bell companies as they enter new areas of business.

The changes in CWA, AT&T, and the Bell companies portend a new direction for long-term labor-management relations in the industry. At this early stage, two apparently conflicting trends have emerged, and it is unclear at this point which will prevail.

On the positive side, we see a trend toward greater cooperation between the companies and the union. Some managers realize they have a great resource in the workforce and that they need the support and commitment of the workers to survive in a competitive, rapidly growing market. Managers who feel this way are willing to work together with the union and involve workers in decision-making in areas such as training and technological change. We feel that joint problem-solving will benefit the company through greater efficiency and higher quality of products and service and will benefit the union by increasing employment security and improving the quality of jobs.

On the negative side, however, we are seeing an increased polarization of labor and management resulting from management's persistent attempts at cutting costs to achieve competitiveness. Labor has continually made positive contributions to productivity at AT&T and the Bell companies, yet the focus remains on reducing labor costs. Attempts to cut costs through reductions in real incomes and transfer of health-care costs to workers resulted in increased adversarial relations and a three-week strike in 1983, and we have no reason to believe the situation will improve in 1986. Labor is always willing to help if everyone will benefit in the long run, but we see no reason whatsoever to agree to concessions when profits are strong, the market is growing, and managers are highly paid.

Another negative practice that is increasing the adversity between company and union is the creation of new nonunion subsidiaries by AT&T and six of the seven regional companies. While CWA would like to work with the company to enhance both efficiency and jobs, we cannot effectively represent our members by cooperating on one front while the company beats us down from behind. We hear a lot these days about the union's responsibility to the company, but not a word is uttered regarding the company's responsibility to the union.

Which of these trends will prevail remains uncertain. Perhaps the result will be mixed, with a shift toward cooperation and problem-solving in some companies but a move toward greater strife and adversity elsewhere. It will probably take two or three rounds of bargaining before a definite pattern emerges. We can only hope that whatever outcome prevails will be one that yields the greatest benefit and least burden on the men and women we represent.

XIX. CONTRIBUTED PAPERS: ORGANIZATIONAL BEHAVIOR

Patterns of Commitment Among Rank-and-File Union Members: A Canonical Analysis

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Researchers in organizational behavior have usually defined organizational commitment in terms of attitudes and behavioral intentions. According to Hall (1979), these attitudes, which all seem to tap moral involvement, include: (1) identification with the organization, (2) involvement in the organizational work role, and (3) a warm, affective regard for the organization. The behavioral variables usually include a willingness to exert effort for or a desire or willingness to remain in the organization.

Several studies done in the 1950s focused on the question of whether an individual could be dually committed, that is, maintain simultaneous loyalty, allegiance, or commitment to both an employer and a union (Dean 1954, Purcell 1960, Stagner 1954). The general conclusions of these studies was that in established union-management relationships, commitment to both organizations was more the rule than the exception. However, a recent review of those studies by Schriesheim and Tsui (1980) found few using rigorous quantitative methodology. Based on their review and an analysis of new data they collected at four sites, they concluded that "although dual commitment may characterize some employees in some organizations, dual commitment does not characterize all (or, perhaps, most) employees in all (or most) organizations" (pp. 5-6). These findings and some of the early studies suggest that the pattern of an individual's commitments to union and employer may vary depending on characteristics of the individual and the situation.

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In the last few years a number of other studies (Martin, Magenau, and Peterson 1982, Angle and Perry 1984, Fukami and Larson 1984, Gallagher 1984, Larson and Fukami 1984) have investigated the antecedents and/or consequences of both union and employer commitment. Some of these studies have also examined the role of various moderators of the relationship between the two types of commitment. Most previous research has studied dual commitment as a correlation or cross-tabulation between separate employer and union commitment measures or has compared the correlations or regressions of these separate measures. Other studies have used partial correlation to examine the variables moderating correlations between the two forms of commitment. This study differs from previous studies in that patterns of commitment are examined through canonical correlation, a multivariate procedure. It also differs from most previous research in terms of the specific variables used in the analysis.

The study of variables related to these patterns of commitment is important since such patterns may relate to whether workers take a cooperative or adversarial approach to labor relations. One might expect that individuals who are highly committed to both employer and union (i.e., dually committed) would take a more cooperative approach to union-management relations. On the other hand, to the extent that an individual differs greatly in levels of commitment to employer and union (i.e., unilateral commitment), he/she might be more likely to adopt a win-lose approach.

Variables and Hypotheses

The present study explores the relationship between characteristics of the individual, union-management relationships, union, employing organization, and the work and work environment on individual patterns of commitment to both the employing organization and the union.

Personal Characteristics

Previous research (Becker 1960, Salancik 1977) suggests that the more an individual feels locked into an employment situation, the greater will be that individual's level of commitment to the employing organization. The perception of many employment alternatives would thus be expected to relate negatively to employer commitment. A number of other personal characteristics such as high income, advanced age, low education, female gender, being married, having children, and long job tenure are likely to lead to greater employer commitment by reducing the number of equivalent employment opportunities, restricting mobility, or through the accruing of assorted advantages (e.g., friendships, retirement benefits, feelings of stability) of continued employment.

The above mentioned personal characteristics were also expected to relate to union commitment since for many individuals the only realistic hope of changing unions would involve changing employers. Thus, the factors that tie an individual to an employer may also tie an individual to a union and affect union commitment in the same way as employer commitment. Hence, all the above factors were hypothesized to be related to a pattern of dual commitment.

Union activism has been found to be related to unilateral commitment (Dean 1954). Behavior indicative of union activism (i.e., filing grievances, attending union meetings, reading the union newspaper, and having a detailed knowledge of the labor agreement) was therefore hypothesized to be related to unilateral commitment to the union. Research (Hulin and Blood 1968) suggests that rural employees are more likely to hold values consistent with the employer than the union. Thus unilateral commitment to employer was hypothesized to be more common among rural workers.

Labor Relations Characteristics

Dual commitment has traditionally been thought to arise in part from employees giving joint credit to union and management whenever relations are good between the two (Dean 1954, Martin 1981). Consistent with this view, several studies have recently shown that a positive correlation between union and employer commitment is moderated by positive union-management relations (Angle and Perry 1984, Gallagher 1984). Where labor relations are good, integrative or problem-solving views of collective bargaining and contract administration are also more likely since such approaches rely heavily on the mutual cooperation and trust of the parties (Walton and McKersie 1965). Conversely, distinct expressions of a punitive approach to union-management relations, such as using the grievance procedure to punish the supervisor, were expected to relate to unilateral commitment to the union.

Union and Employer Characteristics

Both union and employer can take certain actions which are likely to be relatively independent of the other party. Such actions would be expected to be related to commitment to one organization but not to the other. An example would be organizational practices which allow for influence in decision-making. The idea that participative decision-making practices resulting in personal influence can lead to commitment to the employing organization has been well supported (Hall 1979). It is also reasonable to assume that union decision-making practices, which are responsive and allow for member participation, are related to union

commitment. Thus union policies promoting member influence and employer policies allowing for employee influence were hypothesized to be related to unilateral patterns of commitment to their respective organization. For similar reasons, the perception of promotional opportunities was hypothesized to be related to unilateral commitment to the employer.

Other employer and union characteristics such as steward effectiveness and supervisor support were expected to relate most strongly to commitment to the respective organization involved and, hence, to a unilateral pattern of commitment. However, since the supportiveness and effectiveness of union and management officials are likely to depend at least partially on the cooperation of the other party, they were also expected to be related to a pattern of dual commitment.

Work and Work Environment

Since management has the most immediate and direct control of the work environment, workers are likely to hold their employer responsible for their job satisfaction. Consequently, job satisfaction was hypothesized to be related to unilateral commitment to the employer. A larger work unit is likely to be associated with more impersonal relations with both management and union officials. Unit size was therefore expected to have a negative relationship with dual commitment.

Method

The respondents were 228 rank-and-file members of a local union representing employees at the 45 separate work locations of one retail employer located in a Midwestern state. A questionnaire was sent to 368 members and 228 completed questionnaires were returned. Of these, 225 were suitable for data analysis.

A second wave of parallel questionnaires was sent approximately one year later to the same individuals who received the original questionnaire. Of the 110 wave-two questionnaires that were returned, 109 were suitable for data analysis.

The criterion variables were an employer commitment scale and a union commitment scale, each consisting of three parallel items adapted from Porter, Crampon, and Smith (1976) and Gordon, Philpot, Burt, Thompson, and Spiller (1980). The product of the standardized values of these two commitment measures was included as a third criterion measure for exploratory purposes to determine whether any independent variables predicted an interaction between the two forms of commitment. The scales used as independent measures included Hoppock's (1935) job satisfaction scale, the quality of union-management relations scale devel-

oped by Rosen, Greenhalgh, and Anderson (1981), and a measure of integrative-distributive bargaining based on Frederickson's (1969) work. The other independent measures included standard demographic items and other attitudinal measures adapted from recent studies in union-management relations (c.f., Martin, Magenau and Peterson 1982). The scale reliabilities, reported in Table 1, were all above .60, which is considered satisfactory for research purposes (Nunnally 1967).

Canonical correlation (Cooley and Lohnes 1971), a multivariate statistical procedure that allows the investigator to analyze relationships between multiple independent and multiple dependent variables, was used. A multivariate analog of simple correlation, canonical correlation develops linear combinations of variables (variates) that are maximally correlated with each other. After the first pair of maximally correlated variates has been located, additional pairs of variates that maximally correlate may be identified, but each additional pair must be uncorrelated with all previously located variates.

