

**INDUSTRIAL RELATIONS
RESEARCH ASSOCIATION SERIES**

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

**DECEMBER 28-30, 1986
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New Orleans**

EDITED BY BARBARA D. DENNIS

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PREFACE

The program for IRRA's 39th Annual Meeting, in New Orleans, featured a few looks back and many looks forward—how did collective bargaining and our whole industrial relations system evolve to where we are today, and how will the changes we are witnessing in the world economy and in technology affect industrial relations in the future.

Lloyd Ulman established the theme in his Presidential Address, "Who Wanted Collective Bargaining in the First Place?", as he examined the evolution of various labor-management systems in Western Europe and North America. Our Distinguished Speaker, James D. Hodgson, former Secretary of Labor, elaborated on the theme in his address, "Our New Industrial Age: Where Does Industrial Relations Fit?", as he compared the experiences of the U.S. and Japan, where he served as U.S. Ambassador for several years.

Among the sessions in the "present and future" category were "Changes in Labor Relations: Their Impact on Union Structure," "Corporate Restructuring and Industrial Relations," "Planning for the Future: Implementing the AFL-CIO Report," and "What's New About Technological Change?" Other session topics included the NLRB, profit-sharing and incentive pay, economic inequality, and part-time work as well as research in organizational behavior and human resource management, research methodologies, and comparative labor market policies.

These Proceedings provide an appropriate opportunity to pay a special tribute to Betty Gulesserian who, for so many years, devoted her energies to the Association as Executive Assistant. She retired in March 1983 and, in the years since, traveled the world. Deteriorating health forced her return to Madison where she died on August 3, 1986.

We in the Association always recognized Betty's special contributions, and we are equally grateful to her successors, Marion Leifer, Executive Secretary, and Marjorie Lamb who cope so competently with the ever-increasing national office duties. We thank them all for helping to make the IRRA the dynamic organization it is.

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, a *Membership Directory* every three years, and quarterly issues of the *Newsletter*.

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If you are not already a member, we invite you to join by sending your membership application and dues payment. Inquiries regarding membership, meetings and publications should be addressed to the IRRA Office.

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Sincerely yours,



IRRA President 1987

CONTENTS

Officers of IRRA	Cover 2
Preface	iii
IRRA Membership Information	iv

I

PRESIDENTIAL ADDRESS

Michael H. Moskow, Presiding

Who Wanted Collective Bargaining in the First Place?	LLOYD ULMAN	1
---	-------------	---

II

DISTINGUISHED SPEAKER ADDRESS

Lloyd Ulman, Presiding

Our New Economic Age: Where Does Industrial Relations Fit?	JAMES D. HODGSON	14
---	------------------	----

III

THE NLRB: ANALYSES OF THE BOARD'S IMPACT AND REMEDIAL POLICY

Myron J. Roomkin, Presiding

Remedial Policy and Compliance with the NLRA	ROBERT J. FLANAGAN	21
The Impact of the Runaway Office on Union Certification Elections in Clerical Units	BEATRICE J. FREIBERG AND WILLIAM T. DICKENS	29
Union Organizing Drive Outcomes from NLRB Elections During a Period of Economic Concessions	RICHARD B. FREEMAN AND MORRIS M. KLEINER	41
Discussion	MYRON J. ROOMKIN	48

IV

AN UPDATE ON MINORITY AND AFFIRMATIVE ACTION PROGRAMS

Charles Craypo, Presiding

Splitting Blacks? Affirmative Action and Earnings Inequality Within and Across Races	JONATHAN S. LEONARD	51
Sex Segregation on the Job: Trends and Remedies	HEIDI I. HARTMANN AND BARBARA F. RESKIN	58
Women's Progress in the Labor Market: Should We Rest on Our Laurels?	FRANCINE D. BLAU AND MARIANNE A. FERBER	70
Discussion	JULIANNE MALVEAUX	77

V

COMPARATIVE LABOR MARKET EXPERIENCE AND POLICIES: U.S. AND EUROPE

Everett M. Kassalow, Presiding

Labor Market Contrasts: United States and Europe	JANET L. NORWOOD	82
Flexibility and Unemployment: The View from Western Europe	DAVID SOSKICE	93
How Flexible Is Flexible? The United States Labor Market Versus Western Europe	RICHARD S. BELOUS	101
Discussion	PHILIP K. WAY	108

VI

CHANGES IN LABOR RELATIONS: THEIR IMPACT ON UNION STRUCTURE

Mark L. Kahn, Presiding

New Developments in Union Structure in the U.S. Auto Industry	HARRY C. KATZ	112
The AT&T Divestiture and the CWA	WALLACE HENDRICKS	121
Changing Union Structure and the Changing Structure of Unionization in the Post-Deregulation Airline Industry	KIRSTEN RUTH WEVER	129
Discussion	BEN FISCHER	137
	JACK BARBASH	141

VII

NEW DEPARTURES IN COMPENSATION: PROFIT-SHARING AND INCENTIVE PAY

Lucretia Dewey Tanner, Presiding

Share Arrangements and Macroeconomics	MARTIN L. WEITZMAN	144
Profit-Sharing Arrangements and Collective Bargaining	DANIEL H. KRUGER	152
Who Has Flexible Wage Plans and Why Aren't There More of Them?	RENAE BRODERICK AND DANIEL J.B. MITCHELL	159
Union Versus Nonunion Attitudes Toward Share Arrangements	LAURA B. CARDINAL AND I. B. HELBURN	167
Labor's Collective Bargaining Experience with Gainsharing and Profit-Sharing	JOHN L. ZALUSKY	174

VIII

CORPORATE RESTRUCTURING AND INDUSTRIAL RELATIONS

Richard Prosten, Presiding

American Enterprise in a Time of Change: Implications for Industrial Relations	PHILIP K. WAY	183
Bargaining in Telecommunications After Divestiture	PETER CAPPELLI AND CHARLES PERRY	191
The Impact of Industrial Relations on the Restructuring of the Basic Steel Industry in Sweden	TREVOR BAIN	201
Discussion	PHILLIP E. RAY	209

IX

DISSERTATION ROUNDTABLE

Orley Ashenfelter, Presiding

Employment Training Policy and Politics, 1978-1982: From CETA to JTPA	A. MICHAEL COLLINS	213
--	--------------------	-----

The Impact of Technological Change on Collective Bargaining Power	GORDON BETCHERMAN	218
Defined Benefit, Defined Contribution, or No Pension?	REBECCA A. LUZADIS	222
Discussion	PETER FEUILLE	226
	HENRY S. FARBER	229

X

METHODOLOGICAL DEVELOPMENTS AND RESEARCH DESIGN ISSUES IN INDUSTRIAL RELATIONS

Peter Feuille, Presiding

A Labor Relations Application of the Bootstrap Sampling Technique	THOMAS G. PEARCE	232
Arbitrating Discrimination Grievances: An Empirical Model for Decision Standards	VERN E. HAUCK AND JOHN C. SOUTH	239
Research Design Issues in Comparative Industrial Relations	RICHARD B. PETERSON	244
Research Methodology Needs in Human Resource Management	HERBERT G. HENEMAN III	252
Discussion	JOHN THOMAS DELANEY	258

XI

RELATIONSHIP BETWEEN SOCIAL LEGISLATION AND UNION ORGANIZATION

Jack Stieber, Presiding

Unionism and Protective Labor Legislation	RICHARD B. FREEMAN	260
The Impact of Employment-at-Will Judicial Decisions on Outcomes of NLRB Representation Elections	RICHARD N. BLOCK, CHRISTINE L. MAHONEY, AND LESLIE F. CORBITT	268

XII

PLANNING FOR THE FUTURE: IMPLEMENTING THE AFL-CIO REPORT

Lloyd Ulman, Presiding

The AFL-CIO Blueprint for the Future— A Progress Report	CHARLES J. McDONALD	276
Discussion	SANFORD M. JACOBY	283
	MARYELLEN R. KELLEY	286
	JOHN J. LAWLER	293

XIII

CONTRIBUTED PAPERS: UNIONS AND COLLECTIVE BARGAINING

James W. Kuhn, Presiding

Factors Leading to a Decline in Union Win Rates: 1973-1981	PAULA E. STEPHAN AND BRUCE E. KAUFMAN	296
Employee Involvement Programs: Do They Alter Worker Affinity Towards Unions?	ANIL VERMA	306
Collective Bargaining in Steel: A Strategic Perspective	RICHARD KALWA	313
Discussion	SUSAN SCHWOCHAU	320
	PHILIP K. WAY	323
	JAMES W. KUHN	327

XIV

INCREASING ECONOMIC INEQUALITY IN THE U.S.? ALTERNATIVE VIEWS

Sheldon Danziger, Presiding

The Facts About Rising Industrial Wage Dispersion in the U.S.	LINDA A. BELL AND RICHARD B. FREEMAN	331
What Is Making American Wages More Unequal?	CHRIS TILLY, BARRY BLUESTONE, AND BENNETT HARRISON	338
Family Income Inequality in the United States: 1967-1984	MCKINLEY L. BLACKBURN AND DAVID E. BLOOM	349

XV

NEW RESEARCH IN ORGANIZATIONAL BEHAVIOR
AND HUMAN RESOURCE MANAGEMENT

Thomas Kochan, Presiding

Dualism in Contemporary Union- Management Relations	DANIEL B. CORNFIELD	358
Research on Procedural Justice: Implications for Industrial Relations	BLAIR W. SHEPPARD AND JOHN W. MINTON	368
New Technology and New Research Opportunities	PAUL S. GOODMAN	375
Discussion	DAVID LEWIN	381

XVI

SECTORAL STUDIES OF COLLECTIVE BARGAINING:
HEALTH CARE

Karen Shallcross Koziara, Presiding

The Changing Financial Environment and Hospital Industrial Relations: A Tale of Two Cities	MARY BRADLEY, KAREN S. KOZIARA, AND JOSHUA L. SCHWARZ	386
Hospital Competition, Labor Demand, and Labor Productivity	JAMES C. ROBINSON	397
Bargaining in the Health Care Industry— A Study Revisited	LUCRETIA DEWEY TANNER AND JEROME T. BARRETT	404

XVII

CONTRIBUTED PAPERS: LABOR ECONOMICS
AND LABOR MARKETS

Lawrence M. Kahn, Presiding

Occupational Skill Training and Transferability: How Does the Military Fare?	STEPHEN L. MANGUM AND DAVID E. BALL	412
The Economic Returns to Military Service	THOMAS N. DAYMONT AND PAUL J. ANDRISANI	422

Why Do We Learn So Little from Impact Evaluations of Employment and Training Programs?	MICHAEL E. BORUS	432
Discussion	LAWRENCE M. KAHN	440
	WILLIAM T. DICKENS	444

XVIII

WHAT'S NEW ABOUT TECHNOLOGICAL CHANGE?

David R. Zimmerman, Presiding

Technological Change and Employment: Fears and Reality	H. ALLAN HUNT	447
Public Policy and Collective Bargaining Responses to New Technology in Canada	THOMAS R. KNIGHT AND DAVID C. MCPHILLIPS	455
Technological Change and Industrial Relations: An International Comparison	RUSSELL D. LANSBURY	463

XIX

PART-TIME WORK AND PART-TIME WORKERS

Katherine G. Abraham, Presiding

Older Workers and Part-Time Work	ALAN J. MARCUS, JAMES JONDROW, AND FRANK BRECHLING	471
Part-Time Work and Wages Among Adult Women	REBECCA M. BLANK	479
Part-Time Workers: Unionization and Collective Bargaining in Canada	ISIK U. ZEYTIINOGLU	487
Discussion	HILDA KAHNE	496
	WILLIAM T. DICKENS	502
	KATHARINE G. ABRAHAM	504

XX

INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGISTS
AND INDUSTRIAL RELATIONS: A SYMPOSIUM^o

Summary of the Symposium	DAVID LEWIN, RAPPORTEUR	507
--------------------------	-------------------------	-----

XXI

INSIGHTS FROM INDUSTRIAL RELATIONS
INTO THE STUDY OF ATTAINMENT^{o*}

Summary Notes on the Special Session	DAVID LEWIN, RAPPORTEUR	513
--------------------------------------	-------------------------	-----

XXII

IRRA ANNUAL REPORTS

Executive Board Meeting in Atlanta	519
Executive Board Meeting in New Orleans	523
General Membership Meeting in New Orleans	527
Audit Report for 1986	529
Alphabetic List of Authors in 1986 Proceedings	Cover 3

^o Summary of a joint session of Division 14, American Psychological Association and the IRRA at the APA meeting, Washington, D.C., August 1986.

^{o*} Summary of a special joint session of the American Sociological Association and the IRRA at the ASA meeting, New York, August/September 1986.

I. PRESIDENTIAL ADDRESS

Who Wanted Collective Bargaining in the First Place?

LLOYD ULMAN
University of California, Berkeley

The decline of trade unionism and collective bargaining in the United States has launched an academic and journalistic growth industry to explain the decline. A considerable variety of plausible explanations has emerged, and that is only to be expected in grappling with a complex historic event. Some of the hypotheses, however, do differ among themselves with respect to their international implications, and their shortcomings are revealed when they are placed in an international context. Explanations that run in terms of economically motivated behavior or of widely experienced changes in the economic environment would suggest that union decline should not be a uniquely American phenomenon, whereas for most of the postwar period it really was. On the other hand, explanations that dwell on international differences in legal and bargaining institutions and political arrangements could treat union decline as an extension of a historic American "exceptionalism," but developments in recent years suggest that loss of union influence and membership is no longer confined to the United States. Moreover, some of the "exceptional" characteristics of American unions seem to have created expectations of greater organizational robustness in the U.S. than abroad, at least if we are to judge from two questions that have been put by foreign observers. Why, foreign businessmen often wonder, have American businessmen been so hard on the most conservative unions in the free world? And why have so many American workers been indifferent or even downright hostile to unions that have done more things for their members on the job than unions in other countries?

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Such considerations illustrate the need to view industrial relations problems more systematically in a comparative and international context and to devise or extend analytic approaches that can accommodate both common and divergent developments in the areas of union recognition by employers, labor ideology and politics, and bargaining structures and performance. What follows are highly preliminary and speculative comments along these lines.

An Extended Model

We might start out with the economists in assigning to businessmen a consistently dominant aim of maximizing profits, and also in regarding the tastes and preferences of workers as exogenously determined, although these assumptions are less innocent in some times and places than in others. Profit maximization, of course, would not preclude union recognition; indeed, when the expected costs of resistance and preemption in a union-free environment happen to exceed combined strike and settlement costs under collective bargaining, profit-driven employers would have to opt for the latter. But they might choose collective bargaining even if it costs more than union avoidance but less than the most probable radical alternative on the current political scene. Collective bargaining would be offered if its availability could sufficiently reduce the probability of occurrence of such an event.

Radical political alternatives are not considered in the standard economic calculus, whether because they are absent from the current American scene or because an individual employer could hardly hope to reduce the probability of a political event by offering collective bargaining to his own employees. In fact, it would be to every employer's advantage not to do so and to let every other employer bear the cost of this public good. However, it surely would be in what used to be called the enlightened self-interest of employers to further their class interest by collectively proffering collective bargaining to large groups of workers, provided the negative and positive incentives to do so are sufficiently great.

The costs helping to shape the currently dominant employer policies towards unionism and collective bargaining reflect the currently dominant tastes and preferences of workers. These must include their relative preferences for alternative institutional regimes governing the employment relationship as well as for the more familiar economic packages of money, security, and reduced effort. The institutional alternative would range through various forms of

nonunionism, collective bargaining, worker participation in management or ownership, and public ownership. They are characterized by varying degrees of "industrial democracy," on the one hand, and of managerial control or private ownership, on the other. The ideological mood of a particular country's working people at any point in time can be reflected in (a) how they tend to rank such institutional alternatives, and (b) how willing they are to forgo some particular state in favor of a more "conservative" one that happens to be associated with greater economic benefit (at the outset). Let us consider three possible cases that are suggested by diverse historical experience, although they are certainly not to be taken as a satisfactory representation of historic complexity.

Case 1

Case 1 is characterized by a strongly held preference among workers for socialism over nonunion capitalism, but also by a willingness to compromise on collective bargaining under capitalism should the latter alternative offer a sufficiently promising bundle of economic benefits and industrial democracy. In this case employers may have a collective incentive to offer collective bargaining. Political left-wingers have invariably tended to blame union leaders for selling out their members under such circumstances, but this interpretation fails to explain how members can be or remain sold. If instead workers are credited with the ability to make up their own minds, it is they who are doing the selling. Case 1 describes a buyout, not a sellout.

Case 1 can caricature some of the central aspects of industrial relations in Germany, the Netherlands, and Scandinavia over a period extending roughly from the latter part of the 19th century to after the first World War. In these countries Socialist-affiliated union movements participated in serious challenges to the political and economic order, which sometimes took the form of general strikes as well as parliamentary political activity, but they pursued conventional bargaining objectives as well. Employers offered united and effective resistance, but they also tended to respond by extending bargaining recognition to the unions. In addition, social insurance was often regarded as a form of political insurance by the business community. Public insurance schemes sometimes originated by the extension of state subsidies to union funds, and this integrated the unions into important areas of policy-making and administration and helped to establish a corporatist tradition affecting the relations among unions, employers, and the state.

The political considerations that motivated employers in these countries influenced the structure and scope of collective bargaining. Employer class consciousness helped to produce relatively strong employer associations which would offer resistance both to union bargaining demands and to competitive pressure on wages (and hence prices). It could also help to explain the affiliation of large-scale firms (although not all of them) with strong associations, although they typically had less to gain from affiliation than the smaller, weaker, and high-cost firms whose interests were strongly represented within associations. The existence of strong associations, in turn, tended to strengthen centralizing influences on the union side, although the latter did not always prevail against separatist tendencies imparted by diversity of political and religious affiliation, on the one hand, and craft organization, on the other. Finally, in confining collective bargaining to the industry level (or wider), employer associations helped to exclude plant-level working arrangements from the purview of formal collective bargaining and thus to keep the unions out of the plants. After the first World War, left-wing agitation resulted in the establishment of works councils, but these were soon confined by both management and union efforts to largely nonadversary functions.

Case 1B (as in Britain)

British experience diverged from the Case 1 format of rational recognition in that the establishment of collective bargaining in that country in the second half of the 19th century and its subsequent stability came about despite an absence of fear of revolutionary militancy and also despite the existence of a powerful ethos of economic individualism that contrasted with continental corporatism and cartels. But support for trade unions, collective bargaining, and, indeed, a broad national consensus emanated from a different vein of British conservatism—a sort of *richesse oblige* that was generated as a reaction against the same harsh excesses of the Industrial Revolution which had prompted much of the militancy and political activism manifested by British unionists. Unlike continental corporatism, this British paternalism was not necessarily consistent with an assumption of long-term profit maximization leading to union recognition but then to strong employer resistance under collective bargaining. In any event, British employer associations lacked the disciplinary authority and self-generated financial resources of some of their continental counterparts. Moreover, they did not embrace as large a proportion of the total area covered by union activity, for unionism, led by militant

and autonomous shop stewards, became a feature of plant-level labor relations in Britain. But hope (rooted in some early evidence) persisted that a British variant of corporatism would prevail: that the unionists would return paternalistic favors by exercising their bargaining power with restraint.

Case 2

Case 2 differs from Case 1 in that it is characterized by a dominant worker preference for some radical social order over collective bargaining as well as nonunion capitalism. In this case employers have no incentive to accept or encourage collective bargaining because of the existence of a militant commitment by unions or other groups to direct action in furtherance of an ideology that would preclude their acceptance of collective bargaining as even a temporary stopover on the road to Utopia. Whatever the threat to capitalism posed by these high rollers of labor history, it could be countered by state activity and not by bilateral bargaining relationships. Case 2 is suggested by experience in France and Italy where major labor movements have long reflected a strong syndicalist influence.

Case 3

Case 3 differs from the first two in that workers for the most part do not prefer a radical social order to an existing capitalist one, with or without collective bargaining. They may well prefer collective bargaining (and its associated features of industrial democracy) to nonunionism; and, if they do, the strength of that preference will help to determine the costs of operating under each of these two regimes. But since profit-oriented employers have no need to buy workers out of radicalism, they will accept collective bargaining in this case only if its strike and settlement costs are expected to lie below the combined costs of preemption and direct resistance to organization.

This case has been suggested by experience in the U.S. where socialism and later communism never attained the major political status that they did abroad (in part due to the stiff competition that various ideological imports had to face from homegrown antimonopoly populism), and where radical influences within unions could be countered by employer resistance in the arena of industrial relations. Some American employers and financiers could agree that the pure and simple unionism represented by the American Federation of Labor (another homegrown product) was a big improvement over its assorted radical competitors; but, as long as most American unionists

seemed to reach the same conclusion, the employers could regard no unionism as the best buy of all. (This is the answer to the question raised by those contemporary foreign businessmen.) Left-wing leaders regarded Gompers and his antisocialist "lieutenants" as misleaders of labor, but they could not claim as supporting evidence the Type 1 political behavior that their colleagues abroad could point to when leveling the same charge against socialist union leaders in Europe.

Employer associations were formed in the 19th century, but often for the purpose of resisting unionization. Large-scale employers did not throw their weight behind industry-wide bargaining or acquiesce in social security schemes, let alone those which helped to integrate the union movement into the socioeconomic structure of society. Instead, they preceded and later accompanied their own preemptive welfare policies with direct resistance to collective bargaining via the strike-breaking route, heavily reinforced by the police, judicial, and legislative institutions of the state. And, unlike the feudalistic paternalism that was conducive to union recognition in Britain, such paternalism as lurked within the bosoms of large-scale American employers ultimately found expression as part of a strategy to forestall unionism by maintaining relatively high wages, employment security, promotional opportunity, a variety of pensions and insurance, and the replacement of the pre-World War I "drive system" of management with an enlightened approach that emphasized "human relations in industry." The combination of relatively high wages, on the one hand, and, on the other, of employment security, promotional opportunity, a variety of pension, insurances, in-kind benefits, and a "human relations" approach to personnel management that characterized such policies would be more logically explained (as it was by Slichter) as an investment in union prevention than (as it was much later) as an investment in specific human capital.

The belated (by foreign standards) establishment of collective bargaining in manufacturing and other sectors employing large numbers of unskilled workers has also been depicted as a Type 1 sellout rather than a set of narrowly calculated and reluctant Type 3 acceptances. The new casts of villains included corporatist employers, the New Deal Administration, liberal Supreme Court justices, and the leaders of the CIO industrial unions whose shared objective was allegedly to deflect a radicalized—or potentially radical—rank and file from the objective of participatory industrial democracy, as revealed in the sitdown strikes of the thirties. It could be claimed that this type of corporatist hypothesis was consistent with participation by the new

industrial unions in collective bargaining arrangements that resembled in content and duration the internal labor markets established earlier by large-scale employers in the absence of unionism, to encourage long-term employment relationships. It could be claimed that the old company-dominated unions, which were intended to keep independent unions out, were simply replaced with grievance procedures, arbitration, and no-strike clauses, which were intended to keep rank-and-file militants down. The unions were thus cut in on monopoly capitalism as junior partners and hatchet persons, according to this view from the New Left.

But postwar American patterns of collective bargaining were also viewed more prosaically as evidence of "mature bargaining relationships" among adversaries. In any event they did not qualify for membership in Case 1. The historical occasion for a global tradeoff between collective bargaining and political socialism did not arise. Substantial elements of radicalism were represented by the Communists in several of the original CIO unions, but they were a negligible force in the political arena. Union recognition was extended reluctantly in Case 3 fashion by individual employers for whom costs of resistance and preemption had been raised sharply by the upsurge in grass-roots militancy in the 1930s and also by the Wagner Act, which they fought bitterly before and after passage. The prevalent structures of collective bargaining in the U.S. furnished little evidence of Case 1 class activity by employers: the manufacturing sector here has been characterized by more single-employer bargaining than exists abroad. Moreover, industrial democracy was extended to the plant level in the U.S., and, while managerial discretion has been greater under collective bargaining-cum-grievance procedure than it would be in theory under worker participation or than it has been in practice under the dominion of British shop stewards, a wide variety of productivity-determining working arrangements has been subject to bargaining. And mature collective bargaining remained adversarial. Although the bouts of widespread unrest that had occasioned passage, first of the Wagner Act, and second, of the Taft-Hartley amendments, simmered down, the American strike record remained quite high by European standards. In the 1960s when nonunion wages gained on union levels, the incidence of strikes rose, as did the incidence of contract rejections in membership referenda. In the 1970s, unions countered the inflationary aftermath of the first oil price shocks by negotiating pay increases that exceeded nonunion increases despite diminished profitability. Unionized American employers paid Hicksian Danegeld,

as union members got significantly higher pay and benefits than unorganized workers with similar qualifications, doing similar work, and, it might be added, within more competitive as well as more concentrated industries.

Meanwhile nonunion employers successfully resumed the basic carrot-and-stick approach of their prewar predecessors. Changes in the mix of methods employed were associated with changes in their cost-effectiveness. Postwar carrots included new versions of enlightened personnel management as well as pay policies that responded to increases in negotiated rates. They were presumably influential both in arresting the advance of organization in the private sector (reflected in the relative decline in union electoral victories and membership that began in the early 1950s) and (as a by-product of generalizing negotiated pay increases) in gaining for the unions a collective reputation as an inflationary force in a predominantly unorganized economy. The subsequent increase in popularity among nonunion employers of get-tough policies, or unvarnished resistance, came in good measure as a reaction to the bargaining gains registered by unions after the first oil price shocks; these gains raised the price of carrots considerably. Now union pay increases became increasingly translated into *relative* cost increases, and they contributed to shrinkage of the unionized sectors of the economy. And under pressure on profitability exerted by nonunion competition, together with increased foreign competition, deregulation, shifts in consumer demand, and further adverse movements in the terms of trade, unionized employers turned to get-tough bargaining policies and ushered in the present era of give-backs, take-backs, increased recourse to strikebreakers, and broken (or badly bent) bargaining structures.

Yet neither of the methods used to resist unionism in the postwar period could have been as cost-effective as each indeed was had not the resumption of traditional employer patterns of opposition been accompanied by a marked subsidence of both worker militancy and public sympathy towards unions from levels reached in the 1930s. The Great Depression constituted a far greater shock to employer profitability than the events of the 1970s and 1980s, but it touched off a wave of labor unrest that overmatched employer reluctance to recognize unions. If levels of worker feistiness had been higher in the postwar period, established nonunion employers might have had to raise their wages higher relative to nonunion wages in order to deter organization—even possibly to set premiums over union levels as

compensation for the relative lack of industrial democracy in their own establishments. Or potential nonunion entrants would have been confronted with a higher probability of becoming organized themselves, so that the relative cost position of unionized firms would have been less subject to deterioration by negotiated increases—except in the increasingly important case of foreign competition. Multiemployer bargaining structures would have proved more resistant to economic pressures, and strikebreakers harder to come by. Instead, another historic characteristic of American industrial relations reasserted itself. It was described by Slichter, writing in 1939, “the fact that the bargaining power of most unions is greater than their organizing power.”

Elimination of this deficit by another wave of organization in the private sector can no more be ruled out nor better foreseen than the last one had been. Dem bones *could* rise again: it is possible that lowered economic horizons, or greater economic insecurity, and shifting demographics could finally induce the white-, pink-, and new-collar groups to emulate many of their colleagues abroad and in the public sector at home. And the organizational success registered in the public sector would indicate that worker interest in unionism is far from dead, but it suggests that, for the private sector to emulate the public, an increase in union organizing power would require a decrease in the level of employer resistance. Meanwhile, the Slichterian imbalance may instead be reduced by the ongoing reduction in union bargaining power (as reflected in reduced strike activity and union wage premiums). This should probably tend to arrest organizational decline, although not in industries in which even nonunion firms have been finding it difficult to survive foreign competition.

Postwar Developments Abroad

In postwar Europe the reemergence of other historic patterns has helped to account for different organizational experiences. After having been swamped in some of their original host countries by the great and tragic sequence of depression, fascism, and war, Cases 1 and 2 resurfaced.¹ Since the late 1970s union membership has fallen

¹ To be sure, there were important changes from their original states, but some of these tended to reinforce salient characteristics of the prewar configurations—for example, various structural and legal changes which tended to both circumscribe and centralize collective bargaining in West Germany, and the increased power of the Communist parties in France and Italy, whose opposition to decentralized institutions helped to further weaken or retard the development of collective bargaining in those countries. Italy, however, moved away from a Communist-augmented version of Case 2, as a series of major political, economic, and social changes (including the rank-and-file strikes of 1969) favored greater bipartisan acceptance of collective bargaining.

relative to employment in France and Italy (the two original Case 2 countries), Britain, and the Netherlands, as it had been doing in the United States (and, it might be added, Japan). But membership has not fallen relative to employment in the Scandinavian countries and Canada (where it rose markedly), West Germany, and Austria—all, with the partial exception of Canada, Case 1 countries with major social democratic parties and strong and relatively centralized bargaining institutions. But political power exercised by the unions within and through these labor parties has helped to preserve their organizational base by continuing to nourish a relatively strong community of interest within the ranks of employers as well as workers. As a result, nonunion incursion into the jurisdictions of strong employer associations has been deterred, first, by the general expectation that new entrants will be unionized, and ultimately by a good chance that any would-be corporate rate-busters would find themselves short of labor (by cooperative union strike action), suppliers, business customers, or finance.

Even in these countries, however, bargaining structures have been subject, since the 1960s, to a succession of decentralizing influences. Large-scale employers have found themselves under pressure to pay wage drift in order to reduce persistent shortages of skilled labor (often resulting from the wage structure negotiated by industrial unions), to increase the loyalty of their employees in periods of higher profitability, or to gain more efficient utilization of their workforces (“rationalization,” “flexibility”). These decentralizing influences were paralleled on the labor side by discontent among more highly paid skilled workers and within the ranks of professions, the salariat, and public-sector employees, and also by left-wing reactions against centralization and bureaucracy in political life as well as in industrial relations.

Moreover, where structures have remained intact, they may have contributed to a diminution of support for collective bargaining. In these countries, where wage levels have not been subject to serious erosion by domestic nonunion competition, unions have been criticized for having made the general level of money wages too responsive to inflationary shocks and too unresponsive to unemployment—hence with having kept real wages too rigid and too high to permit the adoption of sufficiently expansionist monetary or fiscal policies. Unions in Europe have also been charged with using their combined political and bargaining power to reinforce a battery of restraints on the ability of employers to dismiss workers: this has

allegedly had the perverse effect of making firms reluctant to hire new workers, inducing them instead to overinvest in labor-saving equipment and thereby contributing to "structural" unemployment (including high rates of long-term unemployment).

This charge of employment rigidity has been countered by the allegation that job security (for those employed) has been conducive to higher rates of productivity growth, which have enabled these European countries to compete satisfactorily with weakly organized economies. The charge of real wage rigidity has also been called into question. Moreover, while strong centralized bargaining structures permit greater union impact on wage levels, they, together with the political attributes of Case 1 countries, have been conducive to the adoption and effectiveness of policies of direct wage restraint. (Indeed, the latter could theoretically make wages more responsive to downswings in demand than would be the case in unorganized labor markets.) And if we are to believe cross-country studies in which the "misery index" is regressed against various indices of "neocorporatism" (always including measures of centralization), these policies have not been ineffective. But economic and political pressures have sharply limited the scope for granting compensatory tax and social welfare measures in "political exchange" for bargaining restraint, while the levels of social welfare already attained have made the higher levels of unemployment and the deflationary policies associated with them less politically unpalatable than had been anticipated—at least for a while. Furthermore, the difficulty encountered in obtaining sufficient restraint has often generated tension between political leaders of labor parties and their powerful supporters in central union federations and big national unions. It has exacerbated differences between unions in more dynamic sectors and those in sectors (especially the public sectors) where jobs are secure, thereby contributing to the decentralizing tendencies referred to above. Wage restraint has, in at least one country (Sweden), provided the unions with a central role in economic policy-making, but at the same time it has exposed the limitations of collective bargaining as a source of continued economic gain and of job security for union members. Hence unionists, even in some of the countries in which their organizations have thus far remained strong, have been looking for new worlds to conquer, lest they lose their importance as social institutions and their appeal to a new generation of workers. In this sense Swedish unionists find themselves in the same boat with

American and British unionists who have been suffering absolute and relative declines in organization.

More, More, More—Sharing?

The most promising way to go would appear to be further along the historic path of industrial democracy. Union-management agreements would feature sharing by workers and their representatives in wider areas of managerial decision-making, profits, and financial equity, while contractually fixed components of compensation would be deemphasized. Profit-sharing has been advocated as an instrument for achieving that elusive goal of noninflationary full employment through cost flexibility; along with “codetermination,” it offers at least as much promise of yielding increased international competitiveness via lower *levels* of unit labor costs in high-income economies. In this country, however, both forms of sharing have been urged as a nonunion alternative, but in the absence of collective bargaining, profit-sharing would be arguably unstable and even subversive of the efficiency objectives of codetermination. There is reason to believe that in good times worker capitalists would object to dilution of their equity if management sought to increase their firm’s workforce (and competing employers would have to bid up conventional wages). And in bad times capitalist workers would object to a reduction in their share incomes, just as nonunion wage slaves have historically regarded wage cuts as breach of implicit contract and often reacted by restricting output and productivity (thereby tending to maintain the level of the “efficiency wage”).

But sharing arrangements might be regarded more hopefully as complements, rather than alternatives, to collective bargaining—and indeed they have been so regarded abroad. Workers might be more willing to take the bad with the good and enter into long-term commitments to the enterprise, which would yield greater flexibility in work assignments as well as in money costs, if what they got in return was jointly determined and protected under explicit bargaining contracts. What they would get in return would be negotiated profit shares and possibly more job security as the competitiveness (including the international competitiveness) of their firms was improved by lower contractual labor costs. The adversary role of unionism would not be extinguished; rather it would underwrite the effectiveness of cooperative arrangements. Employers might therefore find it profitable to adopt more positive attitudes towards unions—even to want collective bargaining in the first place—

provided the unions adopted more positive attitudes towards participatory industrial relations. And the unions would find it advisable to do so, especially if they could recall that on past occasions recognition by management had entailed other major changes in the scope and structure of industrial relations (e.g., more centralized bargaining in Europe and long-term, complex agreements in the U.S.). But, again as in the past, management's decision will ultimately be a function of worker attitudes. A new generation of workers, confronted by major changes in their work environments, must decide whether paternalism is a tolerable substitute for democracy and, therefore, whether unions will be given the opportunity to play a more valuable and viable role in the community's economic life.

II. DISTINGUISHED SPEAKER ADDRESS

Our New Economic Age: Where Does Industrial Relations Fit?

JAMES D. HODGSON

Former Secretary of Labor and U.S. Ambassador to Japan

Let me start this way. As I see it, this country of ours is now engaged in the battle of its economic life. In our lifetimes you and I have seen nothing quite like it. For nearly two decades now, America has consistently underestimated the impact of the surging competitive challenge from overseas. Worse, we continue to do so. The United States has long since lost its leadership in manufacturing and trade. We are rapidly losing it in technology and finance. Our agricultural and extraction industries wallow in an economic mire. Only a catch-all sector we call “service” thrives.

Suddenly we have found ourselves in a changed world, swimming upstream against a strong current, as we plunge into what pundits have come to call “a new geo-economic age.” This change did not hit America alone, of course. It is worldwide. One manifestation is that economic life now thumbs its nose at national boundaries. Suppliers and markets are no longer local—they are global. When quantified, all this adds up to some awesome facts (Kristof, 1986):

- Three trillion dollars in goods now cross political borders each year.
- So do thirty trillion dollars in investment capital.
- The incredible figure is global capital flow—three hundred trillion dollars *daily*.

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So we in American industry now play in a profoundly new economic ballgame. In just a decade and a half the portion of American GNP involved in international trade has zoomed from 10 to 36 percent.¹

All this has had a direct personal effect on you and me and on every citizen we meet on the street. Today the things we Americans listen to, look at, wear, drive, use, eat and drink increasingly come from distant lands. And as wave after wave of imported goods flows in, American industry, plant-by-plant, pulls up stakes and moves out. As consumers, we Americans lead a dazzling good life. But somehow we can no longer hack it as producers.

Now, smack in the midst of this wholesale transformation of the world's economic life, you and I meet here this afternoon in the Mardi Gras city to examine where and how industrial relations fits.² History has provided the stage for this examination. To understand the setting we must first reflect a bit.

Earlier in the 20th century the American industrial world faced some vexing problems. Conflict between labor and capital raged almost untamed. The highly impersonal persona of our new corporate world was having trouble responding to the very personal demands of massive workforces. Meanwhile, dramatic shifts in social values and workplace regulations burst on the scene.

Thus thrice confronted, American enterprise tossed the ball on each of these challenges to our then emerging industrial relations function. Somehow, each time we managed to field the ball rather well. In consequence, our function won a place for itself in an upper echelon box on the organization chart. Quite an achievement.

But hardly had some order been brought to each of these contentious spheres, than from a distant quarter a new spectre arose. Overseas competitors began knocking on our door. They found a door left wide open. It turned out that the American industrial scene had developed a soft underside. Standards in our workplace had slackened. Sludge had crept into "mahogany row." Productivity, quality, and level of effort were not what they had been. Worker demands had outrun efficiency gains. Something had to give. What gave was American competitive capability.

¹See "Trade Is Playing a Fast Growing Role . . ." *Wall Street Journal*, November 30, 1980.

²No corporate organization is known by a greater variety of designations, viz., industrial relations, human resources, human relations, personnel, employee relations, etc. Nomenclature aside, the basic function is the same.

So when this invasion hit our shores we were vulnerable. Massive dislocations soon spread across our industrial landscape, plunging us into an era of smokeless smokestacks. A rust bowl was born.

Now as I pursue this exposition more directly into the territory of industrial relations, some infinitely arguable questions arise:

- Did industrial relations anticipate and help American enterprise prepare for this invasion?
- Have we played a leading role in helping cope with the challenge it presents?

Some of you may be able to give affirmative answers to these questions. Sorrowfully, I cannot. Along with the rest of American industry, it seems our function tended to lag both in recognizing and in responding to the threat. Long after we began experiencing a formidable challenge from abroad, American industry, including industrial relations, continued to pursue priorities peripheral to this imposing onslaught.

As I say, we were not in any sense the only institution to miss this invading boat. Even organized labor, whose concern for the weal of the American worker is explicit, didn't foresee the full impact of what was happening.

Sure, the AFL-CIO routinely would pass protectionist resolutions, but I have in my files a thoughtful, superbly crafted speech made by Lane Kirkland in 1978, setting forth the problems that lay ahead for the American worker in the upcoming ten years (Kirkland, 1978). Nowhere in the 2300 words of that speech was the effect of competition from overseas on our workforce once mentioned!

About here I've got some explaining to do. I must again point out that my thinking on this subject reflects views nurtured during my years in Japan. There my eyes were opened; I was amazed by the attitudes, relationships, and results I saw in that country's workplaces. Gradually I became convinced that there I was witnessing the birth of the industrial economy of the future.

What I saw was this: A nation that lacked other resources had been forced to wager its future on the skillful development and utilization of its human resources. It won that wager and, in winning, produced the most awesome economic thrust ever achieved by any nation in a single generation.

In 1977 when I returned to the U.S., the industrial scene here struck me as curiously complacent. When I said as much at a couple of conferences, I was firmly put down for being a scaremonger. Many of you may feel the same way today.

I know that none of us likes to indulge in oversimplification. Yet, to save time, I am going to indulge in one. Since my return from Japan, I have thought at length about what should have been done here. Vastly oversimplified, my conclusion adds up to this:

It seems to me that the basic industrial relations focus in this country remained much too long on making working conditions more attractive after the competitive incursion from abroad should have prompted a shift to devoting ourselves to workplace productivity improvement.

With that comment I realize I have risked losing many in the audience. Some will take comfort in the thought that I mistake the true scope of industrial relations. "People, not productivity, is our proper sphere," some may say. That view is quite understandable, but, under current circumstances, it is not a particularly useful perception. It does little to address the most basic problem of the American worker today—the threat to his *job* caused by American industry's inability to compete.

Now, for those of you who are still with me, let me trot out the key suggestion I want to make in these remarks. Let me develop it syllogistically:

If the overriding challenge to American industry is to regain its competitive capability (and I think it is), and

If to regain this capability we must make a strong forward leap in the management of our human resources (as I think we must),

Then leadership is urgently needed to assure that this forward leap gets made.

So now comes the key question: Who should provide that leadership? My candidate is—yes—*industrial relations*.

I suggest that within industry our function proceed to undertake a leading role in attacking head-on the most important of today's economic challenges. In terms of the title of these remarks, here is where I believe industrial relations should "fit." Someone must press for transformation of the American workplace to achieve better management of human resources. Industrial relations can and, I think, should lead the way.

I realize, of course, that improved management of human resources will not, by itself, solve this nation's economic deficiencies. Profound changes in public policy and a careful restructuring of government economic agencies must go forward as well. But, as Hewlett-Packard's John Young (1986) says, "Washington cannot legislate us into becoming more competitive." That is a task for industry itself.

So it is that today I urge industrial relations to become a zealous catalytic agent for insisting that American enterprise bring a new attitude and give a new priority to human resource management.

Here it is important to understand that practically every authority who has taken a comparative look at the management of human resources in our two countries has concluded that the Japanese do the job better—better in terms of worker utilization, better also in terms of worker satisfaction. For doubters, I suggest a reading of such academicians as Harvard's Ezra Vogel (1975, 1979) and UCLA's William Ouchi (1981). Then, to get a pundit's perspective, go on to read David Halberstam's *The Reckoning* (1986). There, I believe you will find views confirming those I offer here.

Such basic elements as the value of work and pride in work rank far higher in the Japanese lexicon than on this side of the Pacific. Healthy cooperation between all levels of the workforce—unionized or not—flourishes in Japanese plants. A genuine *two-way* sense of obligation—call it reciprocal loyalty if you wish—exists in Japan between management and the workforce. Within a Japanese enterprise, the top to bottom distance is less organizationally, less in employee communications, and distinctly less in salary levels than it is here.

Now when we stop to think about it, aren't all these disparities to be found right in the heart of the most basic stuff with which our industrial relations function deals? It strikes me that we should not be satisfied until we have moved forcefully to help American industry close the gap. Failure of industrial relations to take a leadership role here could indeed result in our function fading quietly back into the corporate woodwork.

I suppose a question still remains with respect to exactly why, of all functions, industrial relations should be my candidate for grasping the sceptre of leadership in this situation. Let me explain it this way:

First, no other function is stepping forward to do it—not finance, not engineering, not marketing, not even operations. A vacuum awaits to be filled. Further, practically all those who study this circumstance conclude that of all America's many resources, our human resource is the most underutilized.

Another relevant fact needs citing here. Human resource management—Japanese style—has actually proven its effectiveness right here in our own country. Both Professor Tsurumi (1986) of Baruch College and Professor Kujawa (1985) of Miami University have examined the morale and productivity of Japanese-managed plants in this country. Both came up with a fund of evidence showing that the Japanese have achieved superior results in the U.S. with an American workforce.

Sometime I would like to take you all into the Toyota auto plant at Fremont, California. What a change there now from the shabby chaos that prevailed in the same plant with much the same workforce only a few years ago when it operated under old-line American management!

As structures, styles, and priorities in that plant were recast by the Japanese, worker attitudes, product quality, and plant productivity all soared. At Fremont, perhaps the most dramatic change occurred in plant labor relations. The management and the union there joined together to work out bold new relationship concepts. Their conspicuous success is a triumph for all those who champion people-centered policies in industry.

In the past our industrial relations function won its spurs through promoting improved industrial working conditions. To that useful role I am suggesting that we now add another duty—that of improving *utilization* of the American workforce. I believe our function is not only professionally, but also emotionally equipped to assume this role. Scratch beneath the skin of most practitioners and scholars in our fraternity and you will uncover a closet idealist. You will find someone who passionately believes that reliance on the creative effort of those who serve is the best basis for building a strong and ethical industrial society.

At this point in history, industrial relations can best enhance realization of such a society by pressing for more effective utilization of our workforce.

How do we go about doing this? This is not a "how to" speech, but I will offer the following. In my view we could do well to concentrate on improving all ways in which workers and work come together. Shorten the distance between those who plan the objectives and those

who produce the product. Industrial relations should take responsibility not only for the worker's relationship with his company, but for more efficient and satisfying utilization of his services. We should have as our goal not only satisfied workers, but an efficient total-team workforce.

For some practitioners, to do this in full measure may require new skills. Additional familiarity with economic data analysis, labor economics, and operations planning may be needed. So may a wider knowledge of communication and motivation tools. There is no reason why these skills cannot be acquired as the role expands.

Now let's wrap this up. I'll try to boil down all I've said with a one-two-three count-off:

1. American industry sorely needs to regain its lost competitive capability.
2. To do so, it must do a vastly better job of managing its human resources.
3. Industrial relations is the most appropriate function for undertaking leadership in this endeavor.