Canonical relationships are normally interpreted by forming a structure correlation matrix between the scores on the canonical variates and the scores on the original variables. Structure correlations are interpreted similarly to factor loadings in factor analysis. Coefficients of .30 or less are generally disregarded (Cooley and Lohnes 1971).

Results

A check for multicollinearity was made by regressing each independent variable on the remaining independent variables. None of the resulting multiple *R*s exceeded .80, which has been suggested as the point beyond which multicollinearity becomes problematic (Nie, Hull, Jenkins, Steinbrenner, Bent 1975).

Wilks' lambda multivariate test of significance and dimension reduction analysis indicated that only two of the three possible canonical correlations were significant ($p < .001$). The correlations between the first two pairs of variates were .77 and .66, respectively. The raw canonical weights (not reported) derived from the original sample were then applied to raw scores of the corresponding set of variables in the second sample to cross-validate the results of the original sample. The zero-order correlations computed among the first two pairs of variates thus derived in the second sample were .69 and .73. Both were significant ($p < .001$, $df = 107$) and consequently cross-validated the first two pairs of canonical variates. Calculation of Stewart and Love's redundancy index (Cooley and Lohnes 1971) indicated that the first predictor variate accounted for 20.2 percent and the second predictor variate accounted for 14.3 percent of the variance in the criterion variable set. Thus, the first two predictor variates

accounted for a total of 34.5 percent of the variance in the criterion variables.

TABLE 1
Structure Correlation Matrix

| Independent and Dependent Variables | Scale Alpha | Predictor Variates | |
|--|----------------|--------------------|------|
| | | 1 | 2 |
| Personal characteristics | | | |
| Children | | .11 | -.10 |
| Income | | -.15 | .05 |
| Tenure | | -.12 | .16 |
| Married | | .08 | -.08 |
| Female | | .14 | .09 |
| Age | | .09 | -.03 |
| Education | | -.18 | .03 |
| Employment mobility | .65 | -.27 | .27 |
| Union activities | .63 | -.11 | .46 |
| Rural worker | | .00 | .16 |
| Labor relations characteristics | | | |
| Use grievances to punish | | -.14 | .35 |
| Integrative contract administration | | -.02 | -.32 |
| Integrative bargaining | .83 | .42 | .03 |
| Union-management relations | .93 | .70 | -.09 |
| Union characteristics | | | |
| Decision-making | .75 | .70 | .57 |
| Steward effectiveness | .93 | .36 | .25 |
| Employer characteristics | | | |
| Influence on employer | .80 | .42 | -.34 |
| Promotional opportunity | | .32 | -.35 |
| Supervisor support | .80 | .45 | -.34 |
| Work and work environment | | | |
| Job satisfaction | .82 | .65 | -.45 |
| Unit size | | .08 | .05 |
| | | Criterion Variates | |
| | | 1 | 2 |
| Commitment | | | |
| Union commitment (<i>UC</i>) | .88 | .67 | .74 |
| Employer commitment (<i>EC</i>) | .89 | .75 | -.67 |
| <i>UC</i> x <i>EC</i> | | .08 | .01 |

The structure correlations are displayed in Table 1. Examination of the structure correlations with the two criterion variates indicates that both union and employer commitment have strong positive correlations with the first criterion variate. That variate was named dual commitment since higher scores on it are associated with higher levels of commitment to both union and employer. The second criterion variate, however, has a strong positive correlation with union commitment and a strong negative correlation with employer commitment. It was named unilateral commitment to the union since positive scores on this variate are associated with

higher levels of commitment to union and lower levels of commitment to employer.

Examination of the largest structure correlates ($r > .30$) with predictor variate one, the variate correlated with the dual commitment criterion variate, suggests that dual commitment is related to integrative views of collective bargaining, positive union-management relations, participative and effective union decision-making, steward effectiveness, influence on employer, promotional opportunities, supportive supervision, and job satisfaction. These findings indicate that variables from all categories, except personal characteristics, are related to dual commitment. In short, the findings suggest that many positive aspects of the employment situation, whether related to characteristics of the union-management relationship, employer, union, or work itself, are related to dual commitment.

The largest structure correlations with the second predictor variate suggest that unilateral commitment to the union is associated with a pattern of union activism, use of the grievance procedure to punish the supervisor, nonintegrative views of contract administration, participative and effective union decision-making, low influence on the employer, few promotional opportunities, nonsupportive supervision, and low job satisfaction.

The overall pattern of structure correlations with the second predictor variate suggests that this variate, associated with unilateral commitment to the union, primarily reflects negative characteristics of the employer, aspects of work (i.e., job satisfaction) for which the employer is likely to be held responsible, and positive characteristics of the union. The relationships of union activism and the two contract administration items to this variate may reflect adversarial thinking and behavior associated with unilateral commitment.

Comparison of the structure correlations on predictor variates one and two reveals a number of interesting patterns. Several variables have substantial correlations with both variates. These are union decision-making, influence on employer, promotional opportunity, supervisor support, and job satisfaction. These variables are all positive aspects of the work situation that can probably be primarily attributed to the actions of one or the other of the parties. Examination of the zero-order correlations (not reported here) of each of these variables with the individual commitment scales indicates that they generally have strong or moderately strong correlations with one of the two commitment measures and a weak correlation in the same direction, or negligible one, with the other. This pattern of relationships suggests that these variables are related to an individual's overall level of commitment (i.e., dual commit-

ment) because they are related to higher commitment to one organization without being related to lower commitment to the other. However, because the strength of their relationships to the individual commitment measures differs, they are also related to differences in an individual's level of commitment to union and employer (i.e., unilateral commitment).

A second pattern is exemplified by union-management relations, integrative bargaining, and steward effectiveness. All have substantial correlations with the first predictor variate but relatively weak correlations with the second. Two of these are positive aspects related to the relationship between employer and union. It is likely that workers will give credit for these aspects to both parties. These variables tended to have moderate zero-order correlations in the same direction with both individual commitment variables. This suggests that they are related to dual commitment because they are related to higher levels of both union commitment and employer commitment. They are unrelated to unilateral commitment because their relationship to employer and union commitment is in the same direction and of roughly equal magnitude. They thus are unrelated to differences in an individual's level of commitment to the two organizations.

A third pattern of relationship is exhibited by union activism, use of grievances to punish, and integrative contract administration. These variables have substantial correlations with the second variate but weak correlations with the first and appear to be consequences of adversarial interactions and patterns of thinking. All three variables have zero-order correlations running in the opposite directions with the union and employer commitment measures. They are thus related to differences in commitment to union and employer but unrelated to higher levels of commitment to both organizations.

Patterns of correlation with individual union and employer commitment measures similar to those reported here were found by Martin, Magenau and Peterson (1982) for union effectiveness, union influence, employer influence, promotional opportunity, supervisor support, integrative views of contract administration, and two out of four items included in the union activism scale. Steward effectiveness, job satisfaction, union-management relations, and the integrative bargaining variables were not included in their study. Punitive use of the grievance procedure, however, was negatively correlated with both employer and union commitment. This suggests that the patterns of correlations for several of the variables studied here generalize to populations other than this sample of rank-and-file union members.

Summary and Conclusions

Canonical correlation analysis identified two commitment variates. One was positively correlated with both union commitment and employer commitment and was named dual commitment. The other was positively related to employer commitment and negatively related to union commitment and named unilateral commitment to employer. The predictor variate correlated with dual commitment seemed to reflect an overall positive work situation and included characteristics of labor relations, the union, the employer, and the work itself. The predictor variate correlated with unilateral commitment to the union seemed to reflect positive characteristics attributable to the union and negative characteristics attributable to the employer, and adversarial thinking and behavior. Examination of the patterns of correlation with the various commitment measures indicates that: (1) variables related to both dual and unilateral commitment are likely to be positive characteristics of the work situation attributable to one of the parties but not the other; (2) variables related only to dual commitment are positive characteristics of labor relations attributable to both parties; and (3) variables related only to unilateral commitment appear related to adversarial thinking and behavior.

The findings on dual commitment suggest that workers will be committed to both labor and management where a positive work situation exists. Further, if workers are dually committed they are more likely to accept and be supportive of problem-solving approaches to collective bargaining. The fact that positive union-management relations, positive employer and union characteristics were all related to dual commitment has important implications. These findings suggest that a positive relationship between management and labor, and positive management practices, will not undermine workers' commitment to the union. Similarly positive practices by the union do not undermine worker support for the employer. At least in well-established relationships, it does not appear that conflict is necessary in order for the union to have the commitment of rank-and-file workers.

The variables related to both dual and unilateral commitment should not be thought of as building commitment to one organization at the expense of the other. Recall that these variables tended to be correlated with either one of the separate union or employer commitment measures but were unrelated to the other. Thus while various positive employer and union practices will be primarily related to commitment to one of the two organizations, they do not simultaneously reduce commitment to the other organization.

The findings on unilateral commitment suggest that if the employing

organization wishes to avoid a situation where workers have one-sided commitment to their union, it should minimize adversarial situations, allow for influence in work decisions, and provide for promotional opportunities, supportive supervision, and satisfying work. This would appear to be especially necessary where the union's decision-making practices are effective and allow for member participation.

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Some Implications of Having Wages Red-Circled

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The red-circling of workers' wages is a common by-product of the job evaluation process. After completing the job evaluation, it may become apparent that some workers are being paid more than the upper limit of the wage grade to which their jobs are assigned. Belcher (1974) has pointed out that overpaid employees present a special problem in compensation administration that must be addressed. This is because the presence of overpaid employees tends to make pay range maximums meaningless, allows some employees to receive wages higher than that justified by the requirements of the job, and organizational resources can be misallocated by giving overpaid employees more than they deserve at the expense of other employees receiving lower wages but providing equal or greater contributions to the attainment of organization goals (Belcher 1974). For these reasons, the integrity of the compensation program could be jeopardized if employees were allowed to continue to receive wages higher than the upper limit of the wage range.

The problems of red-circled wage rates is commonly addressed in personnel and compensation administration text books. The discussion is usually quite superficial and focuses on the need to eliminate red-circled rates. While not explicitly saying so, the primary concern appears to be the maintenance of the integrity of the compensation plan. To the authors' knowledge, the implications of being red-circled for the workers involved have not been examined. Further, the organizational ramifications of red-circling employees have not been studied.

Equity theory (Adams 1965) provides a useful theoretical foundation for studying red-circled employees. This theory postulates that individuals calculate a ratio of their outputs to inputs relative to the ratio of some relevant other's ratio of outputs to inputs. Typically, inputs include factors such as education, experience, and effort. Examples of outputs from a job

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include pay, fringe benefits, status, and prestige. Inequity exists when the individual's ratio is not equal to the relevant other's ratio. Feelings of inequity are motivators of behavior; that is, the inequitably compensated worker will take actions intended to restore equity. Weick (1966) identifies several ways a person can restore equity: actually altering either inputs or outputs, perceptually distorting inputs or outputs, leaving the organization, getting the comparison person to change, and changing the comparison person.

Given the way organizations handle red-circled employees, feelings of inequity by the workers involved are a possible consequence. For example, if wages of red-circled employees are lowered or if their general wage adjustments are restricted with no change in job duties, feelings of inequity could result. While inputs do not change, wage decreases or limitations on wage increases are likely to be viewed as a decrease in outputs from the job relative to non-red-circled employees who experienced no commensurate decrease in job outputs. Similarly, if red-circled employees have new job responsibilities added to their positions to justify a wage rate higher than the wage grade maximum, the workers' ratio of outputs to inputs has been altered. The inputs required by the job (job duties) have increased without an increase in outputs. If the red-circled employee's comparison group did not experience a similar change, feelings of inequity could result.

When employees believe they are being treated inequitably, it is likely that they will take some action to restore equity. If red-circled employees experience feelings of inequity, they will probably engage in behaviors intended to reduce the inequity. The purpose of this study was to identify some of the implications for the worker and for the organization of the red-circling procedure.

On July 1, 1981, a new compensation plan was implemented for the staff of a university located in the Rocky Mountain region. The compensation plan was the result of a year-long job evaluation study. Employees being paid at or above the top of the wage range for their job category were red-circled, that is, they were earmarked for special attention and adjustment (Zollitsch and Langsner 1970). These employees received the full annual wage adjustment to which they were entitled on July 1, 1981. In future years, those at the top of their wage grade would receive across the board adjustments but were ineligible for merit pay. Employees paid above the top of their wage grade were scheduled to receive only 80 percent of the range movement for their job category on July 1, 1982. Each successive year, the amount of the range movement received by these employees was scheduled to be reduced by an additional 20

percent. By 1986, it is expected that all employees currently red-circled will be paid at rates within the wage range associated with their job categories. While limitations were placed on the annual wage increments received by red-circled employees, their job duties were not changed. Further, non-red-circled employees had no limitations placed on their annual wage adjustments.

By limiting the wage increments (job outputs) of red-circled employees without comparable limitations being placed on non-red-circled employees and by not changing the job duties (inputs) of the red-circled employees, a situation was created in which red-circled employees could perceive themselves as being treated inequitably. Equity theory suggests that the red-circled employees will take actions to restore equity. This study tests the following hypotheses:

1. Red-circled employees will report lower overall job satisfaction than non-red-circled employees.
2. Red-circled employees will report lower satisfaction with pay than non-red-circled employees.
3. Red-circled employees are more likely to report they intend to change employers than non-red-circled employees.
4. Red-circled employees will put less effort into their jobs than non-red-circled employees.
5. Red-circled employees will use more sick days than non-red-circled employees.

This study looks at ways to moderate the effects of being red-circled. The relationships between perceived ease of changing employers, ability to get promoted and to get the job reclassified into a higher wage grade, and the apparent consequences of being red-circled are also identified.

Method

Sample

The employing university initiated a job classification program during 1980. As a result of this process, a revised job classification system and compensation plan were initiated on July 1, 1981. At about this time, red-circled employees were identified. During April and May 1983, a survey of the University's general staff was conducted. The survey instrument contained approximately 100 items and was concerned with a variety of issues such as attitudes toward the recently implemented job evaluation system and compensation plan, procedures for adjusting wages, and several facets of job satisfaction. A total of 1710 questionnaires were distributed to full- and part-time employees in budgeted as well as

“soft money” positions. A total of 991 useable questionnaires were returned yielding a response rate of 58 percent.¹

Analyses

The subsamples of red-circled ($n = 120$) and non-red-circled ($n = 858$) employees were further broken down into white-collar and blue-collar groups. This was done because factors that could influence an individual's response to being red-circled (such as opportunities for advancement and local labor market conditions) are distinctly different for the two major occupational groups. To test the hypotheses listed above, five regression analyses were performed within both the white-collar and blue-collar subsamples. The dependent variables were: overall job satisfaction, satisfaction with pay, intent to change employers, effort expended on the job, and the number of sick days used in the preceding 12 months. As indicated above, the red-circled and non-red-circled employees differed on several demographic variables. To statistically control for these differences, hierarchical regression was used. The variables gender, years of service, and education were entered into the regression equation first. Then, a dummy variable representing the red-circled employees was brought into the equation. With this approach, it was possible to test the hypotheses derived from equity theory. Then, correlation analyses were used to help identify the factors that could moderate the consequences of being red-circled.

Results

The results of the regression analyses are summarized in Table 1. As hypothesized, red-circled employees within both the white-collar and blue-collar subsamples report lower job inputs than respondents not red-circled. Among white-collar employees, red-circled workers took more sick days; and among blue-collar employees, red-circled workers report expending less effort on the job. Given the cross-sectional nature of the data available, it was not possible to determine whether the differences between red-circled and non-red-circled employees represented a decrease in inputs by red-circled employees attributable to feelings of inequitable treatment. This, however, is a reasonable interpretation given that the groups did not differ significantly with respect to measures of self-reported historical performance and their supervisor's evaluation of their performance.

¹ Although nonrespondents were not contacted to examine nonresponse bias, several personal and job characteristics of the sample and population parameters were compared. Also, tables comparing red-circled and non-red-circled employees and complete descriptions of the variables examined in this study are available from the authors.

TABLE 1
Results of Regression Analyses^a

| Dependent Variables | Beta of Dummy Variable Representing Red-Circled Employees | Standard Error of Beta | F | <i>p</i> ^b |
|-------------------------------|---|------------------------|------|-----------------------|
| <i>White-Collar Employees</i> | | | | |
| Overall job satisfaction | -.33 | .26 | 1.53 | .11 |
| Satisfaction with pay | -.37 | .29 | 1.66 | .10 |
| Intent to change employers | .23 | .29 | .67 | NS |
| Effort expended on the job | .03 | .13 | .57 | NS |
| Number of sick days used | 2.43 | .83 | 8.53 | .01 |
| <i>Blue-Collar Employees</i> | | | | |
| Overall job satisfaction | .63 | .29 | 4.75 | .03 |
| Satisfaction with pay | -.09 | .30 | .88 | NS |
| Intent to change employers | -.71 | .31 | 5.16 | .05 |
| Effort expended on the job | -.32 | .14 | 5.08 | .05 |
| Number of sick days used | .88 | .96 | .84 | NS |

^a To conserve space, the control variables are not included in this table.

^b One-tailed tests of significance.

The findings suggest that the consequences associated with being red-circled are more negative for white-collar employees than for blue-collar employees. Red-circled white-collar employees reported lower levels of overall job satisfaction and pay satisfaction. These differences are significant at approximately the .10 level. Also, the size of the beta coefficients relative to their standard errors allows some confidence to be expressed about the direction of these relationships. Contrary to expectations, blue-collar employees who were red-circled reported higher levels of job satisfaction and expressed less interest in changing employers than those who were not red-circled.

Given feelings of pay inequity, equity theory predicts that employees will engage in behaviors thought to restore equity. Other ways are available for restoring equity in addition to putting less effort into a job or taking more sick days. This study included three measures of perceptions concerning alternative ways of eliminating feelings of inequity: ease of getting a good job elsewhere, ability to get one's job reclassified into a higher wage classification, and ability to get promoted into a higher job classification. Based on equity theory, it was expected that individuals who believe other means are available to them for reestablishing equity

are less likely to avail themselves of negative (from the organization's perspective) ways for eliminating inequity, such as reducing effort. It follows that such perceptions should also be positively related with measures of job satisfaction and commitment to the job.