There you have the essence of my message for this day. There is the "fit" I see for industrial relations in tomorrow's America. Should industrial relations undertake this role, it will serve the greatest single need now faced by a faltering American economy and its threatened workforce. It will fulfill what I have long considered to be its proper destiny. I would hope this organization could provide a stimulus in this direction.

References

- Halberstam, David. *The Reckoning*. New York: William Morrow and Co., 1986.
- Kirkland, Lane. "Work in America: The Decade Ahead." Paper presented at Arden House Conference, May 24, 1978.
- Kristof, Nicholas D. "The Yen Rapidly Comes of Age." *New York Times*, August 31, 1986.
- Kujawa, Duane. "American Workers and Japanese Direct Investment." Council on Foreign Relations paper, May 1985.
- Ouchi, William. *Theory Z*. Reading, MA: Addison Wesley, 1981.
- Tsurumi, Yoshi. "Made in America, Managed by Japan." *New York Times*, November 16, 1986.
- Vogel, Ezra. *Japan as Number One*. Cambridge, MA: Harvard University Press, 1979.
- . *Modern Japanese Organization and Decision Making*. Berkeley: University of California Press, 1975.
- Young, John. "Council on Competitiveness." Opening press statement, Washington, D.C., December 2, 1986.

III. THE NLRB: ANALYSES OF THE BOARD'S IMPACT AND REMEDIAL POLICY

Remedial Policy and Compliance With the NLRA

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Since the mid-1950s, the regulation of labor relations in the United States has been associated with a litigation explosion as the number of unfair labor practice charges filed with the National Labor Relations Board (NLRB) doubled every decade, reaching a peak of more than 44,000 charges filed in 1980. Recent debates over labor relations policy have centered on the consequences of employer noncompliance that is believed to be the source of much of the litigation explosion and on reforms of the National Labor Relations Act (NLRA) that might produce greater compliance. While the proposed reforms now range from structural reforms of the NLRB's procedures to outright deregulation—repeal of the NLRA—failed legislative reform proposals have invariably sought to establish punitive remedies in the Act. This paper explores the likely role of such remedies in the recent litigation explosion and the case for punitive remedies.

The Growth of Unfair Labor Practice Charges

Most of the litigation explosion in labor relations cannot be attributed to a parallel growth in the volume of labor relations activity over which the NLRB has jurisdiction, a factor stressed by Board members. The range of activity subject to regulation has increased somewhat as a result of two factors. The industrial coverage of the

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NLRA has been expanded both by statute and by the Board's assertion of jurisdiction. In addition, inflation tends to expand the scope of the Board's activities because Congress has required the Board to accept cases from organizations whose sales or revenues exceed nominal dollar thresholds that have remained constant since they were set in 1959 (Meltzer and LaLonde, 1980). Nevertheless, these factors appear to account for at most 20–25 percent of the increase in charges since 1969, and it is clear that the increase during this period cannot be predicted from the earlier relationship of charges to either labor relations or economic activity (Flanagan, 1986b). Moreover, since charges rose for every important category of unfair practice and among all parties to labor relations, it seems unlikely that the growth of litigation can be traced to a few key changes in specific rules or doctrines that have been developed under the Act (Flanagar., 1987).

The litigation explosion in labor relations therefore presents the following puzzle: During the period in which unfair labor practice charges have grown, the volume of labor relations activity subject to regulation—largely union representation elections, collective bargaining negotiations, and work stoppages—remained relatively stable. Very little of this puzzle can be explained by the changes in the distribution of labor relations activity by region and industry. Shifts of labor relations activity from regions or industries where the probability of an unfair labor practice charge is high to sectors where it is low accounted for almost none of the growth of charges during the 1970s, for example (Flanagan, 1987, Ch. 3).

In large measure, the key to the puzzle of the litigation explosion under the NLRA should be found in the behavioral responses of the parties to labor relations to the incentives established under the regulatory framework of the Act. This raises the issue of incentives to comply with and enforce compliance with the National Labor Relations Act, including the remedial structure of the Act. Remedies are only one element of a broader set of incentives influencing the strategic choices of labor and management, however. Since the NLRB's remedial philosophy was established long before the litigation explosion, the growth of unfair labor practice charges cannot be a direct result of the Board's remedial options. The growth must reflect changes in the other incentives that form part of the strategic compliance and enforcement calculus under the Act.

An unfair labor practice charge is observed when one party to labor relations adopts behavior that may violate the NLRA and another party chooses to challenge that behavior by filing an unfair labor practice charge. Therefore, both the incentives to adopt potentially illegal labor relations behavior and the incentives to challenge possible noncompliance must be examined to understand the role of strategic behavior in the litigation increase. A strategic employer will choose labor relations activities that minimize expected costs. The incentive to choose behavior that may violate the NLRA rather than clearly legal behavior is that the former is believed to result in lower labor costs (for example, by reducing the likelihood that a bargaining relationship will be established). If the behavior is challenged by the union or a worker, however, the employer incurs both litigation costs and, if the NLRB sustains the unfair labor practice charge, remedial costs. The incentive of a union or worker to file a charge depends on the expected gain from thwarting the employer's behavior weighted by the probability that the NLRB will rule favorably on the charge.

When the interactions between the parties are worked out, it turns out that unfair labor practices are likely to be positively related to factors increasing labor costs (such as the labor cost difference associated with unionism and the size of the worker group to which the difference would apply) or decreasing profitability. However, the effects of incentives controlled by the NLRB on regulatory litigation are ambiguous. For example, higher backpay awards reduce the direct incentive for employers to violate the law (tending to reduce charges), but raise the incentives for unions to file charges when possible noncompliant behavior is observed (Flanagan, 1986a).

The relative importance of the various incentives influencing strategic compliance and enforcement decisions is examined in an analysis of pooled data for nine 1-digit industries over the period 1966-1980. Unfair labor practice charges filed against employers, *ULPE*, are related to the number of representation elections, *ELEC* (as a control for the volume of regulated activity), several incentive variables, and a time trend, *TIME* (to test for the presence of influences on charges in addition to the measures of activity and incentives). The analysis includes some incentive variables that are subject to NLRB control and some that are not. The former variables include real backpay per illegally discharged employee, *RBPAY*, as a measure of remedial policy, and a dummy variable for years when a majority of the NLRB were Democrats, *DEM*, as a measure of the expectations of the parties

to labor relations about the likelihood that the Board would sustain unfair labor practice charges filed against employers. The former variable has been essentially trendless, as nominal backpay awards have tracked changes in money wages over the period. Moreover, *DEM* obviously differs from the observed proportion of pro-labor NLRB rulings, since both employers and unions will adjust their behavior to their expectations of success with the Board. (Empirically, the correlation between the proportion of pro-labor NLRB rulings (Moe, 1985) and *DEM* is not significant.) *DELAY*, the average number of weeks from the filing of a charge until its adjudication, reflects the Board's resources and procedures as well as the volume of filings. This variable is added to the second regression model. These variables are not available at the industry level and, in any event, represent considerations of Board policy that would be the same across all industries.

Incentive variables beyond the direct control of the NLRB include the industry profit rate, *PROFIT*, measured as profits divided by GNP, and the size of election units, *SIZE*, as a measure of the number of employees affected by cost differences attributable to noncompliance.¹ The incentives for employers to adopt noncompliant labor relations behavior in an effort to reduce labor costs should be strongest in industries with low profits. The incentive for employers to choose noncompliance and for suspected noncompliance to be challenged should be greatest in large representation or bargaining units.

The results of a regression analysis of the pooled data are reported in Table I. Several points are notable. Once labor relations activity is controlled for, incentives influencing strategic behavior are an important determinant of unfair labor practice charges. However, the most significant effects are from incentives that are determined outside the sphere of influence of the Board. Although the industry profit rate and unit size each has a significant influence on charges filed against employers, none of the variables representing channels of Board influence—the measure of remedial awards, *RBPAY*, the measure of the Board's doctrinal inclination, *DEM*, or the period of adjudication, *DELAY*—are statistically significant. (In an aggregate time-series analysis of compliance incentives reported elsewhere, the relationship between real backpay awards and the number of unfair labor practice charges filed against employers is also insignificant

¹The union-nonunion wage differentials, as a proxy for the labor cost differential associated with noncompliance, would be preferable for the *PROFIT* variable in this analysis, but data are not available at the industry level over this period.

TABLE 1
 Regression Results: Analysis of Unfair Labor
 Practice Charges Against Employers, 1966-80

Independent Variables	(1)		(2)	
	Coeff.	<i>t</i> -stat.	Coeff.	<i>t</i> -stat.
<i>ELEC</i>	1.88	12.19	1.89	12.20
<i>PROFRATE</i>	-5.59	-1.90	-5.72	-1.93
<i>SIZE</i>	10.86	2.50	10.56	2.42
<i>RBPAY</i>	.14	.19	.16	.23
<i>DEM</i>	339.78	1.62	138.16	.42
<i>TIME</i>	141.43	5.65	113.32	2.63
<i>DELAY</i>	..	..	2.90	.80
Constant	-1625.10	-3.77	-2331.82	2.38
\bar{R}^2	.72		.72	
F-ratio	58.94		50.47	
Sample size	135		135	

Note: See text for definitions of variables and description of sample.

(Flanagan, 1986a.) Nevertheless, a significant time trend remains even after the effects of incentives and activity are accounted for. Expansion over time in the rights accorded workers under the NLRA and/or shifts in the number of strategic employers and unions may account for some of the increase in unfair labor practice charges.

The analysis of compliance incentives has the following implications for the debate over remedies under the NLRA. First, the litigation explosion and whatever consequences it has had for unionization and other outcomes of the labor relations system would have occurred even if punitive remedies had been available under the Act. Second, any simple punitive scheme is unlikely to eliminate objectionable labor relations behavior, because many empirically important compliance and enforcement incentives are beyond the reach of the Board. Third, the practical design of a damage scheme that would eliminate objectionable behavior would be extraordinarily complicated. In order to see this, we must turn to the economic principles of legal remedies.

Deterrence and Labor Relations Policy

It has long been recognized that the optimal fine should be set equal to the costs the violation imposes on victims adjusted upward for the probability that violators will avoid detection and conviction (Becker, 1968). Remedies based on this principle encourage compliance whenever the private gains from violating a law, such as

the NLRA, are less than the losses suffered by workers affected by the violation. Under this remedial scheme, violations of labor relations law would occur only when the private gains to the violator exceed the costs to victims of the activity. The size of the punitive element of any fine would vary with the likelihood of detection. Economic analysis, therefore, stresses that there are two elements to the design of a remedial policy—the damages to victims and the probability of detection—and that the second provides the rationale for punitive damages.

With regard to damages, a compensatory remedy which effectively restores the probabilities of unionization or collective bargaining outcomes to pre-violation levels is consistent with this principle. The difficulty with the current remedial approach under the NLRA is less with the concept—restoration of the status quo in labor relations at the time a violation occurred—than with its implementation. Corrective actions that seek to rectify individual harm suffered by injured workers ignore the external effects of violations on a general effort to pursue concerted activity. That the external effects are difficult to evaluate is unquestionable. Since they rest in part on the effects of unionization on compensation, they are likely to vary in general over time and between industries and regions and, in particular, with the bargaining power of the parties. Nevertheless, the failure to incorporate them in the compensatory remedial approach of the NLRA means that enforcement, which must be initiated by the victim, will be too low. This point apparently motivates many proposals for punitive damages under the NLRA, although it is in fact an argument for implementation of a fully compensatory remedy.

The likelihood that a violation of the NLRA will be detected is high, since the behavior of all parties is easily observable, and there is little private information (in contrast, say, to the relationship between taxpayers and the Internal Revenue Service). With low litigation costs for plaintiffs, charges will be filed only against violations causing compensable damage. Thus, the traditional case for punitive damages is difficult to establish under the NLRA when charges are adjudicated promptly. When lengthy periods of adjudication erode the ability to compensate fully for damages, the likelihood that a charge is filed will decline even when a violation produces damage. The case for punitive damages, therefore, rests on delays in adjudication. With prompt adjudication, only the development of fully compensatory remedies would be at issue.

Despite easy observability, many violations of the Act go unchallenged. A detailed study of about three dozen representation elections found that only 53 percent of employer actions that would have violated NLRB rules for representation elections were challenged by the unions or workers involved (Getman et al., 1976). Either many violations of NLRA rules are so inconsequential to the outcome of labor relations that they are not even challenged by the victims, or violations that have consequences are so poorly remedied under the NLRA that it is not worth incurring even the low costs of filing an unfair labor practice charge. This distinction is crucial to the development of an appropriate remedial policy. If the former is the dominant reason, the availability of punitive damages payable to victims is likely to produce over-enforcement of the law; charges are likely to be brought for activities that do no damage. If the latter is the dominant reason, there will be under-enforcement of the law, as noted earlier. Research on the NLRA provides little guidance on which of these factors is behind the failure to challenge many infractions.

Conclusions

Proposals for punitive damages rest on the failure of the NLRB to adopt a truly compensatory approach to violations of the NLRA because the external effects of actions against individuals are ignored and because lengthy adjudication undermines effective adjudication to the point where some charges are not worth filing. For many violations of the NLRA, however, it is not clear whether the failure to file charges reflects suboptimal remedies or absence of damage. Any simple punitive scheme is unlikely to capture the variation in damage across different bargaining situations. Moreover, punitive remedies are only one element of the total package of incentives influencing compliance and litigation choices under the NLRA. The effects of remedial policies and other incentives controlled by the Board on litigation may be swamped by the effects of factors, such as changes in profit rates or in the labor cost differential associated with unionism, that are beyond the Board's span of influence. A change in remedial policy may influence compliance choices at an important margin, but it will not guarantee a major change in the general level of compliance or regulatory litigation.

References

Becker, Gary S. "The Economics of Crime and Punishment." *Journal of Political Economy* 76 (March/April 1968), pp. 169-217.

- Flanagan, Robert J. "Compliance and Enforcement Decisions Under the National Labor Relations Act." Working paper, Graduate School of Business, Stanford University, November 1986a.
- _____. "NLRA Litigation and Union Representation." *Stanford Law Review* 38 (April 1986b), pp. 963-71.
- _____. *Labor Relations and the Litigation Explosion*. Washington: Brookings Institution, 1987.
- Getman, Julius G., Stephen B. Goldberg, and Jeanne B. Herman. *Union Representation Elections: Law and Reality*. New York: Russell Sage Foundation, 1976.
- Meltzer, Bernard D., and Robert J. LaLonde. "Inflation and the NLRB." *Regulation* (September/October 1980).
- Moe, Terry M. "Control and Feedback in Economic Regulation: The Case of the NLRB." *American Political Science Review* (December 1985), pp. 1094-1116.

The Impact of the Runaway Office on Union Certification Elections in Clerical Units

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"I've worked for Mutual Insurance for the past ten years doing clerical work."

"Are the clerical workers unionized at Mutual Insurance?"

"Oh no. We don't want a union."

"Why not?"

"Job security. When the union won at Blue Shield, the employers moved their jobs. The union couldn't hold on to their jobs. We don't want a union. We prefer to have our jobs."

Conversation with a San Francisco clerical worker, June 1983

In 1972 Office and Professional Employees Union (OPEU) organized 1700 keypunch and data processing employees at Blue Shield Insurance Company, San Francisco. Eleven years later, only 100 jobs were left. The work, which was done on computer terminals, could be easily transferred to the other offices. "Now, wherever there's an organizing drive, the employers use what happened at Blue Shield as a warning to their workers," said a former Blue Shield employee. "They tell them, 'Oh sure, you want to vote for the union. Well, let me tell you what the union did for the employees in San Francisco—lost their jobs.'"¹

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¹ Conversation, 1983.

Labor law places few restrictions on a unionized employer's right to relocate work. Prior to the 1984 National Labor Relations Board (NLRB) decision in *Milwaukee Spring II*, 1984,² the only reasons for which an employer could not relocate work were (1) the cost of labor, (2) to avoid a union organizing attempt, or (3) to rid a company of a union. Under the new ruling, labor costs may justify moving an operation. If the union succeeds in raising workers' wages, the company has a legal excuse for relocating the work.

Companies with organized office workers have taken advantage of the allowances the law makes and have left the union behind. In the course of our research, we encountered 22 cases of runaway union offices in the San Francisco Bay area between 1973 and 1983. This list is by no means exhaustive.

One consequence of the ease with which office jobs can be moved may be a heightened sense of job insecurity among office workers. Job security—once a compelling reason to vote for the union—may ironically have become a potent management threat, helping to prevent unionization. The potential importance of this consideration is suggested by two previous studies. Getman, Goldberg, and Herman (1976) collected and analyzed data on 31 union certification elections, involving a variety of types of workers, which took place in the Midwest in 1972 and 1973. In one part of their study they asked workers who had voted in a recent certification election to recall issues from the company campaign. Thirty-five percent of the workers remembered the argument that they might lose their jobs if a union was formed as a campaign issue, making it the third most frequently recalled issue. Although only 3 percent of those who voted against union certification cited the possibility of job loss as the reason for their choice, another study of the same data suggests that many more workers may have been influenced by the possibility. Farber and Saks (1980) develop a probit model of workers' voting decisions. One factor they analyze is workers' perception of how hard it would be for them to find another job as good as their current job. They found that workers who felt that it would be difficult to find as good a job and who felt that employment security was a problem on their current job were slightly more likely to vote for the union. However, the average worker who did not feel that employment security was a problem, but thought that it would be difficult to find another job as good as his/her current job was about 25 percent less likely to vote for the union.

² 268 NLRB No. 87, 115 LRRM 1065 (1984).

While these studies suggest that the fear of job loss is a potent argument against unionization in many circumstances, there are no studies which have directly analyzed the impact of the possibility of work relocation on how workers vote. If the fear of relocation is a significant concern, then clerical workers with mobile jobs should vote against unionization more often than clerical workers with jobs that cannot be moved, all other things held equal. Here we consider the hypothesis that the ease with which jobs may be moved (job mobility) has a significantly negative impact on the percent of workers voting union in certification elections. To do so, the voting behavior of clerical workers in 101 union certification elections (UCEs) was analyzed. We find that workers in the most mobile offices are 7 to 30 percent less likely to vote union than those in the least mobile jobs, depending on the measure of mobility used and the specification used to estimate the effect. These results may help explain why union organizers believe that clerical organizing has been most successful in not-for-profit organizations and the public sector, and less successful in finance, insurance, and real estate companies.³ To the extent that jobs in not-for-profit organizations and the public sector are largely immobile, they will be easier to organize.

Data

In order to determine the impact of office mobility, results from 101 UCEs involving only office workers were gathered. The elections were held in the Oakland and San Francisco regional NLRB districts between 1971 and 1983. Eighty-nine of these UCEs were randomly selected from the "closed case" files in the Oakland regional office of the NLRB, and 12 from the same files at the San Francisco NLRB regional office. The selection process involved searching 12,000 index cards of closed cases and singling out only those cases where an election in a clerical unit had been held. From all the index cards a random sample of 101 clerical elections was chosen. Clerical units were defined to be those including one or more of the following jobs: office-clericals, data processors, switchboard operators, secretaries, PBX operators, plant clericals, warehouse clericals, receptionists, reservationists, cashiers, desk clerks, customer service representatives, key entry operators, dispatchers, and telephone operators.

There were 4,652 clerical workers involved in the 101 elections. The union won 61 percent of the elections and lost the remaining 39 percent. Fifty-seven percent of all workers voted for the union.

³ Based on conversations with 60 union organizers in 1983.

Although the percentage of union victories in the sample is substantially greater than the national or the California average for union wins in any year for which data are available (NLRB Annual Reports, 1971-1981), there is no reason to expect that the percentage of union wins in clerical units should be the same as for other types of units. For example, win rates differ greatly by industry. Also, because of the difficulty in maintaining clerical units, unions may only take on those cases which they are more likely to win.

In order to analyze the effect of mobility as a determinant of election results, information on other variables known to influence outcomes of union elections was obtained so that their effects could be controlled for. Some of the background information on each election was gathered from the NLRB election files: the election date, the company name and location, the industry, the union name and local number, and the size and job description of the office unit. To obtain the rest of the data, the union organizer or local president involved in each election was interviewed and asked: the number of other employees at each location, whether these employees were organized, the number of other organized and unorganized company locations, the degree of management resistance during the organizing campaign,⁴ how easy it would be for the company to relocate, a detailed description of the office work, and the gender and ethnicity of the unit.

Measuring Mobility

Measuring the mobility of clerical jobs poses a difficult problem. Little research has been done on what types of firms are most likely to relocate. Therefore, in order to distinguish between the mobile jobs and immobile jobs in our sample, methods to measure the mobility of office work had to be developed. Three different methods were used. Each has advantages and drawbacks. The evidence from the three

⁴ The union representative was asked to describe the company antiunion campaign. From their descriptions, campaigns that included management consultants, firings, illegal threats, unfair labor practices, or at least a five-month delay were defined as "intense." Campaigns where the employer conducted an antiunion campaign without the assistance of an employee relations consulting or law firm were considered "moderate." "Low key" campaigns were ones that involved little or no active management resistance. In the 17 cases where the union representative did not know the information about the campaign, the decision about the degree of management resistance was based on information from the NLRB files. For an "intense" rating, the election had to have at least two of the following: management labor lawyers, charges of unfair labor practices, or substantial delays. If the election had only one of the above, it was rated as "moderate." The "low key" campaigns were ones which had none of the above conditions *and* had the election within three months after the petition was filed.

measures is complimentary and, together, much stronger than using any one by itself.

The first method used to determine the mobility of election units was to survey the organizers involved in each election. Each described the type of work the clericals performed and rated the work as mobile, somewhat mobile, or immobile. Since the organizers have detailed information about the company and its ability to relocate jobs, and since they knew which offices they had previously organized had moved and which had not, they should be qualified to make an informed assessment.

The major disadvantage of this method is that the organizers are not unbiased judges. Organizers know the outcome of the elections and whether the work was relocated. They might be expected to exaggerate the mobility in elections they lost to justify the outcome, thus causing a spurious correlation between mobility and election losses. Also, a few of the organizers were unfamiliar with office work and may not be expert judges of mobility.

The second method used for defining the clerical units as mobile or not involved employing an expert on firm's locational choices. Our expert was Barbara Baran, a doctoral candidate in the University of California, Berkeley's Department of City and Regional Planning, who is researching the question of how firms decide where to locate office jobs. The organizers mentioned above were also asked to list the criteria they thought important in determining mobility. Ms. Baran was given information on 22 characteristics, which were the ones most frequently mentioned.⁵

She rated the clerical units as mobile, somewhat mobile, or immobile, based on that information. Besides the obvious advantage of using an expert on office mobility to decide each firm's potential to relocate, the other advantage of this method is that Ms. Baran did not know the results of the union elections or whether any firms moved. However, this measure has a drawback in that it was based on less information than the organizers'.

For our third measure we constructed an index of mobility. The index incorporated 15 of the 22 mobility determinants used by the expert judge's analysis. Based on discussions with organizers and other experts familiar with office work and runaway jobs, the factors were assigned weights according to their relative importance in determining

⁵ A list of 22 characteristics is available in an expanded version of this paper, NBER Working Paper No. 1693. It is available from the NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138, at a price of \$2.00.

the mobility of office work. Positive points were awarded to those characteristics that were associated with immobility and negative points were given for those that are associated with mobility.⁶

The advantages of the index of mobility are that it is systematic and somewhat objective.⁷ Major disadvantages of this measure are that the system uses only a limited amount of information and has no flexibility to deal with unique cases.

Validating the Mobility Measures

Do office workers know and care about mobility? If the theory is correct that the fear of relocation makes office workers less likely to vote for unionization, then office workers must be aware of the mobility of their work. In order to document this awareness, a questionnaire was developed to test whether relocation is more of a concern among office workers with mobile jobs than among workers with immobile jobs.

The questionnaire was given to clerical workers at five locations where UCEs had recently been held. The five elections were the only recent ones in the Bay Area where we were able to gain access to the workers. The questionnaire asked the office workers to rate the importance of ten factors in their decisions to vote for or against the union. They could rate the factors as very important (1 point), somewhat important (2 points), not too important (3 points) and not at all important (4 points). The only response on the questionnaire of interest was the rating given to the item "the concern that your employer may have your job done at a different location, if the union won."

Two of the five were judged to be mobile by all three criteria. The average response in these two elections was 3.5 in one and 2.5 in the other. For the three judged to be immobile the averages were 3.86, 3.75, and 3.62. The ratings that the five groups of workers gave to the importance of the fear of job relocation were consistent with the mobility criteria; the clericals with the mobile jobs rated the threat as more important. The average rating for the mobile workers was 3.32 and the average rating for immobile workers was 3.71 (with one meaning very important and four least important). The difference of

⁶ A detailed description of the index can be found in an expanded version of this paper. See note 5.

⁷ We cannot claim that the index is completely objective since we were familiar with the results and characteristics of the elections when we constructed it. While no conscious effort was made to modify the index on the basis of the election results, the index cannot be considered experimentally blind to the outcomes.

these means is statistically significant at the .05 level using a one-tail *t*-test.

These results indicate that workers in mobile jobs do perceive and care about the possibility of job mobility. Although on average workers rated this factor somewhere between not too important and not at all important, company voters in the two mobile units viewed the issue as being "not too important" to "somewhat important" on average.⁸ Some saw it as "very important." Further, workers in the two mobile firms viewed the issue as more important, on average, than those in the units judged to be immobile.

Finally, the fact that in each election judged to be immobile the union won, and in every case union voters saw mobility as a less important issue than those who voted against certification, suggests the importance of job mobility in determining the outcome of certification elections. The next section considers this question in more detail.

Analysis of the Voting Data

Table 1 presents the one-way analysis of variances for the percent of office workers voting for the union, broken down into mobile and

TABLE 1
One-Way Analysis of Variance of Percent of Workers Voting Union

Mobility Measure	% Voting Union	Difference between Mobile and Not Mobile	Standard Error for Difference Between Category and Not Mobile	F-Test of Joint Significance
Organizer's Judgment:				
Not mobile	65.4%			Significant at .05 level
Somewhat mobile	59.7%	- 5.7%	6.4%	
Mobile	49.5%	-15.9% ^{oo}	6.4%	
Expert's Judgment:				
Not mobile	62.6%			Significant at .15 level
Somewhat mobile	54.1%	- 8.5%	8.2%	
Mobile	45.9%	-16.7% ^o	9.3%	
Mobility Index				
Not mobile	63.3%			Significant at .05 level
Mobile	51.2%	-12.2% ^o	5.9%	

Note: ^o Significant at .05 level, one-tail test. ^{oo} Significant at .01 level, one-tail test.

immobile groups using each of the three mobility measures. In all cases, the mobility effect is in the anticipated direction—lowering the

⁸ The average score for all company voters was 2.90 compared to an average of 3.74 for those who voted union.

TABLE 2
Control Variables Included in First Analysis

Composition of Unit:

Percent Women
 Percent Black
 Percent Asian
 Percent Chicano
 Dummy = 1 for no data on race

Year election was held
 Number of workers employed at this site
 Number of workers in unit
 Percent of work force at site doing clerical work

Union Dummies:

Teamsters
 SEIU
 OPEU
 ILWU
 CWA
 (left out category is other)

Industry Dummies:

Cannery
 Manufacturing
 Trucking and Warehousing
 Communications
 Wholesale and Retail
 Business Services
 Health Care
 Utility
 (left out category is FIRE)

Dummy = 1 if business has no other locations.
 Dummy = 1 if business has more than 10 other locations.
 Dummy = 1 if some other workers at site are organized.
 Dummy = 1 if some work is computer work.
 Dummy = 1 if clericals do work for other offices.
 Dummy = 1 if clericals do general office work.
 Dummy = 1 if clericals do inventory work.
 Dummy = 1 if clericals deal with customers in person.
 Dummy = 1 if clericals do only computer work.
 Dummy = 1 if clericals do phone work.
 Dummy = 1 if clericals operate a switchboard.
 Dummy = 1 if firm is family owned.

probability of voting union. The magnitudes are roughly the same for the three measures, and workers in the most mobile units are statistically significantly less likely to vote for the union. The F-tests reject the hypothesis at the .05 level for both the organizers and the mobility index ratings. The expert judge's rating rejects the hypothesis at the 0.15 level.

While these results support the hypothesis that more mobile clerical units are more likely to vote against unionization, they are not

conclusive. The one-way analysis of variance provides no controls for other factors which may be influencing election outcomes. Many factors which determine mobility may have a direct effect on the election outcomes as well. To account for these effects we used a statistical procedure with multiple control variables. The procedure allows for the fact that the percent voting union in an election is a limited dependent variable. It also allows for possible heteroskedasticity in the error term in the equation predicting the proportion voting union, which is caused by the variation in the number of people taking part in each election. The procedure is a modified version of Haldane's minimum χ^2 logit proposed by Dickens (1985).

Initially, all the control variables listed in Table 2 were entered into the analysis and those with $t < 1$ were removed (except for the mobility variables). Overall, the coefficient values for mobility either did not change or become smaller as variables were removed. However, the standard errors became smaller as the degrees of freedom increased.⁹

Table 3 shows the results for the minimum χ^2 logit analysis. The first column presents the coefficients of the mobility dummy variables. The second column presents the approximate impact of mobility on the proportion of workers voting for certification, and the third column presents the results of the F-tests for joint significance of each set of mobility measures.

The first set of results does not include controls for management resistance. In this case the signs and relative sizes of the coefficients are all as would be expected except for the units organizers rated as somewhat mobile. There the coefficient is slightly positive but is far from being statistically significant. For both the expert judge's ratings and the mobility index, the mobile units are statistically significantly less likely to vote union and the impact on the probability of voting union is nearly the same as for the one-way analysis of variance.

Previous work on the determinants of voting in union certification elections suggests the importance of management resistance (Freeman and Medoff, 1984, pp. 230-39). It is possible that mobility is not responsible for reducing the probability of workers' voting union. Rather, management resistance might be stronger in the mobile firms. The problem with controlling for management resistance is that it is endogenous; in the companies where, for reasons we do not observe,

⁹ A list of control variables in each final specification can be found in our expanded paper. See note 5.

TABLE 3
Logit Transformation of Fraction Voting Union
Regressed on Mobility Measures and Controls

Mobility Measures:	Coefficient and Standard Error	dP/dX for Average Unit ^a	Joint Significance
<i>Management Resistance Not Included:</i>			
Organizer's Judgment:			
Somewhat Mobile	.029 (.254)	.007	Fail to reject
Mobile	-.324 (.276)	-.078	
Expert's Judgment:			
Somewhat Mobile	-.324 (.375)	-.078	Fail to reject
Mobile	-.712* (.331)	-.171	
Mobility Index:			
Mobile	-.525* (.261)	-.126	Significant at .05 level
<i>Including Management Resistance:</i>			
Organizer's Judgment:			
Somewhat Mobile	.043 (.230)	-.010	Fail to reject
Mobile	-.306 (.259)	-.073	
Expert's Judgment:			
Somewhat Mobile	-.224 (.352)	-.054	Fail to reject
Mobile	-.509 (.572)	-.122	
Mobility Index:			
Mobile	-.684** (.214)	-.164	Significant at .01 level
<i>Only Elections with Light Management Resistance^b</i>			
Organizer's Judgment:			
Somewhat Mobile	-.096 (.329)	-.023	Fail to reject
Mobile	-.675* (.380)	-.162	
Expert's Judgment:			
Somewhat Mobile	-1.30** (.480)	-.312	Significant at .05 level
Mobile	-.72 (.677)	-.174	
Mobility Index:			
Mobile	-1.26** (.357)	-.302	Significant at .01 level

Note: * Significant at .05 level, one-tail test. ** Significant at .01 level, one-tail test.

^a This is an approximation to the expected change in the proportion of workers voting union in an average unit. It is constructed by multiplying the coefficient times the average proportion voting union times one minus that proportion.

^b Specifications are the same as those above except that the management resistance dummies were interacted with the mobility measure. Only the coefficients for mobility when resistance was light are reported.

the organizing drive is weak, management's antiunion campaign does not need to be as intense to win. Strong union organizing drives may give rise to intense management efforts or no effort at all. Therefore, the results including management resistance variables should be interpreted with caution.

With management resistance included, the coefficients all have the anticipated signs and relative magnitudes. In addition, their sizes do not change much. However, only the mobility index measure is still statistically significant. This may mean that the management resistance and mobility effects are substitutes for each other; when one effect is present, the other does not matter. Therefore the impact of mobility on elections should be examined where management resistance was negligible. The third section of Table 3 presents these results. Here, the coefficients all have the anticipated signs; three out of five are statistically significant. The only peculiar result is that the effect of "somewhat mobile" is greater than "mobile" in the expert judge's result. However, the hypothesis that the effect of "mobile" is greater than "somewhat mobile" cannot be rejected. In all three cases the impact of mobility is large and, for the most mobile units, statistically significant.

The pattern of results is strongly consistent with the hypothesis that the mobility of office work influences voting in union certification elections. The effect was to reduce the percent voting for certification by 7.5-30 percent, with most estimates around 15 percent. In this sample of clerical elections, as in most UCEs, the elections are close so that a 1 percent decrease in the probability of voting union translates into roughly a 2 percent drop in the probability of a union victory. Thus, mobile office units appear to be 15-60 percent less likely to certify a union.

Conclusion

We have examined the role of job mobility in influencing the outcome of union certification elections. To determine whether workers in more mobile jobs perceived mobility to be an important problem, we constructed and distributed a questionnaire to workers who took part in recent certification elections. Workers in the two units judged to be mobile, on average, felt that the fear of job loss was a more significant factor in their voting decision than did the workers in the three immobile units. Also, those who voted against certification were more likely to report that mobility was a significant factor in their decision.

To determine the impact of mobility on voting, data were collected on 101 clerical unit certification elections which took place in Central and Northern California between 1971 and 1983. Three measures of office mobility were developed. The analysis of these data suggests that clerical workers in potentially mobile jobs are considerably less likely to vote union than are those in immobile jobs.

These results can help explain why union organizers believe clerical organizing has been more successful in the public sector and in not-for-profit firms than in large private-sector firms. To the extent that clerical units in private-sector firms are easier to move, they will be harder to organize. Additionally, if other types of workers are similarly fearful that unionization will result in job loss and if the claims by some authors that job relocation has been taking place more often in recent years are true (Bluestone and Harrison, 1982), these results may also help explain the long-run decline in union success in organizing new workers.

Finally, to the extent that it is the goal of U.S. labor law to protect workers from employer coercion in choosing whether or not to be represented by a union, the law is failing—at least for clerical workers. Our evidence strongly suggests that many workers are voting against unions not because they would prefer no representation, but because they fear that if they choose representation they will lose their jobs.

References

- Bluestone, Barry, and Bennett Harrison. *The De-Industrialization of America: Plant Closings, Community Abandonment and the Dismantling of Basic Industry*. New York: Basic Books, 1982.
- Dickens, William T. "Error Components in Grouped Data: Why It's Never Worth Weighting." National Bureau of Economic Research, Technical Working Paper 43, April 1985.
- Farber, Henry S., and Daniel H. Saks. "Why Workers Want Unions: The Role of Relative Wages and Job Characteristics." *Journal of Political Economy* 88 (April 1980), pp. 346-69.
- Freeman, Richard B., and James L. Medoff. *What Do Unions Do?* New York: Basic Books, 1984.
- Getman, Julius G., Stephen B. Goldberg, and Jeanne B. Herman. *Union Representation Elections: Law and Reality*. New York: Russell Sage Foundation, 1976.
- National Labor Relations Board. *Annual Reports of the National Labor Relations Board*. Washington: U.S. Government Printing Office, 1971-1981.

Union Organizing Drive Outcomes From NLRB Elections During a Period of Economic Concessions*

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What happens to workers and companies that face a union organizing drive when the labor market is weak and union density and economic power is declining? How do wages, benefits, and personnel practices change when a union wins the election and gains a contract? Are estimates of the union wage premium from standard cross-section analyses, which averaged 20–25 percent in the 1980s (Lewis, 1983; Freeman and Medoff, 1984), a reasonable indicator of the likely impact of unions on the wages of newly organized firms? In a period of overall union weakness, does new union organization bring with it the “voice” benefits of unionism?

Standard research on trade unionism in the U.S. provides no answer to these questions. Union wage studies invariably focus on wage differences among workers rather than among firms, and rarely distinguish between workers who become union by moving to an already organized workplace and workers who become union through new organization. To determine the effects of new organization on workers and firms requires data of a type not currently available from the usual data sets. Accordingly, in 1986 we concluded a special survey of some 346 firms: 200 private-sector firms with over 20 employees in the bargaining unit who in the 1980s experienced organizing drives that led to National Labor Relations Board supervised elections in the New England and Kansas-Missouri NLRB districts and 146 additional

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“control” firms who did not experience such drives during the 1980s and were nonunion. To minimize any differences between the two sets, we selected control firms on the basis of information provided by the firms facing organizing drives regarding their closest competitor in the local area.¹ First, we asked the firms facing organizing drives about wage levels and personnel practices currently, during, and several years prior to the organizing drive, and asked their “pair” firms questions regarding wages and practices over the same period. Second, by analyzing firms facing an organizing drive about their situation before/after the drive we change the research question from the usual “how much do union wages or work conditions differ from nonunion wages or work conditions?” to the question more relevant to organizing drives of “what does new organization do to the wages or work conditions of firms?” By using a longitudinal rather than cross-sectional design, we focus on marginal rather than average wage effects.

Our research also differs from standard studies because we have sought to use a “semi-experimental” design, with paired comparisons to control for “unobserved differences” among the firms.² To the extent that firms have more accurate information about close competitors than does the researcher, a paired comparison design will mimic more closely a true experiment than regression analyses with CPS or other data obtained for very different purposes.

From our analysis we have reached two basic conclusions. First, we have found that union wage gains among newly organized firms are an order of magnitude lower than is indicated by cross-sectional union wage studies. Second, we have found that the newly unionized firms made significant changes in personnel practices in ways consistent with the union “voice” model.

Wage Effects

Table 1 presents the basic evidence supporting our first claim. Column 1 records the number of enterprises in our sample, divided into four distinct groups: firms that faced a drive and lost the election

¹ The specific question asked to identify pairs was: What companies are your closest nonunion competitor(s) in this part of the country? We called more than 250 companies to find pairs and asked the same questions regarding wage changes and personnel practices of the companies that did not have organizing drives.

² To obtain our sample of 346, we questioned approximately 490 firms. Of the companies with NLRB drives, 8.4 percent went out of business during the period covered; 40 firms refused to talk to us. There was no difference in the rate of going out of business for firms that faced an organizing drive in comparison to those that did not.

TABLE 1
 Mean of Wages and Benefits and Changes in Wages
 and Benefits by Organizing Category

(1)	Number of Workers in Establish- ments (2)	Current Wages and Benefits (1977 dollars) (3)	Changes in Real Wages and Benefits One Year Be- fore Election to Current (1977 dollars) (4)	Mean Real Change in log Wages (5)	Real Difference in Change of log Wages from its Pair (6)
Union wins election, gains a contract N = 50	19,250	\$5.83 (2.37)	3.3%	.03	-.002
Union wins election, loses contract N = 28	4,340	\$5.48 (2.09)	-1.0%	-.01	.015
Union loses election N = 124	40,548	\$5.82 (1.66)	2.4%	.01	.020
No organizing drive N = 146	58,254	\$5.39 (1.68)	-1.1%	-.01	

Note: Standard deviations are in parentheses.

to the union and signed a contract; firms that lost the election but did not sign a contract; firms that defeated the union in the election; and the control group that did not face an election. Of the firms who faced organizing drives leading to a representation election, 39 percent lost the election to the union; this compares to an average for the Boston and Kansas City NLRB districts for 1983, the midpoint of our election sample, of 40 percent for elections with over 20 employees. Sixty-four percent of the firms who lost to the union in the election ended up signing collective contracts; this compares with the 63 percent reported by McDonald (1983) for the period 1979-1982. Column 2 records the number of workers in the establishments in the firms in the various categories.

Column 3 presents the mean and standard deviation of the mean of wages and fringe benefits for the four groups, with the wages deflated by the average hourly earnings paid private-industry workers in the various groups of firms in 1977 dollars to allow for differences in the

timing of elections, which would of course affect wage levels. The initial wages are of roughly the same magnitude in the various groupings, suggesting that on this variable at least the firms were comparable. Column 4 presents the percent changes in real wages and benefits from one year prior to the election to the current period.

Column 5 records related measures of the changes in wages needed to assess the effect of new organization on wages: the log of the mean change in wages for the establishments, which is more consistent with the standard log-earnings equation format. Both statistics tell a similar story about the effect of new unionization on wages in this period, with firms that signed contracts having somewhat higher wage changes relative to firms in the control group as well as firms that refused to sign contracts after losing the NLRB election. Further, workers in firms that defeated the union in an organizing drive had wage increases above those cases where the workers voted for the union and did not receive a contract and relative to the control group. It appears that the threat effect of having an organizing drive leading to an NLRB election had some positive real wage effects.

Column 6 probes this result by recording the mean difference in the logarithm of the wages and benefits of firms in each category from its pair. To see whether or not the pairing technique provides a useful way of dealing with differences among establishments, we calculated the variance in the log of wages among the pairs. If the pairing technique identifies close competitors accurately, the estimated variance of wages for the firms in total because of the common component of the variation between the pairs will be removed by differencing:

$$\text{var}(w_i - w_j) = \text{var } w_i + \text{var } w_j - 2\text{cov } w_i w_j, \text{ so that if } \text{cov} > 0$$

$$\text{var}(w_i - w_j) < \text{var } w_i + \text{var } w_j$$

In our sample the relevant variances were: $\text{var } w_i = .022$; $\text{var } w_j = .019$; $\text{var}(w_i - w_j) = .023$. Hence the technique did help us eliminate unobserved differences among firms. The results for the paired comparisons show that wage changes relative to their comparison group had essentially no wage and benefit effect. Further, that in this period, at least, firms that signed contracts did not have greater wage increases than firms in the control group using this approach. However, firms that defeated unions did have a modest 2 percent wage increase.

Our overall results will undoubtedly come as a surprise to those who take the standard union wage analyses at face value, as indicating the effect of unionism on wage differences. What then explains the striking divergence between the changes in wages we found and those summarized in Lewis or Freeman and Medoff?

One reason undoubtedly relates to the ability of unions to win wage gains with first contracts. Our findings on the small impact of unionism are, we note, consistent with the findings of the impact of teacher unionism on wages in newly organized districts, which have also found only slight wage effects (see Freeman, 1986). In first contracts unions are often more concerned with union security clauses and other contractual features designed to guarantee organizational survival than in large wage increases. A second factor explaining our finding must be the period covered—one in which *Current Wage Developments* shows unions negotiating smaller increases than are obtained by nonunion workers in an effort to reduce the union premium to more sustainable levels after a decade of extensive increases. It is likely that in a period of concession bargaining new unions were less able to impress their wage demands on management than in other periods of time.

Modest initial union wage effects and the uniqueness of the period aside, however, we believe that our results cast some doubt on the extent to which the standard union wage premium analyses can be used to predict the effects of new organization on firms and workers. While it is possible, even likely, that as time proceeds and the labor market improves, wages in the organized firms in our sample will grow relative to nonorganized firms, we doubt that the wages will rise by 20–25 log points above wages in nonunion firms. One reason for this doubt is that the environment in which unions now operate differs greatly from that which produced the cross-sectional differences analyzed in the standard methodology. Factors like the internationalization of the U.S. economy, lower union density, greater competition from nonunion firms, and deregulation of product markets are likely to reduce the ability of unions to raise wages by as large margins as in the past.

Effects on Personnel Practices

Does our finding that newly organized firms did not experience much greater increases in compensation than other firms in the 1980s imply that the successful organizing drives did nothing to improve the position of workers? Not at all. Our questions regarding the personnel practices at the various establishments show a completely different

TABLE 2
 Contrasts of Personnel Practices in the Face of an Organizing Drive

Companies with Drives	Union Wins Election, Gains Contract N = 50		Company Matched Differences B/A	Union Wins Drive, but Does Not Obtain Contract N = 28		Company Matched Differences B/A	Union Loses Election N = 124		Company Matched Differences B/A	Control Group N = 146	
	Bef.	Aft.		Bef.	Aft.		Bef.	Aft.		Bef.	Aft.
Grievance procedure	.38	.86	.37	.46	.64	-.06	.49	.66	.11	.44	.52
Written seniority	.42	.70	.23	.39	.71	.12	.53	.63	.08	.33	.39
Written posting promotion	.40	.66	.28	.61	.75	-.18	.67	.76	.03	.49	.58
Profit-sharing	.36	.24	-.24	.57	.68	.06	.55	.63	.02	.47	.55

Note: B/A indicates matched differences before and after an organizing drive.

pattern than that for wages, with significant positive gains in the aspects of organization associated with union voice (see Table 2). In establishments where the union won an election and gained a contract, the proportion of establishments with grievances rose by nearly 50 percentage points, compared to more modest increases in the other groups; seniority in layoffs rose from 42 percent of establishments to 70 percent compared to virtually no change in the control group; the posting of job openings also increased markedly with a union contract compared to the other cases. Finally, consistent with cross-section studies of the relation between unionism and methods of pay, profit-sharing was significantly reduced in the presence of a contract.