With the sample limited to red-circled employees, correlation analyses were performed between the three measures of the alternative ways for reducing the feelings of inequity and the variables found to differentiate between red-circled and non-red-circled employees. The results of the correlation analyses are presented in Table 2. In general, the findings pertaining to job and pay satisfaction are consistent with hypotheses derived from equity theory. Within the white-collar subsample, perceptions concerning one's ability to get the job reclassified and to get promoted appear to mitigate the adverse effects of being red-circled. Both overall job satisfaction and pay satisfaction are positively related with measures of the perceived ability to get the job reclassified and to get promoted into a higher wage grade. These relationships are also found in the blue-collar subsample. However, results contrary to expectations are found within the white-collar subsample when the relationship between the ability to get the job reclassified and the number of sick days is examined. Equity theory would suggest that individuals who believe they could get their jobs reclassified would not have to reduce job inputs to restore equity. Table 2 indicates that for red-circled white-collar employees, there is a positive relationship between believing that the job can be reclassified and the number of sick days taken. This finding is difficult to explain with the available data.

TABLE 2
Correlations Between Perceptions of Alternatives
for Resolving Inequity and Factors
Associated with Being Red-Circled

| Factors Differentiating Red-Circled and Non- Red-Circled Employees | Alternatives for Resolving Inequity | | |
|--|-------------------------------------|--------------------------|-----------|
| | Change Employers | Have Job Reclassified | Promotion |
| <i>White-Collar Employees</i> | | | |
| Overall job satisfaction | -.05 | .27* | -.18 |
| Pay satisfaction | -.08 | .30** | .27* |
| Number of sick days used | -.07 | .23* | .16 |
| <i>Blue-Collar Employees</i> | | | |
| Overall job satisfaction | .04 | .22* | .23* |
| Intent to change employers | .03 | -.19 | -.10 |
| Effort expended on the job | .03 | .03 | .00 |

* Significant at the .05 level.

** Significant at the .01 level.

Discussion

The red-circling of employees' rates of pay may be necessary to protect the integrity of the organization's compensation system by helping to insure that employees view the system as being internally equitable. This study demonstrates, however, that some negative consequences are associated with the red-circling procedure. Red-circled blue-collar employees report putting less effort into their jobs and white-collar red-circled employees report taking more sick days. Furthermore, within the white-collar subsample, it appears that feelings of inequity likely to be experienced by red-circled employees may not be resolved, since the affected employees reported less satisfaction with their pay and lower overall job satisfaction than their counterparts who were not red-circled.

In order to insure that employees not being overpaid (non-red-circled workers) consider the compensation system to be internally equitable, it is necessary to give special attention to those who are being overpaid relative to the upper limit of the wage range for their jobs. By so doing, feelings of inequity are likely to be created in the employees who are red-circled. The results of this study indicate that a "price" is paid for red-circling employees. Further, most organizations appear willing to pay that "price." However, the adverse effects of red-circling can be minimized if handled properly.

Given lower pay satisfaction and lower overall satisfaction, less effort expended on the job, and the use of more sick days are associated with being red-circled, the results suggest that the special treatment received by red-circled employees be eliminated as quickly as possible. This argues against options such as freezing wages or withholding part of general wage increases until the upper limit of the wage grade catches up with the rate being paid the red-circled employees. These approaches are likely to allow the feelings of inequity and the resulting negative consequences to persist over a period of time. Such conditions are not within the best interests of the employees involved or of the employing organization. Limited support was found in this study for solutions to the problem of red-circled employees that avoid feelings of inequity by moving the overpaid employees into a new job where the rate received by the red-circled employee is justified by the job evaluation process. Redefining the worker's job or promoting the employee are such options. This suggests, however, that it is possible to reallocate human resources in light of organizational needs and worker attributes. Some support was found for the view that the negative consequences (lower pay satisfaction and lower overall job satisfaction) of being red-circled could be moderated by perceptions concerning the ability to get one's job reclassified or to get promoted. This suggests that in organizations where promotions, transfers,

or job redesign are not immediately available, it may be advantageous to let red-circled employees know that efforts will be made to move them into jobs that are not red-circled.

While the number of employees red-circled each year is probably quite small, this study indicates the workers may react to being red-circled in ways detrimental to the organization. It must be remembered that those who are red-circled are likely to be long-term employees who did nothing to warrant what they perceive to be unfair treatment under the organization's compensation plan. Therefore, it is important to understand the ramifications of red-circling employees and to understand ways to minimize the adverse consequences of the red-circling process.

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Measuring CETA Agency Performance*

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Evaluations of employment and training programs have concentrated on estimating the aggregate impact of particular manpower programs on the participants in the program (Perry, Rowan, Anderson, and Northrup 1975, Barsby 1972, Borus 1980). Very few attempts have been made to evaluate the performance of prime sponsors (cities, counties, consortia, states) or to investigate what determinants affected the performance of prime sponsors. In addition, the types of evaluations previously conducted often concentrated on either participant characteristics or local labor market characteristics to explain the performance of manpower programs. CETA legislation, however, required that particular segments of the population (youth, veterans, females, minorities, and recipients of public assistance) be served and the number and type of job openings in a community is often related to local economic conditions. Prime sponsors, for these reasons, often maintained that those variables that affected the success of their programs were beyond their control and that the evaluation of performance based on the usual indicators such as placement rates, earning gains, and cost per placement should be treated with great caution (U.S. Department of Labor 1979, Mirengoff and Rindler 1978).

The present study represents an advance and improvement over previous studies for several reasons. First, it is the only national study of CETA prime sponsors which relates organizational, participant, and labor

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market characteristics to prime-sponsor performance. Typically, other studies have used only a very small sample of prime sponsors in a limited geographical area or else have not focused on prime sponsors at all. Moreover, with some exceptions (Bain and Fottler 1982), they have focused primarily upon participant and labor market variables, ignored organization variables, and not taken a systemic view of the manpower training system. Second, those studies which have been national in scope have been purely descriptive with little analysis or use of multivariate statistical techniques. Finally, this study uses theoretical concepts drawn from several social science disciplines whereas the typical evaluation study either lacks a theoretical perspective or reflects a less comprehensive perspective.

Miles (1980) has suggested an integrated model that defines organization performance as the ability of an organization to minimally satisfy the expectations of those constituencies (individuals, interest groups, coalitions, and organizations) upon which the focal organization is critically dependent. In a government agency, such as CETA, this could be taxpayers, employers, program participants, elected officials, CETA officials, and the U.S. Department of Labor.

Taxpayers expect CETA to be cost effective and capable of paying for itself due to the increased earnings of participants, while employers are primarily concerned with hiring productive and disciplined employees. The placement rate can be considered as an indication of employer satisfaction with the quality and relevance of the program. Participants are also concerned with the ability of a prime sponsor to place them in unsubsidized employment. Since elected officials try to satisfy the taxpayers and client organizations, their goals are similar to taxpayer or client organization goals. CETA officials are primarily responsive to local elected officials and the U.S. Department of Labor (U.S. Department of Labor 1978, Mirengoff, Rindler, and Greenspan 1981).

The U.S. Department of Labor (1977) has used three major effectiveness criteria: (1) positive terminations including placement rates; (2) participant earnings gains; and (3) cost-effectiveness. These criteria are consistent with the integrated model of organization effectiveness (Miles 1980). They are also supported by the evaluation literature which suggests that social programs be evaluated from the viewpoints of participants, society, government, and employers (Borus 1979). Finally, these three criteria are consistent with the CETA legislation itself which specifies that "The Secretary of Labor shall evaluate the effectiveness of programs authorized under this Act . . . with respect to the statutory goals and objectives, including increases in employment and earnings of participants [Section 313b] . . . and cost effectiveness [Section 676.450]."

The dependent variables are those that have been offered in the literature and by the Department of Labor as indicators of CETA program effectiveness (Levitan and Wurzburg 1979). The independent variables include organizational, participant, and labor market characteristics. This "systemic" approach has been suggested by Goodman (1969, 1973) and empirically verified by Fottler (1978). Basically, this approach acknowledges the multidimensional nature of variables that affect program performance in employment and training programs.

Method

Three hypotheses have been developed and tested for this study, on the basis of theory and previous empirical evidence:

1. Prime-sponsor performance is positively related to size and a program mix emphasizing on-the-job training, but negatively associated with a program mix emphasizing classroom training or work experience.
2. Prime-sponsor performance is negatively related to the percentages of program participants who are female, young, welfare recipients, and black.
3. Prime-sponsor performance is negatively related to the unemployment rate in the local labor market.

A national sample of prime sponsors is used in this study. Our sample included 142 (42 percent) of the 347 prime sponsors in the United States. The reporting period is Fiscal Year 1980 and the data come from: (1) a self-administered questionnaire sent in March 1982 to all 476 U.S. prime sponsors requesting information on their organizational characteristics and managerial policies for FY 1980, and (2) the activity reports of these same prime sponsors (1980) for Title II B/C. The reports are *Quarterly Summary of Participants Characteristics*, *Annual CETA Program Activity Summary*, and *CETA Financial Status Report*. This study examines Title II B/C which is directed at reducing structural unemployment and does not examine Title VI, public-sector employment (PSE). PSE was aimed at job creation rather than training and requires addressing a different set of independent variables. Responses were received from 197 prime sponsors. Complete data were available for 142 prime sponsors with 368,881 participants representing all geographic regions.

OLS regressions were run for each of the three effectiveness criteria. One of the major issues in any type of social science research using multiple regression analysis is the problem of multicollinearity among the independent variables (Johnson 1972). The measurement of variance inflation factors (VIF) for each independent variable has been one method of measuring the extent of that problem. Theoretical work by Marquardt (1980) and subsequent applications by Gunst and Mason (1980) have demonstrated the usefulness of this technique in dealing with

the multicollinearity problem. For this study all independent variables had a VIF of less than 5.0 except for TOTEXP (5.17), and multicollinearity was judged not to be a problem.