Regression analyses relating changes in the various work practices given in the table to the unionization of the firm and controls (not reported here) show that in no case are these changes due to some other factor differentiating the establishments. Rather, they appear to be genuine effects of new unionization. Further, our matched company differences from its pair shows generally consistent results for the union contracts effects. That is, having a contract seems to bring significant voice effects beyond just having an organizing drive or not.

Finally, in addition to the practices recorded in Table 2, we examined what unionizing drives did to such other features of the workplace as time off with pay and found no significant differences.

Interpretation

The fact that new union organizations were able to win the "voice" features of unionism for their members, but were unable to make "monopoly" wage gains in a period of overall union weakness, tells us something about the intrinsic nature of the union institution. While unions seek to raise wages for members, redistributing income from profits, or from consumers, to members, even when they cannot do so, they are able to bring significant changes in work practices, creating industrial jurisprudence and the rule of law rather than unilateral employer will (or whim) at the workplace, which benefit workers and have the potential for improving the overall productivity level.

References

- Freeman, Richard B. "Unionism Comes to the Public Sector." *Journal of Economic Literature* 24 (March 1986), pp. 41-134.
- Freeman, Richard B., and James L. Medoff. *What Do Unions Do?* New York: Basic Books, 1984.
- Lewis, H. G. "Union Relative Wage Effects: A Survey of Macro Estimates." *Journal of Labor Economics* 1 (January 1983), pp. 1-28.
- McDonald, Charles. "Memorandum to the National Organizing Committee, AFL-CIO," 1983.

DISCUSSION

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Each of these papers is an excellent example of contemporary methods in the study of union formation. Contemporary empiricism may be distinguished from earlier empirical studies (my own included) by the more rigorous way it conceptualizes the process of unionization and by its creativity in developing data and models.

Freeman and Kleiner bring quasi-experimental design to the study of union formation and come up with several interesting findings. The findings that newly organized enterprises exhibit small gains for unionized workers and that unions favor so-called “recognition contracts” are important—and were long suspected. However, we still must determine, as the authors suggest, whether the results are the product of the concessionary eighties, or this has always been the case (i.e., that *ceteris paribus* wage differences vary at different stages of the relationship).

In pursuing these questions, they should remember that even the best paired-comparison design must take into account the selectivity of the sample and particularly the self-selection represented by the elections studied. Quasi-experimental designs are helpful when random assignments to experimental groups are not feasible. However, prior research suggests that organizing is not a random phenomenon. Such nonrandomness could help to explain some of the results.

For example, while “voice” benefits are more likely to be achieved in situations in which the union wins, there are rather sizable increases in voice benefits among firms in which the union loses, thereby suggesting that threat effects should be factored into the analysis.

Freiberg and Dickens’s paper uses an interesting combination of methods to get at worker anxiety of job loss during the organizing process. I know the work is preliminary and experimental, but future work should seek to place these anxieties in perspective by dealing

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with the strength of this fear relative to others and its strength relative to anticipated gains from unionizing.

Also, the authors should augment their analysis by including a measure of labor mobility to counterbalance the various measures of capital mobility. For example, the unemployment rate adjusted for compositional effects is an accepted way of denoting both worker fears of unemployment as well as the relative opportunities for finding work should the plant close.

The use of organizers as expert judges is particularly novel. I agree that this is probably a tainted measure of capital's potential mobility. Still, I am rather curious to know how organizers respond to this issue, particularly when they know in advance the firm is likely to "run away" or shed jobs.

Flanagan's paper is an extension of the work he has been doing on the rising caseload of the National Labor Relations Board. He has done a good job clarifying the theory of deterrence in NLRB litigation. Unfortunately, like other empirical studies of NLRB activity, his paper suffers from a few problems that are for the most part beyond his control.

First, published data on the NLRB have been pushed about as far as they can be. For example, the dependent variable in this and similar studies tends to be the number of charges filed or closed in a particular period, industry, or locality. Such records derive from statutorily prescribed categories and fail to distinguish among many possible behavioral circumstances which inspired the charge to begin with. A case involving one illegally discharged employee is counted equally with a bad-faith bargaining allegation affecting 1000 employees.

Second, a model of deterrence and rational decision-making may be inappropriate in trying to explain the behavior of individuals. Such a model assumes institutions as actors, with ample resources both to push forward their cases as well as to monitor the prior performance of the regulator. However, we know that a large share of the Board's caseload is created when individuals in existing bargaining relationships file charges alleging a breach in the duty to represent them fairly and equally. This third area of industrial relations activity—that is intra-organizational disputes—contrary to Flanagan's findings has been growing and should continue to grow.

Third, the empirical work on the Board (including Flanagan's) stops in 1980, probably because that is when the data end. Since 1980, however, the Board has done more than it has historically to influence compliance choices. Unionists, who undoubtedly are the most

sensitive on the issue, would say that the Reagan Boards have not followed the traditional Republican pattern and are challenging the legitimacy of the very institutions they are supposed to regulate. Perhaps a kinder interpretation is that the regulators who believe in free markets have had difficulty understanding that the labor market is dominated by institutional arrangements, economic power, and traditions. Whatever the reason, we have seen a number of "strange decisions," frequently hostile to unionism and collective bargaining.¹

As a consequence, the actors, especially the unions, have experienced a change in the incentives and disincentives and have altered their litigation strategies. It remains to be seen whether the rational decision-making models fitted to pre-1980 data are as relevant to post-1980.

¹ Luckily and appropriately, the courts have served as a check on the agency. For instance, in *National Lock Corporation*, the First Circuit, in referring to the Board's ruling, exclaimed, "If we had not seen it, we would have found it difficult to think the present case was for real." In another case, Justice Posner of the Seventh Circuit recently noted, "Maybe the Board's workload is too heavy to allow anything better but that will not permit us to uphold a decision for which the Board has failed to provide a coherent rationale." In this same vein, the Court of Appeals for the District of Columbia, in *OCAW Union v. NLRB (TNS Inc.)*, concluded that the Board had abdicated its responsibility to enforce the law when the Board accepted without inquiry privately negotiated reinstatements of improper discharges during an organizing campaign.

IV. AN UPDATE ON MINORITY AND AFFIRMATIVE ACTION PROGRAMS

Splitting Blacks? Affirmative Action and Earnings Inequality Within and Across Races*

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As in other bargaining situations, it is not unusual for the public perceptions of affirmative action bargaining under the contract compliance program to be at variance with the facts. Under the system of goals and timetables commonly perceived as quotas, firms typically achieve about one-tenth of their goals. Under a program often perceived as chasing after predominantly white male firms, such firms are actually less likely than integrated firms to be targeted for a compliance review. A program often portrayed at the extremes of futility or heavy-handed rigidity has slowly and steadily contributed to the racial integration of the workplace. While criticized for forcing employers to throw standards to the winds, significant evidence that affirmative action has caused a decline in firm productivity or profitability has yet to be shown (Leonard, 1987). This paper focuses on another part of the debate that has enjoyed wide publicity without the hindrance of evidence. What evidence is there for the propositions that affirmative action only helps blacks get unskilled jobs, or (somewhat at odds with the first) that it only helps the highly educated cream of the black labor force, leaving low-skilled blacks further behind?

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* Points of view or opinions stated here do not represent the official position or policy of the U.S. Department of Labor.

Framework

In the following sections we look for evidence that affirmative action has shifted the demand curve for minority males by examining cross-section evidence on wages. Under the assumptions that labor is imperfectly mobile between cities because of a fixed cost of obtaining information or of moving, and that affirmative action pressure varies across cities, cross-section wage estimates may reveal something about affirmative action. If the supply of minorities relative to whites in each city is not perfectly elastic, we may expect that minority wages will increase relative to white wages, *ceteris paribus*, if affirmative action pressure increases.

The Impact of Affirmative Action on Earnings Inequality Across Races

The evidence in Table 1 suggests that affirmative action has increased the demand for minority males. These are estimates from cross-section regressions of the logarithm of wages on the proportion of employment in an individual's SMSA and industry that is in federal contractor establishments, along with a set of other variables that control for individual characteristics such as education and age, an indicator of city size, and a set of dichotomous variables indicating which of 42 SMSAs the individual resides in. The equations are estimated separately for nonwhite and white males who were reported as employed in the May 1978 and 1973 Current Population Surveys.

TABLE 1
The Impact of Affirmative Action on Male Wages

Equation:	Nonwhites		Whites	
	1	2	3	4
	<i>1978</i>			
Percent contractor	.39 (.069)	.39 (.068)	.29 (.023)	.30 (.023)
	<i>1973</i>			
Percent contractor	.36 (.071)	.37 (.072)	.21 (.023)	.21 (.023)

Note: Standard errors in parentheses. Equations 2 and 4 include dichotomous controls for 5 occupations. All equations include dichotomous variables for marital status, veteran status, privately employed, and 41 SMSAs. Controls are also included for education, age, and their squares, city size, and (in 1978) central city residence. Sample sizes are: nonwhites, 1034 (1978) and 1004 (1973); whites, 7378 (1978) and 8440 (1973).

Since only federal contractors are subject to affirmative action under the Executive Order, we expect sectors with a high proportion of contractors to pay minorities relatively more—if labor is not perfectly mobile, and if affirmative action is effective.

The greater the proportion of employment in an industry in an SMSA that is subject to affirmative action, the greater the wages of nonwhite males compared to their brothers in other cities or industries. Equation 1 indicates that a ten percentage point increase in covered employment increases minority male wages by 3.9 percent, and this is significant. Most of this wage increase occurs within, not across, broad occupations. Equation 2 replicates equation 1 but adds a set of occupation indicators. The wage effect is hardly changed. If affirmative action's only impact were to jump minorities into higher level broad occupations, then we would expect the coefficient on proportion contractor to be positive in equation 1, but zero in equation 2. The near identity of coefficients across equations suggests that much of the positive impact of affirmative action on minority wages has been due to promotions within broad occupational categories.

The impact of affirmative action on minority male wages must be judged by comparing it with the impact on white males. Federal contractor industries might be high-wage industries for reasons that have nothing to do with affirmative action. The estimates for white males (equations 3 and 4) show strong indications of this industry effect: white males' wages are also higher in contractor-intensive sectors. If we take the impact on white males as a measure of the industry effect, then the difference between the impact on nonwhites and whites gives us a measure of the true impact of affirmative action on nonwhites correcting for the industry effect. A ten percentage point increase in employment subject to affirmative action then results in a 1 percent increase in nonwhites' wages relative to those of whites, although the racial difference is imprecisely estimated. This reduces the average 75 cents per hour wage gap between minorities and whites by more than 2 percent. This is not a great gain. However, the contribution affirmative action has made in reducing racial inequality, and so perhaps discrimination, should be considered in light of the historical reduction in racial inequality. Between 1967 (the earliest year of available data) and 1978 the racial wage ratio of median weekly earnings of full-time employed males increased from 69 to 78 percent. During the same period, the proportion of employment covered by affirmative action increased from zero to roughly 50 percent. According to our estimates, this should increase minority earnings by

5 percent relative to those of whites. Affirmative action then could account for roughly a third of the increase in the racial wage ratio.

The returns to human capital, as measured by years of schooling, age, and occupational attainment, are lower for minorities than for whites. However effective affirmative action has been, a nonwhite would still earn more were he white.

Comparison with Earlier Effects

Recent work on the impact of affirmative action on employment and occupational advance (Leonard, 1987) suggests that affirmative action became more effective during the late 1970s. One might suspect that these results are overstated because of the self-selection of employers into contractor status, or because of biased reporting on EEO-1 forms (Smith and Welch, 1984). This paper seeks to determine the validity of such criticisms by looking at wages for evidence corroborating or contradicting a demand shift.

While firms may have an incentive to overstate minority employment in reporting to the OFCCP, no individual has the same incentive to dissemble when reporting race, gender, or occupation. The finding that affirmative action has increased minority male wages then supports the interpretation that reported employment shifts represent real demand shifts rather than strategic reporting. Similarly, if the observed employment shifts were explained by the self-selection into contractor status of minority-intensive firms, we would not expect to find higher wages for minorities. However, the effect I interpret as an affirmative action effect is strongly correlated with an industry effect; adding industry dummies substantially reduces the impact of proportion contractor on relative racial wages—often to insignificance—perhaps because there is little independent variation left in the measure of proportion contractor by industry by SMSA once both industry and SMSA are otherwise controlled for.

Another approach to judging the strength of the wage results for 1978 is to compare them with similar estimates for an earlier year. Since most employment estimates and historical anecdotes suggest a weaker affirmative action program, we expect to observe a smaller wage effect in an earlier year (Brown, 1984). The best test would take us back before affirmative action as we know it was instituted in 1965, but appropriate cross-section data are not available.

The lower panel of Table 1 replicates the previous specification for 1973, with the exception of not controlling for central city residence, which was not available. In general, the estimates are roughly similar

across years. For nonwhites the estimated coefficient on proportion contractor increases as we would expect, but not significantly. For whites the increase is significant. Since the impact on nonwhites is greater than that on whites in 1973, and more so than in 1978, these results suggest that affirmative action may have had a slightly greater impact in the earlier period. Another interpretation is that the industry-specific effects have become stronger but that labor supply is approaching the new post-affirmative action equilibrium.

In regressions not shown here, similar estimates are made for 1969. It is reassuring that the contractor effect is insignificant for white males in 1969, but significant for nonwhite males. Perhaps this reflects a peculiar omitted variable bias (defense industries?) in the wage equations that differentially affects blacks and that has grown since 1969. Alternatively, these wage equations considered together may indicate an affirmative action program that since 1969 has helped reduce racial wage inequality.

Race or Class: Has Affirmative Action Hurt Low-Skill Blacks?

Some have argued that affirmative action helps only the cream of the minority population and, with the perversity some expect from government intervention in competitive markets, has actually hurt those most in need of help—low-skilled blacks. The argument may have merit on the margin in the case of Title VII, if an employer must choose between potential hiring and promotion/discharge litigation. It is tempting to resort to such a split effect argument in trying to reconcile effective government antibias programs with conflicting evidence of a degradation in the earnings and employment of unskilled blacks.

To shed some light on this issue, I estimate the impact of affirmative action on wages by race as a function of the level of education. To the previous specification I add the interaction of proportion contractor with years of schooling and its square. The results are presented in Table 2. There is no evidence in 1978 to support the bifurcation argument. For nonwhites the interaction terms are of marginal significance at best, and indicate a stronger, not weaker, impact of affirmative action on those with little education. If anything, affirmative action has reduced racial wage inequality more among the lowly than the highly educated. Among college graduates, these cross-sections suggest no narrowing of racial inequality—perhaps because of greater mobility among highly educated workers. Not only does affirmative action appear to reduce racial wage

inequality in general, it also appears to reduce inequality among nonwhites across education level by pushing the lowly educated more than the highly educated—just the opposite of the bifurcation argument.

TABLE 2
The Impact of Affirmative Action on Male Wages by Education Level
($\partial \ln \text{Wage} / \partial \text{Percent Contractor}$)

Equation:	Nonwhites		Whites	
	1	2	3	4
1978				
Years of schooling completed				
8	.53	.50	.33	.34
10	.52	.49	.31	.31
12	.47	.45	.29	.29
14	.37	.38	.28	.29
16	.24	.27	.28	.29
1973				
Years of schooling completed				
8	.32	.32	.27	.27
10	.34	.35	.19	.18
12	.36	.37	.15	.15
14	.39	.39	.17	.17
16	.41	.41	.23	.25

Note: These are estimated on samples of 1034 nonwhites and 7378 whites in 1978 and 1004 nonwhites and 8440 whites in 1973, controlling for all the variables in Table 1 with the addition of interaction terms between percent contractor and education and its square. Equations 2 and 4 also include 5 dichotomous variables for occupation.

These estimated interactions vary over time. In 1973 the interaction terms are significant only in the case of whites. For nonwhites we cannot reject the null hypothesis that the impact of affirmative action depends not at all on the level of education. Moreover, though the estimated effect does change significantly for whites, we cannot reject the stability of the effect of affirmative action on nonwhites between 1973 and 1978. There is no significant evidence here that affirmative action has hurt lowly educated blacks. Rather it increases their wages relative to whites.

Conclusion

Affirmative action under the Executive Order program does appear to have increased the demand for minority males relative to

white males, judging from the relatively higher wages paid minority than white males in cities and industries with many federal contractors subject to affirmative action. It does not appear to have contributed to the bifurcation of the nonwhite community. Rather, it appears to increase the demand for lowly educated minority males as well as for the highly educated.

It would be surprising if affirmative action maintained the same effectiveness during the early 1980s. Political rhetoric about limiting affirmative action has been matched by changes in enforcement. As the number of compliance reviews has roughly doubled since 1980, their intensity and productivity has declined. Since 1980 backpay awards and show-cause notices have declined by 89 and 23 percent, respectively. The ultimate deterrent, debarment, has been employed only twice since 1980. Without the enforcement of strong sanctions, without economic growth, and without political support for affirmative action, we should not be surprised to see weaker results in the 1980s. As in any bargaining situation, a credible threat to impose sanctions is of substantial use. Absent that, further progress under affirmative action must rely more heavily than before on corporate and government bureaucratic inertia, and on residues of understanding and good will.

References

- Brown, Charles. "The Federal Attack on Labor Market Discrimination: The Mouse that Roared?" In *Research in Labor Economics*, Vol. 5, ed. Ronald Ehrenberg. Greenwich, CT: JAI Press, 1984.
- Leonard, Jonathan S. "The Effectiveness of Equal Employment Law and Affirmative Action." In *Research in Labor Economics*, Vol. 8, ed. Ronald Ehrenberg. Greenwich CT: JAI Press, 1987.
- Smith, James, and Finis Welch. "Affirmative Action and Labor Markets." *Journal of Labor Economics* 2 (April 1984), pp. 269-301.

Sex Segregation on the Job: Trends and Remedies

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In its 1986 report, *Women's Work, Men's Work: Sex Segregation on the Job*, the Committee on Women's Employment and Related Social Issues of the National Academy of Sciences/National Research Council concludes:

During the past decade sex segregation has broken down in many occupations, and substantial change has occurred in others. Those changes would have been far less likely without governmental enforcement and private litigation. . . . [T]he remedies introduced in the preceding two decades have generally reduced segregation. . . . [G]oals and timetables have been effective, especially in highly segregated industries, and the committee believes the[ir] use . . . should continue. (Reskin and Hartmann, 1986, pp. 130, 128, 131.)

In this paper we summarize the evidence presented in the report (which we co-edited) that supports the committee's conclusion.¹ The report evaluates alternative explanations for sex segregation and assesses the effectiveness of various federal-level interventions. In discussing the effectiveness of equal employment opportunity and affirmative action here, we focus on reducing sex segregation in the workplace, rather than the wage gap. We begin by briefly reviewing recent trends in the extent of sex segregation in employment. We then

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¹ The committee was chaired by Alice S. Ilchman. Members were Cecilia Burciaga, Cynthia Fuchs Epstein, Lawrence M. Kahn, Gene F. Kofke, Robert Kraut, Jean Baker Miller, Eleanor Holmes Norton, Gary Orfield, Naomi R. Quinn, Isabel V. Sawhill, Robert M. Solow, Louise A. Tilly, and Donald J. Treiman. The study was funded by the Carnegie Corporation of New York, the U.S. Office of Education, and the U.S. Department of Labor. The full report is available from the National Academy Press, Washington, D.C. 20418 (price, \$19.95).

summarize the history of EEO and affirmative action regulations and discuss the methodological difficulties in assessing their effectiveness. Next we examine the variety of types of evidence regarding their effectiveness. Finally, we discuss the committee's conclusions and recommendations concerning remedies.

Sex Segregation: Extent and Trends

The labor force is remarkably segregated by sex. Men and women often work in sex-typed occupations—occupations that are held by predominantly one sex or the other. Some firms and industries also exhibit substantial sex segregation—more than would be expected from the occupational mix they employ, and more than would be expected by chance. Because establishment-level data are limited, however, most research on sex segregation has used occupational-level data, and measures of sex segregation are clearly sensitive to the level of aggregation in the occupational data. In 1980, 48 percent of women were employed in occupations that were at least 80 percent female; for men the figure was 71 percent (Rytina and Bianchi, 1984).

The most commonly used measure of occupational sex segregation, the index of dissimilarity or segregation index, estimated for 262 detailed Census occupations in 1981 (Beller, 1984), indicates that 62 percent of all women or men workers would have to change occupations for women and men to be distributed across occupations identically. As the committee noted in its report, by using this measure of segregation they do not mean to imply that identical occupational distributions for men and women—complete integration—is the appropriate policy goal, but they do believe that if all barriers in the full exercise of women's employment rights were eliminated, sex segregation would be reduced substantially (Reskin and Hartmann, 1986, p. 7).

According to Beller (1984), between 1972 and 1981, the index of segregation declined at an annual rate nearly three times greater than in the 1960s, when the index showed a modest decline. Beller's results for the 1970s, based on Current Population Survey data, have been replicated by Bianchi and Rytina (1984) using decennial Census data and by Jacobs (1983) who computed occupation-by-industry indices. The proportions of men and women working in same-sex-dominated occupations also declined during this period.

Thus, that a decline in segregation occurred during this period is well established. Much of the observed decline represents changes in the sex composition of occupations rather than changes in the relative

sizes of more or less integrated occupations. Women increased their representation particularly in management occupations (Rytina and Bianchi, 1984) and in a few nonmanagerial traditionally male or mixed-sex occupations, such as typesetters and compositors and recreation workers (Reskin and Roos, 1986).

To what extent do equal employment opportunity laws and affirmative action regulations deserve credit for these declines in sex segregation? Although some EEO provisions were enacted during the 1960s, implementation with respect to sex largely began in the 1970s.

EEO Laws and Affirmative Action Regulations

Beginning with Franklin Delano Roosevelt, every president since 1940 used executive orders to bar race discrimination by federal contractors. Executive Order 11246 (1965, as amended by Executive Order 11375 in 1967) barred federal contractors from sex discrimination as well. Subsequent regulations in 1970 (for minorities) and 1971 (for women) required contractors to take affirmative action (and to develop annual affirmative action plans) to ensure nondiscriminatory treatment of women and minorities in recruitment, training, employment, and promotion. At about the same time, regulations were issued barring sex-labeled job advertising, sex-based seniority lists, and so on. The penalty for noncompliance with the executive orders can involve termination of a contract and/or debarment from future contracts, sanctions rarely used in practice. An estimated 31 million workers are employed by federal contractors, so the potential impact of these regulations is large. The Office of Federal Contract Compliance Programs (OFCCP) in the Department of Labor is responsible for enforcement.

Title VII of the 1964 Civil Rights Act barred sex (as well as race, national origin, or religious) discrimination in hiring, job assignment, promotion, or other conditions of employment. The Equal Employment Opportunity Commission was established to administer the employment provisions of the act. Until 1972, when the Commission gained the right to sue, its enforcement powers were very limited. Also in 1972, federal, state, and local government employees were included under the protection of the act. From its inception, the act applied to unions and employment agencies as well as employers. In 1969 the EEOC issued several guidelines to bar sex-stereotyping in hiring, job classification, and advertising. In 1981, through legislation, discrimination based on pregnancy was included in the scope of Title VII.

Sex discrimination in apprenticeship was prohibited by these two same major mechanisms dating from the mid-1960s (contract compliance and Title VII), but specific regulations requiring affirmative efforts in recruiting women into apprenticeship programs via advertising and goal-setting were not promulgated until 1978, when construction was targeted by the OFCCP, and the Department of Labor's Bureau of Apprenticeship and Training required apprenticeship programs listed with the Bureau to take affirmative action to recruit women. With respect to federally supported vocational education and job-training programs, legislation in 1976 (Vocational Education Amendments) and in 1978 (the reauthorization of CETA) mandated sex equity.

Assessing Effectiveness

Definitely establishing that women's gains in the 1970s were caused directly by the interventions described here is difficult. Theories of law enforcement point out that enforcement has both direct and indirect effects—direct effects on the violators actually “caught” and the remedies ordered as a consequence, and indirect effects through voluntary compliance by those against whom no action has been taken, either to avoid government sanctions or because the existence of the laws and regulations prompt change in attitudes about acceptable behavior. Many believe the indirect effects to be much greater than the direct effects.

Because other social forces also changed attitudes and behavior (and may have contributed to the passage and enforcement of the laws), disentangling the effects of changes induced by laws is difficult. Clearly the civil rights and women's liberation movements of the 1960s and 1970s highlighted employment discrimination and reshaped social values about how minorities and women should be treated. The women's movement influenced attitudes about the kinds of occupations women should pursue. The aspirations of many women changed, and individual women, women's groups, and government pressed employers to change.

Moreover, effective laws and regulations lead to changes so indirect as to be hard to discern. The employment of women in formerly all-male settings will lead to the employment of others in the same or similar settings, without intervention. Their presence shows employers that “it works” and women that they can get the jobs. Even when there are no examples of women workers, the existence of laws may encourage women to apply for jobs they formerly thought closed

because they now believe employers cannot discriminate against them.

During a time period when many changes occurred simultaneously and overlapping remedies were implemented, isolating the effects of particular interventions is clearly difficult. Without appropriate controls, it is impossible to isolate cause-and-effect relationships or to know how much change would have occurred without intervention. Also, the failure to find positive results of an intervention does not necessarily mean it was ineffective; it may have prevented or minimized an increase in segregation that would otherwise have occurred.

A final reason why measuring the effect of laws is difficult is that they are not always enforced; consequently, enforcement effort must be considered. With respect to the anti-sex-discrimination provisions of these laws and regulations, consistent, strong enforcement was often absent, particularly in the early years (Reskin and Hartmann, 1986, pp. 84-91). Currently, concern is again being raised by the decrease in enforcement effort that has characterized the Reagan Administration. The EEOC has shifted its focus from systemic or class action suits to individual complaints and the annual number of lawsuits filed by the EEOC has fallen dramatically since 1981 (Burbridge, 1984). The annual settlement rate has fallen and the no-cause and cases-closed rates have increased substantially. With respect to the affirmative action requirements of the executive orders, some members of the Reagan Administration advocate removing the requirement for goals and timetables. To date, those requirements have not been altered, but evidence shows that the Office for Contract Compliance, like the EEOC, is giving less thorough attention to an increased number of cases (Burbridge, 1984).

The Evidence on Effectiveness

Although our conclusions concerning the effectiveness of laws are necessarily limited, a variety of evidence, including case studies of enforcement efforts in specific establishments, occupations, or training programs, statistical studies, and surveys, suggests positive intervention effects.

Title VII and the EEOC

Several systemic cases involving large employers demonstrate the effectiveness single enforcement actions can have on women's employment opportunities. In 1970, 92.4 percent of all jobs at AT&T

were virtually single-sex jobs (i.e., at least 90 percent of one sex). In 1973, AT&T and the EEOC entered a consent agreement providing for goals in hiring and promotion, and during the period 1973-1979, female employment in several male-dominated occupations increased markedly, particularly in management, sales, and some craft jobs, as did men's participation in clerical jobs. A 1974 consent decree with major steel companies and the United Steelworkers of America resulted in women's increased representation in traditionally male production, maintenance, and craft jobs. In less than four years between 1976 and the end of 1979, the numbers of women in production and maintenance positions in two steel mills increased almost threefold from 763 to 1938, while their number in craft jobs increased from 27 to 197. Clearly these increases exceed those that would have occurred without the special outreach effort that compliance encouraged.

Large, highly visible cases often encouraged other employers to follow suit. For example, the aluminum industry incorporated many of the provisions of the steel industry consent decree in its collective bargaining agreement. Many companies reported that the federal enforcement effort directed at other companies was a major factor in voluntary changes in employment practices in their own companies (O'Farrell and Harlan, 1984). Between 1964 and 1981, federal district courts decided more than 5000 employment discrimination cases (Leonard, 1984).

The federal government, whose employees were first covered in 1972, may also illustrate the impact of enforcement. Between 1974 and 1983, the percentage of women in grades 9-12 increased from 18.9 to 30.4 percent and in grades 13-15 from 4.8 to 10.3 percent. Although the link between these increases and specific enforcement efforts has not been established, Epstein (1981) found affirmative recruitment efforts responsible for a sharp increase in the percentage of women lawyers in the Office of the U.S. Attorney General between 1970 and 1979.

The consent decrees in which the EEOC entered and the cases it pursued in the courts shaped comprehensive remedies to improve women's access to nontraditional occupations; discriminating firms (and others who voluntarily complied) changed their personnel practices in many areas. The litigation the agency pursued and its regulations also established legal principles with potentially broad impact: disparate impact, pregnancy discrimination, and a narrow definition of bona fide occupational qualification.

The results of the various statistical studies that have been done of the overall effectiveness of Title VII were summed up by committee member Robert Solow as showing that the laws have “modest effects in the intended direction.” Earlier statistical studies tended to show greater effects for blacks than for women and greater effects among lower-skilled than higher-skilled jobs, but later studies tend to suggest more uniform effects in both employment and wage gains for women and minorities. Individually, these statistical studies have various limitations, but on balance they suggest more rapid improvement than would have occurred without enforcement (Reskin and Hartmann, 1986, p. 94).

Executive Order 11246 and the OFCCP

Federal contractors must file affirmative action plans with the federal government annually, and compliance reviews are made in perhaps 20 percent of companies annually. There have been few actual disbarments, the strongest remedy available under the executive order, but complaints initiated by the Women’s Equity Action League in 1970 and 1971 did lead HEW to withhold funds temporarily from 11 universities in 1972, putting pressure on universities to develop affirmative action plans and recruit accordingly. To some extent this pressure has been effective, as advertising is now the norm for academia, and women have increased their representation on faculties, though particularly at the lower ranks (Astin and Snyder, 1982). The large increases in the participation of women in several predominantly male professions can also be attributed to affirmative action (Reskin and Hartmann, 1986, p. 129).

In 1978, the OFCCP targeted banking, insurance, and mining, and women showed large gains in several traditionally male-dominated occupations in those industries. The proportion of female underground miners hired increased from 1 in 10,000 hires in 1978 to 1 in 12 in 1980 (Reskin and Hartmann, 1986, p. 89), and the representation of women among bank managers increased from 17.4 percent in 1970 to 33.6 percent in 1980. In construction, which was also targeted, two case studies of enforcement efforts concluded that goals and timetables created a small increased demand for women construction workers; most contractors and unions interviewed admitted that without goals and timetables women would not have been hired (Reskin and Hartmann, 1986, p. 91). There are also numerous examples of cities training and hiring women as police officers,

firefighters, garbage collectors, and the like (*New York Times*, October 13, 1985).

Statistical studies of the effectiveness of the executive order have generally found small effects in the early years when enforcement was limited, but larger effects in later years. For example, Leonard (1984) found more rapid improvement in employment shares for federal contractors than noncontractors, with the effects strongest for black men, smallest for white women, and black women in between.

Surveys of Impact on Employer Attitude Change

A Conference Board survey of 265 large corporations found that top management awareness of federal EEO regulations was an important factor in whether or not firms changed their practices and whether or not their efforts were effective. Very few of the firms said that an actual investigation or lawsuit had spurred their efforts, but they often mentioned awareness of large backpay awards against other employers, and they deemed the risk of a Title VII class action suit a real one (Reskin and Hartmann, 1986). A 1976 Bureau of National Affairs survey indicates that the overwhelming majority of firms subject to OFCCP regulations had affirmative action plans and one-third of them evaluated managers in terms of EEO performance.

Apprenticeship, Federal Job-Training Programs, and Vocational Education

In general, apprenticeship changes have been slow in coming, primarily because there are many formal (age limits, for example) and informal barriers (knowledge of available jobs and programs) to the participation of women in apprenticeship. However, several targeted attempts at increasing the participation of women in traditionally male apprenticeship programs have been successful. For example, in 1970 at the start of Wisconsin's women-in-apprenticeship project, all but 13 female apprentices were in cosmetology. By 1973, 67 women had begun apprenticeships in 30 new fields. After the federal government targeted construction in 1978, a sharp rise occurred in the number of women registered in related apprenticeship programs.

Across-the-board evaluations of CETA (Waite and Berryman, 1984; Berryman et al., 1981), the largest federally funded job-training program of the 1970s, suggest that CETA did little to enhance women's access to traditionally male occupations. Sex differences in program assignment occurred, with women concentrated in the shorter-duration, lower-paying, and often part-time programs (Wolf,

1981). CETA's emphasis on quick placement precluded training women for predominantly male blue-collar trades. From 33 to 60 percent of the women who requested placement in mixed or male-dominated occupations were assigned to them. On the other hand, many small programs funded by CETA succeeded. A Denver program placed almost 900 women in 70 different trades over a nine-year period. A Washington, D.C., program placed about 400 women in electrical, mechanical, and automotive trades between 1977 and 1980. In both programs retention rates ranged from 70 to 80 percent. In 1981, the much smaller JTPA replaced CETA. JTPA lacks machinery for preventing sex discrimination, but little evaluation of results is yet available.

The effect of vocational education, which occurs largely in high schools and to some extent in postsecondary institutions, is still largely segregative, given the extensive sex segregation in enrollments across programs. In recent years, however, sex differences in enrollments have declined, almost certainly at least partly as a result of the implementation of the 1976 sex-equity amendment to the Vocational Education Act and Title IX of the 1972 Education Amendments. Because states vary widely in how they implement the sex equity provisions of the Vocational Education Act, differences emerge in the extent to which schools in their jurisdictions offer programs that are specifically geared toward training young people for sex-atypical occupations. States that showed the largest change in enrollment patterns had specific goals and timetables, scrutinized the schools, trained teachers, and encouraged students to take sex-atypical courses (Reskin and Hartmann, 1986, p. 110). As in job-training programs, the most successful individual programs were geared to the local labor market, established liaisons with employers, oriented participants thoroughly, and provided them with support services such as child care.

Conclusions

The evidence reviewed above convinced the NAS committee that many remedies work when properly implemented.

With respect to vocational education, a legislative mandate coupled with federal money is not sufficient to ensure success. Active monitoring of the schools, especially their training of teachers and counselors, is necessary. In view of parental and peer pressure, attracting female students requires affirmative efforts. Moreover,

realizing the benefits of vocational education requires assistance with placement.

With respect to training programs, regulations requiring nondiscrimination and affirmative action are not likely to suffice in desegregating training programs without both federal assistance in developing operating mechanisms and strong enforcement to ensure their implementation. Federally funded small, innovative programs specifically geared to preparing women for sex-atypical jobs can be very effective.

With respect to apprenticeship, it is clear that targeting recruitment to apprenticeship programs works when employers are given a stake in the outcome, such as federal contractors in construction were in 1978. Affirmative recruitment efforts must be made, as many women are not familiar with the skilled trades for which apprenticeship prepares one. Pretraining programs, prior to the start of the apprenticeship, to familiarize women with the tools and concepts involved, also works.

With respect to employment, both the affirmative action guidelines under the Executive Order and Title VII of the 1964 Civil Rights Act have been effective in improving the employment situation of women and minorities overall. Although implementation, especially with respect to sex discrimination, was often slow, and enforcement sometimes inadequate, when agencies had adequate resources and strong leadership and employers had adequate incentives, regulations fostered women's access to some predominantly male occupations and contributed to the further integration of more mixed occupations. The support of the top leadership within firms was found to be critical for the success of programs (both voluntary and imposed) designed to integrate women into formerly closed areas. Analyses of the construction industry, and other targeted industries, show that goals create a demand for women that, in turn, created a supply of female applicants.

Recommendations

In its report, the Committee on Women's Employment and Related Social Issues expressed concern that decreased federal enforcement effort and shifts in EEO policy will have negative effects on the employment opportunities of women, not only because reduced enforcement may have direct effects on compliance, but also because employers' voluntary efforts are likely to be reduced as well, and women may themselves become discouraged from attempting to

enter sex-atypical jobs. Moreover, the evidence clearly shows that committed leadership is a critical component of efforts to bring about change. Committed leadership, in the executive and legislative branches, in business and workplaces, in schools, and in the national media, all contribute to a climate that encourages voluntary change and enhances the credibility of enforcement efforts.

Among the specific recommendations to enforcement agencies was the continued use of goals and timetables, targeting of industries, and highly visible class-action suits that identify systemic discrimination. In addition, specific funding for monitoring conciliation agreements and consent decrees was urged. Also recommended was improved research on the effectiveness of various enforcement strategies and forward-looking research on emerging issues, including identifying new approaches to pay equity.

References

- Astin, Helen S., and Mary Beth Snyder. "Affirmative Action 1972-1982: A Decade of Response." *Change* 14 (July/August 1982), pp. 26-31, 59.
- Beller, Andrea H. "Trends in Occupational Segregation by Sex, 1960-1981." In *Sex Segregation in the Workplace: Trends, Explanations, Remedies*, ed. Barbara F. Reskin. Washington: National Academy Press, 1984.
- Berryman, Sue E., Winston K. Chow, and Robert M. Bell. "CETA: Is It Equitable for Women?" Rand Note N-1683-NCEP. Santa Monica, CA: Rand Corporation, 1981.
- Bianchi, Suzanne M., and Nancy F. Rytina. "Occupational Change, 1979-1980." Paper prepared for the annual meeting of the Population Association of America, Minneapolis, May 4, 1984.
- Brown, Charles. "The Federal Attack on Labor Market Discrimination: The Mouse That Roared?" In *Research in Labor Economics*, Vol. 5, ed. Ronald Ehrenberg. Greenwich, CT: JAI Press, 1982.
- Burbridge, Lynn C. "The Impact of Changes in Policy on the Federal Equal Employment Opportunity Effort." Washington: Urban Institute, 1984.
- Epstein, Cynthia Fuchs. *Women in Law*. New York: Basic Books, 1981.
- Jacobs, Jerry A. "The Sex Segregation of Occupations and Women's Career Patterns." Doctoral dissertation, Department of Sociology, Harvard University, 1983.
- Leonard, Jonathan. "Employment and Occupational Advance Under Affirmative Action." *Review of Economics and Statistics* 66 (August 1984), pp. 377-85.
- O'Farrell, Brigid, and Sharon Harlan. "Job Integration Strategies: Today's Programs and Tomorrow's Needs." In *Sex Segregation in the Workplace: Trends, Explanations, Remedies*, ed. Barbara F. Reskin. Washington: National Academy Press, 1984.
- Reskin, Barbara F., and Heidi I. Hartmann, eds. *Women's Work, Men's Work: Sex Segregation on the Job*. Washington: National Academy Press, 1986.
- Reskin, Barbara F., and Patricia A. Roos. "Status Hierarchies and Sex Segregation." In *Ingredients for Women's Employment Policy*, ed. Christine Bose and Glenna Spitze. Albany: State University of New York Press, 1986.
- Rytina, Nancy F., and Suzanne M. Bianchi. "Occupational Reclassification and Changes in Distribution by Gender." *Monthly Labor Review* 107 (March 1984), pp. 11-17.
- Waite, Linda J., and Sue Berryman. "Occupational Desegregation in CETA Programs." In *Sex Segregation in the Workplace: Trends, Explanations, Remedies*, ed. Barbara F. Reskin. Washington: National Academy Press, 1984.
- Wolf, Wendy C. "The Experience of Women in Federally Sponsored Employment and Training Programs." In *Increasing the Earnings of Disadvantaged Women*, ed. National Commission for Employment Policy. Washington: National Commission for Employment Policy, 1981.

Wolf, Wendy C. "The Experience of Women in Federally Sponsored Employment and Training Programs." In *Increasing the Earnings of Disadvantaged Women*, ed. National Commission for Employment Policy. Washington: National Commission for Employment Policy, 1981.

Women's Progress in the Labor Market: Should We Rest on Our Laurels?

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For some time now it has been commonplace to note the tremendous influx of women into the labor force and to contrast this rapid movement with the remarkable constancy of occupational segregation by sex and the male-female earnings gap. More recently, however, a few researchers have pointed out that there have been changes in these respects as well, and that there may be reason to believe that they will accelerate. Some would argue that while continued stagnation might suggest the need for further action to ensure acceptable progress, we can all sit back and relax if segregation and the earnings gap are in any case declining.

A thorough review of available data and the literature that discusses them moves us cautiously closer to the views of the optimists than we were before. Indeed, there are even some signs of a trend toward a more equitable division of labor in the home, a development overlooked by most observers. Nonetheless, there are good reasons for activism rather than lethargy. In a nutshell, this conclusion is based on solid evidence of recent improvements, tempered by the fact that they have so far been quite slow, and that the acceleration, or even continuation, of these trends cannot be taken for granted. Moreover, it is our view that government intervention was necessary to attain the progress achieved so far and will continue to be important to ensure future gains.

Occupational Segregation

The extent of gender differences in occupations is most commonly measured by an index of segregation which indicates the percentage of women, or men, who would have to change jobs for the occupational distribution of the two groups to be the same. A number

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of studies have calculated this index using the detailed breakdown of occupations employed in the Census. The available evidence suggests that the magnitude of segregation was substantial and relatively stable throughout the first half of this century at about 66 to 68 percent (Gross, 1968). Beginning in 1960, however, the index began to fall, declining by 3.1 percentage points between 1960 and 1970, as women increased their representation in traditionally male sales and clerical jobs and men moved into some of the traditionally female professions (Blau and Hendricks, 1979). More recent work by Beller (1984), which uses data from the Current Population Surveys, suggests an acceleration of this trend after 1970, with a drop of 6.7 percentage points between 1972 and 1981, and an even more rapid decrease for younger age groups. Gains appear to have been concentrated in the professional and managerial categories, where some remarkable increases in the representation of women in traditionally male occupations have occurred.

In spite of these changes, the amount of segregation as measured by the index remains large. Six out of 10 women, or men, would still have to change jobs in order for the index to become zero. At the present rate, this would take many decades. Moreover, little progress has been made in integrating male blue-collar jobs. It is also important to bear in mind that there is actually considerably more segregation than is indicated by any measure that focuses on Census occupational categories, for there are also substantial differences in the specific jobs men and women do within such classifications, and where they do them. There are, in many cases, male and female subspecialties, as well as "vertical" segregation, with men at the top of the hierarchy, having more status, more autonomy, and often more authority, while women tend to be at the bottom. Additionally, men and women are frequently segregated by industry and even by firm. Thus, Bielby and Baron (1984), using the employer's own detailed job classifications, reported that of 400 work organizations in their sample, 59 percent were perfectly segregated by sex—no men and women shared the same job title—and in the remainder the median amount of segregation was 84.1 percent.

Without evidence that the other types of segregation are also diminishing, there is some question of how meaningful the observed decline in occupational segregation is. Beyond that, there is some concern that occupations which have become integrated as a result of an influx of women may once again become segregated as female occupations. Among the best known historical examples of such

occurrences are primary school teachers, secretaries, and, more recently, bank tellers. Current examples include computer operators and insurance adjusters. Women comprised 33.9 percent of the former and 29.6 percent of the latter in 1970, but by 1980 the figures were 59.1 percent and 60.2 percent, respectively.

Given these complexities and our remaining ignorance about the distribution of male and female workers within occupations, predictions may seem somewhat foolhardy. Nonetheless we believe that the available evidence points toward a continued decline in sex segregation, both between and within occupations, given the continued efforts on the part of government to keep the doors open. Such trends are reinforced by a growing tendency among young women and men to acquire more similar amounts and kinds of human capital, including years of work experience (Blau and Ferber, 1986; O'Neill, 1985; Smith and Ward, 1984). Indeed, the process of change

TABLE 1
Median Annual and Weekly Earnings of
Full-time Women Workers as Percent of Men's Earnings,
Selected Years, 1955-1985

	Annual ^a	Weekly ^b
1955	63.9	
1960	60.8	
1965	60.0	
1970	59.4	62.3
1975	58.8	62.0
1976	60.2	62.2
1977	58.9	61.9
1978	59.7	61.3
1979	60.0	62.4
1980	60.2	63.4
1981	59.2	64.6
1982	61.7	65.0
1983	63.6	65.6
1984	63.7	67.8
1985	64.5	68.2

Sources: U.S. Bureau of Labor Statistics, *U.S. Working Women: A Databook 1955-1975*, Bull. 1977; Earl F. Mellor, "Investigating the Differences in Weekly Earnings of Women and Men," *Monthly Labor Review* 107 (June 1984), pp. 17-28; U.S. Bureau of the Census, Current Population Reports. "Money Income of Households, Families and Persons in the United States," Consumer Income Series P-60, various issues; Bureau of National Affairs, *Daily Labor Report* 23 (February 4, 1986).

^a Includes full-time, year-round workers only. Includes income from self-employment.

^b Includes all full-time workers, regardless of weeks worked. Excludes income from self-employment.

will most likely gain momentum as more recent cohorts of women who are less occupationally segregated replace older ones.

The Earnings Gap

The most widely used measure of the earnings gap is the ratio of annual earnings of full-time, year-round female as compared to male workers (Table 1). At first glance, these data would hardly appear to provide grounds for great optimism, since the ratio was 63.9 percent in 1955 and 64.5 percent in 1985. A careful examination of the years in between, however, shows that the ratio reached its most recent low point of 58.9 percent in 1977 and, by 1985, had risen by 5.6 percentage points. More evidence of a convincing recent decline in the earnings gap emerges from the series on the weekly earnings of full-time workers, which showed a rise of 6.3 percentage points in the ratio over this period.

Two additional aspects of the recent changes are seen in Table 2. First, the earnings gains, like the declines in occupational segregation, have been particularly pronounced among younger workers. The relative income of women aged 25 to 34 as compared to men increased by almost 13 percentage points between 1967 and 1985, with most of the improvement occurring in the last decade.

TABLE 2
Median Income for Women Working Year-Round,
Full-Time as Percent of Men's Income, by Age

Age	1967	1975	1985
25-34	62.2	65.8	75.0
35-44	55.1	54.9	62.3
45-54	54.0	53.9	56.9

Source: U.S. Bureau of the Census, Current Population Reports, "Money Income of Households, Families and Persons in the United States," various issues.

Second, the data suggest that younger women are likely to retain a substantial amount of the improvement in their relative earnings as they age. The relative income of women aged 35 to 44 in 1985 was only 3.5 percentage points less than that of those aged 25 to 34 ten years previously, while the income ratio of 45- to 54-year-old women was actually somewhat higher than the figure for 35- to 44-year-old women in 1975. Coupled with the changes in occupations described above, these trends reinforce our conclusion that young women are likely to

continue to fare better than their predecessors at each point in the life cycle. Hence, the overall gender gap in income, like occupational segregation, should decline considerably more as these cohorts replace earlier ones.

The Division of Labor in the Home

As constant as the earnings gap appeared for so long, so too did the allocation of tasks within the home. Studies done in the 1960s and 1970s showed that throughout the period wives did far more housework than husbands, whether or not they were employed outside the home. Moreover, there was no indication of an increase in the time husbands spent on housework over that period. Recently, however, there appear to have been some significant changes. Juster (1985) compared data from 1975 and 1981 surveys and found that men's work in the home increased by somewhat more than one hour per week, while their time spent on market work decreased by about an hour. At the same time the changes for women were in the opposite direction by about one and a half hours each. (Some of this reflects increasing labor force participation.) The changes were larger among the younger group (ages 25 to 44) where, for example, men's work in the home increased by almost three hours.

Thus, the evidence suggests that the time spent on market and home work by men and women moved more rapidly toward equality in the late 1970s than in the preceding decades. This is most likely both a response to greater labor market opportunities for women and a factor contributing to the enhancement of those opportunities for them. It is a significant change even though women continue to do most of the housework, and the ultimate locus of responsibility for it, in most cases, probably still rests with them.

Policy Implications

Some researchers (for example, O'Neill, 1985, and Smith and Ward, 1984) have interpreted recent developments as being primarily due to women's human capital finally increasing as compared to men's, which, they claim, was not the case in earlier years. Smith and Ward in particular argue that "women's market skills have been the primary shaper of their economic status in the past, and will be in the future, rather than legislation, government commissions, or political movements" (p. xiv). The implication is that if women will only acquire enough human capital, other efforts to reduce the earnings gap

are unnecessary, and that such efforts can, in any case, be expected to have little impact.

There are, however, a number of flaws in this reasoning. First, the empirical evidence from cross-sectional studies suggests that while women's lesser amount of human capital explains some of the earnings gap, it does not explain all of it (Blau and Ferber, 1987). The residual, generally found to be half or more of the differential, is often taken as an estimate of labor market discrimination. Thus, remedying women's human capital deficiency is not likely by itself to close the earnings gap. Second, it is not necessarily the case that women's increase in human capital accounted for *all* of the observed improvement. There have been studies which suggest that the government's antidiscrimination effort also played a role (e.g., Beller, 1979). Finally, it may well have been that "legislation, government commissions, . . . [and] political movements" helped give women both the incentive and the opportunity to acquire more human capital.

It seems reasonable to view the trends in the sex differential in earnings as part of a long-term cumulative process in which women's improved job qualifications and reduced labor market discrimination against them mutually reinforced each other. It would be foolish to abandon this formula just when it appears finally to have begun to pay off. Nor do we see any reason for complacency in the pace of change achieved to date, all the more so when the situation in the United States is compared with that in some of the other advanced industrialized countries.

Among the 17 advanced industrialized countries which provide relevant information, the ratio of women's to men's hourly earnings was higher in 12 of them in the early 1980s than the (roughly comparable) ratio of hours adjusted weekly earnings for all workers in the United States of 71 percent. The average for the other countries was 75 percent, and the figure was as high as 83 percent in Australia, 85 percent in Denmark, and 90 percent in Sweden. Equally interesting is the fact that in 10 of the countries the earnings gap had declined more rapidly than in the United States over the previous 10 years, and, furthermore, that this had no apparent effect in slowing down the rise in women's labor force participation rates or increasing the ratio of women's to men's unemployment rates. In Sweden, for example, 66.3 percent of all women were in the labor force in 1982, while the unemployment rate for women was 3.4 percent and for men it was 3.0 percent (Blau and Ferber, 1986).

We do not dispute that women's higher level of education, increasing entry into male occupations, and growing labor force attachment have been instrumental in improving their economic status. We cheer on the primarily young women who have accomplished these changes. However, there is good reason to think that progress could be faster, and less demanding of unusual determination and perseverance on the part of women, if society renewed its commitment to opening doors wider to women who want to enter the labor market, and particularly those who choose to enter nontraditional jobs, and to safeguarding their opportunity to climb career ladders with equally qualified men.

Women's traditional role in the family has no doubt been a hindrance to their success in the labor market. But it is also true that their inferior position in the labor market has reinforced the traditional division of labor within the family. Progress in either sector is likely to have a favorable effect on the other, as the most recent data suggest.

To date, full equality has not been achieved, in terms of either job integration or earnings, in any country. Furthermore, different institutional arrangements in the United States may make it difficult to equal the rate of progress of such countries as Sweden and Australia. But there is no reason why we should not try to improve upon a record that leaves us bringing up the rear of economically advanced countries.

References

- Beller, Andrea H. "The Impact of Equal Employment Opportunity Laws on the Male/Female Earnings Differential." In *Women in the Labor Market*, eds. Cynthia B. Lloyd et al. New York: Columbia University Press, 1979.
- . "Trends in Occupational Segregation by Sex and Race: 1960-1981." In *Sex Segregation in the Workplace*, ed. Barbara F. Reskin. Washington: National Academy Press, 1984.
- Bielby, William T., and James N. Baron. "A Woman's Place Is With Other Women." In *Sex Segregation in the Workplace*, ed. Barbara F. Reskin. Washington: National Academy Press, 1984.
- Blau, Francine D., and Marianne A. Ferber. "Discrimination: Empirical Evidence for the United States." *American Economic Review* 97 (May 1987).
- , *The Economics of Women, Men, and Work*. Englewood Cliffs, NJ: Prentice Hall, 1986.
- Blau, Francine D., and Wallace B. Hendricks. "Occupational Segregation by Sex; Trends and Prospects." *Journal of Human Resources* 14 (Spring 1979), pp. 197-210.
- Gross, Edward. "Plus Ça Change . . . ? The Sexual Structure of Occupations Over Time." *Social Problems* 16 (Fall 1968), pp. 198-208.
- Juster, F. Thomas. "A Note on Recent Changes in Time Use." In *Time, Goods and Well-Being*, eds. F. Thomas Juster and Frank P. Stafford. Ann Arbor: Institute for Social and Policy Research, University of Michigan, 1985.
- O'Neill, June. "The Trends in the Male-Female Wage Gap in the United States." *Journal of Labor Economics* (January 1985 Supp.), pp. S91-S116.
- Smith, James P., and Michael P. Ward. *Women's Wages and Work in the Twentieth Century*. Santa Monica, CA: Rand, October 1984.

DISCUSSION

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Our title, "An Update on Minority and Affirmative Action Programs," suggests these programs remain viable. But the papers presented in this session suggest that these programs are visible, but not necessarily viable. The authors agree that there has been a reduction of occupational segregation (by either race or gender) in the workplace. Both Blau and Hartmann discuss the results of this reduction, and despite an optimistic title ("Should We Rest on Our Laurels?"), conclude that the process of reducing the level of occupational segregation by gender has been slow. Leonard's work focuses on the status of black men; he points out that their status has improved, regardless of educational level. All three authors refer to government's role in reducing occupational segregation by race or gender. The importance of this role suggests a pessimism for the future of affirmative action, since current government policy has attempted to dismantle affirmative action programs.

The Blau-Ferber and Hartmann-Reskin papers review evidence of economic and noneconomic trends and the ways they have influenced the decline in sex segregation in the workplace. Their reviews are important and inconclusive, especially since economists tend to ignore the way societal trends impact economic outcomes. It is especially important to note that when "minorities and women" are lumped together, it is easy to assume that societal trends that favor women also favor blacks. Yet, the December 1986 lynching of a young black man in Howard Beach, Queens, New York, suggests that societal attitudes toward blacks have changed only slightly.

Neither Blau nor Hartmann makes a strong link between affirmative action programs and sex segregation in the workplace, although Hartmann makes a stronger case than Blau. Perhaps the strength of Hartmann's data leads her to make stronger, and unwarranted, conclusions. According to Heidi Hartmann, there has been "massive change" in the status of women in the labor force. Yet

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this massive change leaves the majority of women in low-paying, sex segregated jobs. According to the Duncan indices that Blau discusses in her paper, 56 percent of all working women would have to change occupations to have occupational distributions identical to those of men (Malveaux, 1987, Ch. 2).

The average wage of working women in 1984 was \$264 per week, or just above \$13,000 per year. This annual wage level may be fine for women who combine salaries with their spouses, but a growing number of white women (and even more black women) head households and support themselves and their children on these low salaries.¹ As jobs generated in the manufacturing sector decline, and as new low-paying jobs grow more rapidly than high-paying jobs (Bluestone and Harrison, 1986), more and more women will be forced into the workplace. Will the "massive change" that Hartmann cites improve their lot?

Hartmann referred to the most "massive change" possible in her closing paragraphs when she discusses the necessity of implementing pay equity systems. Blau's paper suggests that without changes in the terms and conditions of work, women may end up with better job titles but less money. Hartmann's suggestion that we pursue comparable worth to improve the status of women is important and should be included in discussions like this on the status of affirmative action programs.

Leonard's work makes the stronger link between affirmative action and job segregation and has been useful for interpreting detailed establishment data and using EEOC data to estimate the effects of affirmative action. The notes he presented here provided information about manners and methods used to enforce affirmative action initiatives. His "nuts and bolts" perspective on the working of OFCCP makes it clear that enforcement has slowed and that prospects for affirmative action programs are grim under the present administration.

Addressing the Ignored

Because my research focuses on the status of black women in the workplace, I was disturbed that the three papers presented chose to ignore minority women, whose status in the workplace differs from

¹ Weekly income data are published in *Employment and Earnings*, January 1986. Forty-three percent of all black families and nearly 15 percent of all white families are female-headed.

that of both white women and minority men. The report from which Hartmann's paper is drawn does refer to the status of black women.

Ignoring the status of women of color implies that these women are "two-fers," the beneficiaries of both programs designed to benefit blacks and those designed to benefit women. But black women's progress in the occupational spectrum has been different from the progress of white women; while white women have fled typically female jobs, the most important occupational change for black women has been that far fewer of them work in private household occupations.² Black women's earnings (at \$246 per week) are lower than those of white men, black men, and white women.³ And since black women experience extremely high unemployment rates (more than 15 percent in 1986), a comparison of full-time weekly earnings tends to overstate the relative position of black women in the workplace.

A discussion of sex segregation in the workplace that does not differentiate women by race implies that all women share a similar position in the workplace. But Duncan indices show that 30 percent of all black women would have to change jobs to have a distribution identical to that of white women (Malveaux, 1987). Because both Blau and Hartmann have ignored the phenomenon of black women's crowding, they failed to point out this essential difference in their papers.

Five percent of the labor force are black women, but more than 10 percent of all private household workers, teachers' aides, social workers, food-service workers, and other such groups are black women (Malveaux, 1985). In some of my previous work (Malveaux, 1987), I have termed this disproportionate representation "black women's crowding," a phenomenon that, while related to the occupational segregation white women experience, is peculiar to black women. Has this status been ignored in both research and policy? A cursory review of the evidence would suggest so. At the Department of Commerce, for example, there are programs to encourage minority ownership and women's ownership, but hardly any discussion of encouraging ownership by minority women. In 1985, 3.9 percent of all self-employed women were black, and among all black self-employed workers, 29.7 percent were black women (Malveaux, 1986);⁴ thus, they

² While more than a third of all black women workers held private household jobs in 1960, just 5 percent held such jobs in 1985.

³ Unpublished data, Bureau of Labor Statistics.

⁴ The source for these data is unpublished BLS Table 26A.

were underrepresented both by race (among women) and by gender (among blacks).

How much focus should programs affecting black women have? They are, after all, just 5 percent of all workers. But black women's work roles have been a bellwether for the roles of all women. Before the term "juggling" became popular, black women juggled because they had no choice but to combine work and family. The single motherhood that white women have just learned to grapple with has become an increasing probability for black women—43 percent of all black families were headed by women in 1985.

Even further, the experiences of black women serve to anchor the experiences of working women without choices. Until the experiences of women of color are more closely examined, feminist scholarship is incomplete, self-serving, and stymied by a myopia which, if corrected, would result in the development of a stronger, more inclusive effort. The Sears Roebuck case, which Andrew Hacker (1986) discusses in a recent review, is an example. Rosalind Rosenberg spoke of women's "preference" for jobs that were compatible with their family obligations. But domestic service, which employed the majority of black women until the 1980s, was a direct assault on the family obligations of black women. Some were forced to live at their places of work and were unable to visit with husbands and young children until weekends. Many were paid little and were subjected to sexual harassment. The point, in terms of women's preferences, is that women have done whatever work was available to help support their families. Official and unofficial barriers constrained the majority of women to service work. Similar barriers prevented most white women from working in sales jobs that award commissions. The experience of black women helps to illustrate some of the factors shaping the experience of white women. Failure to acknowledge the experience of black women makes the case for discrimination against white women much weaker.

Need generated the workplace experience of most black women. But policy-makers, with a focus that is alarmingly myopic, still raise the question about the advisability of women's work effort.⁵ Black women never had the option of asking if their workplace effort would be "advisable." White women will increasingly find themselves in black women's shoes, working because they must and hoping that

⁵ See, for example, a *USA Today* discussion, "Should Women Work?", December 10, 1986, p. 12A.

public policy generates support services, like child care, to make work lives easier.

Black women are ignored in this series of paper, but other minorities and other minority women get even less attention. While it is true that the data on Hispanic workers are not as well developed as they might be (3-digit occupational distributions are not available from annual averages, for example), these workers may face an occupational segregation completely different from the segregation black workers face. Blau, Hartmann, and Leonard may not have had access to data that would raise questions about the status of Hispanics and Asians, but it is important that these data be more fully developed.

Is Affirmative Action a Solution?

Affirmative action only partly addresses the inequalities that minority and women workers experience in the workplace. As the structure of the economy shifts from manufacturing to service jobs, black male manufacturing workers bear a heavier burden than do many others in their attempt to find new jobs. Black men and women experience high unemployment rates; even when work is available, these workers are likely to find low-paying jobs that generate an income lower than the poverty level.

Affirmative action has been described as a "compromise policy" for black workers.⁶ Affirmative action provides more blacks with jobs and promotions without addressing the inequality generated by the current job allocation programs. While the efforts of researchers like Blau, Hartmann, and Leonard to address affirmative action issues are to be applauded, it is equally important to question affirmative action as a solution to the inequality faced by minorities (especially blacks) and women in the workplace. While it is important to measure the effectiveness of affirmative action, it may well be equally important to examine other strategies to close earnings gaps.

References

- Bluestone, Barry, and Bennett Harrison. "The Great American Job Machine: The Proliferation of Low Wage Employment in the U.S. Economy." U.S. Congress, Joint Economic Committee, December 1986.
- Hacker, Andrew. "Women and Work." *New York Review of Books*, August 14, 1986.
- Malveaux, Julianne. "Consequences of the Economic Status of Black Women." Committee on the Status of Black Americans, National Academy of Sciences, December 1986.
- _____. "The Economic Interests of Black and White Women: Are They Similar?" *Review of Black Political Economy* (Summer 1985).
- _____. *No Images: Contemporary Black Women in the Workplace*. Forthcoming 1987.

⁶ Interview with Civil Rights Commissioner Mary Frances Berry, April 1986.

V. COMPARATIVE LABOR MARKET EXPERIENCE AND POLICIES: U.S. AND EUROPE

Labor Market Contrasts: United States and Europe

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Labor market analysis is most often done in geographic isolation. By that I mean that other industrial nations' experiences are either ignored or are seen as having very limited relevance to the American experience. I would argue, however, that the international community provides a rich source of information to help us understand our current circumstances and to foresee our future. How better to study the costs and benefits of social insurance than to examine the European systems which are both older and, often, more extensive than our own? Similarly, Europe's experience in dealing with an aging population provides a looking-glass for our own near future. On the other hand, we faced the problems of very high unemployment for teenagers and racial minorities long before these became issues in Europe.

Labor market experience is another very different element to the link between the United States and Europe. International economies are so interrelated that policies and developments in one country can profoundly affect the job market in other countries. I would like to address several aspects of both issues—comparative labor market experiences between the United States and Europe and the interdependency of world economies.

It is not easy to compare conditions across national boundaries. In addition to the differences in such factors as demographic

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composition, political policy, and economic institutions, we need to take account of the differing labor market developments that have occurred over the past decade on the two sides of the Atlantic. During the 1970s, for example, this country saw unprecedented labor force growth, as larger numbers of women than ever before entered the labor force and the postwar baby-boom generation reached working age. Our economy created more than 20 million jobs and has added 10 million more so far in the 1980s, as the movement of employment away from the goods-producing sector into the service-producing sector continued. Some of these same developments took place in Europe, but the magnitude and pace of change there were quite different.

The Western European countries have had very little job growth since 1970. Moreover, I have found the Europeans to be far more pessimistic about future labor market developments than we are. In contrast, after four years of growth following one of the longest and steepest recessions in our history, we currently have a jobless rate that is lower than that of most European countries and a larger proportion of our population is employed.

Employment Expansion

Most of the increase in employment in the United States since 1980 has been in the service-producing sector. Thus, the goods-producing sector, whose employment level has not grown, now accounts for less than one in three American jobs. Employment in the goods-producing industries has actually declined in most European countries, and the growth of the service sector there has not been large enough to make up for these reductions.

Types of Jobs Created

The growth in service-sector jobs and the decline in some areas of manufacturing has led to a common perception that high-wage factory jobs are being lost, while low-wage, often part-time, service jobs are being added. This notion is probably equal parts fact and fiction. It is true that many relatively high-wage jobs in steel and auto production, for example, have been lost. And the problems faced by workers with these job losses are numerous. However, at the same time, we have also lost many very low-wage factory jobs, such as those in textiles, apparel, and leather. It is true that the service sector includes many low-wage, dead-end jobs in the rapidly growing fast-food and retail industries, for example. But the service sector also has 85 percent of all

professional employees, including most of the physicians, lawyers, airline pilots, architects, computer scientists, and teachers. The point is that the service sector is so diverse that it cannot be characterized as either high wage or low wage. We must be careful not to stereotype the job opportunities arising in a sector which now accounts for three-fourths of all jobs and almost all of the net job growth.

It is also important to recognize the considerable interdependence between the goods and service sectors. For example, the production and consumption of goods leads to the development of such services as transportation, retail trade, and repair facilities. Moreover, some of the employment growth recorded in the service industries reflects work that some manufacturing firms have contracted out—accounting, engineering, legal, and other services that were formerly performed by workers on the manufacturers' payrolls. In addition, marked growth has occurred in personnel supply agencies, which provide temporary help to businesses to cope with peak demand or vacations.

International Competitiveness

The structural changes in the U.S. economy have focused attention on our international competitiveness. Foreign trade has become an increasingly important factor affecting the U.S. employment situation. In 1970, merchandise exports and imports each represented only about 4 percent of our gross national product (GNP). Ten years later, by 1980, these ratios had risen to about 8 and 9 percent, respectively. Since then, however, our trade balance has changed. Merchandise exports have declined (even on a current dollar basis) and, as of 1985, represented 5.4 percent of the GNP. Merchandise imports, in contrast, represented nearly the same proportion of the GNP in 1985 as in 1980.

U.S. international competitiveness depends heavily on the relationship of U.S. labor costs to those in other countries. The relevant comparison is of unit labor costs—total compensation per unit of output—since a producer with a higher level of productivity (as measured by output per hour) can pay higher wages and still remain price competitive.

Over the long term, since 1960, the 2.7 percent per year increase in U.S. manufacturing productivity has been slower than in the nine European countries for which we have data and considerably less than the 8 percent per year increase in Japan. Since about 1973, however, all industrial countries have experienced a decline in their productivity growth rates. The falloff in the other countries was greater than in the

United States. But most of the European nations had faster productivity growth than the United States, both before and after the slowdown. The superior productivity performance of the European countries, however, was accompanied in most cases by substantial reductions in factory employment.

In assessing changes in competitiveness, productivity developments need to be looked at in conjunction with relative changes in hourly compensation costs. Unit labor costs in manufacturing (the ratio between hourly compensation costs and output per hour) have risen less in the United States since 1960 than in any of the other countries except Japan. This has largely counteracted our slower rate of productivity growth. Moreover, the rate of productivity growth in the United States has improved in recent years, and hourly compensation costs have risen at only about a 4 percent rate since 1982. In fact, manufacturing unit labor costs were lower in 1985 than in 1982.

The comparisons I have just discussed are based on measurement in each country's own currency. However, the cost of internationally traded goods is affected not only by productivity and cost developments, but also by changes in the market value of each country's currency. These changes in exchange rates alter the effect of relative changes in costs in national currencies and, therefore, need to be taken into account in assessing changes in the competitive environment.

In the 1970s the dollar depreciated against the Japanese yen and the currencies of most of the European countries. When adjusted for exchange rate changes during this period, Canada had about the same rate of increase in unit labor costs as we did, while Japan and all the European countries had substantially larger increases.

Between 1980 and 1985, the U.S. dollar rose strongly versus the Canadian dollar and the European currencies and somewhat against the Japanese yen. The effect on comparative unit labor cost trends was striking. In national currencies, 7 of the 11 foreign countries for which we have comparative data had larger increases than the United States. But when the appreciation of the dollar since 1980 is taken into account, only one country besides the United States—Canada—had an increase in manufacturing unit labor costs. Japanese unit labor costs fell 2.3 percent per year, and European unit labor costs declined between 4 and 12 percent per year.

Over the past year, the dollar has been declining against some currencies—primarily those of Japan and Western Europe—while showing relatively little movement against currencies of most of the other major U.S. trading partners. For example, imported automobile prices most certainly were affected by recent exchange-rate trends. On the other hand, much of our imported apparel comes from countries whose currencies' values move in concert with the dollar, and prices of their products, therefore, are not affected directly by changes in the trading value of the dollar.

On the export side, prices, particularly of manufactured goods, continue to show little movement. Of course, these export price indexes are based upon dollar commodity prices. From the point of view of the foreign buyer (that is, in foreign currency terms), U.S. exports have become considerably cheaper, on average, during the past year, reflecting the dollar's sharp drop against the currencies of some of our major trading partners.

These price developments are beginning to be reflected in the trade data. Indeed, the latest trade figures suggest that a modest turn-around may be taking place, dominated by lower imports of autos and consumer goods from industrial countries where the dollar's depreciation has been most pronounced. One encouraging note on the competitive position of the United States is that U.S. export prices now bear the same relationship to the export prices of Japan and Germany as they did in 1981. These ratios had risen sharply between 1981 and 1985.

Labor Force Developments

These economic factors—productivity, costs, currency exchange, and prices—all have substantial impact on nations' labor markets. At the same time we see the development of some very important demographic and social issues. Some of these can be examined in a useful manner by contrasting labor market developments for demographic groups in the United States and abroad.

Women

The most dramatic change in the U.S. labor force in the past two decades has been the unprecedented entry of large numbers of women into the workforce and their sustained commitment to the world of work. Over half (56 percent) of all American women of working age are now in the labor force. In Europe, only Scandinavian women exceed this level. Economic activity by women in some

European countries is rising but, in general, remains well below the U.S. level. A transformation of major proportions in the role of women in working life has been occurring here and in much of Europe; the differences are primarily a matter of degree and of timing.

In the United States, single and divorced women have long had relatively high labor force participation rates, for obvious economic reasons. Their rates are not far behind those of men. However, the most striking feature of greater female participation in the workforce is the proportion of married women who work. American wives have entered the workforce in dramatically increasing numbers, especially in the 1970s, and European wives are also increasing their labor force participation.

Declining fertility rates have tended to reduce the home responsibilities of women, facilitating their rising labor force activity in many countries. Women are having fewer children, but even young children do not seem to be the obstacle to employment that they once were. Only one in three American married women with children under the age of 6 worked outside the home in 1960; now more than half of them are in the labor force. In Sweden, the proportion is even higher. Both here and in much of Europe, it is no longer true that women automatically quit work upon marriage or after childbirth.

Women today are probably much better off than their mothers, but they are not as well off as their brothers. In most European countries—as in our own—women often work in the low-paying occupations in the low-paying industries.

Youth

Young people also tend to be concentrated in low-paying jobs—when they work. Youth unemployment rates are at very high levels in both Europe and the United States. Almost one out of every five teenagers in the U.S. labor force is unemployed, as is one of every ten adults aged 20 to 24. Unemployment rates among British, French, and Italian youth now exceed these high U.S. levels, while West Germany manages to maintain much lower rates, especially for teenagers.

During the 1960s and early 1970s, European countries in general had low levels of youth unemployment. In Germany, youth rates were about the same as adult rates. Elsewhere in Europe, youth unemployment rates were higher than rates for adults, but the disparity in Europe was not nearly so large as in the United States.

During the same period, the United States experienced, simultaneously, a rapid expansion in both the youth population and in their participation rates. Also causing upward pressure on our jobless rates were the very high rates of labor force participation among students.

Since the late 1970s, the traditional gap between the United States and European youth unemployment rates has narrowed or disappeared. The period from the mid- to late-1970s was a time of dramatic turnaround in demographic trends. During the early to mid-1960s, when the U.S. birth rate began to fall, European birth rates began to rise. These young Europeans started to enter the labor market in the latter half of the 1970s. Even though youth participation rates in Europe have continued their historic decline, a result of increased schooling and poor job market alternatives, the labor markets have had difficulty absorbing the increase in student job-seekers and new college graduates.

In the United States, in contrast, the teenage population began to decline in 1978, as the baby-boom generation moved into older age groups. This development may exert downward pressure on the unemployment rate, because this high-rate group has become a smaller proportion of the labor force. In Europe, the teenage population did not begin to diminish until very recently and, except in Germany, is not expected to show nearly so sharp a decline through the remainder of the 1980s as in the United States. In general, then, youth will continue to exert upward pressure on European unemployment rates for several years to come.

The Older Population

Just as most industrial countries are experiencing serious problems at the lower end of the age spectrum, there are also problems emerging at the other end of the spectrum—the older population. Unlike youth, older workers are not a high unemployment group; the problems here relate more to retirement and to income-support systems.

During the past two decades, the population over the age of 65 has grown by 55 percent in the United States and by 30 percent in Europe. Compounding the normal increase in “dependency” that would accompany an aging population has been the decline in the labor market activity of older workers.

In Europe, the changes in older worker labor market status preceded ours in timing and have been more serious. Not only has the older population of Europe been consistently a higher proportion of the total population, but their labor force participation rates have also been substantially lower than those in the United States.

The role of the older worker, in most countries, has become a policy paradox. Pressures on income-support systems point toward policies to allow, or even encourage, older persons to work longer, whereas, in fact, the opposite trend is dominant. In the face of high unemployment rates, a new emphasis in many European countries has been placed on encouraging persons to retire early or to work part time while receiving a pension. The rationale is to create more opportunities for younger workers.

The costs of early retirement have been higher in Europe. But we are playing a good game of catch-up. As the huge U.S. baby-boom generation grows older, there is probably no other labor market issue that will incite such forceful policy debate and such intense political pressure as this one.

It is noteworthy that the legislation passed by the last Congress eliminates, for the most part, an employer's ability to force a worker to retire solely on the basis of age. Previous legislation which raised the allowable age of mandatory retirement from age 64 to age 70 had little effect on the trend to earlier retirement. While the new legislation may be helpful to those individuals who want to continue working, it is unlikely that it will have much impact on the aggregate categories.

Minorities and Guestworkers

Europe preceded us in facing the issues raised by the aging of the population; however, our experience with minority groups in the labor market far predates that in Europe.

Racial, ethnic, or other minority groups often have disadvantaged positions in the labor market. This country's large black population as well as our increasing group of Hispanic workers continue to have higher jobless rates than most other parts of the population. Many of the European countries have experienced an inflow of foreign "guestworkers" who came to meet the labor shortages of the 1960s. Both the guestworker migrations in Europe and the majority of recent U.S. migrant flows from Mexico and other parts of Latin America derive from a similar situation—the existence of wide differences in standards of living across common or nearby borders.

Originally, the European guestworker flows were cyclical; foreign nationals flowed into Northern European countries when demand was high and left when it was low, with little effect on the unemployment rate of the host country. As work contracts were renewed, however, many guestworkers began to put down roots in the host countries, marrying locally or bringing their wives and children from home. When the recession struck in 1974, increased job competition caused bans to be placed on new immigration by the host countries. While some guestworkers returned home, most stayed, and many entered the unemployment rolls. While guestworkers of the sixties and seventies were generally men with some skills, those of the eighties are more often their wives and children, plus applicants for political asylum, many of whom lack job skills.

These new problems that Europe has had to confront sound familiar to us. They include language as well as social and cultural differences. Foreigners tend to live in the large urban areas. The foreign youth of working age constitute a substantial and growing part of the youth unemployment problems which Europe confronts today—just as minority youth in the United States have a much harder time than others in finding successful job experiences.

Dynamics of the Labor Market

While all of the issues I have thus far discussed—developments in productivity and costs and the demographic and social trends—are very important, no aspect of American job creation is more important than the dynamic nature of the U.S. labor market.

The job market in this country reflects a continuing flow of activity. The figures on employment and unemployment which are announced each month represent a snapshot of that particular month. But the monthly figures mask the very large flows of people entering and leaving the labor force or changing their employment status during the course of a month and from one month to the next.

In 1985, the number of people unemployed in an average month in the United States was about 8.3 million. But the number of workers who experienced some spell of unemployment throughout the year was 2½ times that number. Most people have relatively short spells of unemployment, which are interspersed frequently with periods of employment and of inactive labor force status. In fact, if we compare the group of people who were unemployed in a given month with the group unemployed in the following month, we find that, in normal times, only about half are still unemployed, a quarter have found jobs,

and about a quarter have left the labor force entirely. European countries have much lower levels of these labor market flows than we do.

Possibly the best evidence of the differences in labor market dynamics are the disparities between the United States and Europe in unemployment duration and in job creation. In the United States, even during the 1981-1982 recession, the median duration of unemployment was only about 2½ months; in Europe, the average ranged from 7 to 10 months for most countries. As recently as 1985, the most recent data available, at least one out of three of the British, French, Italian, and German unemployed had been out of work for one year or longer. In contrast, fewer than one out of ten of the American unemployed had been jobless that long.

The point is that American workers tend to move into and out of employment and unemployment with some frequency, whereas European joblessness tends to reflect a much larger group of long-term unemployed.

In terms of job creation, the United States has had extraordinarily large employment growth compared with Europe. Since 1970, as the U.S. labor force has increased, employment had grown by about 30 million. In the four largest European countries, whose combined population closely approximates our own, employment has changed little since 1970.

Why does the United States have more labor mobility, labor market flows, more short-term unemployment, and more job creation than Europe? Certainly differences in history and cultural attitudes play an important role in mobility patterns. European workers are far less likely to change jobs voluntarily than their American counterparts. There is also less of a tendency to change residence in search of jobs. In the United States, mobility is considered desirable, even though the search for a better job may entail some unemployment. We Americans are still experiencing dramatic shifts in regional economic development and opportunity. In addition, our young people tend to do more job-changing before settling into more permanent careers than do European youth.

It is much more than history, tradition, and sectoral shifts that explain these labor market differences. Institutional differences are also important, as are differences in the social insurance systems of the United States and Europe. There are also international differences in layoff practices and job-security procedures. In Europe, employers often cut working hours during periods of reduced orders; the lost

hours are reimbursed by government-subsidized benefits. These short-time work mechanisms can keep hundreds of thousands of European workers from being listed as unemployed during a recession.

Most of the European-style job security and job continuity practices are absent or are much weaker in the United States. American employers are quicker to respond to labor market conditions by hiring or dismissing workers. In general, American workers must be fully unemployed to collect unemployment benefits.

We do have some signs of change, however. U.S. legislation now allows the use of unemployment insurance to compensate workers who have had their hours reduced; presently, 12 states have incorporated this option into their unemployment insurance system. In Europe, some countries have cut back on employment security by reducing the scope and coverage of their legislation in recent years, making it somewhat easier for employers to hire and fire.

Outlook

Currently, there are some 19 million persons unemployed in the industrial countries of Europe and about 8.2 million jobless in the United States. The all-Europe unemployment rate of 11 percent is far above our own, which represents a reversal of historical relationships.

Since the 1981-1982 recession, the U.S. employment situation has improved markedly. The jobless rate has declined from almost 11 to 7 percent, and employment has increased by more than 11 million. But improvement has been much slower in Europe. In fact, most of the forecasts suggest very slow improvement in unemployment in most European countries for the near future.

Structural declines are occurring in several major industries on both sides of the Atlantic, and high joblessness among the minority population is a matter of great concern in both Europe and the United States. But the fact that Europe has a much larger group of long-term unemployed persons than we do suggests that the road back to labor market health will be rockier abroad than it has been here.

The success of the U.S. economy rests partly on Europe. The scope for a purely national recovery is limited, because all developed countries have become inextricably linked together by world trade, capital flows, exchange rates, and the international monetary system. Foreign trade has long been a crucial part of European prosperity and, despite our well-publicized trade deficit, is still a crucial part of our own prosperity. More than ever, we are an interdependent part of a world economy.

Flexibility and Unemployment: The View from Western Europe*

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The economies of Western Europe are, by comparison with the United States, small and open. Each country in the region is constrained by the requirements of external equilibrium, and it is no surprise that gross domestic product (GDP) growth rates have fallen over the last decade broadly in line with the growth of world trade. What is less easy to explain is the wide difference in unemployment performance. Austria, Norway, and Sweden had rates of unemployment in 1985 of below 4 percent (OECD standardised data); Germany (8.6 percent), Denmark (8.9 percent), France (10.1 percent), and Italy (10.5 percent) constitute a middle range of countries, and in Belgium, the Netherlands, and the United Kingdom the rates of unemployment were 13 or 14 percent.

Two types of explanation have been proffered to account for these differences: (1) Unemployment has remained high in those countries in which wage and employment flexibility at the microeconomic level have been low, i.e., in practical terms where wages are determined by collective bargaining and where the cost of firing is high. This type of position has often been associated with an anti-Keynesian view of macroeconomics and an emphasis on the beneficial consequences for employment of cutting government expenditures. (2) Low unemployment has required the adoption of Keynesian policies of aggregate demand management, at least within the limits allowed by the external constraint, and where "corporatist" wage-setting institutions have sufficiently moderated real wage growth to ensure that international competitiveness and inflation goals have not been put at risk.

The increasing weight of evidence favors the second of these two views—which I shall refer to as Institutional Keynesian—at least to

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explain differential performance within Western Europe.¹ This evidence takes the form of the ability of macroeconomic models to explain a large proportion of the variance of unemployment by reference to aggregate demand policies and wage-setting institutions.

As a full explanation, however, Institutional Keynesianism does not go far enough. It is, in the first place, macrocentric. That is to say, it concentrates on questions of aggregate demand management and economy-wide real wage developments. I do not mean by this that the micro-foundations of the macro theory are inadequate: indeed, a strong point of Bruno and Sachs (1985) and Layard and Nickell (1985) is that the macro results are well grounded in micro theory. But the approach has paid little attention to adjustment at company and industry levels: the search for new markets, product innovation, labor force retraining, employment security, and so on.

In the second place, there is no discussion of why some countries did deflate and others did not, nor a discussion of micro policy changes, especially in relation to employment security, the relevance of which will be made clear below. Sweden, Austria, and Norway did not deflate, while Germany, Denmark, and the Netherlands did; yet all six countries had some institutional capacity for real wage moderation. Sweden increased employment security arrangements, while the U.K. and France reduced them. This suggests that consideration of political strategies cannot be avoided.²

Some progress can be made to a fuller understanding of differential unemployment performance in Western Europe if all of these elements are considered together:³ the role of Keynesian aggregate demand management; institutional capacity for real wage moderation; adjustment at company and industry levels; and the political choice for or against deflation and employment security.

In what follows each element is addressed in turn. I explain, first, why deflationary Keynesian policies have been more damaging for employment than standard short-run Keynesian models would predict; second, how an understanding of the institutional capacity for wage restraint should go beyond an assessment of the centralising role of unions to an understanding of political bargains on the one hand and of workforce consensus on the other; third, how the latter should

¹ See Bean, Layard, and Nickell (1986), Newall and Symons (1986), Metcalf (1986), Layard and Nickell (1985), and Bruno and Sachs (1985).

² See Garrett and Lange (1986), Goldthorpe (1984), and Therborn (1986).

³ Both Rowthorn and Glyn (1986) and Therborn (1986) adopt an integrated perspective along related lines.

direct attention to company-level practices; and finally, how political strategies tie these elements together.

The argument of this paper—and it is a tentative one—is that the low unemployment countries have benefitted from an interlinked “package”: (1) company- and industry-level adjustment which has stressed retraining, on-the-job flexibility, and product innovation, and thus been consistent with employment security (within limits) and which has required other appropriate institutions (financial, educational, training, etc.); (2) macro real wage moderation with workforce consensus, derived from company-level adjustment practices including employment security, of course reinforced by encompassing unions and powerful employer associations; and (3) a political bargain in exchange to use aggregate demand management as far as possible and maintain employment security.

Keynesian Demand Management

The modern macro theories referred to above stress the use of unemployment to hold down real wage growth to a rate consistent with the requirements of profitability and international competitiveness, for any given degree of union cooperation. In those countries in which such cooperation has either not been sought or not been forthcoming, governments have had to resort to increased unemployment to maintain competitiveness in the face of external shocks. But it has become evident from the experience of the past decade that sharp deflationary policies may have adverse longer-term consequences, especially if they alter long-term expectations (Allsopp, 1986):

1. Prolonged deflation, initially reflected in spare capacity, leads eventually to scrapping and increased profit margins. This requires a higher level of unemployment in the medium/long term as attempted expansion runs into inflation and capacity shortages. (Capacity utilisation and profitability in Western Europe are now back to their pre-1974 levels.)

2. A similar argument relates to the training of skilled workers. To the extent to which training is carried out by individual companies, the consequence of reduced growth expectations has been a reduction in training; this has led to shortages of skilled labor at high levels of average unemployment, and thus required further rises in unemployment to bring about sufficient moderation in real wage behaviour.

3. The average duration of unemployment rises with the rate of unemployment. The long-term unemployed, however, have a much reduced impact on union bargaining power, thus increasing the rise in

unemployment needed to produce a given degree of real wage moderation.

In addition to these effects of deflationary policies on the wage-price nexus, those countries which generated deflation by a tight monetary policy and, hence, a high exchange rate suffered a different sort of ratchet effect:

4. The high exchange rate forced some exporters out of foreign markets and eliminated domestic capacity in some areas of import competition. But there is an asymmetry between exit from and reentry into markets: a subsequent lower exchange rate has not restored the trade balance to where it was before the period of tight money. Thus the tightened requirement of external equilibrium implies a permanently higher level of unemployment.

Finally, those governments firmly committed to the elimination of public-sector deficits (PSDs) were forced into highly deflationary policies:

5. The combination of the slow-down in GDP growth (because of world trade) and of increased real interest rates (because of tight monetary policy in the early 1980s, especially in the U.S.) pushed up PSDs in most countries. In countries where anti-PSD policies did bite, private-sector investment did not fill the gap left by cuts in public expenditure, as crowding-out theory would predict, because the private sector was faced by the same combination.

6. In countries such as the Netherlands with high social welfare compensation for unemployment, the deflation required for a given improvement in the PSD is higher than elsewhere.

Real Wage Moderation

There is still disagreement about why some countries are more capable of real wage restraint than others. Much work has emphasised the importance of powerful encompassing unions, i.e., a union which knows that its decisions on wage increases will apply in one way or another to a large proportion of workers in the economy. More recent work has pointed to the way in which powerful employer organisations may strengthen unions in wage moderation or even substitute for them. Thus a list of institutional predispositions to wage moderation would start with:

1. Powerful encompassing unions and/or employer organisations. This includes Sweden, Austria, and Norway, and also, among the less good performers on unemployment, Germany and the Netherlands.

But two further factors are necessary:

2. Even with powerful central organisations there has to be considerable workforce consensus, at least in well-organised plants. For this, one element of importance is some fairness in wage increases, usually in the form of similar percentage rises, but another element is the relative importance of factors other than wages in the employment package (such as employment security, opportunity for skills acquisition, adequate grievance procedures, work conditions, and participation in decision-making). However powerful the central organisation, its ability to moderate wages depends on the acceptance by the majority of the workforce that it is reasonable.

3. It has to pay the central organisation to go along with wage moderation. That, in turn, depends on the bargains that can be struck with governments on macroeconomic and other policies, and thus on the believed strategies of the main actors (including threat and delivery credibilities), the degree of trust and consensus in the system, and the political and electoral situation.

Adjustment at Company and Industry Levels

If employment security is important in order to secure workforce consensus for real wage restraint, how could that be economically feasible for companies faced by declining markets and increased international competition? Many European countries reacted in the mid-1970s with employment security measures in the face of external shocks, but they were fully maintained only in Austria, Norway, Sweden, and Germany. Why were business and government prepared to put up with these arrangements in these countries, but not elsewhere to the same extent? The answer is in part political (next section); it is also economic. As Streeck (1985) and others have argued, the cost to a company of employment security depends upon the extent to which, faced with an external shock, it can increase product innovation, capture additional markets, and thus employ the workers it might otherwise have wished to have fired. This typically involves retraining workers, investing more heavily in R&D, and implementing rapid changes in production processes. A number of factors appear as important determinants of the ability of companies to operate in this way: (1) Whether industrial financing in the country in question permits the company to take a long-term view. If it does not (generally where financial institutions have little commitment to industry, where takeover activity is important, and where share prices reflect current profitability so that training and R&D depress share values), the product innovating company is at a disadvantage. (2) Effectiveness of

retraining. This depends on the basic training and education system in the economy, since that determines the "retrainability" of workers; on the degree of coordination between companies, effective coordination being necessary to prevent poaching of trained workers; and on the extent of on-the-job flexibility of trained workers. (3) Consensus-based systems of plant-level industrial relations. (4) Local/regional/national government/employer federation/financial institution aid in restructuring and R&D.

Where these factors are present (Austria, Germany, Norway, Sweden), they make employment security—which employers will seldom welcome, especially in a period requiring rapid adjustment—less of a burden to companies. Where they are substantially absent (the U.K., much of French and some Italian industry), employment security becomes exceptionally costly, implying overmanning, bankruptcies, etc. In the Netherlands, Denmark, and Belgium, some of the above conditions hold, though to a lesser extent than in the first group of countries cited, but employment security in none of them has been as strong as in the first group.

Political Strategies

Decisions about employment security and aggregate demand policy rest largely with the state. Of the countries discussed, three (Austria, Norway, and Sweden) have maintained employment security and avoided deflationary policies. Germany and, to some extent, Italy have maintained employment security, but have also adopted deflationary policies. The U.K., France, the Netherlands, Belgium, and Denmark have each weakened or dismantled employment security provisions and adopted deflationary aggregate demand policies. This combination has been particularly damaging for employment.

These strategies were in part imposed by "economic/institutional feasibility," or the lack of it, and in part by political choice. The final part of the argument of this paper is that it was the relative political strength of business which determined whether deflationary policies were pursued, given "economic/institutional feasibility." Deflation and weakened security reduced the cost to business of restructuring through redundancies, closures, and relocation, but the greater the "economic/institutional feasibility," the lower the effective cost of lengthier procedures, and hence the less intense business hostility. In each of the countries that adopted deflationary and/or anti-employment security policies, either the economic and institutional

feasibility of maintaining employment security was low, or business strength was relatively high. Feasibility was discussed in the last section; business strength has derived both from powerful coordinated business organisations and from right-of-centre governments who are electorally unharmed by high unemployment. France was forced into deflationary policies, despite a Socialist government, because of low feasibility; in Germany, business power has been sufficiently strong under the current Christian Democratic government for deflationary policies to be adopted, despite "high" feasibility; in the Netherlands and Belgium, the power of business organisation has also ruled out a low unemployment option (Katzenstein, 1985). The low unemployment countries, by contrast, had left-wing governments (most of the time) and high feasibility, and when in Sweden the government was right-wing, it feared the electoral consequences of deflationary policies. Thus, Austria, Norway, and Sweden were able to maintain low unemployment.