Results

Table 1 shows variable acronyms, definitions, means, and standard deviations for all variables used in this study. Table 2 shows regression results for the determinants of each of the three organizational effectiveness measures. An effective prime sponsor is one which has a high placement rate (*PLAR*), a high wage increase (*WGDIF*), and a low cost per placement (*CPP*).

TABLE 1
Variable Definitions, Means, and Standard Deviations

| Variable | Definition | \bar{X} | S.D. |
|------------------------------|---|-----------|---------|
| <i>Dependent Variables</i> | | | |
| <i>PLAR</i> | Placement rate = Total number of trainees who were placed in unsubsidized jobs/Total terminations | .3610 | .1367 |
| <i>WGDIF</i> | Training wage difference = Post-CETA median wage - Pre-CETA median wage | 1.85 | .81 |
| <i>CPP</i> | Cost per placement = Total expenditures/Total number of trainees who were placed in unsubsidized jobs | 7326.82 | 4719.51 |
| <i>Independent Variables</i> | | | |
| <i>PFEM</i> | % female enrolled = Number of females enrolled x 100/Total participants | 53.61 | 8.51 |
| <i>PYNG</i> | % youth enrolled = Number under 22 years x 100/Total participants | 45.70 | 10.41 |
| <i>PAFDC</i> | % AFDC recipients enrolled = Number of AFDC recipients enrolled x 100/Total participants | 20.07 | 8.10 |
| <i>PBLK</i> | % black enrolled = Number of blacks enrolled x 100/Total participants | 30.56 | 25.27 |
| <i>UNR</i> | Unemployment rate 1980 | 7.26 | 2.40 |
| <i>TOTEXP</i> | Total expenditures in thousands of dollars | 3521.46 | 4595.51 |
| <i>PEXCRT</i> | % expenditures for classroom training = Expenditures for CRT x 100/Total expenditures | 49.49 | 18.27 |
| <i>PEXOJT</i> | % expenditures for on-the-job training = Expenditures for OJT x 100/Total expenditures | 8.77 | 6.30 |
| <i>PEXWE</i> | % expenditures for work experience = Expenditures for WE x 100/Total expenditures | 29.34 | 17.44 |

The variables in our effectiveness model explain about 36 percent of the variation in placement rates. High placements are associated with high percentages of female participants and low percentages of youth and black participants. In addition, the unemployment rate in the local labor market significantly affects placement rates. High placements are associated with low unemployment rates. Finally, high placement rates are

TABLE 2
Determinants of Program Outcomes Among CETA Prime Sponsors
(OLS regression with *t*-value in parentheses)

| | PLAR | WGDIF | CPP |
|-----------------------|------------------------|--------------------|------------------------|
| <i>PFEM</i> | .0028*** (2.533) | -.0138 (1.595) | -.0677* (1.754) |
| <i>PYNG</i> | -.0027*** (2.953) | -.0037 (.566) | .0231 (.738) |
| <i>PAFDC</i> | -.0004 (.346) | .0142* (1.681) | -.0282 (.703) |
| <i>PBLK</i> | -.0011*** (2.765) | -.0041 (1.469) | .0060 (.443) |
| <i>UNR</i> | -.0189***** (4.742) | -.0125 (.434) | .9700***** (7.064) |
| <i>TOTEXP</i> | .0000 (.483) | .0000 (.033) | .0001 (.810) |
| <i>PEXCRT</i> | .0025*** (3.015) | .0145** (2.420) | -.0321 (1.121) |
| <i>PEXOJT</i> | .0042*** (2.730) | -.0020 (.177) | -.2269***** (4.227) |
| <i>PEXWE</i> | .0007 (.760) | .0097 (1.546) | -.0370 (1.231) |
| Constant | .3322 | 1.7097 | 7.7184 |
| <i>R</i> ² | .36 | .07 | .36 |
| <i>F</i> | 10.378 | 1.444 | 10.379 |

* *p* < .10.** *p* < .05.*** *p* < .01.**** *p* < .001.

positively related to the percentage of prime-sponsor expenditures associated with both classroom training and on-the-job training.

All of these significant results are consistent with our hypotheses with two exceptions. First, the percentage of female enrollees was expected to be negatively associated with organizational effectiveness. Apparently, women are easier to place and have higher placement rates than do men. This might mean that there are more jobs available in occupational areas where females predominate (i.e., secretarial, clerical) or that employers prefer females who may be willing to work for lower wages. Second, effectiveness was expected to be negatively related to expenditures on classroom training. Instead, greater expenditures for classroom training was associated with greater effectiveness as measured by the effectiveness rate. Apparently, classroom training is more effective than is generally believed if it is focused on occupational skills which are in demand.

Table 2 also shows the determinants of participant earnings improvement. Unfortunately, our model explained only 7 percent of the variation in the effectiveness measure and the regression equation itself is not significant. Only two of the independent variables were statistically significant predictors and neither was related in the hypothesized direc-

tion. Greater participant earnings improvements occurred in prime sponsors with high percentages of welfare recipients. The participants start at such a low earnings base (in some cases, the annual earned income is zero) that those placed in jobs show a larger wage increase than these who were previously employed. The reasons for the greater wage improvement among those in classroom training is not clear.

Finally, Table 2 shows the determinants of prime sponsor cost per placement. The regression equation itself is statistically significant and there were three significant predictors of this effectiveness measure. Lower costs per placement were associated with a high proportion of female participants, a lower unemployment rate, and a high proportion of expenditures for on-the-job training. All of these results are consistent with our findings in the first equation. Prime sponsors who enroll high proportions of females, emphasize on-the-job training, and operate in labor markets with low unemployment rates, tend to be more effective in terms of both placement rates and costs per placement.

The program mix offered by a prime sponsor appears to be a critical determinant of prime-sponsor performance. On-the-job training is superior to classroom training and work experience programs. Not only are placement rates higher but costs per placement are lower. The implication is that prime sponsors should devote more time and effort to increasing the involvement of the private sector in providing on-the-job training opportunities for program participants. This emphasis is consistent with the new legislation (Job Training Partnership Act (JTPA)).

The condition of the local labor market (as measured by the unemployment rate) is a major external determinant of prime-sponsor performance. The unemployment rate is negatively related to performance since high unemployment rates are associated with low placement rates and high costs per placement. Individual prime sponsors can do little about the condition of their local labor markets in the short run. In the long run, a closer integration with industrial development activity in the local community may enhance prime-sponsor performance. In addition, the U.S. Department of Labor should apply different standards of performance to prime sponsors operating in tight and loose labor markets.

Participant characteristics were also significantly related to performance. As expected, the percentages of young or black enrollees were negatively related to placement rates. Target groups will probably make these programs less effective from the taxpayer and employer viewpoints. Participant selection policies which "skim" those most likely to achieve program goals (older, white, and female participants) may be necessary if traditional evaluation standards are applied to all prime sponsors. The

major determinants of performance appear to be participant characteristics, the training program mix, and local labor market conditions.

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XX. IRRA ANNUAL REPORTS

IRRA EXECUTIVE BOARD SPRING MEETING May 2, 1984, Cleveland

Officers Present: Wayne L. Horvitz, President; Everett M. Kassalow, President Elect; Jack Stieber, Past President. *Board Members Present:* Mario F. Bognanno, Edgar R. Czarnecki, Lydia H. Fischer, Lois Spier Gray, Karen S. Koziara, Michael H. Moskow, Joyce M. Najita, Sidney W. Salsburg, and Lucretia Dewey Tanner. *Board Members Not Present:* Wilbur Daniels, Martin Ellenberg, John N. Gentry, Solomon B. Levine, and Daniel J.B. Mitchell.

Others Present: David R. Zimmerman, Secretary-Treasurer; Barbara D. Dennis, Editor; Michael E. Borus, *Newsletter* Editor; Helmut Wolff, Dallas Chapter Representative; Kenneth Evans, Program Chairman, IRRA Spring Meeting–Cleveland; Ed Hartfield, representing Michael Nowakowski, 1985 IRRA Spring Meeting–Detroit; and Marion J. Leifer, IRRA Executive Assistant.

President Horvitz called the meeting to order at 7:30 p.m. and welcomed new Board members Ed Czarnecki, Lois Gray, Joyce Najita, Sidney Salsburg, and Lucretia Tanner.

1984 Spring Meeting–Cleveland: Ken Evans welcomed everybody to Cleveland and thanked President Horvitz for his assistance and Marion Leifer for her assistance in setting up the program and arrangements. The Board expressed appreciation to the Cleveland Chapter for a very good job in hosting the meeting.

1985 IRRA Spring Meeting–Detroit: Ed Hartfield represented Mike Nowakowski and Mark Kahn. The meeting will be April 17–19, 1985. A contract has been concluded with the Westin Hotel in the Renaissance Center. Room rates are being arranged. Program and arrangement suggestions were welcomed from the IRRA Board and the Cleveland Committee. Mr. Salsburg suggested that the closeness to Windsor and other Canadian communities be considered. Mr. Hartfield responded that this was already being done.