Concluding Remarks

This tentative account of differential unemployment performance in Western Europe raises more questions than it answers. I hope to have made two points effectively: first, that the life of institutions makes modern economies much more complex than simple textbook analyses would suggest, and that the focus of "corporatist" theorists may have been too narrow. It may be that too much emphasis has been placed on the centralising capacities of trade unions and/or employer federations (important though those capacities are), and not enough thought given (a) to all those institutions relevant to the understanding of adjustment at company and industry levels, i.e., to financial institutions, training and retraining systems, the educational system, R&D institutions, the role of central and local government in industrial change, and, most important, to the ways in which industrial relations operates and in which decisions are made in the plant and the company; and (b) to political parties, their strategies, their relations with peak union and employer organisations, and their perceptions of changing economic behaviour.

Second, the policies of European countries which have been successful in holding down unemployment may in part rest on the type of "rigidities" the removal of which laissez-faire exponents of labour-market flexibility see as a necessary condition of employment growth. This reflects a contrast between two approaches to economic adjustment: one which stresses the importance of allowing businesses

to make their own decisions, in particular in relation to the size of the workforce, and sees employment adjustment as taking place in the external labour market; the other which stresses retraining within the company aided by external agencies as the focus of employment adjustment and as part of a wider package of economic/institutional policies.

References

- Allsopp, C. J. "Keynesian Policies in Western Europe." Mimeo. Oxford, 1986.
- Bean, C. R., P. R. G. Layard, and S. J. Nickell. "The Rise in Unemployment: A Multi-Country Study." *Economica* (1986 Supp.), pp. S1-S22.
- Bruno, M., and J. Sachs. *The Economics of Worldwide Stagflation*. Oxford: Basil Blackwell, 1985.
- Garrett, G., and P. Lange. "The Political Economy of Stagflation." Mimeo. Oxford, 1986.
- Goldthorpe, J. H. "The End of Convergence: Corporatist and Dualist Tendencies in Modern Western Societies." In *Order and Conflict in Contemporary Capitalism*, ed. J. H. Goldthorpe. Oxford: Clarendon Press, 1984.
- Katzenstein, P. "Small States in World Markets." Cornell, 1985.
- Layard, P. R. G., and S. J. Nickell. "The Causes of British Unemployment." *National Institute Economic Review* 1 (1985).
- Metcalf, D. M. "Labour Market Flexibility and Jobs." Discussion Paper No. 254, Centre for Labour Economics, London School of Economics, 1986.
- Newall, A., and J. S. V. Symons. "Wages and Employment in the OECD Countries." *Economic Journal* (forthcoming).
- Rowthorn, B., and A. J. Glyn. "The Diversity of Unemployment Experience Since 1973." Mimeo. Helsinki, 1986.
- Streeck, W. "Introduction." In *Industrial Relations and Technical Change in the British, Italian, and German Automobile Industry*, ed. W. Streeck. Berlin: International Institute of Management, 1985.
- Therborn, G. *Why Some People Are More Unemployed Than Others*. London: Verso, 1986.

How Flexible is Flexible? The United States Labor Market Versus Western Europe

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For years many Americans have cast longing looks at several Western European nations as models for various labor market policies and social welfare efforts. Sweden, for example, often was pointed to as an example of a nation that had found a “middle way” between capitalism and socialism. In recent years Japan also has been used as a paradigm by many American experts of the world of work (Lundberg, 1985; Levitan and Werneke, 1984, pp. 46-53).

However, the direction of the longing looks appears to have changed in the 1980s. Recently many foreign decision-makers have come to the United States to learn more about American labor markets. It is not unusual for American labor economists to meet with European and Japanese experts. However, the number of foreign “students” of American labor markets (who have come to the U.S. to do fieldwork) seems to have shown a very significant increase in recent years. If my experiences are representative of these meetings, foreign economists most often express a sense of amazement concerning the degree of “flexibility” shown by American labor markets. If only foreign labor markets could be made more flexible, then many problems would be solved, my foreign guests have often told me during these meetings.

In light of these meetings, this paper examines several basic questions surrounding American labor markets and flexibility. Beyond anecdotal “facts,” what statistical evidence supports the hypothesis that flexibility has increased in recent years within U.S. labor markets? Also, what are the potential benefits and costs of increased labor market flexibility? We often hear the “good side” of increased flexibility, but what about a potential “dark side” associated with the recent changes?

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Flexibility can be defined in various ways. Webster's dictionary uses such words as "adaptable, elastic, supple, resilient," and "pliable" to describe flexibility. In terms of labor markets, I understand flexibility to mean that compensation, employment levels, and workrules are highly responsive to economic variables.

The major conclusions of this study can be summarized by the following two points:

1. Compensation patterns for American workers are now at least 20 percent more responsive to economic factors, such as unemployment and prices, than they were in, say, the mid-1970s.

2. Real wage rigidity is about 50 percent stronger in Western Europe than it is in the U.S. However, real wage rigidity is more than 50 percent stronger in the U.S. than it is in Japan.

Flexibility and Rigidity

The evidence that American labor markets have become more flexible in recent years comes from several sources. Consider three of the major econometric models of the U.S. economy (i.e., Data Resources, Chase Econometrics, and Wharton). At the heart of these models are strings of simultaneous equations. Each equation (or group of equations) represents a part of the economy. Building an econometric model, however, is not a "one time" event. Good econometricians must always go back out into the field and rebuild their equations as the economy experiences structural shifts.

Thus, while it is wrong to present these econometric models as "gospel" depictions of the American economy, they can provide good "indications" of significant structural trends. The adjustments that are made to these models are not based on whims. Rather the changes are based on new statistical findings.

With the above in mind, the Conference Board asked labor market econometricians at Data Resources, Chase Econometrics, and Wharton a series of questions concerning American labor market flexibility. The general findings are presented in Table 1. As indicated, American wage trends currently appear to be more responsive to both unemployment and prices than they were in the mid-1970s. These estimates indicate why the deceleration of American wage growth has been much more rapid, and long-term, in the 1980s than most "experts" had predicted.

The estimates presented in Table 1 are made with the usual "all other things being equal" caveat. However, all other things have not remained equal in the "rough and tumble" 1980s. For example,

TABLE 1
Estimated Shifts in U.S. Labor Market Behavior^a
(Percentage Points)

Data Resources		Chase Econometrics		Wharton	
1976	1986	1976	1986	1976	1986
1. What would happen to the annual rate of growth of wages if unemployment increased by 1.0 percentage point?					
less than -0.3	-0.4	-0.2	-0.5	-0.5	-0.6
2. What would happen to the annual rate of growth of prices if unemployment increased by 1.0 percentage point?					
-0.09	-0.12	-0.25	-0.36	^b	-0.4
3. If prices increase by 1 percent, how much would wages increase in one year?					
0.6%	0.7%	less than 1%	1.0%	0.5%	0.7%

^a Estimates by the Data Resources, Chase Econometrics, and Wharton are based on the 1986 version of these models and the versions that existed in 1976.

^b No estimate.

imports (which have grown in the 1980s) appear to have a significant impact on wage growth. Data Resources currently estimates that a 10 percent increase in the share of imports divided by real consumer spending will decrease wage growth rates by 1 percent. Also, a 10 percent fall in corporate profits will result in a 3 percent decrease in the wage growth rate, Data Resources estimates.

Thus, American labor market responsiveness, or flexibility, to economic forces appears to have grown in recent years, according to leading econometric evidence. Hence, the talk of a "new flexibility" appears to have sound statistical support, and it is *not* just the invention of the media (as some labor economists have charged). Even if one wishes to make a very "conservative" estimate, it appears that compensation patterns for American workers are now at least 20 percent more responsive to economic factors (such as unemployment and prices) than they were in, say, the mid-1970s.

America and Europe

In recent years the relative rate of net job growth has been higher in the U.S. than it has been in Europe. At the same time, the relative rate of labor cost growth has been smaller in the U.S. than it has been in Europe. While Europe may have a shortage of jobs, there has been no shortage of economists pushing their theories as to what is causing

the problem. In general, the various reasons given for Europe's labor market difficulties can be listed as follows:

1. *Keynesian aggregate demand problems.* Following a general Keynesian view, this theory would place the lack of net job growth at the doors of restrictive monetary and fiscal policies. Lower aggregate demand (than what should have been generated) has led to lower demand for labor, it is argued.

2. *International trade.* Analysts who point to this factor insist that trade from low-wage countries (and even high-wage Japan and North America) have taken away jobs from Europeans.

3. *Low productivity and poor technological growth.* These theories point to low productivity increases and a lag in European technological advancement (compared to Japan and the U.S.) as resulting in lower demand for European labor (Rostow, 1983).

4. *Euroclerosis.* Analysts who use this term argue that European social and political factors have created rigidities in many markets. A large welfare state, strong labor unions, etc., have blunted the market mechanism, it is asserted. The net result has often been higher real wage levels than are warranted. Real wage levels might also be very rigid, Euroclerosis advocates note.¹

5. *Hysteresis.* This theory concludes that as a nation falls into the trap of higher unemployment rates, it may become more difficult to get out of this trap as time marches on (Blanchard and Summers, 1986).

How much weight should be given to the various theories noted above. Table 2 presents some data that tries to measure the importance of the different theories (Bruno, 1986). First, the total changes in a nation's unemployment (for a given time period) are considered to be equal to 100 percent. Then, the following question is asked: How much of a nation's total change in unemployment was due to, say, aggregate demand problems (i.e., Keynesian factors), real wage problems, or "other factors?"

The estimates presented in Table 2 indicate that unemployment due to real wage problems was more serious in Europe than in the U.S. In fact, so-called "real wage problems" *reduced* unemployment in the U.S. in the 1978-1982 period. Thus, real wage adjustments were *not* a problem for the U.S. in this period—they were a blessing! Real wage adjustments in the U.S. (combined with "other factors") exerted an

¹ For more analysis of these theories, see Bean, Layard, and Nickell (1986) and Artus (1984).

TABLE 2
What Caused Unemployment to Change?^a
(Percent)

	U.S.		West Germany		U.K.		France	
	1974-78	1978-82	1974-78	1978-82	1974-78	1978-82	1974-78	1978-82
Total change in unemployment	100%	100%	100%	100%	100%	100%	100%	100%
Change due to real wage problems	+3	-3	+44	+52	+81	+61	+23	+29
Change due to aggregate demand problems	+91	+108	+51	+48	+26	+32	+77	+68
Change due to other factors	+6	-5	+5	0	-7	+7	0	+3

^a Based on estimates by Bruno (1986).

influence that reduced unemployment in America in this period. Meanwhile, real wage problems exerted a strong negative influence in West Germany, the U.K., and France that increased unemployment in this period.

Thus, it appears that real wage problems have been a much more serious factor in Europe than they have been for the U.S. However, Table 2 also indicates that aggregate demand problems have had a significant impact on both European and American labor market conditions in this period. Real wage problems do *not* explain all unemployment trends in Europe and America, and falling real wages (with no other changes) would not have produced the Garden of Eden.

Table 2 estimates of "other factors" is an attempt to look at labor market (supply side) mobility issues. Given these estimates, constraints on labor mobility do not seem to be a big factor behind European unemployment. This finding is supported by other evidence. For example, Flanagan (1986) has concluded that labor supply constraints cannot explain that much of Europe's high unemployment rates. However, he does find evidence that labor demand issues (i.e., restrictions on the ability of firms to set internal performance incentives for workers) has made European employers more "cautious about hiring" new workers.

Real Wage Rigidity

Given the above evidence, it appears that wage rigidities have had a significant impact on labor market results. The *real wage rigidity index*, presented in Table 3, measures how responsive a nation's wage

TABLE 3
Real Wage Rigidity in Various Nations^a
(U.S. = 100)

	Real Wage Rigidity ^b
U.S.	100.0
West Germany	162.7
France	126.9
U.K.	189.6
Italy	120.9
Austria	123.9
Netherlands	159.7
Japan	41.8

^a Index estimates are based on elasticity findings by OECD. See Coe (1985) and Klau and Mittelstadt (1986). Estimates are based on the 1973-83 period.

^b The index of real wage rigidity is calculated as follows: (a) a nation's elasticity of money wages with respect to prices is divided by a nation's elasticity of money wages with respect to unemployment; (b) a nation's index is then restated in terms of the U.S. equaling 100.

rates are to various economic forces. For example, when unemployment or prices change, do real wage levels change? The index is based on estimates of a nation's money wage elasticities with respect to both unemployment and prices. The level of real wage rigidity that exists in the U.S. has been given an index number that equals 100. Hence, conditions in other countries have been presented "relative" to the U.S. The higher the index number, the less responsive is a nation's real wage to economic forces.

As shown in Table 3, it appears that real wage rigidity is much higher in West Germany, France, the U.K., Italy, Austria, and the Netherlands, than it is in America. For example, the real wage rigidity index is almost 90 percent stronger in the U.K. than it is in the U.S. In general, it appears that real wage rigidity is about 50 percent greater in Europe than it is in the U.S. However, real wage rigidity appears to be at least 50 percent greater in America than it is in Japan.

Benefits and Costs

In recent examinations of labor markets, flexibility often has been presented as a "good thing" while administered (or very rigid) labor

markets have been presented as an "evil." I think this is the wrong way to look at the situation. Greater flexibility has many strong points, but it also raises serious policy issues. It has been argued that high flexibility helps a nation produce many more jobs than what would have been generated under administered labor markets. High flexibility also helps a nation respond to numerous economic and social changes, it is argued.

But high labor market flexibility also may generate unwanted "by-products." For example:

1. Will very flexible labor markets create even more income inequality and/or inequality of opportunity?
2. Will this type of labor market produce more jobs without basic benefits (such as health and hospital coverage)?
3. Will very flexible labor markets create more "dead-end" jobs and/or segmented labor markets?
4. Will public policy-makers be able to sustain basic health, safety, and "fair" labor standards in this more "flexible environment"?

The real challenge in the field of American human resource policy may be to obtain the benefits of very flexible labor markets and, at the same time, minimize the social costs. Flexibility—despite numerous social benefits—is *not* an unmixed blessing for society, workers, and even employers.

References

- Artus, J. C. "An Empirical Evaluation of the Disequilibrium Real Wage Hypothesis." *International Monetary Fund Staff Papers* (June 1984), pp. 249-302.
- Bean, C. R., P.R.G. Layard, and S. Nickell. "The Rise in Unemployment: A Multi-Country Study." *Economica* (1986 Supp.), pp. S1-S22.
- Blanchard, O. J., and L. H. Summers. "Hysteresis and European Unemployment." National Bureau of Economic Research, Working Paper 1950. Cambridge, MA: NBER, 1986.
- Bruno, Michael. "Aggregate Supply and Demand Factors in OECD Unemployment: An Update." *Economica* (1986 Supp.), pp. S35-S52.
- Coe, David. "Nominal Wages, The NAIRU and Wage Flexibility." *OECD Economic Studies*, No. 5 (Autumn 1985).
- Flanagan, Robert J. "Labor Market Behavior and European Economic Growth." Paper presented at the Brookings Institution Conference on "Impediments to European Economic Growth," October 1986.
- Klau, Friedrich, and Axel Mittelstadt. "Labour Market Flexibility." *OECD Economic Studies*, No. 6 (Spring 1986).
- Levitan, Sar A., and Diane Werneke. *Productivity: Problems, Prospects, and Policies*. Baltimore: Johns Hopkins University Press, 1984.
- Lundberg, Erik. "The Rise and Fall of the Swedish Model." *Journal of Economic Literature* (March 1985), pp. 1-36.
- Rostow, W. W. "Technology and Unemployment in the Western World." *Challenge* (March/April 1983).

DISCUSSION

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A common theme in the papers by Janet Norwood and Richard Belous is that a key contrast between the labor market experience of the U.S. and Europe is that America has shown a steady growth of employment and cyclical reductions in unemployment, while Europe has seen only marginal employment growth and persistently high unemployment. At a disaggregated level this has been manifest in lower European female and older-worker participation rates and higher unemployment among youths and migrant workers. It should be emphasized that this does not simply represent a slower recovery in Europe; rather, it is indicative of a longer-term fundamental problem. It was evident after the first OPEC-induced recession in the mid-1970s, as well as after the second OPEC-caused slump in the early 1980s.

The causes of this enduring contrast are the focus of this discussion. The authors both emphasize labor market factors rather than aggregate demand. First, wage-setting mechanisms are implicitly blamed by Norwood for relatively fast wage cost growth and hence relatively high unit labor cost growth, and by Belous for real wage rigidity which prevents labor market clearing. Second, employers are said to be slow to hire workers and individuals are reluctant to take up employment due to the fixed costs of employment (such as social insurance and layoff practices) and mobility costs. In other words, European labor markets suffer from so-called Euroclerosis in wage and employment determination. This diagnosis provokes two questions, the answers to which develop and extend the analysis in the papers. First, what might be the underlying industrial relations causes of real wage rigidity in Europe? Second, can Euroclerosis explain the divergence of experience between the U.S. and Europe in the 1980s as appropriately as in the 1970s?

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With regard to the labor relations roots of real wage rigidity, space limitations prevent anything but a broad indication of types of probable pertinent influences. Recent literature has tended to emphasize the importance of bargaining structures (for example, Bruno and Sachs, 1985; Crouch, 1983). First, it is argued that corporatist countries (where the major economic groups, rather than individuals, determine wages) are able to restrain wages to a greater degree. It is held that informational inefficiencies regarding the impact of economic shocks on the economy are reduced, interunion competition is minimized, and economic and social *quid pro quos* for restraint can be negotiated with the government. Corporatist economies are characterized by national-level negotiations, employer coordination, central union autonomy, and weak local union representatives. Second, it is believed that the price-sensitivity of negotiators, and hence real wage rigidity, is greater where there are shorter agreements, and wage indexation and synchronization.

Such structural determinism appears overly simple. Corporatism does not guarantee pay restraint. For example, in the U.K., immediately following the first OPEC price increases, corporatist talks led to the most inflationary wage deals in postwar history. In Sweden, under centralized negotiations the union confederations gained increases beyond what could be justified by competitiveness criteria after the first OPEC shock. Conversely, noncorporatist countries, such as the U.K. under Thatcher, achieved substantial wage restraint in the 1980s. The implication is that whether any set of institutional arrangements dampens wage inflation depends on other factors, especially the attitudes and relative power of management, unions, and government. Future research should study all these variables, rather than assume them to be correlated with institutions.

Concerning the issue of the applicability of the Euroclerosis thesis to the 1970s and 1980s equally, it appears that while rigidity in wage and employment determination was still important in the explanation of the divergence of U.S. and European experience in the 1980s, it was less significant than in the 1970s. There is both statistical and qualitative evidence to support this view.

In the sphere of wage determination, real wage rigidity in Europe as a whole actually diminished after 1981. For example, Holland, Sweden, Italy, and Norway began to see less rigidity in the late 1970s, as did Germany and Belgium in 1981. France and the U.K. were slower to change (Bruno, 1986). In addition, the share of responsibility for unemployment borne by real wage stickiness fell in most European

countries around the same time, aggregate demand accounting for more than previously.

Qualitative evidence shows that, at the same time, changes were occurring in theoretically relevant factors, namely, bargaining structures, and the strategies and power of managements, unions, and governments. Notably, bargaining became more decentralized. In the U.K., employers wanted plant bargaining to a greater extent in order to avoid wage cost increases that could not be afforded. Employers in Holland, too, were happy to see free bargaining replace tripartite bargaining at the center during the recession. Swedish employers also wanted greater flexibility. Unions were generally weakened by unemployment and industrial action was moderated. Governments in some countries also imposed wage controls, as in Holland in 1980 and 1981, and Sweden in 1985.

Employment determination became less inflexible, too, in the 1980s, employers being more ready to hire and fire. While this may have augured well for employment growth in economic upturns, in the demand-deficient context of the 1980s the impact was felt mainly in terms of greater unemployment. Employers in the OPEC recession in the 1970s hoarded labor (as partly revealed in the greater incidence of unemployment among youths rather than incumbent adult workers), but, in the 1980s, in the face of uncertainty over a return to former growth paths, indulged in a "shake-out" of labor. Where workers were taken on by firms, it was increasingly as part-time or temporary employees. The share of part-time workers in total employment exhibited increases above trend in Holland after 1979, and in the U.K., Sweden, Germany, and France after 1981 (Neubourg, 1985). Although data for all countries are not available, temporary employment also appeared to increase (Meager, 1985). The change in employer manpower strategy was aided by various legal changes which reduced the fixed costs of employment in many countries.

The implication of this analysis is that aggregate demand underlay more of the European unemployment and employment problem in the 1980s than in the 1970s. Indeed, European fiscal and monetary policies were generally more restrictive in the latter period. In the mid-1970s, Italy and the U.K. actually adopted expansionary policies in the immediate wake of the recession, before eventually restraining the money supply like Germany. In contrast, after the second OPEC crisis all the major European powers restricted demand, and continued to do so even into the mid-1980s. Governments were scared of a renewal of inflation; some were adherents to the monetarist ideology, and there

was a general vehement opposition to a growth of the labor-intensive public sector.

Important policy implications follow from this discussion. First, to the extent that Euroclerosis is still a problem, institutional reform is insufficient for reduced real wage rigidity: the parties to collective bargaining have to be coaxed or forced into less inflationary strategies. Second, even if Euroclerosis is reduced, unemployment will not necessarily fall and employment grow until the fiscal and monetary environment becomes more accommodating.

References

- Bruno, Michael. "Aggregate Supply and Demand Factors in OECD Unemployment: An Update." *Economica* (1986 Supp.), pp. S35-S52.
- Bruno, Michael, and Jeffrey Sachs. *The Economics of Worldwide Stagflation*. Oxford: Basil Blackwell, 1985.
- Crouch, Colin. "The Conditions for Trade-Union Wage Restraint: An International Comparison." In *The Politics and Sociology of Global Inflation*, eds. C. Maier and L. Lindberg. Washington: Brookings Institution, 1983.
- Meager, Nigel. *Temporary Work in Britain: Its Growth and Changing Rationales*. Sussex, England: Institute of Manpower Studies, 1985.
- Neubourg, Chris de. "Part-time Work: An International Quantitative Comparison." *International Labour Review* 124 (September-October 1985).

VI. CHANGES IN LABOR RELATIONS: THEIR IMPACT ON UNION STRUCTURE

New Developments in Union Structure in the U.S. Auto Industry

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In response to economic pressures, labor relations in the U.S. auto industry recently deviated significantly from past patterns. Much of the analysis of auto labor relations has focused on the nature and implications of contract settlements and worker and union participation programs (Katz, 1985). This paper discusses developments under way in union structure in the auto industry which have had and are likely to continue to have important effects on labor and management. Attention focuses on the decline in the extent of union organization in the industry; the secession of the Canadian autoworkers from the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW); and the erosion of the traditional connective bargaining structure within the U.S. auto industry associated with the increasing variation across plant (local) agreements. In addition to identifying what is happening in these three areas, my intent is to identify the factors that caused the changes in union structure and suggest some of the long-term consequences of those changes.

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The Decline in the Extent of Union Organization

One of the most important developments involving union structure in the auto industry is a decline in the extent of the auto industry that is unionized. The pace and extent of the decline in union organization differs among the independent parts companies (suppliers) and the integrated companies (assemblers) who assemble the vehicles in addition to producing a number of vehicle parts.¹ Department of Labor survey statistics suggest that 95 percent of the parts suppliers were unionized in 1957 and this number had fallen to 60 percent unionized as of 1983.² My guess is that the current extent of unionization in the supplier-parts sector is much lower than 60 percent, given the heightened competitiveness within that segment of the industry and the successful efforts of partially unionized parts producers to decrease their level of unionization.³

In the last few years the opening of assembly plants on a nonunion basis in the U.S. by Japanese parent companies has spread the erosion of union coverage into the assembly sector.⁴ As of 1986 there were two such plants in operation, a Honda plant in Marysville, Ohio, and a Nissan plant in Smyrna, Tennessee. The nonunion assembly sector is likely to grow substantially in the near future. A number of other Japanese companies have announced plans to build assembly plants in the U.S., including Toyota (a plant now under construction in Kentucky), Subaru (Fugi Heavy Industries) in alliance with Isuzu, and Mitsubishi. In addition, Honda has announced plans to expand the capacity of its Marysville plant, apparently a reflection of the fact that Honda management is pleased with the performance of this plant. Some of these Japanese "transplants" eventually may be organized, but the immediate prospects for the union are not favorable. For example, at the Honda plant the UAW conducted a long organizing campaign and then withdrew its petition for a representation election

¹ A related issue is the declining and varying extent of vertical integration across the assembly companies. For example, it is estimated that Chrysler produces only 40 percent of the value content of its vehicles, while Ford and General Motors produce, respectively, 50 and 80 percent of their vehicle content.

² These figures are reported in U.S. Department of Labor (various years) and are discussed more fully in Katz (forthcoming).

³ Examples of how partially organized firms have decreased unionization are provided in Kochan, Katz, and McKersie (1986).

⁴ Prior to the opening of nonunion assembly-line plants owned by Japanese companies, the assembly sector in the U.S. was completely unionized. In the early and mid-1970s General Motors had pursued a "Southern strategy" and opened a number of nonunion plants. By the early 1980s, however, through various agreements, the UAW organized those plants. The history of GM's Southern strategy is described in Katz (1985, pp. 88-91).

in early 1986, apparently because the union had learned that it would have received few votes in the election.⁵

It also should be noted that the growth in the number of Japanese transplants and their expansion is linked to developments in the auto-parts sector. The Japanese assembly transplants purchase some of their parts from new parts plants built by Japanese parent companies, and many of these parts plants also operate on a nonunion basis.

Union coverage in the auto industry also has declined through the rise in the import share of domestic auto sales and through an expansion in the extent of foreign parts purchased (an increase in foreign-parts outsourcing) by U.S. assembly companies (see Katz, 1985). Not only is the union affected by the employment consequences of these developments, but the UAW's bargaining leverage clearly is weaker as a result, particularly in light of the fact that foreign labor often works for less pay and because of the lack of coordination that exists across the autoworkers' unions in various countries.

The UAW is certainly not alone among previously strong American unions that have been frustrated in their efforts to stem the growth of international competition and domestic nonunion operations. The union's organizing difficulties are many and a full discussion of the issues is not feasible here. Let me only describe the primary factors I believe are at play. Part of the union's problem is a result of its poor showing in representation campaigns, particularly in new parts and assembly plants. In the auto industry, as elsewhere, unions are having a very difficult time deriving an answer to new sophisticated personnel and motivational practices.⁶ Furthermore, management's ability to pursue long-run strategies concerning plant location and investments has contributed substantially to the growth in domestic nonunion operations. I see no signs of a reversal in these developments in the near term.

The Secession of the Canadian Autoworkers

Another recent major change in union structure in the auto industry occurred with the secession of the Canadian autoworkers from the UAW and the formation of their own union, the Canadian Autoworkers (CAW), in the winter of 1985. The secession by the

⁵The UAW may have better organizing success at the Toyota plant, given the bargaining leverage the union has through potential disruptions at the GM-Toyota NUMMI plant.

⁶The new sophisticated nonunion system is described in Kochan, Katz, and McKersie (1986).

Canadian autoworkers was in part a consequence of rising Canadian nationalism. But the timing of the secession suggests the important role played by divergences in bargaining power and union strategy between the American and Canadian branches of the UAW.

From 1980 through 1984 the UAW had negotiated contracts at Chrysler, General Motors (GM), and Ford that provided pay increases below the traditional cost-of-living plus annual improvement factor increases. These contracts also included a number of changes in fringe benefits and a variety of employment security and training programs.⁷ Disagreement over the nature of these contracts within the UAW came to a head in the fall of 1984 after the UAW had reached agreement with GM in the U.S. and as the Canadian section of the UAW, led by Robert White, was negotiating with GM of Canada. White was asking for pay increases greater than those included in the U.S. GM-UAW contract and apparently was under some pressure from Owen Bieber, president of the UAW, to conform to the U.S. settlement. After a short strike, Canadian autoworkers were able to negotiate pay increases that were a bit higher than those provided in the U.S. GM-UAW contract. Nonetheless, White then went to his membership and received their support for secession by arguing, among other points, that he had been constrained by pressure from U.S. UAW leaders to moderate his demands.⁸

In part, the relative aggressiveness of the Canadian autoworkers is explained by the fact that their auto market was relatively stronger than the U.S. auto market in the early 1980s and Canadian autoworkers were less fearful that pay increases would lead to employment reductions. Both markets saw sales turn down sharply in the early 1980s, and both domestic auto industries faced heightened international competitive pressure. Yet, the American autoworkers suffered greater employment declines and thereby were under greater pressure to accept pay concessions and in other ways to restructure labor relations. From 1979 to 1982 employment of production workers in the auto assembly and parts industry fell 18.1 percent in Canada, but by 1985 employment had returned to its 1979 level. In the U.S., from 1979 to 1982 employment of production workers in the auto industry (SIC

⁷ Concessionary contracts were first negotiated at Chrysler in 1980. The timing and specific outcomes of negotiations differed between Chrysler and the other two major producers, GM and Ford, although all the contracts provided pay increases below the traditional wage formulas.

⁸ Robert White's views are outlined in his address to the first Canadian autoworkers' convention; see White (1985).

371) fell 33.3 percent and in 1985 was still 11 percent below the 1979 level.

While underlying economic conditions differed in the two countries, differences in union *strategy* also appear to have played a role in shaping the unions' bargaining demands. The leaders of the Canadian branch of the UAW (prior to the secession) were less sympathetic toward worker and union participation in joint training and job-security programs as compared to a number of American auto union leaders.⁹ It is difficult to know how much of this difference in strategy is a product of economic conditions. The Canadians' lack of enthusiasm for new training programs in part seems to derive from the fact that since employment has not been declining as severely, union officers feel there is less need for such programs. Yet, it appears that political views contributed to the divergence in union policies. For example, the Canadian unionists are more prone to oppose jointly funded retraining initiatives on grounds that training is the responsibility of the government and not the private parties.¹⁰ Some of the differences in bargaining positions also reflects different strategic choices, with the Canadian auto union leaders choosing to more vigorously pursue compensation objectives while the American auto leaders weighted employment objectives more heavily.

As discussed below, more diverse and varying economic conditions are a general aspect of the current economic environment and the differences in the state of the U.S. and Canadian auto markets are one illustration of this phenomenon. It is important to note, however, that historically there were many periods in which the economic conditions in the U.S. and Canadian auto markets diverged. In some ways the U.S. UAW's early interest in extending unionization to the Canadians through a unified organization derived from American unionists' concern that the lower wages paid autoworkers in Canada (in part a reflection of their weaker auto market) would undercut the bargaining strength of the U.S. autoworkers. U.S. and Canadian auto unionists had their differences over the years but had managed to overcome them in their joint interest in strengthening their bargaining positions. Why did these joint interests not prevail in 1985? It appears that it was easier for the two sides to compromise their differences during the previous growth environment than it was when

⁹ It should be remembered that there is wide diversity in viewpoints within the ranks of both Canadian and American unionists regarding these programs.

¹⁰ American unionists would likely argue that they view these private initiatives as supplements to and not a substitute for government-sponsored programs and support.

the economic environment turned sharply unfavorable. I am sure that in earlier periods some American autoworkers felt that since their auto market was stronger, they deserved higher pay growth than their Canadian brothers, but since pay was *growing* for both, this did not become a divisive issue. In the recent environment in which concessions were being negotiated, it apparently is much harder for the parties to compromise their particular interests in pursuit of joint gain. In this way, the secession of the Canadian autoworkers may represent a more interesting and general phenomenon.

The Erosion of Connective Bargaining

The traditional bargaining structure in the auto industry over the post-World War II period involved a high degree of standardization of employment terms across the workgroups within each plant, the plants within each company, and the various companies. This was particularly so within the assembly companies. This tradition of strong pattern bargaining was associated with and enforced by the strong role exercised by the national union. Using Lloyd Ulman's phrasing, this bargaining structure can be characterized as "connective bargaining" (Ulman, 1974).

In recent years there has been a marked increase in the *diversity* of work practices and employment conditions across auto plants. For example, some plants operate with team systems which involve only a single classification for production workers, while some other plants still operate with more than 100 job classifications. Some team plants use a pay-for-knowledge system, while others do not. In part these varying work practices emerged as plants responded in different ways to employment declines or management's threats of further employment declines (the threat essentially was that management would outsource production if inhouse costs were not brought closer in line with competitors' costs). Even where they agreed to try to lower costs to avoid further employment declines, labor and management across the plants (and also within the plants) varied in their willingness to introduce new labor relations practices as part of their efforts to lower costs.¹¹ In some plants novel systems of work organization were linked to enhanced worker and union participation in business decision-making. In some other plants the structure of work was unaltered. As with U.S. versus Canadian union policies, it

¹¹ The diversity that emerged in local work practices is discussed more fully in Katz (1985, Chs. 3 and 4).

was the severity and heightened variation of economic conditions that spurred the diversity in work practices across and within auto plants.

This heightened diversity in shop-floor work practices has led to significant changes in the internal affairs of the UAW and created new tensions in the relations between local and national union offices and officers. The national union faces the central problem of finding ways to encourage healthy local experimentation while insuring that local exceptions to national standards do not become a vehicle for subversion of union objectives.¹² The possibility always exists that local diversity in work practices could become a vehicle for management to whipsaw the union.¹³ The national union is searching for a new structure that would assist in the coordination of local bargaining.

Some novel steps in the direction of such coordination were taken in the 1984 contract at GM which created national, regional, and local "Jobs Committees" that were supposed to discuss local contractual modifications made as part of efforts to keep work in plants. My field discussions with national and local union officers suggest, however, that the UAW has had a difficult time coordinating local bargaining as the Jobs Committees are yet to fulfill their stated objectives. Difficulties arise from the fact that coordination of local bargaining requires creation and acceptance of a vision regarding how the union and workers should respond to economic pressures. The union has to decide whether it wants to encourage work reorganization as a mechanism to respond to competitive pressures and how work reorganization should link to revised worker and union roles. There are various opinions concerning those issues within the union, but there is little agreement, let alone movement, toward the creation of a union structure that could implement that vision.

Unless the national union eventually decides on and implements a plan to coordinate local bargaining, it is difficult to imagine how the current local experimentation with restructured labor relations could persist. My sense is that, without national union guidance, the current local variation in employment terms will continue to spur heated debate within the union and eventually may succumb to a militant challenge that questions the value of local experimentation with work

¹² This issue is discussed in more detail in Katz and Sabel (1985).

¹³ It is interesting to note that it was corporate management that encouraged the national union to exercise greater control of the locals during World War II and in the immediate postwar period. In part, management was motivated by the fear that local unions would whipsaw management. This point is discussed in Katz (1985, Ch. 2).

reorganization and participation processes. The militants can provide a clear and more easily managed alternative to current affairs, which is to refuse to modify traditional work practices. The temptation for workers to prefer a steadfast and simple policy is great, even if that policy were to spur long-run employment declines, when the alternative is uncoordinated and poorly motivated change.

Summary

There are a number of commonalities in these three developments in union structure in the auto industry. For one thing, they all were motivated in part in response to changes under way in the economic environment. It was heightened international competition and other aspects of the world auto market that induced the growth in nonunion plants and the variation in economic conditions that lie behind the Canadian secession and the erosion of connective bargaining.

While the economic environment plays a central role in the changes under way in union structure, union and management strategic choices also influenced the course of events. The Canadian autoworkers chose secession in part as a consequence of their political and bargaining strategy differences with American autoworkers. Political and strategic differences also played a crucial role in the tensions that emerged between national and local branches of the UAW. Japanese management faced (and faces) a clear choice as to whether to operate the transplants on a union or nonunion basis. The element of choice is reflected in the fact that some of the Japanese transplants voluntarily agreed to recognize the UAW, such as the GM-Toyota (NUMMI) plant operating in California, while in Honda's and Nissan's transplants management vigorously has opposed unionization.¹⁴ Given the similarities that have emerged in the workrules adopted in the union and nonunion transplants, it is not clear that economic factors play a *determining* role in the union status preferences of management.¹⁵

One other similarity in the three structural developments discussed in this paper is their unresolved nature. Events are still very much unfolding in each case. The union status of either the supplier,

¹⁴ The joint ownership of NUMMI and other plants by American and Japanese companies complicated the union status issue, but at the same time Japanese management's decision to recognize the UAW in these plants does reflect a strategic choice.

¹⁵ For example, the NUMMI and Honda plants both have a team system with a single job classification for production workers, substantial flexibility in the use of craft workers, and more direct production decision-making by the blue-collar workforce. This is not to say that the union presence at NUMMI or elsewhere does not affect employment conditions or workers' roles.

assembly, or transplant sectors are very much in flux, as is the exact nature of Canadian and U.S. autoworker relations. The extent to which the national offices of the UAW effectively coordinate local work organization changes in the U.S. and the nature of national-local union relations also remain to be resolved. In a few years' time at another meeting of the IRRA it would be worthwhile to reexamine these issues and see how events played out.

References

- Katz, Harry C. *Shifting Gears: Changing Labor Relations in the U.S. Automobile Industry*. Cambridge, MA: MIT Press, 1985.
- . "Collective Bargaining in the U.S. Automobile Industry." In *Collective Bargaining in American Industry*, eds. David Lipsky and Clifford Donn. Lexington, MA: D.C. Heath, forthcoming.
- Katz, Harry C., and Charles F. Sabel. "Industrial Relations and Industrial Adjustment in the Car Industry." *Industrial Relations* 24 (Fall 1985), pp. 295-315.
- Kochan, Thomas A., Harry C. Katz, and Robert B. McKersie. *The Transformation of American Industrial Relations*. New York: Basic Books, 1986.
- Ulman, Lloyd. "Connective Bargaining and Competitive Bargaining." *Scottish Journal of Political Economy* 21 (June 1974), pp. 97-109.
- U.S. Department of Labor. *Industry Wage Survey: Motor Vehicles and Parts*. Washington: Bureau of Labor Statistics, various years.
- White, Robert. "Speech to the Canadian Autoworkers National Convention," September 4, 1985 (unpublished transcript in possession of the author).

The AT&T Divestiture and the CWA

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The stories of deregulation in trucking, airlines, and telecommunications have tended to focus on the impact of the new competition that accompanies this deregulation. This is clearly appropriate. However, unions in the telecommunications industry faced a unique problem: the divestiture of the Bell Operating Companies from American Telephone and Telegraph (AT&T). Thus, the unions, and in particular the Communications Workers of America (CWA), had to concern themselves with the establishment of bargaining structures and internal union structures which would be appropriate in the new telecommunications industry as well as with new nonunion competition which was likely to occur as a result of deregulation. In this paper I would like to focus on changes in bargaining relationships as a result of the AT&T divestiture. More detail on the impact of new competition is presented in Hendricks (forthcoming).

Background

The consent decree agreed to by AT&T and the Department of Justice (DOJ) in January 1982 ended an eight-year antitrust suit in which the DOJ sought to restructure the industry by forcing AT&T to separate intercity service from local service and to separate Western Electric and part of Bell Labs from the Bell system. The details of the decree were ironed out (with some significant modifications) by Federal District Judge Harold Green after a lengthy period of public comment. The divestiture of the Bell Operating Companies (BOCs) finally occurred on January 1, 1984, and has had significant impact on the structure of bargaining in the industry and the internal structure of the major union in the industry, the Communications Workers of America. To understand these changes, we first need to look at the structure of the industry and of bargaining before this divestiture.

Prior to divestiture, AT&T was the largest nonfinancial corporation

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^o I am grateful to Peter Feuille for his helpful comments.

in the world. It was vertically integrated from manufacturing (Western Electric) and research and development (Bell Labs) through local service (it owned 90 percent of the stock in 22 Bell companies) and long distance service (AT&T Long Lines). Since the local companies bought all of their equipment from Western Electric, AT&T was the dominant firm in three distinct industries: manufacturing of telephone equipment, local telephone service, and long distance telephone service.

There were three major union forces in the industry: the CWA, the International Brotherhood of Electrical Workers (IBEW), and the Telecommunication International Union (TIU), with the CWA by far the largest. Given the employer structures in the industry, there were extremely strong incentives for unions in the industry to attempt to mirror this structure by centralizing their own structure and demanding centralized (national) bargaining. Schacht (1985) provides convincing evidence that this is the key to understanding the development of the CWA and the bargaining structure in the industry.

The first nationally bargained contract was signed in 1974.¹ This national contract was established without altering legal bargaining units. Individual operating companies signed "enabling clauses" that allowed AT&T to bargain for them. However, they still remained the actual signers of the contracts with individual locals (although in bargaining with the CWA, the international president actually signed the contracts). This national contract was almost the sole basis for the TIU since the TIU was primarily a federation of independent unions.

The 1983 agreement was the last signed on a nationwide basis. At divestiture all of the stock of the 22 BOCs was obtained by seven regional holding companies (RBOCs). The RBOCs formed Bell Communications Research, Inc. (Bellcore) to provide many of the services formerly provided by Bell Labs. AT&T also reorganized itself into five major divisions: AT&T Communications (AT&T COM), AT&T Bell Laboratories, AT&T Technologies, AT&T Information System (ATTIS), and AT&T International.

Unlike unions in the airlines and trucking industries, the CWA did not vigorously fight the reorganization of the communications industry. Instead, they attempted to move forward in several key areas which were central to maintaining the long-run vitality of the union.

¹ In Weber's (1967) terms, a national *negotiation unit* was not established until 1974 even though it might be argued that the *unit of direct impact* was national in scope in 1971 and perhaps even as early as 1965.

Three of the most important were the following:

1. Smoothing the transitional period of divestiture by negotiating procedures with AT&T and by attempting to have key procedures incorporated in AT&T's reorganization plan for Judge Green.

2. Attempting to maintain the gains in centralization of bargaining structure which were achieved in the 1970s.

3. Attempting to organize the information industry more broadly because divestiture and the corresponding deregulation of telecommunications had brought competition from other information services into focus.

Impact of Divestiture

The CWA was largely successful in the first area.² Much of the language in agreements between AT&T and the CWA was carried over directly into AT&T's plan for reorganization and Judge Green's final order. Success in achieving the second and third has been more problematic, perhaps because these goals are more long-term in nature. Following Weber (1967), both goals can be seen as attempts by the union to match the scope of bargaining with the scope of the relevant market. Each is analyzed below.

Bargaining Structure

The impact of divestiture on bargaining structure in the industry came to full force in the 1986 negotiations. All of the 1983 contracts were set to expire in August 1986. The 1986 bargaining units are presented in Table 1 for RBOCs and in Table 2 for AT&T.³ There are three important patterns in the tables. First, there are a large number of units. Second, few independent unions have survived the divestiture. Virtually all the individual units which made up TIU voted to become locals of the CWA or IBEW. Third, CWA has units in almost all firms, while the IBEW has selected concentrations of workers.

According to Weber (1967, p. 33), "fragmentation of bargaining structure usually has been a sign of union weakness," while "the modification of union internal structure [is a] more constructive method of achieving . . . decentralization of bargaining." The CWA was successful in maintaining national, centralized negotiations with

² See Straw (1985) for details on some of the agreements.

³ The information which was necessary to detail these units was obtained from the BOCs, AT&T, and the CWA. The number of workers in each unit represents approximations as of the summer of 1986.

TABLE 1
Bell Operating Company Bargaining Units

Holding Company Operating Company Union	Total Barg. Units		Number of Members
NYNEX	19		
New York Telephone	7		
CWA		5	38,000
IBEW		1	1,300
Independent union		1	2,600
New England Telephone	5		
IBEW		3	17,300
CWA		2	260
Information Services	4		
CWA		3	830
IBEW		1	269
Material Enterprises	3		
CWA		2	525
IBEW		1	211
Pacific Telesis	4		
CWA		1	44,562
IBEW		3	2,505
Bell Atlantic	13		
Pennsylvania Bell	5		
CWA		3	11,872
IBEW		1	1,180
Independent union		1	571
New Jersey Bell	4		
IBEW		2	9,727
CWA		2	4,378
Chesapeake & Potomac	4 (CWA)		22,338
Ameritech	16		
Illinois Bell	6		
IBEW		4	12,661
CWA		2	2,286
Indiana Bell	2		
CWA		1	4,427
IBEW		1	400
Michigan Bell	1 (CWA)		12,771
Ohio Bell	1 (CWA)		10,071
Wisconsin Bell	1 (CWA)		4,046
Ameritech Publ.	1 (CWA)		3,000
Ameritech Services	2		1,333
IBEW		1	
CWA		1	

Note: Data were gathered from the unions and firms by telephone during July and August of 1986.

TABLE 1—(Continued)
Bell Operating Company Bargaining Units

Holding Company Operating Company Union	Total Barg. Units	Number of Members
US West	6	
Mountain Bell	2	
CWA	1	18,030
IBEW	1	1,000
Northwestern Bell	1 (CWA)	10,750
Pacific Northwest	2	
CWA	1	8,841
Independent union	1	700
US West	1 (CWA)	1,914
Southwestern Bell	2	
Operating Company	1 (CWA)	44,446
Holding Company	1 (CWA)	1,261
Bell South	7	
Southern Bell	1 (CWA)	35,844
South Central Bell	1 (CWA)	23,804
Bell South	1 (CWA)	4,915
Others		
Cinn. Bell	1 (CWA)	2,989
Bellcore	1 (CWA)	55

Note: Data were gathered from the unions and firms by telephone during July and August of 1986.

TABLE 2
AT&T Bargaining Units

AT&T Division Union	Total Barg. Units	Number of Members
AT&T Communications	3	
CWA	1	69,299
IBEW	2	5,500
AT&T Information Systems	8	
IBEW	7	12,341
CWA	1	45,000
AT&T Technologies	23	
IBEW	20	21,638
CWA	3	31,764
Bell Laboratories	1 (CWA)	1,589
AT&T Federal Systems	1 (CWA)	1,500
AT&T Research Management	1 (CWA)	35

AT&T. However, it was not successful in maintaining the same degree of centralization with the RBOCs. While the RBOCs refused to bargain together, five of the seven did agree to regional, company-wide bargaining. The remaining two, Ameritech and US West, would bargain only on an individual company basis. The *negotiating units* (Weber, 1967) were therefore AT&T, five regional companies, and eight BOCs (five for Ameritech and three for US West).

The immediate problem which the union had to face was how to deal with the separate negotiations for each of these units. Several changes were necessary. First, the internal structure of the union had to be significantly altered. Prior to divestiture, bargaining demands were identical for all units. The CWA began its decentralization by setting up two bargaining councils: one for AT&T and one for the RBOCs. The number of representation districts was then changed from 13 to 8, with one district for each RBOC except Bell Atlantic which has two.⁴ The union also replaced several department directors with four sector vice presidents (one each for AT&T COM, AT&T Technologies, Telecommunications, and Public Workers). The eight regional vice presidents and the four sector vice presidents now serve on the executive board with the president, a secretary-treasurer, and three executive vice presidents.⁵ Second, the union was successful in staggering some negotiations by moving up the expiration of the AT&T contracts to May 31. There seemed to be a general perception that the union was in a better bargaining position with AT&T and that the AT&T contract might set a pattern which could be followed in the negotiations with RBOCs later in the summer.

In contrast to the CWA, the IBEW had little to gain by the centralization of bargaining. The telephone section of the union was never as centralized as the CWA. The IBEW also does not have members at all the RBOCs and typically does not have members at each BOC within a given RBOC. For example, virtually all the workers covered by IBEW contracts with Ameritech work for Illinois Bell,⁶ while the CWA has members at all five Ameritech BOCs. While the CWA initially demanded that settlements at all five BOCs be identical, the IBEW had nothing to gain from using their bargaining power in this manner. As a result, the fragile union solidarity which

⁴ Bell Atlantic received two units as part of a deal to bring the 13,000-member Federation of Telephone Workers of Pennsylvania to the CWA (BNA, 1986c, p. A-6).

⁵ The president of the ITU will also serve on the board when the two unions merge and the name of the union will change to Communications Workers of North America (BNA, 1986c, p. A-6).

⁶ There is one IBEW unit of 400 workers at Indiana Bell.

came about with the centralization of bargaining in the 1970s was broken by divestiture. The IBEW and Illinois Bell agreed to move up their negotiations to the Spring of 1986 and were able to settle prior to the opening of talks between the CWA and other BOCs and RBOCs.

Since the IBEW-Illinois Bell agreement was significantly different from the CWA-AT&T agreement, it set a precedent that management at the RBOCs and BOCs might expect to deviate from the pattern set at AT&T. In Weber's terminology, the *unit of direct impact* was no longer the Bell system. For example, the IBEW-Illinois Bell contract includes a profit-sharing plan, while the CWA-AT&T settlement does not. All other contracts that were subsequently negotiated at the BOCs and RBOCs (with the exception of NYNEX) also included some form of profit-sharing. However, the plans vary tremendously.

Most of the other RBOCs followed the Illinois Bell strategy and asked for items that were specific to their companies. As a consequence, the CWA had to evaluate a large number of different proposals at about the same time (since all the contracts at BOCs expired on the same date). Thus, while the burden of many contract negotiations had been eased by the moving-up of the contract deadline for AT&T, this burden was substantially expanded as a result of the IBEW-Illinois Bell settlement. The variety of management demands made it much more difficult for the union to determine if one contract offer was better than another.

Interestingly, the difficulties posed for union negotiators by the variety of management proposals were not carried over to the ratification of agreements. Most agreements were settled with either no strike or a short strike. The negotiators were able to deliver their members' votes, even though it was difficult to compare one settlement with another.

A casual comparison of bargaining outcomes for 1986 seems to suggest that the two RBOCs that were able to negotiate separately for each of their operating companies were able to achieve more favorable (to the company) contracts. This might suggest that the union must place more emphasis on centralization of bargaining at the next negotiation. On the other hand, this may simply indicate the problems associated with negotiating a large number of contracts at the same time. In this case, an alternative strategy of staggering contract expirations may be in order.

Organizing Activities

Organizing activities and determination of bargaining structure can be viewed as similar endeavors. One attempts to remove competition with nonunion workers, while the other attempts to eliminate

competition among union workers. While the CWA has indicated that there is a need to organize workers in the information industry, very little progress has been made in organizing nonunion workers. The most important efforts in increasing the size of the union have come in representation elections at old TIU affiliates (approximately 35,000 new members since 1980 (BNA, 1986a, p. A-12)), mergers with other unions (5800 members of the United Telegraph Workers (UTW) and 75,000 members (40,000 employed) of the International Typographical Union (ITU) (BNA, 1986b, p. A-3)), and organization of public-service workers.

The short-run effect of the divestiture was to cause a scramble to represent the workers at the independent unions. In the long run, the opening of the industry to competition probably will require both new organizing and more union cooperation if the unions are to maintain the relatively high wages of telecommunications workers. The mergers of the CWA with the UTW and the ITU may be a step in the right direction. However, the addition of members from these unions won't necessarily strengthen the CWA. Both unions have organized a sector of the industry which is likely to be declining rather than growing in the future.

The CWA appears to be hedging its bets through mergers and organization of public-service workers, apparently attempting to solidify its base through diversification rather than concentrating on nonunion employers in the information industry. These nonunion employers are often relatively small (e.g., the new long-distance companies) or adamantly nonunion and extremely difficult targets (e.g., International Business Machines (IBM)). Much of the competition for existing telecommunications companies is still theoretical. Perhaps this is not the time. However, this time must come in the future or the unionized portion of the industry is headed for a significant decline.

References

- Bureau of National Affairs (BNA). *Daily Labor Report*, No. 40 (1986a); No. 131, (1986b); No. 144 (1986c).
- Hendricks, Wallace. "Telecommunications." In *Collective Bargaining in American Industry*, eds. David B. Lipsky and Clifford B. Donn. Lexington, MA: D.C. Heath, forthcoming.
- Schacht, John N. *The Making of Telephone Unionism 1920-1947*. New Brunswick, NJ: Rutgers University Press, 1985.
- Straw, Ronnie J. "The Effect of Divestiture on Collective Bargaining." *Proceedings of the 37th Annual Meeting, Industrial Relations Research Association*, Dallas, 1984. Madison, WI: IRRA, 1985. Pp. 447-54.
- Weber, Arnold R. "Stability and Change in the Structure of Collective Bargaining." In *American Assembly, Challenges to Collective Bargaining*, ed. Lloyd Ulman. Englewood Cliffs, NJ: Prentice-Hall, 1967. Pp. 13-36.

Changing Union Structure and the Changing Structure of Unionization in the Post-Deregulation Airline Industry

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Since its deregulation in 1978 the airline industry has undergone dramatic changes in the carriers' cost structures, managements' strategies in dealing with their unions and workers, and the structure of ownership. The level of unionization remains high, at about 90 percent (Cappelli, 1986), but the impact of these developments on the unions and their members has been stunning. Three developments in particular lay bare the contemporary weakness of the airline unions. First, the structure of unionization as a whole has changed, with unit turnover and loss as well as competition among unions for all airline workers except pilots. Second, the nature of unionization among one of the "craft and class" categories,¹ the flight attendants, has shifted from apparently increasing unification to clearly increasing fragmentation. Third, the structure of the industry's strongest union, the Air Line Pilots Association (ALPA), has undergone significant changes in order to balance the simultaneous but conflicting imperatives of national centralization and carrier-by-carrier flexibility. All three of these developments reflect the airline unions' loss of power at the collective bargaining table.

This paper begins by laying out the background of the crisis in airlines, and then considers these developments in turn, tying each to the ways in which changing cost structures, new management strategies, and mergers and acquisitions have affected unions and unionization in the industry. I will argue that the smooth functioning of

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¹ The Railway Labor Act mandates that separate "class and craft" groups be represented in different bargaining units. The main groups are pilots, aircraft dispatchers, flight attendants, mechanics, and nonmechanic ground personnel including ticket agents, reservation agents, ramp/freight handlers, airplane cleaners, stock clerks, and clerical workers.

collective bargaining has been undermined by challenges from the management side of industrial relations, and that unions on the whole have been unable to meet those challenges. Put differently, while the most important developments on management's side have been undermining traditional collective bargaining processes and outcomes, as well as shifting to other arenas (such as that of corporate ownership), the unions' structural adaptations have at best been able to address the erosion of their power at the bargaining table. These adaptations are insufficient in an environment in which labor-management relations are increasingly shaped by events beyond the purview of collective bargaining.

Background

Before deregulation the carriers' profitability was more or less ensured by the Civil Aeronautics Board, which, through its control of routes and fares, guaranteed a 12.5 percent return on investment. The companies could afford to be liberal with their unions at the collective bargaining table, passing relatively high labor costs on to consumers in the form of fare increases. The unions were able to whipsaw the carriers for increasing wage, benefit, and workrule gains in each successive round of bargaining (Cappelli, 1986). Management strategies toward labor varied somewhat across the industry, with some carriers adopting more confrontational approaches and weathering more frequent strikes, while others were relatively more accommodating. But these differences in managerial approach had little bearing on wages and benefits negotiated at the collective bargaining table, which were more heavily influenced by patterns set in previous bargaining rounds. The industry's ownership structure was relatively stable: most of the "major" carriers have been on the scene for at least several decades; mergers and acquisitions were relatively rare.

Since deregulation, the carriers have all been forced to make dramatic changes in their cost structures. All of the "majors" elicited wage and/or workrule concessions from labor after 1982. Labor costs have been cut dramatically, from about 30-40 percent to about 20-30 percent of total costs, as carriers compete not only on the basis of service quality and flight frequency, but on the basis of fares.²

² Major carriers' annual and 10-K reports.

As competitive pressures have increased, a variety of management strategies toward the unions have emerged, ranging from outright hostility and "union busting" (as in the case of Continental's 1983 bankruptcy, which nullified the labor contracts), to apparently more "cooperative" cases (such as Eastern and Western, where concessions were combined with comparatively extensive *quid pro quos*). Even in the latter cases, however, the unions' relative ineffectiveness at the bargaining table has been manifested in deep wage cuts and workrule concessions since the early 1980s.

Finally, competitive pressures have bred a spate of mergers, which continue apace as this paper is being written: just this year People Express acquired the assets of the bankrupt Frontier; Trans World (TWA) bought Ozark; Texas Air, owner of Continental and New York Air, has bought People Express (complete with Frontier's assets) and Eastern; Delta bought and is now merging with Western; rumors have it that TWA is considering a bid for Northwest, Piedmont, or US Air; US Air itself is buying Pacific Southwest (PSA). The oligopolization of the industry is still very much in progress.

All three of these developments—lower labor costs, the emergence of a variety of new management strategies, and the changing structure of the industry's ownership—have both challenged labor's effectiveness and contributed to important changes in union structure and the structure of unionization in the airline industry.

The Impact on the Unions

The Shifting Structure of Representation

In general, there has been an unprecedented amount of turnover in the bargaining units representing all airline employee groups except pilots (who are represented almost exclusively by ALPA). Primarily because of mergers and acquisitions, some units are now represented by new unions. For example, the flight attendants at what was Republic (before its merger with Northwest) were represented by the Association of Flight Attendants (AFA), but are now in a Teamsters unit (the Teamsters having already represented Northwest's flight attendants). The ticket agents at the old Republic, formerly represented by the Air Line Employees Association (ALEA), automatically became part of Northwest's Brotherhood of Railway and Airline Clerks (BRAC) unit, partly because ALEA failed to

negotiate "Labor Protective Provisions" with Republic before the merger took place.³

Some groups may lose their status as bargaining units altogether. Industry and union analysts speculate that Texas Air, which controls five carriers, may attempt to "bust" the unions at those of its carriers that are unionized. Because Delta's employees outnumber Western's by a margin of 3:1, and because Delta has proven notoriously difficult to organize (again, excepting the pilots), it seems quite unlikely that Western's flight attendants, mechanics and related employees, stock clerks, and agent and clerical workers—all currently unionized—will remain unionized after the two carriers are merged in the Spring of 1987 (Wever, 1986).

This trend of widespread turnover among bargaining representatives—and the possible future loss of some units—is paralleled by an increasing measure of competition among unions, including the Teamsters, BRAC, the Machinists (IAM), and the Transport Workers Union (TWU), among others.

Fragmentation and Competition for Flight Attendants

The comparative labor market weakness of the flight attendants has been paralleled by a particularly noticeable fragmentation in the structure of their unionization. That weakness was manifested most clearly earlier this year when TWA's Carl Icahn summarily dismissed 6000 flight attendants and within a few weeks had deployed about 4000 replacements.

In the mid-1970s, when the "Steward and Stewardess Division" broke away from ALPA, its members and leaders scattered into a variety of different unions. Of these, the AFA was the most prominent because it represented the flight attendants at several large and medium-sized carriers—United, Western, Republic, Frontier, and Ozark—as well as a number of smaller carriers. But the AFA has either lost or is likely soon to lose its units at Western, Republic, Frontier, and Ozark and quite possibly at other small carriers as well. Thus, while it once seemed possible that the AFA might continue to score organizing gains and eventually become the major union representing the industry's cabin crews, it now appears that such a dominant position is entirely out of that union's reach.

³ Many of the industry's agent and clerical workers are not unionized to begin with.

The AFA will probably retain its United unit, but the rest of the industry will likely be represented by an increasingly wide variety of national unions (including the TWU and the Teamsters) as well as a number of independents. It seems highly improbable that the flight attendants will even be able to gain the sort of bargaining leverage that accompanies a centralized representational structure like ALPA's.

Centralization at ALPA

Because of the broad extent of ALPA's unionization,⁴ and because of the pilots' comparatively favorable labor market position, the union's institutional security is for the time being ensured. The damages its members have sustained have been limited to wage and workrule concessions and some (mostly temporary) furloughs. In this case the most important developments concern the structure of the union itself, rather than the extent and structure of unionization. The most visible changes in ALPA have to do with the national's centralization.

ALPA began to consolidate in the early 1980s, when the national strengthened its Representation Department, the legal support services to representation, and the union's in-house expertise on concessions and so-called "management quid pro quos." It is primarily through this organizational restructuring that the parent union has been trying to increase its control over local-level negotiating processes. It has upgraded its own capacity to analyze the carriers' financial needs, to fashion stock and profit-sharing plans, and to coordinate information about the provisions of various different kinds of contract concessions that have been made at the different carriers.

The initial impetus for the national's reorganization was provided by the industry's increasingly obvious financial instability. As both weaker carriers (like Eastern and Western) and stronger ones (like American and United) began to demand more and more concessions in 1982, 1983, and 1984, the union recognized the reversal of pre-deregulation bargaining patterns; as of the early 1980s, the carriers were able to whipsaw the union into increasing contract concessions. ALPA representatives at specific carriers sometimes found it expedient to deviate from national standards. For example, in negotiations with Western, the Los Angeles ALPA council challenged central bargaining standards by fashioning concessions that eroded

⁴ The American Airlines unit is the only significant non-ALPA group of pilots in the industry.

established seniority and equipment pay differentials. The national took the unusual step of interceding, and reestablished some of the norms from which the LA council had sharply deviated. This experience also provided further impetus for the national to increase its control over the contracts negotiated at the different carriers. Among other things, the parent union officially reaffirmed its commitment to the principle that no contract be binding without the signature of the national president. Beyond this, ALPA created a permanent Collective Bargaining Committee (CBC), charged with the task of analyzing and designing solutions to the tensions between (a) the need for flexibility in dealing with the separate carriers, especially in the face of varied employer tactics and competitive positions, and (b) the need to maintain enough national standards to avoid the complete erosion of ALPA's industry-wide bargaining power.⁵

Summary, Interpretations, and Conclusions

These changes in union structure and the structure of unionization in the airline industry have a common general cause: labor's weakness at the collective bargaining table. For instance, in the case of the Delta-Western merger, where several bargaining units may soon be lost, it is impossible not to recall that Delta's workers are better paid and are widely believed to have more pleasant working conditions than Western's. In other words, the unions at Western have been unable to provide wages, benefits, and working conditions as favorable as those at the industry's only nonunion "major." Unit turnover and loss are matters of concern even to ALPA officials, given the ascendancy of the antiunion Texas Air.⁶

The weakness of the airline unions is, of course, most obviously seen in the fragmentation of the flight attendants' representational structure and the precipitous decline of the AFA. Given the choice, some flight attendants, like those at the new Northwest, have opted for older, more powerful unions (in this case, the Teamsters). The Teamsters are less identified than the AFA with the specific concerns of flight attendants (such as the professionalization of the job, or health and safety), but more identified with traditional, material gains at the collective bargaining table. Some of Western's flight attendants may

⁵ See ALPA (1984). This tension has also surfaced in a series of bitter battles between ALPA representatives at different carriers that are merging; the disputes, which revolve around the difficulties of integrating seniority rosters, have been mediated by the national.

⁶ Recent conversations with ALPA officials in Washington and Los Angeles.

prefer not to be unionized at all, given the alternative which is widely perceived to be quite popular, viz., the famous nonunion "Delta family." Indeed, in a deregulated environment it is not clear what unions can do for workers who are as easily replaceable as flight attendants.

Even the centralization of ALPA reflects the union's relative weakness, compared to its pre-deregulation position. Internal organizational realignments have almost been unavoidable, given the comparative bargaining weakness of the pilots over the past several years.

Will ALPA's centralization be sufficient to counterbalance the increasing oligopolization of the industry's ownership structure? Will the industry's other unions be able to coordinate their efforts in a similar fashion? The record to date indicates negative answers to both questions. However centralized ALPA's strategy may be, it will not be at the collective bargaining table that the union will be able to affect strategic management decisions about ownership structure. Moreover, rivalries among the other unions in the industry (including the AFA, the Teamsters, the IAM, the TWU, and BRAC, among others) suggest the extreme unlikelihood that these organizations will be able to coordinate their various strategies.

Even the Machinists (IAM), still considered among the strongest labor representatives in the industry, have moved toward a more flexible, decentralized approach to collective bargaining. Just after deregulation, the national IAM was opposed to any concessions at all,⁷ but it is now much more accommodating. The IAM at Eastern, for example, spearheaded a coalition of unions there that sought a nontraditional, "cooperative" approach to labor-management relations (in return for concessions).

Three general conclusions are suggested. First, the carriers' financial positions have been more precarious, but their power vis-à-vis labor has also been more wieldy during the recent period. One illustration of managements' consciousness of this fact is that all struck carriers have been willing to operate through their strikes since deregulation, which they never did in the 1960s and 1970s.

Second, it is not clear that the unions' loss of power can be mitigated by labor's "innovations" outside the arena of collective bargaining. The ease with which the airlines and their assets (including

⁷ The national actually took its Braniff representatives to court for agreeing to concessions in the early 1980s.

sometimes their human assets) can be bought and sold, transferred, and reorganized renders it difficult for the unions and the carriers to build the kind of trust that would be necessary for successful "cooperative" or even lasting "mixed" (cooperative/adversarial) labor-management relations.⁸ The failure of apparently dramatic experiments in this direction at both Eastern and Western testifies to the difficulty of transcending traditional adversarialism in industrial relations, where labor is so comparatively weak (Wever, 1986). This weakness suggests the need for the unions to focus some of their attention on broader political and policy issues such as partial re-regulation if they are to have any success in reintroducing stability into airline industrial relations.

Third, lacking regulation to ensure carrier profits and allow for high labor costs, there is no compelling reason to predict a rapid comeback for the airline unions. Some, like ALPA, will fare better; others, like the AFA, will probably do worse; but none is likely to do more than stem the erosion of traditional gains and sources of power. In any case, future changes in union structure are likely to reflect the labor market power of union members at least as much as they reflect either the strategies of union leaders or the industrial adjustments currently under way in the airline industry.

References

- Air Line Pilots Association. "Collective Bargaining Committee Report to the Board of Directors, November 1984." Washington: ALPA, 1984.
- Cappelli, Peter. "Airline Industrial Relations Under Deregulation." Unpublished paper, Wharton School, University of Pennsylvania, March 1986.
- Wever, Kirsten R. "Power, Weakness and Membership Support to Four US Airline Unions." Ph.D. thesis, Department of Political Science and Industrial Relations Section, Sloan School of Management, Massachusetts Institute of Technology, September 1986.

⁸ For instance, when Pan Am sold its Pacific routes to United, it also transferred some of its employees to man those routes.

DISCUSSION

BEN FISCHER

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The comments from the three preceding speakers about their background oblige me to explain that for 47 years I made a living out of the class struggle, but now I work professionally at denying its continuing existence.

America's workers are not oppressed and suffering. Labor strategy must necessarily reflect that fact. The workers' struggle for enough share to achieve survival is yesterday's ballgame. Today workers are in a fight for the survival and success of the economy.

The role played by unions in this effort and in today's environment necessarily shapes the structure of unions and of labor relations. In today's dog-eat-dog global economy, the labor relations process is directed toward making companies, plants, and even specific operations more productive, more cost efficient, and better able to relate to specific markets.

Unions will join in these efforts or decline. Unions can play a lead role in the quest for competitiveness and perhaps profit thereby, due to being relevant and performing a tangible service for the economy and the employees.

This changing role tends toward decentralization of labor relations, since each segment competes with the others. Unions cannot muster sufficient power to significantly restrain competition. Neither trade policy nor regulatory strategies could seriously reverse competitive forces; at best their impact would be short-lived and eventually counterproductive.

Unions, even if aided by management, cannot hope to seriously constrain competition by pattern bargaining or leveling labor costs. Nothing on the horizon indicates a serious reversal of the continuing erosion of patterns and diversification of labor relations policies.

In evaluating the current scene, it would be unfortunate if we engaged in regret over the changes described so well by the

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presenters—changes equally common in other industries such as steel, aluminum, electrical, containers, even construction, and, soon to come, in the railroad industry. These changes ought not to be described as defeats for unions or even as concessions. Rather, they are evidence that union roles and structures are accommodating to market realities; the only alternative would be further decline of the economy and of the unions.

It is ironic that unions, once a potent force for change and innovation, now are often defending the status quo, or even trying to turn the clock back. The glories of the postwar period, featuring growth and affluence, are suitable for celebration at union conventions, but do not provide appropriate guides for current policy.

Economic forces dictate strategies designed to achieve vast improvements in productivity, quality, service, and cost effectiveness. The clear alternative is an absolute decline in living standards along with recurring pockets of failure and dislocation, as well as a labor movement without a viable mission in the manufacturing sectors and perhaps even in others.

Unions should review their 50-year history. The pre-1980 labor relations patterns represent a labor concession to the most basic of management demands—the unbridled right to manage. Unions did not succeed in seriously eroding the right of management to decide and to direct. The workers' role has been to obey orders. True, with a union, a worker could protest violation of contractual rights and periodically present requests (dramatically termed "demands"). But except where management consented to grievance arbitration, the management retained the right to decide. Even in the face of a strike, the management and only the management could make the eventual decision.

This accommodation (or concession as it would now be called) by unions came early in the New Deal days when Philip Murray-Walter Reuther notions about industrial democracy and meaningful worker participation in workforce decision-making were categorically rejected. The modern labor agreement reflects the union agreement that management runs the show, essentially along the lines of the Fred Taylor school of management and its companion pseudo-scientific wage systems.

A generation of union members and leaders has been weaned on this arrangement. Now, when many management forces seek to

concede some of what they previously rejected, unions are usually found protesting. Let us review what is happening.

Managers are not embracing worker involvement as a result of an ideological conversion, but are merely responding to new urgencies, new economic pressures, the broader and more potent options of consumers.

Companies are inclining toward democratization as a survival strategy. Unions can respond to the same forces—or try to resist at their peril. When unions do pursue a role in promoting productivity and competitiveness, they have no choice but to adapt to the wide variables of the marketplace, thus abandoning patterns and centralized controls. It is a disservice to unions and to the labor relations process to equate adaptation, changing roles, achieving market relevance with union defeat or weakness. The French steel unions were strong and militant, but unsuccessful. The British coalminers were revolutionary in their resolve and actions, but failed to impede or repeal economic forces.

Academics can be helpful in putting in perspective the difficult problems confronting unions. New union roles can be evaluated as retreat or defeat—or as the beginnings of new labor relations initiatives, a step toward enlarging worker dignity and relevance.

We are on the threshold of full economic citizenship for working people. With such citizenship comes a greater burden of responsibility. Unions can seize the opportunities and embrace the realities. Or labor can resist change, and as a consequence increasingly be bypassed.

The papers presented here review major trends in three important industries. In airlines, it would be useful if the chaotic union structure were rationalized so that labor could at least try to relate effectively to the drastic changes taking place. Unions must find the courage to resolve the mess of multiple competing unions and lack of meaningful strategy.

In the Bell system, adaptation is taking place, not as neatly as could be theoretically conceived, but in a manner which does indicate that the parties are coming to grips with complex realities.

In autos, a variety of trends are discernible and the union is in the process of trying to relate. There are various groups and pressures, often conflicting but providing an important laboratory of labor relations experiences. Again, it is utopia to expect a neat, unified strategy, but reasonable to hope for important effective initiatives. Some are clearly discernible.

What seems clear is the inappropriateness of clinging to the past or of pursuing a class-struggle strategy. The health of the economy requires aggressive victories, not of labor over management, but of the labor relations process over ineffective performance and lagging competitiveness.

DISCUSSION

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I have no mind to criticize these very good papers. The authors do well what they have set out to do. Rather, I want to take advantage of my discussant's role to free-wheel on the contexts and consequences of their researches.

The papers say, in effect—as I read them—that the unions in the respective industries are caught up in circumstances that are mostly beyond their reach. The salient circumstances, limned in broad strokes, are import penetration (autos) and deregulation (airlines and telephones), aggravated by mergers and acquisitions in the former and divestiture in the latter.

These contexts are part of the larger pattern of economic destabilization which includes the dampening of American business innovation, the intensification of American business bureaucracy, a couple of energy crises, a couple of recessions (one more like a depression), exchange-rate distortions, and the Reagan “revolution.” These industry-specific and general shocks have created an environment unfavorable to unions and favorable to management in providing the coercive evidence for antiunion aggressions.

Antiunionism, the essence of management's new industrial relations, springs from the necessity, as management sees it, of competing in an economic world which no longer marches to the American drummer. At this moment, takeover mania, “golden parachutes,” the Boesky affair, and the quarterly financial report syndrome are symptoms of an underlying business pathology of which “union-free” industrial relations is only a small part. This, then, is the “strategic choice” which American management has opted for.

The substantial contribution of the papers is to connect up the changes in market structure—deregulation, import penetration, divestiture, and acquisitions and mergers—with the changes in union structure (nowhere clearly defined, by the way)—specifically, declining union density, decentralized decision-making, internal

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dispersion of union power in autos and communications but not in airlines (this last is also a consequence of union weakness), demoralization of bargaining units through outsourcing, subcontracting, and outright litigation.

As to the employment terms of the relationships, union influence and power are being eroded through reforms in job classification systems that destroy job identity, two-tier wages, and absolution from contract obligations by bankruptcy. The hopes for union-management cooperation—one of the more promising developments of adversity—are being dashed by mergers, plant shutdowns, and unprecedented mass layoffs. Employee commitment and trust can only wither in the face of instability.

If there is some compensatory social benefit for weakening unions, it has yet to show up in any material way. Oligopoly is returning to air transport. If Ross Perot is right, General Motors has yet to be stirred out of its bureaucratic torpor. Executive bonuses and inexplicable buyouts in the face of plant shutdowns, mass layoffs, and massive wage sacrifices raise questions as to whose interests are being served. Steel—indispensable to the security of modern industrialism—is almost in a state of panic. The cheaper and better service which the deregulation and divestiture were supposed to usher in, in telephones, is still to be realized. No redeeming purpose seems to have been served by the process set in motion by these overarching events.

Sometime in the 1970s we began to develop a passion for the quality of work built around the full-time, lifetime job with health and pension fringes on top. The lifetime job is now being undermined by mass layoffs in mid-career; job identity is being diluted by elastic classification systems; outsourcing, subcontracting, homework, and the “hollow corporation” are widening the gap between an employer of convenience and the effective employer, several times removed from the work situation, who really makes critical decisions. The American dream of full-time employment at respectable wages is being eroded by temporary help, part-time work, sectoral redistribution from manufacturing to service employment, “flexitime,” and bonuses instead of wages. All in all, the labor market is moving toward the retrograde condition of wages and salaries as commodities which we thought social policy had begun to humanize.

I derive four lessons from this recital, none of which should reflect on the paper-writers:

1. Wholesale utopian schemes like deregulation, divestiture, tax reform, and supply-side economics are undertaken solely because the theory sounds right. It turns out that brutal reality interjects unanticipated variables that negate original purposes.

2. Unions have gotten a bum rap for their complicity in the American economy's fall from grace. In fact, the unions, by their nature, have been reactors to, not initiators of, the large changes. With hindsight, the unions might have moderated their wage demands, but where do we find examples of this sort of self-denial short of the brink? Nor is it self-evident that union wage policy has been that important in a context of business oligopoly, technological backwardness, "corpocracy," and takeover mania.

3. Quantity eventually evolves into quality. We are not only witnessing massive labor cost-cutting, but in its wake the erosion of an industrial relations way of life which has served the society well. At the moment it is not apparent what good purposes are being served thereby.

4. Positivism in the social sciences may have gone too far. Although American social science is methodologically the best there is, it is arrogant and insufficiently informed by human concerns that can't be fit into a computer. This was not always so; the intellectual Founding Fathers of our field, John R. Commons, Elton Mayo, and their disciples, brought not only the methods of social science to their researches, but a profound sense of equity and social justice.

When you get down to it, industrial relations *is* equity. Industrial relations comes into being to mediate the ruthlessness of efficiency with fairness and a right to be heard. Are we now witnessing the decline of industrial relations as equity and its replacement by coercive labor market power in the form of mass unemployment and mass layoffs? And for what?

VII. NEW DEPARTURES IN COMPENSATION: PROFIT-SHARING AND INCENTIVE PAY

Share Arrangements and Macroeconomics

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Lately there has been a tremendous resurgence of interest in share arrangements generally, and profit-sharing in particular. This new interest has been manifesting itself in a variety of ways. It shows up in statistics concerning actual pay settlements. Even without the numbers telling us what is happening out there, we all know there is a lot more talk about gainsharing arrangements than we have heard in a long time.

Profit-sharing itself is an old idea with, I think, a venerable history. There are surely a number of reasons for the rekindled interest of late. A major direct spur is undoubtedly coming from the fierce pressure for containing costs, or at least making them somewhat more responsive to performance, that many industries, which were previously quasi-protected, are now subjected to in a deregulated, internationally competitive environment. Another rationale stems from the more general idea that a properly instituted gainsharing plan can motivate workers to cooperate more fully with management in raising productivity and increasing profitability by giving them a direct stake in the outcome. And there is the idea that if society as a whole were to move toward profit-sharing, it would help to soften the

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wicked unemployment-inflation tradeoff which bedevils current attempts of traditional macroeconomic policy to reconcile reasonably low unemployment with reasonably low inflation. It is this macroeconomic promise of profit-sharing on which I will concentrate here by attempting to set forth the general case briefly and informally. Some more formal references are cited at the end of the paper.

Perhaps it is appropriate to start by commenting on one important difference between how someone with an economist's perspective is likely to view labor payment systems and how someone coming from a pure industrial relations background is likely to see things. The economist tends to regard narrowly defined industrial relations as essentially concerned with the interests of two parties at the workplace: management, and the already employed, in-place, existing core labor force—"insider" workers in the economist's jargon. Relatively little attention is paid to third-party "outsiders"—the unemployed and those who, when they have jobs, constitute the low-seniority, untenured, last-hired and first-fired. Yet industrial relations generally, and pay policies in particular, have profound effects on unemployment and inflation. And unemployment is extraordinarily expensive, not to mention immoral. If we could lower our average national unemployment rate from around 7 percent to around the 4-percent level prevailing, say, in Massachusetts, that would translate into an annual increase in national income of about a quarter of a trillion dollars. Surely it is possible to craft an industrial relations system that preserves most of the traditional desiderata which insiders value, but builds in stronger incentives to employ more outsiders and to keep them employed through thick and thin.

Japan has an unusual labor payment system where about one-fourth of an average worker's total compensation comes in the form of a twice yearly bonus supplement with significant profit-sharing overtones. While it would be naive to infer a simple cause-and-effect relation from profit-sharing to full employment (in abstraction from the entire industrial relations context), the automatic shock-absorbing cushion provided by the bonus system is almost surely making some contribution toward the remarkably low rates of Japanese unemployment.

What causes unemployment or slack labor markets? There is only one basic answer, but, like a coin, it has two sides. Side one is that unemployment is caused when firms face insufficient demand for their products relative to their marginal costs of production. Side two is that unemployment is caused when firms have too high marginal

costs of production relative to the demand for their products. Sometimes it is useful to stress one side of the coin, sometimes the other. But it is always the same coin.

In either case, the key to noninflationary full employment is an economic expansion that holds down the marginal cost to the firm of acquiring more labor. Macroeconomic policy alone—the purposeful manipulation of financial aggregates—can be very powerful in achieving full employment or price stability, but cannot be reliably depended upon to reconcile both simultaneously.

The major macroeconomic problems of our day trace back, ultimately, to the wage system of paying labor. We try to award every employed worker a predetermined piece of the economic pie before it is out of the oven, before the size of the pie is even known. Our “social contract” promises workers a fixed wage independent of the health of their company, while the company chooses the employment level. This stabilizes the money income of whoever is hired, but only at the considerable cost of loading unemployment on low-seniority workers and inflation on everybody—a socially inferior risk-sharing arrangement that both diminishes and makes more variable the real income of workers as a whole. An inflexible money wage system throws the entire burden of economic adjustment on employment and the price level. Then macroeconomic policy is called upon to do the impossible—reconcile full employment with low inflation.

A profit-sharing system, where some part of a worker’s pay is tied to the firm’s profitability per employee, puts in place exactly the right incentives to resist unemployment and inflation. If workers were to allow some part of their pay to be more flexible by sharing profits with their company, that would improve macroeconomic performance by directly attacking the economy’s central structural rigidity. The superiority of a profit-sharing system is that it has enough built-in flexibility to maintain full employment even when the economy is out of balance from some shock to the system. When part of a worker’s pay is a share of profits, the company has an automatic inducement to take on more employees in good times and, what is probably more significant, to lay off fewer workers during bad times. A profit-sharing system is not antilabor and does not rely for its beneficial effects on lowering workers’ pay. The key thing is not to get total worker pay down (it could even go up within reason), but to lower the base wage component relative to the profit-sharing component. The marginal cost of labor is approximately the base wage, more or less independent of the profit-sharing component.

While it is possible to dream up unlikely counterexamples and to interpret the existing evidence perversely, the bulk of economic theory, empirical evidence, and common sense argue that widespread profit-sharing will help to improve macroeconomic performance. The bottom line is that it is easy to envision situations where profit-sharing helps macroeconomic performance, while it is difficult to imagine a scenario where profit-sharing damages an economy, which is as much as can be claimed for any economic idea.

The British Chancellor of the Exchequer stated the case for profit-sharing as follows in his 1986 annual budget speech before the House of Commons: "The problem we face in this country is not just the level of pay in relation to productivity, but also the rigidity of the pay system. If the only element of flexibility is in the number of people employed, then redundancies are inevitably more likely to occur. One way out of this might be to move to a system in which a significant proportion of an employee's remuneration depends directly on the company's profitability per person employed. This would not only give the workforce a more direct personal interest in their company's success, as existing employee share schemes do. It would also mean that, when business is slack, companies would be under less pressure to lay men off; and by the same token they would in general be keener to take them on."

It is no mystery why profit-sharing makes the employer view things fundamentally differently. In a profit-sharing system the young school graduate looking for work comes with an implicit message to the employer saying, "Hire me. I am reasonable. Your only absolute commitment is to pay me the base wage. That is my marginal cost to you. The profit-sharing bonus is like a variable cost, depending to some extent on how well the company is doing. So you have a built-in cushion or shock absorber if something should go wrong." By contrast, the young British school-leaver looking for work in a wage system now comes to a potential employer with the implicit message: "Think very carefully before you hire me. I am expensive and inflexible. You will have to pay me a fixed wage independent of whether your company is doing well or poorly, and you will not easily be able to lay me off if your business goes badly." Is it difficult to deduce in which situation companies might be expected to more eagerly recruit new hires and in which situation new hiring commitments are likely to be avoided when at all possible? The essence of the case for profit-sharing is the basic idea that on the margin the profit-sharing firm is more willing than the wage firm to hire new workers during good times and, more

importantly, to lay off fewer workers during bad times. From a social point of view, a wage system is poorly designed because it is inherently so rigid. There has to be a precise relation between the wage level and the level of aggregate demand to just exactly hit the full employment target without causing inflation. By contrast, a profit-sharing system is inherently much more forgiving. Full employment will be maintained even if base wages and profit-sharing parameters are somewhat "too high" relative to aggregate demand or, equivalently, aggregate demand is "too low" relative to pay parameters.

It should be noted that not all forms of share systems bring about equally desirable macroeconomic benefits. For example, such widely disparate systems as ESOPs on the one hand, or piece-rate formulas on the other, unlike profit-sharing, do not necessarily alter the employer's attitude about hiring or laying off workers.

I do not have nearly enough time here to deal fully with the objections that are traditionally raised against profit-sharing. Many of them involve a fallacy of composition—a fallacious generalization from what is ostensibly good for the tenured high-seniority insider worker, who already has job security, to the level of what is good for the community of all would-be workers, which is quite a different matter. Perhaps the most egregious example of this kind of fallacious compositional reasoning is the argument that profit-sharing allegedly exposes workers to unnecessary risk.

This risk argument, so widely parroted and seemingly so plausible, embodies, at least in its crude form, a classical fallacy of composition. What is a correct statement for the individual high-seniority worker who already has job tenure is patently false for the aggregate of all would-be workers. The problem of unemployment is in fact the largest income risk that labor as a whole, as opposed to the median tenured worker, faces, and it is concentrated entirely on the marginal or outsider worker. If more variable pay for the individual helps to preserve full employment for the group, while fixed pay for the individual tends to contribute to unemployment, it is not the least bit clear why overall welfare is improved by having the median worker paid a fixed wage. Actually, the correct presumption runs the other way around.

What is true for the individual tenured worker is not true for labor as a whole. When a more complete analysis is performed, which considers the situation not as seen by a tenured, high-seniority worker who already has job security, but by a neutral observer representing the entire population, it becomes abundantly clear that the welfare

advantages of a profit-sharing system (which tends to deliver full employment) are enormously greater than a wage system (which permits unemployment). The basic reason is not difficult to understand. A wage system allows huge first-order losses of output and welfare to open up when a significant slice of the national income pie evaporates with unemployment. A profit-sharing system helps to stabilize aggregate output at the full-employment level, creating the biggest possible national income pie, while permitting only small second-order losses to arise because of relatively limited random redistributions from a worker in one firm to a worker in another. It is extremely difficult to cook up an empirical real-world scenario, with reasonable numbers and specifications, where a profit-sharing system with a moderate amount of profit-sharing (say 20 percent of a worker's total pay) does not deliver significantly greater social welfare than a wage system.

Any economy is full of uncertainty. There are no absolute guarantees, and if the uncertainty does not come out in one place, it will show up in another. I am saying that it is much better, much healthier, if everyone shares just a little bit of that uncertainty right at the beginning rather than letting it all fall on an unfortunate minority of unemployed workers who are drafted to serve as unpaid soldiers in the war against inflation. It is much fairer if people will agree that only 80 percent of their pay is going to be tied directly to the funny-looking green pieces of paper—which are themselves an illusion, although a very useful illusion—and 20 percent will be tied to company profits per employee. Then the economy can be much more easily controlled to have full employment *and* stable prices. Society will be producing, and hence consuming, at its full potential. If people will face up to the uncertainty, and if everyone accepts some small part of it, then society as a whole will end up with higher incomes and less uncertainty overall.

The crucial thing to decide is whether or not profit-sharing would reduce unemployment. The traditional “insurance” argument in favor of a wage system is fallacious, being based on a partial equilibrium view which does not take into account the radically different macroeconomic consequences of the two systems for overall employment and aggregate output.

Another fallacy of composition is often involved when opponents of profit-sharing argue that additional hired workers dilute the profits per worker which the previously hired workers receive, thereby possibly causing resentment by the already existing labor force against

newly hired workers which, in extreme cases, might lead to restrictions against new hires. The fallacy of composition here lies in failing to account for the fact that under widespread profit-sharing and relatively free hiring there would also be a tight labor market, and hence an employer cannot so easily pick up jobless people off the streets, because they are just not there.

Incidentally, this kind of profit-dilution argument is a red herring on other grounds as well. Even a one-sided worst-case scenario where profit-sharing “merely” dampens economic downturns by encouraging employers to lay off fewer workers during recessions still represents an economic benefit to the community of potentially enormous magnitude. In periods of recession and other kinds of squeeze, the “insiders” risk becoming “outsiders” and they may well be glad of a system which, without painful renegotiations, will enable an automatic adjustment in pay to be made—which would be self-reversing in recovery—to preserve jobs. Remember, also, that even in periods of normal growth there will always be firms under pressure to reduce employment and anything which lessens that pressure will help overall employment. To ratchet an economy toward a tight labor market and improve the employment-inflation tradeoff so that macroeconomic policies can be used more effectively requires only that, on the margin, during downswings a few less old workers are laid off and during upswings no fewer new workers are hired.

I started by commenting on some differences between how the economist and the industrial relations expert are likely to view labor payment systems and then proceeded to play the economist. I would like to return to that theme with a bit more emphasis on the industrial relations side, ending with a plea that we all move closer toward joining the issues because a lot of interesting and even important things may be at stake.

There are genuine, legitimate, tough issues involved in reconciling the many, already inherently conflictual, goals of traditional industrial relations with the additional burden of creating incentives to retain more workers during bad times and to take on more of them during good times. Any industrial relations system is a complicated package, of which pay is only one element. Trust between management and labor is an important part of most successful profit-sharing schemes. I do not pretend to know exactly how to design a socially optimal industrial relations pay system under the real world constraints that are out there. What I am saying is that we should be placing much more emphasis on the employment consequences of industrial relations than

we are now doing, and that it seems to me that anything resembling a socially optimal solution is very likely to involve some form of profit-related pay to help stabilize employment at higher levels.

References

- Freeman, Richard B., and Martin L. Weitzman. "Bonuses and Employment in Japan." National Bureau of Economic Research, Working Paper No. 1878, April 1986.
- Mitchell, Daniel J.B. "Gain Sharing: An Anti-Inflationary Reform." *Challenge* 25 (July-August 1982), pp. 18-25.
- Weitzman, Martin L. "Some Macroeconomic Implications of Alternative Compensation Systems." *Economic Journal* 93 (December 1983), pp. 763-83.
- . *The Share Economy*. Cambridge: Harvard University Press, 1984.
- . "The Simple Macroeconomics of Profit Sharing." *American Economic Review* 75 (December 1985), pp. 937-53.
- . "Steady State Unemployment Under Profit Sharing." *Economic Journal* 97 (March 1987).

Profit-Sharing Arrangements and Collective Bargaining

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The International Congress on Profit Sharing, meeting in Paris in 1889, defined profit-sharing as “an agreement freely entered into by which employees receive a share, fixed in advance, of the profits in harmony with equity and the essential principles of positive law.”¹ Embodied in this definition is that the worker’s “share” would be something beyond regular wages; it would be based on net profits, and it would not be regarded as a gift, but as a legitimate business expense.

Profit-sharing represents an alternate compensation system or a supplement to the wage system. In the United States, the wage system is the predominant mode of compensation. *The wage system is the standard practice of paying workers a fixed wage regardless of whether the company is doing well or poorly.* The wage may be set either jointly by collective bargaining or by the employers unilaterally. *The wage system works fairly well when aggregate demand is healthy and there is an air of certainty as to the future economic activity.* Alternative compensation or supplement compensation in addition to profit-sharing includes tips, commissions, lump-sum payments, and incentive pay rates. It would appear that the recent interest in alternate compensations is market driven. There are both domestic and international forces at work which are compelling a reexamination of employee compensation.