Approval of Minutes of 1983 San Francisco Meeting: A letter from Jack Stieber was received suggesting several clarifications. One concerned

the interest of the Western Chapters in hosting meetings. Stieber said that the Association has no direct evidence of a lack of interest, but no invitations have been received recently. Stieber also questioned the inclusion of the Barbash report on the news release on the *Work Ethic* volume. The Board decided to strike both items. The minutes were approved as corrected.

David Zimmerman, Secretary-Treasurer: Mr. Zimmerman distributed accountant's statement for the first three months of 1984. Membership appears to be holding at 1983 levels. Efforts are being made to get members who are in arrears (about 800). We continue to get new members. We have a surplus, at the end of 1983, of \$25,000. We had an unrestricted fund balance of \$14,567, and now have \$39,157 at the end of 1983. We are in the best financial situation we have been in for a time. We still feel that a dues increase will not be necessary as we project that we will have a surplus at the end of this year. Expenses are in line except for the hard disks that we purchased to store the *Directory*, and this expense should be "capitalized." *Directory* costs will be less than usual due to cost-savings methods. It was suggested that these data should be included in the September *Newsletter*. The Board accepted the Secretary-Treasurer's report.

Editor Barbara D. Dennis: The Proceedings of the San Francisco Meeting will be out in June. The Proceedings of the Spring Meeting will be in the August issue of *Labor Law Journal* and then will be reprinted and sent to the IRRA membership in September.

Microfilming: A request from Information Access Co. of Menlo Park, CA, was received requesting the right to index and microfilm copies of IRRA Proceedings and sell them to libraries—both the whole thing and individual parts. We would get 20% of the sales. The problem is the copyright. We do not ask for individual releases. We own the copyright and can give away the entire volume but not the individual parts. Individual authors retain their own rights. Information Access wants to make available an index and then the customer decides what to buy. Mr. Bognanno made the motion that we do not accept the offer of this company. Motion carried.

Indexing of IRRA Volumes: With respect to indexing more generally, Ms. Dennis has prepared lists of subjects for program committees. There is an index in the Proceedings every five years with broad subject headings. It was suggested that we continue to index every five years and have a more specific index for our volumes. Ms. Dennis was asked to present ideas to the Board at the December meeting.

***Directory*, Marion Leifer:** The *Directory* will have a new cover. After a discussion of materials contained in the *Directory*—especially in the

back of the *Directory*, it was decided that we would eliminate everything except a list of the Chapters and contact people. It was decided to include the chart for Geographic Distribution of IRRA members and Subscribers, Occupational Classification of IRRA Members, Members by Academic Degrees in 1979 (if we can retrieve it), and a listing of Chapters and contact persons in geographic listing rather than chronological listing. The Office does not retain information about age or sex. Mr. Bognanno suggested that some data could be included in the Proceedings on an annual basis. Mr. Salsburg moved acceptance of the Geographic Distribution of IRRA members and Subscribers chart and the Occupational Classification of IRRA Members chart, plus members by academic degree. It was suggested that we set up a new system for retrieval in the future. We will do this this year (without academic degree) and then see how the membership reacts. Mr. Salsburg's motion was amended to include Members by Academic Degree, eliminate Officers of the Association and IRRA Annual Meetings, list chapters by state, and continue chart on IRRA National/Local Chapter Comparisons. This is a trial year to see what data might be requested.

1985 Research Volume: Ms. Dennis called attention to the report from Hervey Juris, found in Board packet. Deadlines, authors, contents were covered in report. The Board members should send comments to Mr. Juris and send copies to Ms. Dennis.

1986 Research Volume: President Horvitz explained that he had received only one proposal, from Karen Koziara and Lu Tanner. Ms. Dennis reported that, on an informal basis, she had received two proposals, one on trade unions and one on technological change. After discussion of these topics, it was decided to pursue the "Women and Work" topic. It was stated that we need to know more about the chapters and how they will be "fleshed out." Some authors have been approached. It was also suggested that the topic be narrowed in scope to a more specific collective bargaining and industrial relations perspective. There will be ample opportunity to critique the committee's work in December. Also, it was suggested that they add one or two people to the editorial Board.

David Lewin Letter: President Horvitz referred to David Lewin's letter in the folder, which called for more joint sessions with other disciplines. Mr. Lewin noted that there is much interest in industrial relations among other associations and we should consider sharing meetings with them. This is not intended to sever our relationship with the AEA. Ms. Koziara endorsed the idea but raised a question about mechanics. She noted that a session sponsored with another group could be co-sponsored at the December meeting time, or we could co-sponsor at the

time of a different group's meeting. Mr. Stieber expressed concern that we might lose membership at our meetings because of this kind of planning since academics can only go to one meeting a year and will go where their peers are. We should try and bring them into our meetings even if we have to add a day to our program, and intersperse these sessions in our program. President Horvitz noted that some of these organizations are developing programs that sound like they should be on "our side of the street." Ms. Gray said that we should develop mutual interests and outline benefits for both sides, and extend invitations to sponsor sessions with us. Mr. Moskow suggested that perhaps we could alternate years for sharing of sessions. Mr. Lewin commented that we have to see how receptive these other associations will be to this idea. The membership of the various associations was discussed in terms of practitioners vs. academics. The Board decided to have Mr. Lewin develop a report for its consideration in December. In response to a question, Mr. Zimmerman noted that we can add sessions to our meetings on the last day, but not add extra days.

Michael Borus, Newsletter Editor: Editor Borus distributed a list of proposals. Mr. Borus noted that five of the six proposals were new. He also noted that the positions-available were not restricted to academic institutions and that it was a moneymaking proposition for the Association, with rates set at approximately \$30 an inch. After a short discussion, the proposal for publishing abstracts of papers presented at IRRA meetings was dropped. However, summaries of Board meetings would be printed in the *Newsletter*.

Requests of Local Chapters for Membership: Rhode Island Chapter has applied for membership. Mr. Zimmerman noted that their bylaws and constitution are consistent with the National Association. The other criterion is whether they are geographically acceptable to other chapters. Mr. Salsburg moved that we accept the Rhode Island chapter contingent of verifying that they have no problems with other IRRA Chapters. The motion carried. (Mr. Zimmerman will report in December on verification.) A request for affiliation was received from the South Africa Chapter. Mr. Zimmerman noted that we do have chapters outside the U.S.; however, it is typical that those chapters have a member who is prominently involved with the National IRRA. There is also the IIRA to which they could become a member. Also, our chapters are not "national" in scope such as the proposal they presented. They would be more acceptable as a "local" chapter at the University of Witwatersand. The Board decided that it would be best for President Horvitz to write and inform them that it is our policy to have Local Chapters, not National Chapters. It was noted that perhaps our policy of having chapters outside

of U.S. and Canada should be reviewed, and this item will be discussed at the December meeting.

Program for 1984 Annual Meeting in Dallas: President Horvitz presented a summary of the program. He noted that the first day format will be somewhat different since it is the 100th Anniversary of the BLS and we will feature them. Janet Norwood will be principal speaker at a plenary session followed by two smaller sessions about the Bureau. John Dunlop has been asked to be Distinguished Speaker. Other topics include Job Training Partnership Act, Unemployment Insurance, Comparable Pay, Report on Sloan School Summary (Industrial Relations System in Transition), Future of Indexation, Work & Retirement, Fifty Years of NLRA: Unfinished Agenda, Employee Ownership, Two-Tiered Labor Management Agreements, Military Economics, Deregulated Industries, and two Joint Sessions with AEA. The meetings will be in the Hilton Hotel. Helmut Wolff, Dallas Chapter Representative, said that the chapter probably would provide some type of social function. He was interested in a larger entertainment project and this will be discussed with Mr. Horvitz and Mr. Zimmerman.

Resolution for Forming a Statistical Group: This proposal came out of the IR Center Directors Meeting in San Francisco and also out of material that Mr. Mitchell had presented to the Board about membership in COSA and COPFSAS. (The IRRA Board had referred the COSA and COPFSAS data to the IR Center Directors.) The resolution was presented to the IRRA members in the February *Newsletter*. Six responses were received, four for the resolution, one against, and one that was both for and against. Discussion indicated that there seems to be very little interest on the part of our members in this resolution. Mr. Bognanno noted that Paul Weinstein had asked him if he would alert the Center Directors to write. Mr. Bognanno did not, but he pointed out that all 35 of the IR Center Directors in attendance at their meeting in San Francisco voted for the resolution. A committee would prepare reports on what is going on in the field, but IRRA would not take a stand on any of the reporting. An argument for not doing this was that the mutual thrust for this idea was to go before the BLS and present a point of view. What is needed and what is not needed could be a political issue. It was noted that the letters were thoughtful, but very few received. Several members pointed out that we did not know what such a committee would do. The Board decided that the proposal should be referred back to the IR Center Directors and let them decide what action they should take, and to point out our question about the appropriate role of the IRRA.

Rehmus Letter: Charles Rehmus, previous Nominating Committee Chairman, had written to the IRRA asking about the composition of and

guidelines for the nominating committee, raising in the process several questions about the representation on the Board and Presidency. It was noted that no complaints had been received about the actions of the Nominating Committee. The Board decided to table the issue indefinitely.

The meeting adjourned at 11:28 p.m.