Today, any firm faces a combination of two kinds of uncertainty. One is firm-specific; it relates to a specific company and is largely unrelated to other sectors of the economy. The second kind of uncertainty concerns the general state of aggregate demand and affects almost every firm in varying degrees. An example of a firm-specific uncertainty would be the Chrysler Corporation experience. It is uncertain as to the public response to its new models, whether or not

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¹ Kenneth Thompson, *Profit Sharing* (New York: 1949), p. 16.

it can improve productivity, how soon a particular plant can be retooled, whether it can get concessions from the union to reduce the number of job classifications, how both General Motors and Ford will respond to Chrysler's seeking a larger share of the market, and how aggressively the Japanese will push their car. In addition, there is uncertainty as to the state of the national economy which, over time, affects the demands for all products for all firms. When aggregate demand is contracting for whatever reasons, firms begin to lay off workers. Wages tend to be sticky and change relatively slowly over time. The wage system has difficulty responding to changes in the overall decline of aggregate demand.

Alternate compensation programs enable employee compensation to be based in part on uncertainties. Corporations appear reluctant to bargain for specified wage increases when the economic outlook for the firm is blurred. The wage increases in a depressed market could well further weaken the firm's competitive position. Profit-sharing and lump-sum payments are usually based on corporate performance. They are separate payments and are not folded into the base rate. In other words, the base wage or salary is not affected by profit-sharing.

In addition to economic considerations, the current interest in profit-sharing may have been stimulated by worker involvement, quality of worklife efforts, and collaborative labor-management efforts.

Elements of Profit-Sharing Plans

The recent interest in profit-sharing plans raises the important question as to the goals of such plans. Is it being used as a motivator to increase employees' productivity and to lower unit costs? Is it a logical extension of worker involvement programs where workers share in productivity gains? Is it an exchange—a quid pro quo—for the union's agreeing to wage concessions? Is it a move to supplant the union? Is it an approach to limit both wage increases and fringe benefits? These questions suggest that profit-sharing plans can have multiple goals.

In planning and implementing a profit-sharing plan, under collective bargaining, the employer and union must concern themselves with its objectives. What is the objective? To improve productivity? To improve quality? To increase sales? To deal with uncertainty in the marketplace? To supplement employee wages without increasing fixed costs?

Once the decision to have a profit-sharing plan is made, management and their unions must commit themselves to the plan if it

is to be effective. For a plan to have credibility, it must have the complete support of management, union, and employees. A key factor is the employees. They must be fully informed of the purposes and goals of the new plan. The features must be thoroughly explained, and they must be convinced or persuaded of its direct benefit.

Another feature of the plan is who is to be included in it. Put another way, what employees are to be eligible for payments? Will all employees be eligible, or will only full-time employees be eligible, or will only full-time employees with a certain length of service be eligible?

Another key element is the formula to be used to distribute the profits to eligible employees. The experiences of the auto industry with its profit-sharing plans, which were introduced in 1983, underscore that the formulas used vary significantly. In its plan, General Motors stipulated that nonbonus salaried employees would share 10 percent of the U.S. joint tax profits of the corporation in excess of the minimum annual return. The minimum annual return means 10 percent of the net worth (stockholders equity) of U.S. operations plus 5 percent of the excess of the total assets of U.S. operations over the net worth of U.S. operations.

The following is an oversimplified example of the General Motors Plan:

Total assets as defined in Plan	\$42 Billion
Net worth as defined in Plan	<u>22 Billion</u>
Difference	\$20 Billion

Minimal Annual Return Calculation

\$20 Billion x 10% =	\$2 Billion
\$20 Billion x 5% =	<u>1 Billion</u>
	\$3 Billion

Profits as defined in Plan	\$5.5 Billion
Less minimum annual return	<u>3.0 Billion</u>
Profit in excess of minimum annual return	\$2.5 Billion
Profit-sharing rate	10% of \$2.5 Billion
Profit-sharing pool	\$250,000,000

General Motors has 550,000 employees
 $\$250,000,000 \div 550,000 = \450.00 average payout per employee

The Ford agreement calls for an incremental share of the profits whereby the amount of the share depends on the amount of the profits. The Ford Plan requires 2.3 percent pretax return on sales before any profits are shared. Once this pretax is reached, 10 percent of the profits, above the minimum of 2.3 percent return on sales but below a 4.6 percent return on sales, would be shared; 12.5 percent of the profits, above a 4.6 percent return on sales but below a 6.9 percent return on sales, would be shared; finally, 15 percent of profits above a 6.9 percent return on sales would be shared. It should be noted that the payouts are cumulative. The following is an example: Assuming profits are \$2.5 billion and sales are \$40 billion, then the return on sales would be 6.25 percent. The total profit share would be calculated as follows: $.10 (.046 \times \$40 \text{ billion} - .023 \times \$40 \text{ billion}) = .10 (\$1840 \text{ million} = \$920 \text{ million}) = \92.0 million . In addition, $.125 (\$2500 \text{ million} = \$1840 \text{ million}) = .125 \times (\$660 \text{ million}) = \$82.5 \text{ million}$. The total profit share would be \$174.5 million.

The construction of the formulas determines the amount of profits to be shared. For example, in March 1985, the average payout to the Ford employees was \$2000, while under the General Motors plan employees received an average of \$540. The outcome of the formula in terms of benefits received either can contribute to strengthening the trust and credibility of the parties' relationship, or it can have a negative impact in terms of poor employee morale and no gains in productivity.

It is important to analyze the formula which is used to determine the profits to be distributed. One can gain insight into the plan's real intent versus its stated goal. The profit-sharing plans recently bargained in the auto industry took place in an environment of concession bargaining. The plans were negotiated in exchange for concessions. For example, in exchange for profit-sharing, the Ford employees agreed to give up two annual 3-percent increases, and they also deferred COLA raises for 18 months. If the intent is to help make concessions more palatable, this is quite different from trying to increase productivity and becoming more cost competitive.

There are two methods of distributing profits. One is the cash plan, and a second involves deferred payment, typically a retirement benefit.

The most frequently used method is the cash plan. If cash payments under the plan are significant in amounts relative to the employee's base wage, they can serve as a strong incentive to improve performance. Put another way, if the motivational impact from a

profit-sharing plan is to be realized, the amount distributed to the employee must be significant. In a cash plan, the frequency of payout is also important. If the payout is infrequent, the plan can lose its incentive value.

One of the advantages of a deferred plan over a cash plan is that an employee is not taxed on the benefits until they are withdrawn from the plan, which is usually at retirement. A deferred plan may also be desirable depending on the age of the workforce and the interest of employees in funding individual retirement.

In the distribution of the profit-sharing pool, the parties must determine on what basis the profits are to be shared with eligible employees. For example, Ford uses eligible pay as the basis for distribution, while General Motors uses hours compensated and Chrysler hours worked.

Problems with Profit-Sharing

The design of the plan should reflect the plan's goals and objectives. A poorly designed plan can be detrimental to an organization's efforts to realize the plan's goals. The parties must determine exactly what the plan is intended to do. Is it intended to increase productivity and lower labor costs, or is there some other objective?

A most common problem is the overly complicated profit-share formula used by the parties. Failure of the company to properly communicate the method used in determining profit-share amounts can lead to mistrust and frustration.

For example, in 1984 the profit-share distribution at Ford was greater than that at General Motors even though the latter's profits were higher. As a result, the General Motors employees, who apparently were unaware that the formulas utilized by the two companies were considerably different, became frustrated and suspicious of General Motors' management. One could speculate that General Motors did not realize the motivational impact generated by profit-share distribution.

Another problem is the size of the profit-sharing amount received by the employees. For there to be any motivational impact from a profit-sharing plan, the distribution amounts must be "significant" to the employees, significance being relative to wages received.

The frequency of distribution is also a problem. In some instances, distributions are made frequently in an attempt to provide immediate feedback to the employees. More frequent distributions may dilute the

share to such an extent that it will simply be absorbed in the employee's weekly living expenses. On the other hand, a payment made quarterly or annually may be viewed as a bonus by the employee. This may result in more motivational impact per dollar of the amount of profits received by the employee.

A major problem in the profit-sharing plan designed to increase productivity and lower labor costs is the linking of individual performance with profit-share payments. The question is, how can a corporation the size of General Motors convince an employee at the Fisher Body plant in Lansing, Michigan, that his or her extraordinary efforts have significantly contributed to the corporation's overall profits? How does the corporation ensure that the plan does not become another impersonal program with which an employee is incapable of identifying? In this writer's view, it is important to link individual performance with profit-sharing payments. Failure to make this linkage results in a plan that does not motivate employees to identify with the objectives of the plan. It becomes just another compensation mechanism that has the added advantage from the employer's view of having its costs vary with profits. Plan designers need to make that linkage between performance and profits clearly understood, if this is the objective of the plan.

Summary

What does the future hold for profit-sharing plans? It is expected that they will continue to be implemented by more and more of America's corporations, both large and small. However, the impetus for this expansion will be due primarily to a desire for a flexible wage system rather than a commitment to a system offering motivational value. For example, by implementing plans administered centrally and based on corporate rather than divisional or plant profits, both General Motors and Ford, for example, demonstrated either that they were unable to negotiate a meaningful plan with the union, or that their primary thrust was to tie a portion of labor's total compensation to company profits and thereby achieve at least a small reduction in labor costs during periods of depressed sales. It is suspected that *both* of these conditions influenced the current profit-sharing plans in the auto industry and have resulted in "pseudo-profit-sharing plans" that are nothing more than a form of "ability-to-pay" based compensation.

On the positive side, it is likely that the number of profit-sharing plans will also grow in small companies since such plans are currently in vogue as a result of the publicity surrounding plans at General

Motors, Ford, and other large corporations. Further, it is anticipated that these plans will generally be successful since they are likely to be implemented as a part of a more significant development—namely, a change to a management philosophy that is more human resource oriented. A change in management philosophy coupled with a well-designed and easily understood profit-sharing plan could make a significant contribution both to the firms and to the nation.

It is apparent that the expectation of what is to be accomplished with profit-sharing can vary significantly from company to company. The profit-sharing purist would insist that the plans implemented by General Motors and Ford are *not* profit-sharing plans, but rather are supplemental compensation provisions that were traded in exchange for other concessions from the union. While this may be true, it is also true that General Motors and Ford have probably accomplished what they intended to accomplish initially and, therefore, the plans have been successful from their perspectives.

The existence of the plans in the auto industry have created a new awareness of the profit-sharing concept which, in turn, should result in additional converts.

In theory, a profit-sharing plan would appear to be an ideal method of assuring that employees' and employers' objectives are one and the same. The employer is interested in survival and the employee seeks job security. Survival and job security are interlinked and interrelated. Profit-sharing is a special kind of pay for performance which, it is hoped, will become deep-rooted in America's industry. It provides the mechanism for sharing of common goals by management and labor.

Who Has Flexible Wage Plans and Why Aren't There More of Them?

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"Flexible" compensation plans have been attracting renewed interest in recent years. Some of this interest is due to concerns about poor U.S. productivity performance; some of it stems from theoretical analyses by Weitzman (1984) and others suggesting that certain kinds of flexible pay systems could alleviate macroeconomic problems such as unemployment and inflation.

Four types of plans are commonly lumped under the flexibility label: (1) simple incentives such as piece rates, (2) gainsharing plans (Scanlon, Rucker, Improshare), (3) employee stock-ownership plans (ESOPs, tax-credit ESOPs), and (4) profit-sharing plans. Unfortunately, discussion of these plans is frustrated by lack of consistent, basic data on the extent to which they are actually used. Moreover, the tendency to lump the plans together obscures their differences.

Three issues are examined in this paper. First, available evidence concerning the use of flexible pay systems is reviewed. Second, management beliefs about the attributes of the plans, based on a survey conducted by the authors, are explored. Third, the question of perceived substitutability between the alternative plans is discussed, using the survey. The Weitzman argument that all plans are not created equal emphasizes the importance of this last question. If having one type of plan precludes having another, then it will be difficult to encourage establishment of those plans that have desirable economic properties.

Types of Plans

Simple incentive plans began as piece rates in early manufacturing settings. Such plans still exist. But as scientific management developed in the early years of this century, more elaborate systems evolved (Bedaux, Halsey, Rowan, and Gantt plans). A typical plan involves a

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production standard with worker bonuses for meeting or exceeding the norm.

Compensation specialists often argue that simple incentives provide the greatest potential for productivity improvement, since the rewards are tied to individual performance and are made frequently (each paycheck). However, in many circumstances, especially for white-collar workers, lack of a clearly measurable output makes such plans infeasible. Questions of quantity vs. quality may be raised, even where tangible output exists. Finally, there are well known problems with the dynamics of standard setting, especially the (perverse) incentives created for workers to restrict output in order to keep norms low.

Simple incentive plans do not receive favored tax treatment since incentive pay is taxed as current income. From an economic perspective, this treatment is reasonable. If these plans do improve firm performance, they are likely to be adopted without tax preferences. In the Weitzman view, simple incentives do not foster external macroeconomic benefits. Without such social externalities, tax preferences are unwarranted.

In contrast, *gainsharing plans*, because they are often based on value added or sales, may yield Weitzman-type benefits. (Whether they do or not depends on the bonus formula used.) Like simple incentives, gainsharing receives no preferred tax treatment. These systems usually involve bonuses based on labor cost savings at the plant or firm level. Because these programs are group-oriented, they are viewed by proponents as devices to improve teamwork and general job satisfaction. The formulas used to determine gainsharing bonuses are complex.

Employee stock-ownership plans involve creation of a trust which holds company stock for employees. ESOPs have received increasingly favorable tax treatment since the mid-1970s on the theory that they spread wealth and turn workers into mini-capitalists. However, the plans do not produce Weitzman-type external macro benefits.¹ In principle, ESOPs can be used to provide a vehicle for 100-percent worker ownership. Such ESOPs are rare, but often well publicized.

Tax credit ESOPs (TC-ESOPs)—most recently known as PAYSOPs—enjoyed an implicit tax subsidy which exceeded 100

¹ This issue cannot be explored here. Essentially, the problem with ESOPs is that employees take their benefits with them when they leave the firm (in the form of shares or a cash payment for their shares). Under profit-sharing, however, departing employees receive either nothing or—under deferred plans—their past bonuses. See Mitchell (forthcoming).

percent of their cost.² The amount of employer "contribution" permitted was quite limited. Revisions of the tax code in 1986 removed the tax subsidy for PAYSOPs.

Finally, *profit-sharing plans* link bonuses to company profits. Those plans that pay cash bonuses receive no tax preferences. If the plan provides for deferred benefits—that is, paying the bonus into a retirement fund—employee tax liability is deferred. However, the implicit tax subsidy is no greater than provided under qualified pension plans and deferred savings arrangements such as 401(k) programs. Yet if profit-sharing plans offer the macroeconomic external benefits suggested by Weitzman, they have the best claim on preferential tax treatment of any of the flexible pay systems.

Surveys of Plan Usage

Table 1 summarizes information from four major surveys which relate to flexible pay. Other data sources are also available, but there is no comprehensive survey providing information on the number and characteristics of employers and employees involved in such pay systems, or on the employer expenditures involved.³ Based on the limited data available, the following conclusions can be reached.

TABLE 1
Flexible Compensation Plans: Major Data Sources

1. Bureau of National Affairs. *Basic Patterns in Union Contracts*, triennial survey of 400 union contracts. Reports one-third of contracts have simple incentives, concentrated in manufacturing.

2. Bureau of National Affairs. *Productivity Improvement Programs*, 1984 survey of 195 employers. Nineteen percent have profit-sharing, 18 percent have employee stock ownership, 1 percent have Scanlon, 1 percent have Improshare, 40 percent have performance bonuses, 10 percent have piece work.

3. General Accounting Office. *Employee Stock Ownership Plans*, special survey of 4200 ESOPs and TC-ESOPs based on IRS reports covering 7 million workers as of 1983. Ninety percent of these employees are under TC-ESOPs.

4. Bureau of Labor Statistics. *Employee Benefits in Medium and Large Firms*, annual survey covering more than 42,000 establishments with 23.1 million workers. In 1985, 18 percent of covered workers had profit-sharing, 2 percent had ESOPs, 22 percent had TC-ESOPs.

² See U.S. Office of Management and Budget (1986).

³ Interested readers may wish to refer to publications of the ESOP Association, the Profit Sharing Council of America, the Profit Sharing Research Foundation, the National Center for Employee Ownership, and the U.S. Chamber of Commerce for examples of available information.

Incentive plans still are used with some frequency, especially in situations where output is easily measured. However, they appear to have declined in popularity over the long run and in recent years (Carlson, 1982). Gainsharing plans are so rare that they must be regarded as curiosities. Profit-sharing plans cover no more than a fifth of private employees.

Data on employee stock ownership can be misleading. Most of the workers covered by such plans had TC-ESOPs, not "regular" ESOPs. TC-ESOPs were likely to be found at larger firms where personnel managers understood that the U.S. government was paying for them. With the tax subsidy now removed for TC-ESOPs, more attention will be focused on regular ESOPs (which cover only a small proportion of workers). Regular ESOPs enjoy a considerable tax subsidy, especially when used as financing tools.

Management Attitudes

A recent survey of private-sector management attitudes toward flexible pay systems for *nonexempt* employees was conducted by the authors.⁴ Personnel/IR managers were asked about their views of such plans (regardless of use). The survey produced a wealth of data which can only be highlighted in this report.

Management attitudes toward flexible pay are summarized in Table 2. Generally, the respondents believed that of the five flexible pay systems listed in the table, simple incentives were the best productivity enhancers and the easiest to explain to workers. Profit-sharing was seen as providing flexible labor costs to the firm, increasing loyalty, and (in the deferred form) providing a useful retirement program. Gainsharing was viewed as more complex to administer and explain than the other plans, but as having a beneficial effect with regard to productivity, loyalty, and labor cost flexibility.

TC-ESOPs were not highly rated. Undoubtedly, part of the reason is the extremely limited employer "contribution" that was permitted by Congress for these plans. However, regular ESOPs also do not show up well in the relative rankings of Table 2. Proponents, of course, can cite numerous case studies in which benefits did ensue from the use of ESOPs. And the purpose of this essay is not to dispute those findings. Rather, the issue is one of alternatives, particularly since Congress has focused its favors on the ESOP and its variants.

⁴ The survey consisted of a mail questionnaire sent to personnel/IR managers whose names appeared on mailing lists of the UCLA Institute of Industrial Relations, the IRRA, the Internal Revenue Service, and the American Compensation Association. Information about this survey can be obtained from the authors and will appear in other forums.

TABLE 2
 Characterization of Flexible Compensation Plans
 by Survey Respondents

	Profit-Sharing	ESOP	Tax Credit ESOP	Gain-sharing	Simple Incentive
<i>Best for:</i>					
Raising productivity	28%	5%	^a	26%	41%
Increasing loyalty	48	17	2%	19	14
Providing for retirement income	80 ^b	13	7	n.a.	n.a.
Linking labor costs to firm performance	53	n.a.	n.a.	28	19
<i>Easiest to:</i>					
Explain to employees	32	9	7	4	49
Administer	40	7	12	4	38

Source: Based on 508 surveys returned as of October 15, 1986, from personnel/IR managers.

^a Less than .5 percent.

^b Refers to tax-deferred profit-sharing plans.

n.a. Not asked.

It might be noted in this connection that about one-fourth of the sample respondents were employed by firms with ESOPs. Yet they were not significantly more likely to rank the ESOP approach as best with regard to productivity and loyalty. ESOP users were more positive than others about the use of ESOPs for retirement savings and their ease of administration and explanation. But they still rated other plans as better on these dimensions.

The Question of Substitutability

In principle, employers can have a mix of flexible compensation systems; having one plan does not necessarily preclude having another. But employers might not choose to mix the plans if they believed that one was sufficient to meet their objectives. Based on the survey, it is possible to ask two questions: (1) What does management *believe* about the substitutability or complementarity of flexible pay plans? (2) What does management *do* with regard to mixing such plans?

Table 3 reports on findings related to attitudes (as opposed to practices). Respondents were asked whether they agreed or disagreed with the proposition that having one type of specified plan made it unnecessary to have some other specified plan. It is most useful to

TABLE 3
 Management Attitudes Concerning Plan Substitutability
 Percentage of Respondents Generally or Strongly
 Agreeing That Having One Plan Obviates Need for the Other

Firm doesn't need →	Profit-Sharing			Tax Credit ESOP	Gain- sharing
	Cash Bonus	Tax- Deferred	ESOP		
if it has:					
Profit-sharing					
Cash bonus	—	n.a.			
Tax deferred	n.a.	—			
ESOP	16 (20)	15 (19)	—		
Tax credit ESOP	13 (6)	12 (4)	23 (23)	—	
Gainsharing	28 (43)	23 (27)	13 (6)	9 (10)	—
Simple incentive	17 (17)	14 (14)	5 (2)	5 (4)	24 (24)

Source: Based on 508 surveys returned as of October 15, 1986.

Note: Percentages refer only to those answering the question. Figures in parentheses refer to respondents whose firms had the plan applicable to the table row.

n.a. Not asked.

TABLE 4
 Effect of Having Alternative Plans on
 Incidence of Profit-Sharing and ESOPs

Type of Respondent	Profit-Sharing		ESOP	
	Have Plan	Do Not Have Plan	Have Plan	Do Not Have Plan
All respondents	52%	48%	25%	75%
With ESOP	54	46	—	—
With profit-sharing	—	—	25	75
With tax credit ESOP	48	52	33*	67*
With gainsharing	48	52	16	84
With simple incentive	58	42	28	72

Source: Based on 508 surveys returned by October 15, 1986.

* Significant difference indicated by chi-squared test between those with and without tax credit ESOPs. (Chi-squared = 11.658.)

concentrate on the findings with regard to profit-sharing, ESOPs, and simple incentives, since TC-ESOPs have lost their tax preferences and gainsharing is so rare.

Obviously, there are some managers who feel that having an ESOP precludes having profit-sharing. This view is stronger among those

who have ESOPs than among others. But even among ESOP users, only one-fifth take this position. About a sixth of the managers with simple incentives believe that such incentives obviate the need for profit-sharing. No relationship is seen between ESOPs and simple incentives. Stated attitudes, in short, are not barriers to adopting more than one plan.

Information on actual practice is presented in Table 4. The table shows the proportions of respondents who report their firms have (or do not have) profit-sharing plans and ESOPs. Partly because of the sample design, and partly because of sample bias, the proportions having profit-sharing and/or ESOPs are much higher in the sample than in the general population (as discussed above). About half of the respondents report having profit-sharing programs and about one-fourth have ESOPs.

Generally, having another flexible pay system does not have a statistically significant effect on the chance that the respondents' firms also had profit-sharing or ESOPs. The only significant association reported is that those with TC-ESOPs were more likely also to have ESOPs. Presumably, knowledge of operating one type of plan was helpful in operating the other.

Public Policy Implications

Of course, there is another kind of substitution possibility which is not reflected in the survey. Congress has made certain choices in targeting its tax expenditures in the flexible pay area. Specifically, with the 1986 tax law revisions, it has chosen to favor ESOPs over all other arrangements.

In the past, this preference was attributed by many observers to the influence of Senator Russell Long. With Long's retirement, however, it is unclear why this preference—particularly for ESOPs over profit-sharing—should continue. Based on the analysis of Weitzman and others, it is profit-sharing that has the greater claim for a social subsidy due to its potential macroeconomic benefits.

Conclusions

The title of this paper asked who has flexible compensation and why aren't there more of them. Within the (severe) limits imposed by data availability, the first question has already been answered. As to the second, the following responses can be given.

Simple incentives exist where output can be measured and where firms believe they can overcome some of the administrative and

perverse incentive problems such programs entail. Gainsharing is perceived to be difficult to explain and administer (compared with other plans), so its use is extremely limited. TC-ESOPs existed only because of extreme Congressional beneficence. Regular ESOPs seem also to depend on Congressional favoritism; even so, they are not very widespread.

Finally, profit-sharing is seen as inferior to simple incentives if the objective is just to raise productivity. But it receives good overall ratings from managers and can be (and is) used in conjunction with incentives. Recently, profit-sharing has made inroads into the unionized sector of the economy in autos, steel, telephone communications, and lumber. If Congress chooses to reorder its preferences, use of profit-sharing could be extended.

References

- Carlson, Norma W. "Time Rates Tighten Their Grip on Manufacturing Industries." *Monthly Labor Review* 105 (May 1982), pp. 15-22.
- Mitchell, Daniel J.B. "The Share Economy and Industrial Relations: Implications of the Weitzman Proposal." *Industrial Relations* (forthcoming).
- U.S. Office of Management and Budget. *Special Analyses: Budget of the United States Government, Fiscal Year 1987*. Washington: U.S. Government Printing Office, 1986. Pp. G29-G30.
- Weitzman, Martin L. *The Share Economy: Conquering Stagflation*. Cambridge, MA: Harvard University Press, 1984.

Union Versus Nonunion Attitudes Toward Share Arrangements*

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This paper examines profit-sharing plans: any procedure under which an employer makes available to any or all regular hourly paid employees, cash and/or deferred sums based on profits of the business as a whole. While this session is titled "New Departures in Compensation . . .," profit-sharing may be more accurately viewed as "old wine in new bottles."

Monroe found at least 55 profit-sharing plans, of which 12 were then active, in 1896 (Monroe, 1896). An 1899 study noted 23 existing plans (Gilman, 1899a, pp. 346-47). Both studies found a high plan mortality rate as a consequence of the depression of the 1890s, and relatively little involvement of unions. Plans were used to combat unions either by attracting employee loyalty to management or providing disincentives for union activity. The Bucyrus (Ohio) Foundry and Manufacturing Company plan specified that anybody uniting "in a combination for the purpose of coercing the company or embarrassing its business" forfeited the right to a bonus (Gilman, 1899b, p. 313).

Although many profit-sharing plans have existed (including some in unionized firms) for much of this century, profit-sharing has been an element of human resources management and employee compensation receiving little attention. The majority have been deferred plans, with bonuses used to fund retirement programs in a way which has brought tax advantages. A review of all past IRRA Proceedings gives an indication of the lack of attention paid to profit-sharing and other related plans. This is the first IRRA meeting to use the phrase "profit-sharing" in the title of a session or an individual paper. The 1961 Proceedings contained Cushman's paper, "The American Motors-UAW Progress Sharing Agreement," the only paper in any of the

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Proceedings which had profit-sharing as a central concern. Three other papers have been concerned with Scanlon Plans (Tait, 1952; Lesieur, 1952; Lesieur and Puckett, 1968).

Recent interest in profit-sharing seems to stem from two sources. One is the increasing use of positive techniques which, like earlier plans, may reduce employee incentive to unionize. Also, in some unionized firms plans have been negotiated in the context of concession bargaining involving reductions in wages and/or benefits and a loosening of workrules to give management additional flexibility in the use of human resources, such as plans negotiated at General Motors and Eastern Airlines.

This paper reviews the characteristics of profit-sharing plans, management's assessment of the advantages and disadvantages of such plans, and the effectiveness of plans in union and nonunion firms.

The Survey

Data have been collected from responses to a questionnaire sent to all profit-sharing firms which could be identified from three sources: (1) a list of contributors to the Profit Sharing Research Foundation (PSRF), (2) published cases from the profit-sharing literature, and (3) companies identified from more general literature. The list is not all-inclusive and may underestimate smaller firms which have not been written about or which have not contributed to the PSRF. Median size of the nonexempt workforce of nonunion firms is 240.5, about one-half the 500.5 figure for union firms.

Questionnaires were sent to the firms' CEOs, with a request that they or the appropriate manager complete the instrument. A total of 510 firms were surveyed, of which 35 had no plans. Responses were received from 141 (29.6 percent) of the 475 firms with plans: 96 nonunion and 45 union firms.

Selected Features Compared

Table 1 shows selected characteristics of the profit-sharing plans. Although few statistically significant differences were found between union and nonunion plans, the discussion includes nonsignificant, but interesting, findings. Deferred plans predominated in union and nonunion firms, but there was a slightly heavier emphasis on cash plans in union firms ($p < .10$). Where deferred or combination plans allowed for employee contributions, such contributions were made in 42 percent of the union firms, 54 percent of the nonunion firms. Unionized firm plans were more likely to have a predetermined

formula for sharing profits (50 percent) than to involve management discretion (48 percent), while the opposite was true in nonunion firms (55 percent discretionary and 41 percent predetermined formula).

TABLE 1
Selected Features of Profit-Sharing Plans

		Nonunion Firms		Union Firms	
		No.	%	No.	%
Type of plan**	Cash	7	7.5	9	20.5
	Deferred	64	68.8	26	59.1
	Combination	22	23.7	9	20.5
Employee contribution	Yes	48	53.9	15	41.7
	No	41	46.1	21	58.2
If contribution	Voluntary	39	81.3	13	76.5
	Mandatory	2	4.2	—	—
	Voluntary/Mandatory	7	14.5	4	23.5
Funding formula	Discretionary	53	55.2	21	47.4
	Predetermined by formula	39	40.6	22	50.0
	Predetermined by sliding scale	2	2.1	1	2.3
	Other	2	2.1	—	—
Bonus distribution°	Annually	84	87.5	35	77.8
	Semiannually	8	8.3	1	2.2
	Quarterly	4	4.2	6	13.3
	Monthly	—	—	2	4.4
	Other	—	—	1	2.2
Other fringes	Flextime	22	26.3	9	20.5
	Life insurance	92	96.9	43	97.7
	Health insurance	93	97.9	44	100.0
	Tuition paid	62	65.3	33	75.0
	Paid sick leave	83	87.4	36	81.8
	Dental insurance	58	61.1	31	70.5
	Disability insurance	80	84.2	35	79.5
	Stock ownership	35	36.8	17	30.6
	Paid vacation	94	98.9	44	97.8
	Matched contribution	16	16.8	10	54.3
	Defined contribution pension plan	14	14.7	11	25.0
	Fixed benefit pension plan	25	26.3	14	31.8
	Quality circles	17	17.9	13	29.5
	Paid holidays	91	95.8	42	95.5
	Gainsharing°	11	11.6	10	54.3
Vesting***	0-5 years	23	25.8	6	11.4
	6-10 years	53	59.6	19	34.3
	11-15 years	13	14.6	10	54.3

Note: ° $p < .05$ Chi-square. °° $p < .10$ Chi-square. °°° $p < .10$ Anova.

Bonuses are to be distributed annually in the overwhelming majority of all firms, although there is a tendency toward more frequent distribution in union firms ($p < .05$). Full vesting generally occurred sooner in nonunion than in union firms ($p < .10$). Eighty-five percent of the nonunion plans fully vested by the tenth year, compared to 46 percent of the union plans.

In order to see if profit-sharing was substituting in nonunion firms for fringe benefits which are usually found in union-management agreements, respondents were asked to indicate which benefits of a list of 15 were made available to employees. Profit-sharing is not substituting for traditional fringe benefits. The percentage of firms reporting paid vacations, paid holidays, and life and health insurance was about the same for both groups. Sick leave and disability plans were reported by a greater percentage of nonunion firms, while dental insurance was more likely to be found in union firms.

No pattern was found for less traditional fringe benefits. Flextime was used in less than 25 percent of all firms and not surprisingly was more likely in nonunion than in union firms. Tuition reimbursement plans also were uncommon, but more likely in union firms. Productivity gainsharing plans ($p < .05$) and quality circle arrangements were uncommon, too, but contrary to expectations were reported in a higher percentage of union than nonunion firms.

Responses indicate that in nonunion and union firms, profit-sharing is likely to fund pension plans, although less so in union firms, with a higher percentage of unionized cash plans. Also, unions may concede to wage rollbacks, but not pension plan reductions where concession bargaining is necessary. Matched contributions, defined contribution pension plans, and fixed benefit pension plans were reported in a minority of firms.

There are more similarities than differences between union and nonunion firms, judging from the responses. This should be expected since most respondents could not be viewed as distressed situations and most plans are not the result of concession bargaining. Both union and nonunion firms which have been successful with profit-sharing are likely to have learned that plans cannot substitute for other important elements of employee compensation and human resources management. However, it also is likely that some differences between union and nonunion firms are best explained by the presence of unions and their insistence on certain traditional elements of the wage and fringe benefit package.

Advantages and Disadvantages

Table 2 shows the major advantages and disadvantages attributed to the plans. No statistically significant differences were found between union and nonunion plans. Major differences between advantages listed by union and nonunion firms involve retention of employees and the use of profit-sharing to fund retirement programs. We would expect profit-sharing to have less impact on turnover in union firms. Historically, negotiated seniority systems have encouraged retention because of incentives associated with seniority—greater protection against layoffs, longer vacations, more sick leave, better retirement pay. Even where profit-sharing funds pension plans, benefits will accrue through seniority. In union firms seniority, not profit-sharing, has the greater impact on turnover, although profit-sharing also may contribute.

TABLE 2
Management Perceptions of the Advantages and
Disadvantages of Profit-Sharing^a

	Nonunion Firms		Union Firms	
	No.	%	No.	%
Advantages				
Heightened morale and loyalty	18	21.7	8	20.0
Better retention	21	25.3	4	10.0
Provides retirement funds	9	10.8	10	25.0
Employees more aware of profits	24	31.3	15	37.5
Totals	83	99.9	40	100.0
Disadvantages				
Higher administrative costs because of government requirements	7	11.7	7	22.7
Costs associated with time and money expenditures	20	32.3	8	25.8
Employees are given bonuses unfairly	4	6.5	2	6.5
Too much uncertainty	6	9.7	2	6.5
Not enough motivation	13	21.0	3	9.7
Incompetence is rewarded	2	3.2	1	3.2
Not enough money generated	10	16.1	8	25.8
Totals	62	100.1	31	100.1

^a Respondents were asked to name the most important advantage and disadvantage.

The difference in responses concerning the provision of retirement pay is harder to explain. It may be that executives in unionized profit-sharing firms credit profit-sharing with less costly funding of a plan that the union would insist on under any circumstances.

Major differences in disadvantages are found in the following categories: administrative costs because of government requirements, excessive time and money costs, not enough motivation, and not enough money generated. Nonunion and union firm differences in seeing costs as disadvantages are not readily explained. Nonunion concern with low motivation may stem from unreal expectations. The literature on rewards suggests that plans which primarily return any payoff annually are unlikely to have dramatic impact on daily work behavior. Heightened concern about money in union firms may be the result of continuing union pressures that profit-sharing become an attractive addition to the basic wage and fringe package.

Plan Effectiveness

Managers were asked to rate their profit-sharing plan's effectiveness. Nonunion firms rated the plan's effectiveness higher than did union firms with respect to improved employee performance (not statistically significant), employee morale ($p < .05$), and employee retention ($p < .05$). These findings are not consistent with findings concerning disadvantages of profit-sharing, but they are consistent with findings showing that, in general, morale is lower in union than in nonunion firms (Freeman and Medoff, 1984, pp. 136-49). Profit-sharing may substitute in nonunion firms for negotiated seniority provisions as a means of stabilizing the labor force.

Concluding Comments

The data barely scratch the surface of what might be interesting and useful to know about profit-sharing plans as a tool of human resource management. Far more has been written about plans in nonunion than in union settings. As collective bargaining becomes more decentralized and encompasses a wider range of issues, there is much to be learned about the use of profit-sharing in unionized firms. What has been the union impact, if any, on plans which have not survived? Are there important differences in the use of profit-sharing in concession bargaining situations and in situations where economic health is not an issue? What impact, if any, does profit-sharing have on the union-management relations climate in a given firm? Additional questions might be asked. When cries for less adversarial relationships are increasing, it will be important to better understand the impact of nontraditional forms of compensation on union-management relationships.

References

- Freeman, Richard B., and James L. Medoff. *What Do Unions Do?* New York: Basic Books, 1984.
- Gilman, N. P. *A Dividend to Labor: A Study of Employees' Welfare Institutions*. New York: Houghton, Mifflin and Co., 1899a.
- . *Profit Sharing Between Employer and Employee*. New York: Houghton, Mifflin and Co., 1899b.
- Lesieur, Fred G. "Local Union Experience with Cooperation Plan." *Proceedings of the Fourth Annual Meeting, Industrial Relations Research Association*, ed. L. Reed Tripp. Madison, WI: IRRRA, 1952. Pp. 174-81.
- Lesieur, F. G., and E. S. Puckett. "The Scanlon Plan: Past, Present and Future." *Proceedings of the 21st Annual Winter Meeting, Industrial Relations Research Association*, ed. Gerald G. Somers. Madison, WI: IRRRA, 1969. Pp. 71-80.
- Monroe, Paul. "Profit Sharing in the United States." *American Journal of Sociology* 1 (May 1896), pp. 699-709.
- Tait, Robert C. "Some Experience with a Union-Management Cooperation Plan." *Proceedings of the Fourth Annual Meeting, Industrial Relations Research Association*, ed. L. Reed Tripp. Madison, WI: IRRRA, 1952. Pp. 167-73.

Labor's Collective Bargaining Experience with Gainsharing and Profit-Sharing

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In recent years American labor has negotiated many new agreements with profit-sharing or gainsharing plans. But, after nearly a century of practical experience with these plans, labor has few illusions about their value as incentives, as a source of income, as a means of employment security, or as a vehicle to labor and management cooperation. Labor's experience with these plans has been mixed on all points.

Yet many observers treat these plans as freestanding abstract concepts newly discovered and divorced from the practical work environment. They see these plans as elements in dealing with the nation's productivity problems, as a way of joining the interests of labor and management, and recently as an element in national employment policy. Labor sees little prospect of achieving these goals through these plans, yet has found them useful in other ways.

Workers and their unions know and deal on the practical side of profit-sharing and gainsharing plans. Among the negatives, they have seen these plans used in union-busting, as a management-only assured bonus in prosperous times, and as wage alternatives in poor times; workers have traded wages for long-term bonuses only to see the plans terminated in the short term. On the positive side, these plans have been used in achieving other goals and benefits not otherwise available to workers.

In short, although these plans remain a small portion of all collective bargaining agreements, they have been around for a long time. Despite their relatively small number, they are a part of labor's workplace reality and considerable pragmatic experience. The term "gainsharing" has been used to describe a wide range of direct and indirect incentive plans and is now being used to describe some forms

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of profit-sharing plans. This paper will deal first with labor's perception of gainsharing and then profit-sharing plans.

Gainsharing

In 1896 Henry Towne apparently coined the term "gainsharing" in describing the indirect incentive plan used in his firm and differentiating it from profit-sharing plans (Towne, 1896). The plan he described was similar to modern Scanlon, Rucker, Improshare, and other broad-based indirect incentive plans.

However, a good deal of confusion developed. That was not because of the way gainsharing worked, but because the term was used to describe some direct incentives and because of its association with "scientific" management.¹ Frederick Taylor developed an incentive plan in connection with his "scientific" management concept which deskilled work, displaced workers, and moved workplace control to management specialists. His incentive plan paid a higher piece rate for all pieces after a worker went over a certain threshold. In the late 1890s the Halsey plan and, later, the Bedeaux and other plans were developed as direct incentive systems and marketed as "gainsharing" plans. These plans gave gainsharing a perverse meaning.

Variations of the Halsey plans diverted between one-third and one-half of the worker's productivity to pay for supervision, indirect workers, and plant overhead (Halsey, 1896). The Bedeaux plan diverted an increasing share as production increased. These plans were called "gainsharing plans" and were considered unfair by most workers (Brown, 1938).

Yet organized labor did not oppose fair incentive plans. Unions in the needle trades were negotiating market-wide piecework rates and "one-for-one" wage payment plans. These plans became goals of the new industrial unions of the 1930s. Against this backdrop, the union literature of the 1920s and 1930s raised strong objections to management-controlled wage-incentive plans and to "gainsharing" plans. "One-for-one" wage incentives became a standard demand in wage-incentive negotiations and union organizing drives.

Early negotiated incentive plans were based on existing wage incentive plans. For example, the Steelworkers and the steel companies early on negotiated direct one-for-one group incentive

¹ American Federation of Labor, *Convention Proceedings and Reports*, 1898, p. 76; 1905, p. 105; 1909, p. 212; 1913, p. 384; 1914, p. 83; 1915, pp. 83, 106, 326; 1916, pp. 92, 153; 1918, p. 121; 1943, p. 1231.

plans in the steel industry. Later, these plans were adapted to gainsharing plans.

During the 1930s the Steelworkers had a number of contracts with firms which had profit-sharing plans, and there were a few strikes over profit-shares during the period (Scanlon, 1948). It was during the same period that the beginnings of the Scanlon plans developed in the steel industry and by the steel unions.

Joe Scanlon's work for the Steelworkers had a goal that is not unlike the union's current use of profit-sharing and employee-ownership plans. In the 1930s and 1940s the union's goal was a basic industry-wide wage and benefit package. However, some firms were marginal and could not meet the basic package. In fact, Scanlon worked for a firm that was reorganizing in bankruptcy, and his cost-saving ideas not only helped it survive, but the firm eventually paid the industry pattern.

Near the end of World War II, money benefits were attached to the Scanlon productivity improvements, and it and the Rucker plans became "gainsharing" plans—the same concept that Towne described in 1896. However, the Steelworkers' use of gainsharing as an industry-wide bargaining tool was not appropriate in many other bargaining relationships.

Other unions in other industries were negotiating a few gainsharing plans as negotiated wage bargains or as an alternative to direct wage incentives. In the 1950s the Rubber Workers had Rucker plans in four small midwestern firms and a Scanlon plan at Parker Pen; the Auto Workers had a number of Scanlon plans in auto-parts firms, and the Machinists had a number of agreements. The latest proprietary gainsharing plan, Improshare, was developed in the early 1970s and by 1980 about 75 such plans had been negotiated.

Most union members view these gainsharing plans as basic, although complex, wage bargains. They are an exchange of worker short-cuts, ideas, and higher levels of production for money. The bargainers weigh extra money against the downside features of peer-group pressure, potentially greater safety risks, and lost personal time protections. The parties design these plans to produce stable earnings related to worker performance rather than to factors beyond their control. In short, rational economic behavior shapes these plans to meet the real needs of those involved.

For example, workers and their unions also realize that gainsharing plans have led to job losses when productivity increases and market shares don't. Thus, unions have negotiated guarantees against layoffs

due to gainsharing or worker participation committees. Some plans provide that gainsharing funds be set aside for training, and almost all stabilize income through banking a share of earnings. Other agreements limit the number of new hires or how long they must be on the payroll before sharing the bonuses. A careful look at gainsharing plans and related contract clauses indicates that workers and their unions seek to stabilize income and employment while improving productivity, and that a good deal of money is involved.

These plans are expensive, so unions are finding less interest among employers. In the past few years Parker Pen, Gould Battery, and Ingersol Rand have all terminated gainsharing plans. Parenthetically, if economic and organizational theory hold, one would expect rather profound employment and productivity effects in these firms, but none have been noted. Nevertheless, workers and their unions feel they have been cheated because implicit in the gainsharing concept is a share of productivity gains as bonuses in exchange for the workers' short-cuts, creative ideas, and greater levels of effort. This understanding is supposed to outlive the typical collective bargaining agreement that is renegotiable every three years. When management moves to close out or buy out the gainsharing plan, management is keeping and using the productivity gains, but not making the installment payments, and workers cannot repossess their short-cuts and ideas.

Thus, the catchy and well-used term "gainsharing" may be on its way to acquiring a bad name all over again.

Profit-Sharing

Profit-sharing was debated in the AFL's magazine, the *American Federationist*, in 1910.² It was the basic issue in the 1916 Stetson (hat) Company strike and to this day is used as a showpiece by antiunion and union-busting employers (AFL, 1916, p. 383). Yet the AFL, the CIO, and the AFL-CIO have never opposed profit-sharing, and only a few individual unions have ever taken policy positions opposing it. As with gainsharing plans, unions have approached these bargains carefully, trained their staffs, and negotiated profit-sharing plans on labor's agenda—an agenda that has been changing.

² See William Shaw, "Can Labor Be Capitalized?" *American Federationist* 17 (June 1910), p. 524; "Another View of Mr. Shaw's Proposition," *American Federationist* 17 (June 1910), p. 517; and "Mr. Shaw's Scheme of Capitalizing Labor," *American Federationist* 17 (August 1910), p. 687.

Early profit-sharing plans were usually exclusively controlled by management and coupled with “yellow dog contracts” that forbade union activity in that era. The practice with profit-sharing was to pay below-market wages and have profit-sharing make up 20 to 30 percent of wages at the end of the accounting year. Thus, in an age of company spies and agent provocateurs, workers who were suspected of any association with a union not only risked their jobs and being blacklisted, but also stood to lose a good share of their previous earnings. The passage of the Norris-LaGuardia Act in 1932 outlawed the “yellow dog contract,” but profit-sharing remained a part of the antiunion toolkit.