IRRA EXECUTIVE BOARD ANNUAL MEETING December 28, 1984, Dallas

President Wayne L. Horvitz called the meeting to order at 7 p.m. Present were President Horvitz, President-elect Everett M. Kassalow, and Board members Mario F. Bognanno, Edgar R. Czarnecki, Lydia Fischer, Lois S. Gray, Karen S. Koziara, Solomon B. Levine, Daniel J.B. Mitchell, Michael Moskow, Joyce N. Najita, Sidney W. Salsburg, and Lucretia D. Tanner. Also present were four newly elected Board members, President-elect Lloyd Ulman, Thomas Balanoff, Peter Feuille, and Donald Vosburgh. Others attending were David R. Zimmerman, Secretary-Treasurer; Barbara D. Dennis, Editor; Michael E. Borus, *Newsletter* Editor; Helmut Wolff, Dallas Local Arrangements Chairman; Mark Kahn and Louis Ferman, Chairmen of the 1985 Spring Meeting-Detroit; Hervey Juris, co-editor of the 1985 research volume; David Lewin, Joint Program Meetings Committee Chairman; Sanford Jacoby, Nominating Committee Chairman; and Marion Leifer, IRRA Executive Assistant.

Absent were Board members Wilbur Daniels, Martin Ellenberg, and John N. Gentry. Also absent were newly elected Board members Clair Brown and Charles Rehms.

President Horvitz welcomed the new Board members and thanked the retiring Board members for their services.

Some minor clarifications were made in the minutes of the Spring meeting and the minutes were approved as corrected.

Sanford Jacoby presented the report of the Nominating Committee. The Board accepted the slate as proposed.

Secretary-Treasurer Zimmerman reported that the National Office had purged the membership records of those who had not paid dues for several years, but the loss was more than made up by new members gained as a result of a vigorous promotion campaign and the attraction of the *Directory*. The result is a slight increase in total membership. The number of subscriptions has declined somewhat as libraries have cut back on the number of their subscriptions. The 1985 promotion will focus again on local chapter members who do not belong to the National Association.

Referring to the September 30, 1984 accountant's report, Secretary-Treasurer Zimmerman noted that the projected excess of revenues over expenses will be between \$30,000 and \$40,000, the exact figure dependent upon the accrual system of accounting. The surplus is due to *Directory* sales, increase in sales of other books, income from the *Newsletter*, and income from mailing list rentals. The Stieber volume has sold very well and the supply is almost exhausted. The current financial position is better than any the IRRA has had previously, but 1985 expenses may increase (printing and postage costs in particular). Mr. Zimmerman expects a small surplus in 1985 and suggested ways that the monies might be used to assist local chapters. He also proposed a 5 percent salary increase for the National Office staff, including a higher catch-up increase for one person. The Board accepted the Secretary-Treasurer's report, including the salary increases.

Editor Dennis's proposal for revising the index of IRRA volumes was referred to a committee for discussion later. Ms. Dennis reported that the *Directory* had been distributed and appeared to be very successful. A question was raised about publishing a *Directory* more often, perhaps once every four (rather than six) years, and the National Office was asked to report at the 1985 Annual Meeting on how out-of-date the *Directory* might be after one year. The *Directory* is popular, and it was suggested that one might be issued in addition to the annual research volume.

Hervey Juris, co-editor of the 1985 research volume, reported that first drafts of all the chapters had been edited and returned to the authors, and some of the second drafts had been received before the February 1 deadline. The book title has not been agreed upon.

Karen Koziara and Lucretia Tanner, co-editors, reported on their progress on the 1986 research volume, "Women and Work." Michael Moskow has agreed to be a co-editor. Commitments have been received from all of the chapter authors, some of whom are from disciplines other than industrial relations.

Several topics were suggested during the discussion of the 1987 research volume: public-sector bargaining (a follow-up to the 1979 volume that BNA published for the Association); joint labor management programs (suggested by Louis Ferman); the crisis in union organization in the U.S., or simply trade unions; and the operation of informal economies in society. No decision was reached, and Jack Stieber proposed that a committee composed of the 1984 IRRA President and the two incoming Presidents evaluate the proposals and present three for Board consideration at the 1985 Spring Meeting. A call for program topics for the 1988 research volume should be published in either the May or September 1985

Newsletter, and these topics will be on the agenda of the 1985 Annual Meeting.

David Lewin reported that he had contacted representatives of the American Sociological Association (ASA), the American Psychological Association (APA), and the American Historical Association (AHA) regarding their interest in co-sponsoring sessions. The ASA's response was positive, as there is a resurgence of interest among sociologists in the subject of work. A proposal for a joint session should be made before February 1985. Paul Sackett, APA program chair, proposed that the IRRA co-sponsor a session at their next annual meeting; the proposal would have to be received before their February board meeting. The Board recommended that the IRRA make a commitment to the APA. The AHA will be meeting in New York at the same time as the IRRA's Annual Meeting, and the Board directed Mr. Lewin to work with President Kassalow in arranging one joint session, and possibly two, for the New York meeting. The Board was not unanimous in endorsing the desirability of joint activities with other associations, some feeling that it constitutes a threat to the IRRA as members might be lost to these other meetings, and others viewing the activity as the natural evolution of common interests. The ultimate goal of the Association is to have all people working in industrial relations become IRRA members and attend meetings. Other suggestions to increase the IRRA's visibility and attractiveness were poster sessions and additional sessions with papers presented but not published.

Michael Borus, *Newsletter* editor, asked that chapters submit news items for publication. He also reported that there was limited response to letters to the editor. The number of positions-available ads has been increasing and the revenue should cover half the cost of the *Newsletter*. He is investigating how advertising might affect the third class nonprofit mail permit.

Sidney Salsburg presented a proposal concerning regional meetings, suggesting that they focus on a national or regional issue (such as the steel problem), that they be held in cities where larger meetings are not possible, and that they be generally aimed at the practitioner. This issue was raised at the local chapter officers luncheon earlier in the day, and the consensus there was that the Spring Meeting should be retained with its national focus and should be expanded. The Board agreed that the present arrangement should be continued, but the meetings might be more "lively."

Everett Kassalow listed some tentative program topics for the New York Annual Meeting. Lois Gray, representing the New York chapter,

reported that they were setting up committees and would be involving neighboring chapters in the plans.

Invitations to host the 1986 Spring Meeting were received from four chapters—Chicago, Atlanta, Central Florida, and South Atlantic (South Carolina). The Board chose Atlanta after noting that no meeting had been held in that area for several years. The three chapters in that area that submitted invitations have agreed to cooperate. It was also noted that Chicago is the site for the 1987 IRRA-ASSA meeting.

Reporting for Jack Barbash, Mr. Kassalow said that the topics for the IIRA Meeting, September 1–4, 1986, in Hamburg had not been received. When the information is available, it will be published in the *Newsletter*. Mr. Barbash, the IRRA's delegate, has had input into the program.

The IIRA has asked the IRRA to host a regional meeting in 1987 in the U.S. This will be on the agenda for the Spring Board Meeting in Detroit.

The IR Center Directors again requested that the Board assume responsibility for monitoring BLS statistics, in view of what might be eliminated because of budget cuts. The proposal is for the IRRA to appoint a committee that would monitor the development of statistics from the BLS and other government agencies. The committee would not establish policy on behalf of the IRRA nor would it violate the nonpolitical aspect of the Association. A motion to accept this proposal carried. The committee's function would be to disseminate information, primarily through the *Newsletter* but also to the Board at its meetings. The President will appoint the committee, which should include a representative of the Board and other concerned IRRA members. Mr. Mitchell urged that the committee be appointed promptly, before the Spring Meeting.

The President, Past President, and President-Elect, serving as a committee, recommended that a \$5000 honorarium be paid for the 1984 year to the Secretary-Treasurer and to the Editor. The motion carried.

The meeting adjourned at 11:50 p.m.

FINANCIAL STATEMENTS
Year Ended December 31, 1984

We have examined the balance sheets of the Industrial Relations Research Association as of December 31, 1984 and 1983, the related statements of income, changes in fund balance and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of the Industrial Relations Research Association at December 31, 1984 and 1983, and the results of their operations and changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Stotlar & Stotlar, S.C.

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin
BALANCE SHEETS
December 31

| | 1984 | 1983 |
|---|------------------|------------------|
| ASSETS | | |
| Current assets: | | |
| Petty cash | \$ 50 | \$ 50 |
| Cash—checking | | 5,897 |
| Cash—MMDIA | 66,899 | 50,634 |
| Certificates of deposit | 80,000 | 55,000 |
| Accounts receivable (Less allowance for doubtful accounts of \$405 in 1984 and \$273 in 1983) | 3,649 | 2,685 |
| Accrued interest receivable | 2,775 | 152 |
| Prepaid expenses | | 355 |
| Inventory | <u>21,240</u> | <u>13,911</u> |
| Total current assets | \$174,613 | \$128,684 |
| Property, plant and equipment: | | |
| Equipment | \$ 3,152 | \$ 788 |
| Accumulated depreciation | 322 | 79 |
| Net property, plant and equipment | <u>2,830</u> | <u>709</u> |
| Total Assets | <u>\$177,443</u> | <u>\$129,393</u> |
| LIABILITIES AND FUND BALANCE | | |
| Current liabilities: | | |
| Accounts payable | \$ 19,352 | \$ 13,945 |
| Dues collected in advance | 66,225 | 75,983 |
| Ford Foundation grant unexpended balance | | <u>308</u> |
| Total liabilities | \$105,577 | \$ 90,236 |
| Unrestricted fund balance | <u>\$ 71,866</u> | <u>39,157</u> |
| Total Liabilities and Fund Balance | <u>\$177,443</u> | <u>\$129,393</u> |

(The accompanying notes are an integral part of the statements.)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

INCOME STATEMENTS
For the Year Ended December 31

| | <i>1984</i> | <i>1983</i> |
|-----------------------------------|------------------|------------------|
| Income | | |
| Income from operations | | |
| Membership dues | \$126,013 | \$116,389 |
| Subscriptions | 6,069 | 19,641 |
| Chapter fees | 4,716 | 4,399 |
| Book sales, net of refunds | 10,609 | 8,018 |
| Royalties | 1,130 | 520 |
| Newsletter advertising | 3,071 | 1,498 |
| Mailing list rental | 5,954 | 5,103 |
| Meetings | 8,557 | 5,405 |
| ASSA refunds | 2,350 | 3,503 |
| Miscellaneous income | | 2,248 |
| | <hr/> | <hr/> |
| Total operating income | \$168,489 | \$166,724 |
| Expenses | | |
| Compensation | | |
| Salaries | \$ 42,293 | \$ 42,577 |
| Pension | | 1,187 |
| Payroll taxes | 3,211 | 3,013 |
| Contract services | 3,398 | 2,723 |
| Officer honorariums | 10,000 | 9,000 |
| Employee education | 154 | |
| | <hr/> | <hr/> |
| Total compensation expense | \$ 59,056 | \$ 58,500 |
| Publications | | |
| Proceedings | \$26,299 | \$ 30,750 |
| Spring proceedings | 859 | 6,045 |
| Research volumes | 19,851 | 20,620 |
| Newsletter | 9,497 | 6,477 |
| | <hr/> | <hr/> |
| Total publication expense | \$ 56,506 | \$ 63,892 |
| Meetings | | |
| Meals | \$ 4,839 | \$ 5,919 |
| Officer/Staff travel expense | 2,183 | 4,616 |
| Miscellaneous | 3,254 | 781 |
| | <hr/> | <hr/> |
| Total meetings expense | \$ 10,256 | \$ 11,316 |
| Officer and general expenses | | |
| Membership promotions | \$ 7,878 | \$ 4,196 |
| Computer and label costs | 1,094 | 773 |
| Office supplies | 2,717 | 2,756 |
| Postage and freight | 4,037 | 2,925 |
| Telephone | 1,451 | 1,399 |
| Accounting and auditing | 2,248 | 2,346 |
| Bank charges | 146 | 13 |
| Insurance | 237 | 233 |
| Depreciation | 243 | 79 |
| Duplicating | 1,446 | |
| Bad debts | 180 | |
| | <hr/> | <hr/> |
| Total office and general expense | \$ 21,677 | \$ 14,720 |
| Total expenses | \$147,495 | \$148,428 |
| Income from operations | \$ 20,974 | \$ 18,296 |
| Other income and (expense) | | |
| Interest income | \$ 12,020 | \$ 6,294 |
| Miscellaneous expense | (285) | |
| | <hr/> | <hr/> |
| Other income and (expense) | \$ 11,735 | \$ 6,294 |
| Net income | \$ 32,709 | \$ 24,590 |

(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

| | 1984 | 1983 |
|--|------------------|------------------|
| Unrestricted fund balance, beginning balance before restatement | \$ 39,157 | \$ 28,384 |
| Prior period adjustment | | (13,817) |
| Unrestricted fund balance, beginning balance after restatement | \$ 39,157 | \$ 14,567 |
| Net income | <u>32,709</u> | <u>24,590</u> |
| Unrestricted fund balance, ending balance | <u>\$ 71,866</u> | <u>\$ 39,157</u> |

(The accompanying notes are an integral part of the statements.)

 INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
 Madison, Wisconsin

 STATEMENT OF CHANGES IN FINANCIAL POSITION
 For the Year Ended December 31

| | 1984 | 1983 |
|---|------------------|------------------|
| Financial resources provided by: | | |
| Operations: | | |
| Net income | \$ 32,709 | \$ 24,590 |
| Item not affecting cash and short term investments: Depreciation | 243 | 79 |
| Decrease in accounts receivable | | 2,738 |
| Decrease in inventory | | 3,097 |
| Increase in accounts payable | | 6,312 |
| Increase in dues paid in advance | 10,242 | 36,722 |
| Decrease in prepaid expenses | <u>355</u> | |
| Total funds provided | <u>\$ 43,549</u> | <u>\$ 73,588</u> |
| Uses of Funds: | | |
| Increase in interest receivable | \$ 2,623 | \$ |
| Increase in accounts receivable | 964 | |
| Purchase of equipment | 2,384 | 788 |
| Increase in prepaid expenses | | 355 |
| Decrease in Ford Foundation grant | 308 | 2,535 |
| Prior period adjustment | | 13,817 |
| Increase in inventory | 7,329 | |
| Decrease in accounts payable | <u>6,792</u> | |
| Total uses of funds | <u>\$ 20,380</u> | <u>\$ 17,485</u> |
| Increase in cash and short term investments | 23,189 | 56,093 |
| Cash and short term investments | | |
| Beginning of year | <u>\$111,581</u> | <u>\$ 55,488</u> |
| End of year | <u>\$134,750</u> | <u>\$111,581</u> |

(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

This 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-MMDIA represents the balance invested in a money market account held at Randall Bank, Madison, Wisconsin. Interest earned on the account has averaged 8% per annum during 1983 and 1984.

The Association owned two certificates of deposit, 1983, which are stated at cost. These certificates were:

| <i>Amount</i> | <i>Purchased</i> | <i>Interest Rate</i> | <i>Maturity</i> |
|---------------|------------------|----------------------|-----------------|
| 30,000 | 7/25/83 | 9.62 | 1/23/84 |
| 25,000 | 10/14/83 | 9.00 | 4/13/84 |

As of December 31, 1984, the Association owns three certificates of deposit which are stated at cost. The certificates are held by the Bank of Shorewood Hills, Madison, Wisconsin.

| <i>Amount</i> | <i>Purchased</i> | <i>Interest Rate</i> | <i>Maturity</i> |
|---------------|------------------|----------------------|-----------------|
| 25,000 | 3/22/84 | 10.10 | 3/22/85 |
| 25,000 | 9/20/84 | 10.45 | 3/21/85 |
| 30,000 | 11/19/84 | 9.10 | 5/19/85 |

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 year useful life.

Membership Dues

Membership dues are assessed on a calendar year basis and are recognized on an accrual basis. Dues received for the upcoming 1984 and 1985 calendar years are reflected as deferred income on the balance sheet.

2—RETIREMENT PLAN

The Association had a retirement annuity contract covering the former executive assistant. The amount of funding was treated as additional compensation to the former executive assistant in 1983.

3—RESTRICTED GRANT FUNDS

During 1981, a \$5000 grant was received from the Ford Foundation. These funds were to be available over a two-year period beginning August 1, 1981, for support of meeting and clerical time in preparation of a research volume on the work ethic. As of December 31, 1983, \$308 of the grant funds had not been expended. An extension had been obtained from the Ford Foundation approving disbursement of the grant monies beyond the two-year period. As of December 31, 1984, the grant had been totally expended.

4—PRIOR PERIOD ADJUSTMENT

The Association's fund balance had been restated to reflect the payment of expenses in 1983 attributable to the prior period. Such expenses had not been established as accounts payable as of December 31, 1982.

ALPHABETIC LIST OF AUTHORS

| | | | |
|--------------------------------|----------|-----------------------------|----------|
| Adams, Arvil V. | 122 | Lardaro, Leonard | 114 |
| Allen, Robert E. | 465 | Levitan, Sar A. | 44 |
| Arouca, Dennis A. | 425 | Lynch, Lisa M. | 250 |
| Bain, Trevor | 473 | McCormick, Janice. | 285 |
| Barbash, Jack | 291 | McKersie, Robert B. | 261 |
| Barron, John M. | 107 | McNaught, William | 316 |
| Bemmels, Brian | 212 | Magenau, John M. | 455 |
| Bierman, Leonard | 242 | Mangum, Stephen L. | 122 |
| Bishop, John | 107 | Marcus, Alan J. | 302 |
| Blasi, Joseph Raphael | 360 | Martin, James E. | 455 |
| Blaustein, Saul J. | 162 | Miller, Clifford J. | 147 |
| Bloom, Steven M. | 370 | Mills, D. Quinn | 285 |
| Burdetsky, Ben | 36 | Mitchell, Daniel J.B. | 76 |
| Burtless, Gary | 138 | Moore, Geoffrey H. | 32 |
| Cappelli, Peter | 437 | Moskow, Michael H. | 420 |
| Card, David | 404 | Norwood, Janet L. | 24 |
| Cohen, Wilbur J. | 171 | O'Neill, June | 190 |
| Conte, Michael E. | 377 | Oswald, Rudolph A. | 68 |
| Cook, Robert F. | 93 | Pellegrini, Claudio | 333 |
| Dale, Charles | 295 | Plewes, Thomas J. | 64 |
| Donohue, Peter | 218 | Quester, Aline O. | 302 |
| Duchin, Faye | 309 | Raffa, Frederick A. | 101 |
| Dunlop, John T. | 9 | Rees, Albert | 34 |
| Fischer, Ben | 277 | Rodgers, Robert C. | 234 |
| Fischer, Lydia H. | 422 | Rungeing, Brian | 101 |
| Fogel, Lorel E. | 205 | Rupp, Kalman | 85 |
| Fottler, Myron D. | 473 | Saleh-I-Iundy, Monier | 473 |
| Free, Rhona C. | 208 | Sandver, Marcus H. | 250 |
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