Profit-sharing was also used in connection with employer-dominated unions of the 1930s. The “company union” agreement generally contained a profit-sharing plan, and it was made clear to the worker that it would be lost if an independent or “outside” union were selected by the employees. Of course this was understood to mean an end to a large share of earnings that were described as a discretionary benefit. The “company union” gambit was outlawed when the National Labor Relations Act became effective in 1937. However, in the 1980s some employers still use profit-sharing as an element in their efforts to deny workers their right to union representation (Lieb, 1986).

Yet, not all employers behaved this way and unions did not reject profit-sharing while fighting union-busting. In the 1880s the Knights of Labor and, later, the Plumbers represented N.O. Nelson Company’s profit-sharing workers well into the 1920s when a corporate raider sent the company into bankruptcy. In the 1930s the Steelworkers and other unions organized a number of firms with profit-sharing plans and retained those plans. In 1938, AFL president William Green and two other labor leaders told a Senate committee what organized labor wanted to see in negotiated profit-sharing plans (Green, 1938). In 1958, profit-sharing became a national UAW bargaining goal, ending the union’s previous opposition (UAW, 1949). In 1967 the UAW reported 21 agreements with profit-sharing plans, the United Steelworkers had 22 in 1968, and the IAM had 28 in 1968. The Amalgamated Clothing and Textile Workers, the Molders, and the Electrical Workers are among the unions with extensive experience with profit-sharing plans.³

³ The stated number of agreements understates the actual experience with profit-sharing plans. It is known that union records combined profit-sharing with other concepts. For example, deferred profit-sharing plans were combined with other early pension plans and savings plans, and cash plans with gainsharing plans.

Most of the negotiated profit-sharing plans of the 1930s were cash plans. Deferred plans (pension-related) grew during the late 1940s through the 1950s as a means of introducing pensions in firms that were unable to commit to defined benefit plans. When able, the unions negotiated defined benefit plans. For example, the Amalgamated Clothing Workers' profit-sharing plan negotiated with Xerox in 1947 was first a deferred benefit plan that was replaced by a defined benefit pension plan. Later profit-sharing was renegotiated and a combined plan of the 1960s has been modified many times since.

Four unions at Michigan Wheel, a manufacturer of marine propellers, have negotiated both a gainsharing and a profit-sharing plan for more than 35 years. These plans predate the firm's acquisition by Dana Corporation in 1970. In 1986 the two bonus plans made up 50 percent of earnings which average well over \$30,000 per year. The workers participate in decisions on a variety of issues that are usually considered management prerogatives. In addition, the workers through their union have agreed to use a share of their earnings to buy new electric furnaces for the firm, to improve the quality of their product and to enhance their competitive position.

A leader of the local told a 1986 AFL-CIO conference on profit-sharing that family members make up a large portion of the workforce; even so, "layoffs are quick and deep, while recalls are slow." Utilizing these plans, the workers and management at Michigan Wheel are demonstrating rational economic behavior. Other union representatives at the conference noted similar behavior—maximizing and stabilizing earnings through the use of the manageable elements of the profit-sharing plans. Thus, it is unlikely that profit-sharing systems will lead to shared work any more than will prevailing fixed wage systems.

The early 1960s effort by the Auto Workers to obtain profit-sharing in the basic auto agreements paralleled the goal of the Steelworkers with Scanlon plans—to stabilize the negotiated industry wage and benefit pattern. A fundamental goal of organized labor continued to be to take basic wages and benefits out of competition so that management must compete on its ability and innovation. The UAW objective, after achieving a sound stable income level for its members, was to share in the wealth of the more profitable firms while securing employment opportunities in the marginal firms. This approach fit the traditional goal of the union, but management of the big three automakers resisted for 20 years.

American Motors, without profits, agreed to profit-sharing in 1961, the Chrysler loan-guarantee package contained profit-sharing in exchange for wage concessions in 1981, and Ford and GM—with prospects of poor to no profits—agreed to profit-sharing in 1982. However, the formulas of the auto plans differ, obscuring their leveling potential. The Ford plan formula yields higher returns to workers than does the GM plan. The UAW has stated that in future negotiations it wants to see the GM plan formula revised so that it produces results similar to those at Ford for similar profit levels—a signal that the union is returning to its goal of using profit-sharing to stabilize the basic industry's wage/benefit package.

In other negotiations in the 1980s profit-sharing has been taking on a new and different role—a part of a whole package with little significance as a separate concept. For example, the Steelworkers and LTV Steel used profit-sharing in the following way: Cuts in wages were treated as worker loans to the firm, to be repaid from profits. If profits are insufficient to pay the debt, the agreement obligated the parent LTV firm to issue convertible preferred stock paying 5 percent interest to make up the difference. The stock is distributed to workers who can convert it to voting stock. Key to this agreement is the potential for worker participation through their union—as potential voting stockholders and as debtors in the current bankruptcy reorganization of the firm. Other steel industry settlements employ a variety of other creative plans.

Profit-sharing has also been used in airline negotiations to meet the basic collective bargaining goal of stabilizing employment in individual firms. Before deregulation disrupted the industry, the airline industry made wide use of profit-sharing as an additional benefit. Some firms even had two or three profit-sharing plans, building benefits one on top of another.

Organized labor's view of these plans—as simply a benefit providing additional income—changed in the early 1980s. Profit-sharing became part of a trade—an investment of current wages for a promise of a share of future returns. As the impact of deregulation hardened in 1985, profit-sharing was packaged with stock ownership and levered ESOPs to take on a broader role. Workers, through their unions, began to use these concepts as a part of a whole package to gain greater control of their employment and income security and as a means of influencing management decisions. In the TWA and Eastern negotiations, the packages were described as investments—

wages and benefits for profits and stock ownership and a real voice in the decision-making process.

Summary

Although still a small part of all negotiated settlements, new lessons are being learned by workers and their unions about gainsharing and profit-sharing that are likely to be a part of future labor practices.

This look back over years of experience prompts the following observations:

- Firms with profit-sharing are no more likely to provide employment or income security than are those without. An impressive number of profit-sharing firms which paid a large share of worker income as bonuses are no longer operating. GM's 1986 layoffs and those in the airline industry were not deterred by profit-sharing, nor were there any cases of a flexible pay plan that handled layoffs any differently than any other firm. Workers have found no job security in profit-sharing theory.

- Workers prefer stable income to flexible income and will act accordingly. The Chrysler profit-sharing plan was discontinued in favor of an assured 75-cent-per-hour wage increase and a return to an industry wage/benefit pattern in 1984. The Clothing Workers negotiated out profit-sharing during the 1950s for assured pensions and then returned to it as an additional benefit in the 1960s.

- Rational economic behavior leads workers to maximize their incomes under profit-sharing, gainsharing, and other flexible income plans. Nearly all profit-sharing and gainsharing plans have carefully drawn rules regarding participation in benefits.

In short, for most workers, their debts and cash flow allow little or no room for risk-taking. Thus, gainsharing and profit-sharing are useful to workers only when they contribute to basic security goals. To meet these basic goals, the plans are designed to recover wages lost or used to avoid risks workers cannot afford.

References

- American Federation of Labor. "The Stetson Strike and Profit-Sharing." *American Federationist* 23 (May 1916).
- Brown, Geoffrey C. "The Bedeaux System." *American Federationist* (1938), pp. 942-49.
- Green, William. "Profit-Sharing." Statement of William Green to the Subcommittee of the Senate Finance Committee, November 23, 1938.
- Halsey, F. A. "The Premium Plan of Paying for Labor." *American Economic Association Economic Studies*, Vol. 1, No. 2. New York: Macmillan, 1896.
- Lieb, Jeffrey. "The Promise in Profit-Sharing." *New York Times*, February 9, 1986.
- Scanlon, Joseph N. "Profit Sharing Under Collective Bargaining: Three Case Studies." *Industrial and Labor Relations Review* 2 (October 1948), pp. 58-75.

Towne, Henry R. "Gainsharing." American Economic Association *Economic Studies*, Vol. 1, No. 2. New York: Macmillan, 1896. Pp. 51-73.

United Automobile Workers-CIO, Research and Engineering Department. "What's Wrong With Profit-Sharing?" *UAW-CIO Facts for Action* 1 (April 1949), p. 1.

VIII. CORPORATE RESTRUCTURING AND INDUSTRIAL RELATIONS

American Enterprise in a Time of Change: Implications for Industrial Relations*

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Corporate America has been experiencing radical changes in its structure. A restructuring of industry has been taking place at sectoral level, and structural shifts in the industrial composition of the economy, especially away from manufacturing, have been occurring independently of shifts of employment due to the economic cycle (Bluestone, Harrison, and Clayton-Matthews, 1986). At corporate level, commercial operations have been reorganized: changes in the structure, location, and production activities of corporate business units are evident. Corporation finances have also been restructured.

This paper provides an overview of corporate restructuring and its consequences for industrial relations, to the neglect of industrial restructuring which has received attention elsewhere (*Industrial Relations*, 1986). Initially, the changes in corporate structure in the U.S. are summarized, after which the implications for unions, management, collective bargaining, and human resource management are outlined. The causes of the recent surge in corporate restructuring and related changes in industrial relations are then identified.

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Growth and Incidence of Corporate Restructuring

Significant changes in both the operational and financial structure of corporations have been occurring during the 1980s. The total number of acquisitions and divestitures has risen since 1980, reaching 3001 in 1985—the highest since the 1968–1973 period when the number of announcements peaked at 6107. Acquisitions have increased over a longer period with minor reversals, but have seen most growth since 1980. Divestitures—that is, where there is a sale of a subsidiary, division, or product line—have nearly doubled in the 1980s, although they have not reached the levels of the first half of the 1970s when the number reached 1920 (Grimm, 1985). As an alternative to outright mergers, joint ventures have become increasingly common as a means of restructuring operations. Various, the ventures have brought U.S. companies together, such as GE and Westinghouse, or U.S. and foreign companies, such as GM and Toyota which formed New United Motor Manufacturing Inc. (NUMMI).

Operational locations have also changed. Strikingly, foreign firms have shown more inclination to set up in the U.S. More than 500 Japanese companies now have assembly or manufacturing plants in the U.S. In some cases, greenfield sites have been developed, such as by Honda in Ohio, Toyota in Kentucky, and Nissan in Tennessee. Others have taken over existing companies: for example, Nippon Kokan now has a 50 percent share in the National Steel Corporation and the Japanese ATR Wire and Cable Company has bought plants from Firestone Tire and Rubber. Domestic firms have relocated operations, too, often to the South and West. For instance, after establishing new plants in Tennessee and California, GM gave notice in November 1986 of nine plant closings in the Midwest industrial belt.

Further, the production activities of business units have frequently been altered, with more subcontracting and outsourcing, often from outside the U.S. Examples abound. In the auto industry, the value of components imported quadrupled between 1978 and 1985 (“The UAW . . .,” 1986). Steel firms also increased outsourcing significantly.

On a different tack, more and more companies have chosen to undergo financial restructuring. First, the use of Chapter 11 bankruptcy petitions to facilitate business reorganization spiraled, being seven times as great in 1983 as in 1979 (U.S. Bureau of the Census, 1986). Continental Airlines is a noteworthy example. Second, stock repurchases from shareholders by companies, as seen in firms such as Goodyear and Westinghouse, have grown from less than \$3

billion each year before 1983 to approximately \$40 billion in 1986. Third, management buyouts of business units tripled in the first half of the 1980s, although they remained only a small part of total divestitures (Grimm, 1986).

It is important to put these developments in perspective and realize that the annual percentage of corporations directly affected by major restructuring has been comparatively small. Nevertheless, since these developments have occurred each year and have tended to happen in large firms, a much greater number of workers have been affected than might be assumed.

Associated Developments in Industrial Relations

Corporate restructuring has been intertwined with changes in industrial relations. Accompanying developments have been seen in management and union organization and strategy, collective bargaining, and human resource management policies.

Management structure has become more centralized in many cases. One survey found that a majority of managers in acquired firms believed their positions underwent a radical decrease in authority upon takeover ("Fast Exits for Executives," 1986). Divestitures, meanwhile, left companies more focused, and management correspondingly more centralized (Clapp, 1986). Reorganization has been bound up with a generally more aggressive stance toward unions. Hard-nosed business decisions have taken precedence over industrial relations considerations. For example, striking union flight attendants were replaced at TWA after its acquisition by Carl Icahn.

Not surprisingly, union organization has been affected by restructuring. There is no question that membership has suffered. First, restructuring has reduced employment of union (and nonunion) workers. Corporations that have merged have fired duplicated workers: Chevron cut employment by 15 percent in 1986 after the merger with Gulf, for example. Acquired companies, such as NBC and ABC, have been obliged to dismiss staff. Even where acquisitions have failed, as at Goodyear, manpower economies have been induced. Divestiture has also eliminated jobs: for instance, AT&T reduced employment by 24,000 soon after the break-up. Subcontracting and outsourcing have, of course, displaced workers. Second, the merger of union and nonunion workforces has diluted union support. Third, relocation to the U.S. by foreign, especially Japanese, firms has increased the proportion of antiunion employers. For instance, the

UAW was obliged to give up organizing Honda in Ohio, while Nissan appears unorganizable.

Interunion cooperation has increased in a number of cases, such as where unions have joined forces to attempt to repel undesirable acquirers and even to make alternative bids, as at Eastern Airlines. However, there has also been increased rivalry and conflict. Mergers of similar groups of workers have led to the need to elect a single union as sole bargaining agent to replace the two preexisting ones. After Northwest Airlines took over Republic, the Teamsters displaced the Association of Flight Attendants, and the Brotherhood of Railway and Airline Clerks was preferred to the Air Line Employees Association (which lost more than half its members). There has been competition to organize new corporate entities. For instance, after Kroger closed its UFCW-represented stores in Pittsburgh and ultimately sold them to other chains, the Steelworkers organized certain of them, giving rise to picketing by the Food and Commercial Workers.

Unions are now using financial expertise to a greater extent. In part, they are anxious to be informed about activity on the stock market that might presage a takeover attempt, but they also need advice to enable them to participate actively in corporate restructuring, perhaps by buying stock or attempting an acquisition, as at Eastern.

Related to this, a key development in union strategy in restructuring corporations has been to try to protect the interests of members through influencing the type of reorganization that occurs. To this end, unions have frequently negotiated with suitors to deter potentially hostile employers and to encourage others. Thus, at TWA, the unions gave Icahn concessions and prevented Frank Lorenzo's taking over. Unions have been increasingly willing to litigate to reinforce their strategy—for instance, claiming that the Eastern board of directors was not fulfilling its fiduciary responsibilities properly in agreeing to Lorenzo's takeover, and enforcing pre-acquisition agreements at TWA where, allegedly, assets were sold off and little progress was made toward reducing nonunion wages and benefits.

In collective bargaining, further developments in management and union strategy have been evident. Management's aggression toward unions has frequently included demands for economic and workrule concessions. Union strategy has been primarily focused on job security in the face of corporate restructuring. Outsourcing and subcontracting in particular have captured worker attention because, unlike decreases in demand, they are seen as under management control. The steel

negotiations have recently centered on outsourcing, and that issue was one factor in the USX strike. Several strikes over outsourcing have occurred in the auto industry in 1986. In addition, fears over job security have led to continued suspicions of workrule changes. Where accepted, it has often been with reluctance. It took three years and the threat of closure to induce GM Van Nuys workers to agree to new work methods. The Saturn agreement is still causing disquiet in the UAW.

Pay raises in restructured corporations have generally been limited; wage concessions have occurred in some cases. While it is difficult to isolate the impact of restructuring from other cyclical and sectoral forces, there is evidence that restructuring has been inextricably bound up with pay restraint in many organizations. Chapter 11 bankruptcy proceedings led to wages being approximately halved at Continental and cut by a third at Wilson Foods. In the steel industry, Wheeling-Pittsburgh and LTV made wage cuts during bankruptcy and put pressure on USX to do the same. Acquisitions have often been contingent on wage concessions, especially in the airline industry. More generally, the employment and union membership reductions occasioned by restructuring have dampened the willingness of workers to strive for large increases.

Human resource management policies have appeared to undergo a change of emphasis at the same time as companies have restructured. First, the organization of work has become more flexible, especially in foreign, relocated, new, and nonunion firms, although this must not be exaggerated. Job classifications have been reduced and teamwork introduced. Second, compensation policies have included bonuses, profit-sharing, and stockholding to a greater extent as part of the attempt to raise efficiency and profitability. Third, employee attitude surveys have become more prevalent, particularly where the organization has seen significant change and problems need to be identified. Fourth, counselling concerning alternative opportunities for workers, sometimes in conjunction with retraining problems, has proliferated.

Causes of Restructuring and Industrial Relations Developments

The surge in decisions to restructure corporations and, concomitantly, change the structure and process of labor relations has been influenced by five sets of factors. First, the economic environment has encouraged restructuring and change in industrial relations. The growth in import penetration in manufacturing, and the decline in

world prices, especially oil, have led companies to rationalize operations to reduce unit costs. Technical progress, meantime, has induced the establishment of new facilities with the latest technology. Some industries, such as computers, have now reached maturity and firms are consolidating.

Second, political measures have influenced managerial decisions. The Economic Recovery Tax Act of 1981 has allowed companies to write off newly acquired assets at a rate faster than previously, thereby increasing their cash flow. Debt financing has also been encouraged by the deduction of interest against tax. Deregulation laws initially increased competition, but consolidation has now followed in the shakeout process in airlines, trucking, broadcasting, and banking. This has been facilitated by laws allowing interstate banking and more concentrated ownership of broadcasting stations. In addition, since 1982 the Justice Department has been more amenable to petitions to merge vertically or horizontally.

Third, corporate business strategies have shifted. The formerly preferred strategy of diversification of unrelated concerns has been superseded by divestiture and related diversification in recognition that previous organizational forms had not insulated companies from the recession of the early 1980s. Corporations also realized in the early 1980s that if they were to grow, they needed to merge, since finance was difficult to attract given high interest rates and low stock market values. Foreign companies wishing to grow have frequently set up operations in the U.S. to supply the American market and avoid trade barriers. Finally, corporate raiders have become more common. Actual or threatened acquisitions have encouraged rationalization, to increase stock market values to appease stockholders and ward off other raiders.

Managements have therefore had strong reasons to restructure and adopt appropriate industrial policies. They have been able to do this because of the lack of powerful union opposition. Unions have been weak, due to the content of contracts and the legal environment.

Contracts have generally placed few meaningful restrictions on the ability of managements to reorganize their corporations. In a BNA sample of 400 agreements in 1983, only 18 percent put limits on decisions to shut down or relocate operations, and of these only 38 percent gave unions the right to be notified or to discuss the issues with management (Bureau of National Affairs, 1983). Subcontracting restrictions appear in half the agreements. The practice was prohibited outright in just 2 percent of them, although it was also precluded in a

further 23 percent if layoffs existed or might have resulted. A further 36 percent merely required notification or discussion.

The legal framework has essentially aided the working of the market system and hindered union resistance to restructuring. Operational reorganization has generally been excluded from bargaining by recent NLRB and court decisions. In *First National Maintenance Corp. v. NLRB*¹ in 1981, the Supreme Court ruled that managerial decisions having a substantial impact on employment were negotiable only if the benefit for labor-management relations outweighed the burden placed on the conduct of the business. Further detailing this criterion, the NLRB in *Otis Elevator Company*² in 1984 determined that the decision was a matter for bargaining if it turned on labor costs rather than on a change in the nature of the business. The NLRB also decided in *Milwaukee Spring II*³ that, without a work-preservation clause in the contract, employers could freely transfer work.

The courts also have done little to reduce managerial prerogatives in acquisitions; boards have been in a powerful position to choose the suitor they prefer and resist union takeover attempts. "Poison-pill" defenses have been common, whereby other shareholders have received share purchase rights when unwanted suitors have gained a certain percentage of the stock, diluting the shares and making the acquisition more costly. "Break-up fees" have sometimes been payable by the company to a financier if an unfavored suitor was to take over, again raising the cost. "Lock-up options" have further deterred suitors by giving favored groups the right to buy the firm's assets at a discount. More generally, the courts have questioned the ability of unions to raise finance and have supported lower offers approved by incumbent boards, as at Eastern Airlines.

Nor have unions been able to prevent contract revisions in most cases. Successor employers, where ownership and control have changed, have inherited the duty to bargain but not the substantive contract provisions, following *NLRB v. Burns International Security Services, Inc.*⁴ Recently, however, a few cases of stock transfers have been ruled to imply the continued legal existence of the company and a consequent duty to respect the contract. In the airlines, the unions' position has been weakened by the Department of Transportation's

¹ 91 LC ¶12,085, 452 U.S. 666, 101 S.Ct 2573 (1981).

² 1983-84 CCH NLRB ¶16,181, 269 NLRB No. 162 (April 6, 1984).

³ 1983-84 CCH NLRB ¶16,029, 268 NLRB No. 87 (1984).

⁴ 68 LC ¶12,660, 406 U.S. 272, 92 S.Ct. 1571 (1972).

change of policy toward labor protection provisions (including fair wages) in merger cases. Since 1985 they have been willing to impose them only if needed to mitigate labor strife that would affect air transportation as a whole—a very unlikely occurrence.

Finally, workers have had little power over financial restructuring and its effects. Before 1984, firms in bankruptcy proceedings could unilaterally breach contracts if they were considered to be burdensome, or in some cases potential causes of liquidation, and if the balance of equities favored rejection. Since the Bankruptcy Amendments and Federal Judgeship Act of 1984, however, breaches have been permitted only after collective bargaining in good faith and if the balance of equities has been in favor.

Conclusion

The restructuring of corporations is likely to persist in coming years. Although the new tax laws will penalize long-term capital gains and the rising stock market may deter raiders, many of the other stimuli will no doubt still be present. Further changes in management, unions, bargaining, and human resource management can therefore be expected.

References

- Bluestone, Barry, Bennett Harrison, and Alan Clayton-Matthews. "Structure vs. Cycle in U.S. Manufacturing Job Growth." *Industrial Relations* 25 (Spring 1986), pp. 101-17.
- Bureau of National Affairs (BNA). *Basic Patterns in Union Contracts*, 10th ed. Washington: BNA, 1983.
- Clapp, Andrew D. *The 1986 Yearbook on Corporate Mergers, Joint Ventures and Corporate Policy*. Boston: Cambridge Corporation, 1986.
- "Fast Exit for Executives." *Mergers and Acquisitions* 20 (March/April 1986), p. 21.
- Grimm, W. T., and Co. *Mergerstat Review 1985*. Chicago: Grimm, 1986.
- Industrial Relations* 25 (Spring 1986).
- "The UAW May Be Losing More Than Just Members." *Business Week*, December 1, 1986.
- U.S. Bureau of the Census. *Statistical Abstract of the United States*. Washington: U.S. Government Printing Office, 1986.

Bargaining in Telecommunications After Divestiture*

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The collective bargaining agreements with the Bell telephone companies are the largest set of negotiated settlements in the country. The centralized bargaining structure, which at one point covered more than 700,000 workers with a single contract, was broken apart by the divestiture of the Bell System operating companies from AT&T in 1984. The negotiations in the summer of 1986, the first since divestiture, represent a natural experiment with which to examine the effects of new business structures and decentralized bargaining on the course and conduct of labor relations. These negotiations are also important because the issues they raise may suggest a "model" for the future of "mature" collective bargaining, where profitable firms negotiate with established and sophisticated unions.

Industrial relations in telecommunications represents a microcosm of the pressures shaping employee relations in the economy as a whole. The nature of jobs and employment issues in telecommunications parallel those in the growing high-tech sector of the economy. There is, for example, an explosion of new technologies which affect the way work is done, such as computer-based checking of lines and equipment. There is increasing competition fostered by the gradual deregulation of the industry; deregulation of telecommunications is taking place almost inadvertently, bit-by-bit, as court and government decisions permit competition to enter different aspects of the phone business.

By far the most immediate and significant pressure for change, however, was the 1982 consent decree which divested the regional

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operating companies from AT&T beginning in 1984 and, in the process, ended the centralized bargaining structure in the industry. The disaggregation of bargaining structures and the breaking-up of bargaining patterns is an important feature of contemporary labor relations in general.¹ To understand the process in telecommunications, it is necessary to examine the forces that brought about the centralization of agreements in the first place.

The Rise of Collective Bargaining

The history of the telephone industry is, of course, largely a history of the Bell companies and their ability to exploit technology and, later, market organization to keep competitors at bay. The structure of the industry took its modern form with a 1956 consent decree which granted AT&T a regulated monopoly over telephone service, but which also prohibited it from entering other businesses. The collective bargaining structure that evolved in this context was one of tight pattern bargaining across the telephone operating companies and AT&T.

The Communication Workers (CWA), the dominant union,² did not benefit from this decentralized structure as, for example, airline unions did from pattern bargaining in their regulated industry, because the CWA was unable to “whipsaw” the operating companies. Industry observers argue that AT&T in fact controlled all of the companies’ negotiating decisions from behind the scenes, and this centralized control prevented the unions from securing advantages in one agreement that could be applied to negotiations at other companies. Indeed, the unions persuaded Congress on several occasions during the 1940s to investigate whether the Bell companies were bargaining in bad faith; labor was forced to bargain with the operating companies, they argued, but the operating companies were not free to bargain because AT&T controlled their decisions.

The union’s efforts to centralize bargaining, therefore, were not for the usual reason of “taking wages out of competition.” As regional monopolies, the operating companies were not competitors, and the centralized decision-making pursued by AT&T resulted in a virtually identical contract pattern across all companies. Instead, the CWA

¹ In other industries, the decline of centralized bargaining seems related to economic pressures, such as growing nonunion competition in steel and coal and deregulation in airlines and trucking. See Kochan and Katz (1983) for a discussion.

² The International Brotherhood of Electrical Workers (IBEW) has substantial representation in some companies (see Table 1); there are also a few independent unions mainly in the few operating companies outside the Bell System.

wanted to centralize bargaining so that AT&T would be forced to negotiate directly with it. In 1974, AT&T finally accepted the union's demand in part because militant locals were gaining some success in whipsawing some companies (especially NY Telephone) in the early 1970s, and centralized bargaining would prevent that.³ Other pressures were also building to centralize employee relations such as equal employment litigation, which held AT&T liable for the policies of its operating companies, and a response to competition that stressed the advantages of being part of a nationwide telephone system.

National bargaining increased the CWA's power because it gave them the ability to threaten a systemwide strike. Negotiations were now governed more by national economic trends (particularly after the introduction of cost-of-living adjustments in 1974) and national bargaining patterns than in the past. As a result, wage rates at many operating companies grew seriously out of line with local market rates.⁴ One legacy of centralized bargaining for management, therefore, was the problem of getting wages at each company back in line with market rates in their regions, the rates that their competitors would be paying.

By the late 1970s, AT&T and its operating companies began to prepare for some deregulation of its markets as technological changes reduced the case for maintaining the monopoly in phone service.⁵ Collective bargaining, in turn, also began to adapt to expected changes in the organization of the industry. The 1980 "New Enterprises" Memorandum of Agreement, for example, (revised in 1982 and 1983) protected employment for workers whose jobs would be transferred within the Bell System if functions were rearranged between AT&T and its operating companies (Straw, 1985).

The 1982 divestiture consent decree, in contrast, was quite unexpected and brought with it immediate, extensive change.⁶ The decree was issued in response to a decade-long antitrust case against

³ Whipsawing also caused political problems for the union because it generated invidious comparisons across local unions.

⁴ Management suggests that wages were generally about 20-30 percent above market rates paid by potential competitors, although in some areas, such as the New York metropolitan area, they were actually *below* market levels.

⁵ Only the most obvious of these changes was the development of cost-effective microwave phone transmissions which made it possible to establish competing long-distance services without using AT&T's monopoly cables. For a review of the effects of such changes and of the general state of industrial relations in telecommunications, see Hendricks (forthcoming).

⁶ For a readable account of divestiture and the structure of the industry, see Tunstall (1986).

AT&T. In it, management agreed to separate its regulated, monopoly phone service (the operating companies) from competitive businesses (AT&T long lines and equipment) by divesting the operating companies; in return, AT&T would then be free to enter previously prohibited markets such as the expanding market for computer and information services. In practice, the application of the decree muddled this neat distinction,⁷ but the general effect on labor relations was clear. With the operating companies now independent, the arguments for centralized bargaining across them disappeared.

The Effects of Divestiture on Bargaining

The negotiations in the summer and fall of 1986 were the first since the operating companies were divested. Simultaneous bargaining was abandoned when negotiations with AT&T opened early because it was doing less well financially than the regional companies and was anxious to settle before they established a pattern. (AT&T had tried to renegotiate deferred wage and COLA increases in 1984 and to reopen negotiations in 1985.) The CWA agreed, perhaps to avoid the logistic demands of conducting several negotiations simultaneously and the possibility of funding several strikes at once. Observers thought that the AT&T settlement would set a floor for agreements with the more profitable regional companies, but its settlement in fact became more of a ceiling after the CWA's 26-day strike produced no gains; no other settlement exceeded AT&T in basic wages, and in other areas the settlements were comparable to and in some cases below AT&T's. Pay increases above the AT&T level were in most cases achieved through lump-sum gainsharing payments that do not add to basic rates.

The regional companies were doing well financially, and the unions argued that settlements should be based on their profitability; management, in contrast, argued that the settlements should be based on general trends in settlements in the economy and on the possibility of future low-cost competition. This was the reverse of previous negotiations (indeed, of negotiations at struggling firms in other industries) where the unions stressed the importance of national trends and management emphasized the situation at the firm. Observers suggest that the level of unemployment in the economy, low settlements elsewhere, and arguments about future competition were

⁷ The administration of the decree by the court involved substantial, and at times perhaps inventive, interpretation of its intent. As a result, the operating companies are all now in varying degrees also involved in competitive markets which greatly complicates the regulation process and works against the basic notion behind the decree (see Faulhaber, 1986).

factors that convinced the workers to accept lower settlements than in the past.⁸

Variance Across Settlements

The contract expiring in 1986 had been common to all seven regional companies and AT&T, and the companies still dealt generally with a common union (CWA) whose announced goals were similar across the companies. But the resources of the CWA were no doubt taxed by conducting eight separate negotiations, and it was impossible for them to impose a consistent strategy across negotiations when they were reacting to different management demands. Variations in negotiations and in agreements across the operating companies may be best explained therefore by differences in factors unique to each company.

Table 1 outlines some relevant characteristics of the negotiations and agreements across the regional phone companies. The first characteristic, whether bargaining structures decentralized to the operating company level, appears to be entirely driven by management business strategies. Management at Ameritech and at US West insisted that their operating companies negotiate separately (albeit with some central coordination), a decision that follows from their organizational structures. These two corporations operate very much like holding companies. They have small central offices, and their operating companies function with considerable autonomy; if they have autonomy in setting their goals, the argument goes, they should also have autonomy in determining their labor relations.⁹

The presence of IBEW locals at some companies provided an opportunity for management to decentralize bargaining further and to whipsaw their unions. The IBEW unions in the past had followed the CWA pattern¹⁰ and, many argue, were less prepared than the CWA to

⁸ The exception may be NYNEX where large utility settlements in New York and New England raised expectations (see below). A settlement was reached only after an eight-day strike.

⁹ The holding company approach at these two may have developed because they were created from a number of regionally distinct companies of equal size (in contrast, say, to Southwestern Bell or PacTel which are more or less equivalent to the old phone companies). Information on corporate strategies and organization is taken from corporate reports, speeches of their chairmen, interviews, and other sources.

¹⁰ Although they did not always do so willingly as evidenced by a 135-day strike by the IBEW against Illinois Bell in 1968 in a vain attempt to break the CWA pattern; in 1983, they accepted a management offer that was on the CWA bargaining table when the CWA struck. That offer eventually became the basis for the CWA's settlement. The IBEW risked going first in 1986, perhaps to assert their independence, and the effect was the same as in 1983; they accepted management's offer, the CWA struck, but the CWA eventually settled essentially with the IBEW's contract.

TABLE 1—(Continued)
Bell Telecommunications Companies and IR Outcomes

	CWA	IBEW	Strike	Base Rates			Lump Sums	Gain Sharing	Total % ^a	Job Security ^b
				GW	COLA	Total				
NYNEX NY Tel New England Tel	37,000	17,000	Y	4.5	Y	9.5	—	—	9.5	—
Bell South Southern Bell S. Central Bell	63,000	X	N	5.0	—	5.0	—	Y	10.0	Y

Note: Y = yes; N = no. X = ?.

^a Based on CWA and BNA reports of individual settlements. Assumed inflation rate is 4 percent/year.

^b PacTel's settlement actually provides a no-layoff clause. AT&T placed restrictions on outsourcing and other potential causes of layoffs and provided extensive provisions for retraining. Bell South also provided extensive funds and programs for retraining.

^c There were also short strikes at Michigan Bell, Ameritech Publishing, US West Direct (publishing), and one-day strikes at Mountain and NW Bell.

^d Based on the Michigan/Ohio Bell settlements; the others were similar in structure and total cost, with the exception of the Wisconsin Bell settlement which called for larger base-rate increases with no lump-sum payments.

^e Based on Mountain and Pacific Northwest Bell settlements.

lead negotiations in this round or to take a strike. Management settled first with the IBEW locals in every case—at AT&T, Ameritech, US West, and NYNEX.¹¹ These settlements benefited management because they were lower than those expected at CWA units, and they established a take-it-or-leave-it pattern for the CWA negotiations that followed.

In terms of the actual settlements, the values of the total packages are reasonably similar across agreements, but there is considerable variance in the composition of those packages. Agreements like PacTel's and US West's provide substantial earnings increases, but rely heavily on bonuses and lump-sum payments to do so. In contrast, agreements with NYNEX, AT&T, and Ameritech are more moderate in terms of total earnings, but achieve that almost entirely through basic rate increases and cost-of-living adjustments which become part of the basic rates.

As a result, the contracts that rely heavily on lump-sum and gainsharing payments will become very cheap when those contracts expire. Such payments do not build onto basic rates which establish the base for the next round of increases. PacTel, perhaps the largest settlement in terms of total pay, will become one of the cheapest when it expires because it relies on bonus payments; NYNEX, one of the cheapest in terms of total pay, will become one of the most expensive after its expiration because it relies on basic rates. In short, there appears to be a tradeoff across the settlements which suggests that lower long-term labor costs can be purchased at the expense of higher current pay.

Some of the variance in the size of the settlements, especially in basic rates, is the result of the tension created by local market conditions. In this round, Southwestern Bell secured one of the lowest settlements in part because its labor market was very depressed—due to the recession in the petroleum industry—and because its unions were relatively weak. In contrast, NYNEX had one of the higher settlements because the circumstances in its labor market were stronger; there were five major public utility settlements in New York and New England just before the NYNEX negotiations, all of which came in with three-year increases over 12 percent.

In terms of job security, most of the agreements include a series of retraining programs. PacTel went the furthest with a no-layoff

¹¹ Apparently this was a predetermined strategy at US West and Ameritech ("Only Some Baby Bells . . .," 1986). It appeared ad hoc at AT&T and NYNEX.

guarantee that protects against productivity-related job losses. PacTel had just completed a round of extensive restructuring and layoffs which made it easier to guarantee jobs to those who remained. Bell South established a retraining account which can be used by displaced workers in a variety of ways (including college tuition). They contribute a set amount to it each year on behalf of each employee, like a retirement plan. Both companies are in growing markets, and both have remained reasonably close to the regulated businesses (phone service) which reduces the employment volatility and risk associated with employment security plans. There is also evidence, albeit harder to measure, that companies offering greater job security arrangements like PacTel, Bell South, and AT&T have secured greater changes in workrules. The argument, of course, is that workers are not inclined to make workrule and productivity improvements without job security for fear of working themselves out of their jobs (Cappelli, 1984). The most common of these changes are reductions in the number of job categories and revisions in rules governing job classifications.

Conclusions

Many of the trends in these negotiations are similar to those in the economy as a whole. We see, for example, a decentralization of bargaining as negotiations are increasingly driven by management demands and the circumstances specific in individual firms. Management is striving to reduce basic rates to market levels and to make total earnings vary with the performance of the firm through bonuses and gainsharing plans. The unions appear willing to accept lower settlements in return for job security and appear more willing to accept workrule changes where such job security exists. It is especially important to see these trends in telecommunications, however, because they have developed in an industry that is healthy, with good growth prospects, and from unions that are strong. They do not appear to be the result of short-run concession bargaining pressures. In that sense, they may well represent a new model for what used to be called mature collective bargaining.

References

- Cappelli, Peter. "Union Gains Under Concession Bargaining." *Proceedings of 36th Annual Meeting, Industrial Relations Research Association, San Francisco, 1983.* Madison, WI: IRRRA, 1984. Pp. 297-305.

- Faulhaber, Gerald R. *Telecommunications in Turmoil: Technology and Public Policy*. Cambridge, MA: Ballinger, 1986.
- Hendricks, Wallace. "Telecommunications." In *Collective Bargaining in American Industries*, eds. David B. Lipsky and Clifford Donn. Lexington, MA: D.C. Heath, forthcoming.
- Kochan, Thomas A., and Harry C. Katz. "Collective Bargaining, Work Organization, and Worker Participation: The Return to Plant-Level Bargaining." *Proceedings of the 1983 Spring Meeting, Industrial Relations Research Association*, Honolulu. Madison, WI: IRRA, 1983. Pp. 524-29.
- "Only Some Baby Bells Are Talking Tough," *Business Week*, August 18, 1986, pp. 41-42.
- Straw, Ronnie J. "The Effect of Divestiture on Collective Bargaining." *Proceedings of the 37th Annual Meeting, Industrial Relations Research Association*, Dallas, 1984. Madison, WI: IRRA, 1985. Pp. 447-54.
- Tunstall, W. Brooke. *Disconnected Parties*. New York: McGraw-Hill, 1986.

The Impact of Industrial Relations on the Restructuring of the Basic Steel Industry in Sweden

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During the 1980s the advanced industrialized countries moved towards privatization and deregulation. What emerged in Western Europe may be termed the "British Model," or the selling of state assets or a reduction in the government's ownership of an enterprise (Bain, 1987). Basic steel is an industry with considerable government ownership or support in Western Europe—in countries such as Great Britain, Belgium, Luxembourg, and Italy. The promised payoff from privatization is a more competitive economy less inclined to misallocate resources. There are, however, limits to privatization and the idea that efficiency and reductions in labor costs can only be accompanied by privatization is false. This paper briefly examines an alternative to the "British Model." The basic steel industry in Sweden was restructured between 1978 and 1982 into a single company, *Svenskt Stal* (SSAB), with a considerable amount of government support which enabled it to become more productive and competitive in national and world markets.

McKersie and Sengenberger (1981) contrast two methods of restructuring, external and internal. They characterize "external" restructuring as taking place rapidly in new locations and often with government support, while "internal" restructuring takes place more slowly and usually in the same locations.

Restructuring in basic steel in Sweden was a combination of both approaches. The external methods included a reasonably rapid change between 1978 and 1982 and heavy involvement of the Swedish

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government in the restructuring. One of the three firms that formed the new company was government-owned, and the government contributed both reconstruction and structural loans which were later reconverted into equity capital.

The internal methods included changes in products and technology and maintenance of the original three production sites, as they were integrated into a single firm.

The Swedish case also reinforces the McKersie and Sengenberger conclusion that government subsidies are more likely, the larger the scale and the more devastating the prospective dislocation of employment for an area or industry. The three companies at all three locations—Domnarvet, Lulea, Oxelosund—and the mines were the major employers in their communities.

McKersie and Sengenberger also categorize the strategies for dealing with the employment consequences of economic restructuring as either the “laissez-faire” approach or the “preventive” approach. The principal distinction between the two approaches is that in the first, jobs are not protected, while in the second, policy approaches are aimed at averting economic dislocation.

The Swedish experience generally followed the “preventive” approach. Employees were either temporarily assigned to other jobs or their withdrawal from the company was subsidized. However, a modified “integrative” approach was followed when all three actors—the government, unions, and private enterprise—were jointly involved in a reduction of the workforce.

To appreciate the Swedish case, it is necessary to understand the Swedish industrial relations system as well as Swedish labor market policy in the context of what has been termed the “Swedish Model.” The Swedish industrial relations system came closest to mirroring the Swedish model in the late 1950s and 1960s (Martin, 1987). The fundamental elements were put in place in the 1930s and included an allocation of functions between the state, most often controlled by the Social Democratic party, the closely linked unions, and the management of private firms. The unions and management jointly regulated industrial relations, maintaining “industrial peace” and determining wages through “frame agreements” that set the basic pattern of wage changes in central negotiations. The centralized negotiations took place between the employers association (SAF) and the blue-collar (LO) and white-collar (PTK) unions. Management, in turn, was left to control investment, deciding not only what to produce, but how.

Swedish labor market policy is also part of the model that is aimed at economic progress, full employment, and equity in income distribution. The Labor Market Board (AMS) supervises 24 County Labor Market Boards, each of which has one or more district boards and local offices. The county and community aspects of Swedish labor market policy played a role in basic steel restructuring.

Reorganization

Swedish steel had been suffering since the 1960s from declining profits due to increased competition from imports and losses in its overseas markets. In February 1976, the steel industry council, composed of the basic steel manufacturers, established a government-sponsored Commission of Inquiry on Commercial Steel to examine the possibilities for restructuring the industry (SSAB, 1978). In its March 1977 report, the Commission proposed changes in the crude-steel and rolling-mill stages to raise productivity. It advocated apportioning the production of market-ready steel among the major Swedish rolling mills, Granges AB, Norrbottens Jarnverk AB (NJA, state-owned), and Stora Kopparbergs Bergslags AB, and it proposed allocating the production among the three rolling mills. To supplement the Commission's work, the Ministry of Industry set up the Steel Town Group so that the County Administrators (mentioned in the previous section as playing an important role in labor market policies) could have input into the economic and employment effects of the Commission's recommendations.

Following the Commission's report, the three major steel producers—Granges, the Swedish State company, and Stora Kopparbergs—began talks on the formation of a single steel company. The Ministry of Industry and representatives of the central unions were involved from the beginning. The unions were required to have a voice under the Co-determination Act of 1977 which legislated consultation on all matters affecting employee welfare. The restructuring of basic steel presented the first major test for co-determination in Sweden. After consultation and negotiations with the unions, particularly the LO and the PTK, drafts were worked out by November 1977.

The agreement to form Svenskt Steel Aktiebolag (SSAB) was signed in December 1977. The government owned 50 percent and Granges and Stora 25 percent each. There was considerable government involvement in this agreement, particularly state financial support in the form of two reconstruction loans plus the purchase of the Granges railroad.

As part of the restructuring, all personnel in the three companies initially received offers of employment in SSAB at unchanged terms. However, if the government required SSAB to take steps which would involve labor market policy, the companies would be compensated. By 1981 all but two of the mines had been shut down, and those two had been heavily scaled down. By 1982 the government owned 75 percent of SSAB.

Employment Measures

A projected reduction in employment would be the consequence of a reduction in production capacity by 25 percent, the closing of the blast furnace at Domnarvet, and the closing or sale of several lime and sintering plants. The first restructuring plan of 1977 had forecast an employment decline of almost 4000 jobs in SSAB. This employment loss was expected to have a profound impact on the steel communities, which were heavily dependent on the mills for local employment, as well as on the mining areas, which had already been depressed by earlier mine closures. The government, through the Labor Market Board and its majority ownership of the company, played a major role in influencing the direction and manner of the employment displacement. SSAB was requested to extend the notification period to excess employees from the required six months to 24 months. SSAB projected that it did not have the resources necessary to support excess personnel and forecast that a large part of the reconstruction loan—SKR 600,000 of the SKR 1,000,000 loan—would have to be used to finance the employment reductions. Financial participation was also secured from the Job Security Council, a national committee made up of the Swedish Employers Organization and the Organization of Industrial Salaried Employees.

The employment-reduction measures were jointly agreed to by management, the unions, and the government. The basic outline of the agreement was that new recruiting would be halted, vacancies would be filled through internal mobility, and external labor market recruiting would be permitted only when inside recruits could not be retained or found. An informal labor market exchange was created for this purpose, and a special organization was established for each department with surplus personnel. The employment costs for surplus personnel were to be borne originally by each division until a program could be worked out. SSAB employees had priority rights to vacancies in the parent company, and they were to be informed of vacancies; SSAB was to cooperate with the National Labor Market Board in

reporting vacancies, and anyone who moved could obtain all of the general Labor Market Board supportive services; and SSAB was also to try to promote new employment in those communities where employment reductions were to take place. Early retirement programs were added later.

The 1982 forecast was a loss of 2512 employees. Actual reductions in employment are presented in Table 1 for both blue- and white-collar employees. The table also includes Tibnor, a new division acquired in 1980. The reductions from 1980 to 1983 were 2990 white-collar workers (23 percent) and 792 blue-collar workers (15 percent), a total of 3782 (21 percent). If the 1979 data are used and only three carbon steel plants and the mines are included, total employment is 15,960 in 1979 and 12,258 in 1981; the reduction is 3702, or 23 percent in basic steel and the mines. Therefore, the actual reduction in employment between 1979 and 1983 is quite close to the original 1978-1982 forecast.

TABLE 1
Employment at SSAB, 1979-1983

Location	Employment					Total Reductions 1980-1983
	1979	1980	1981	1982	1983	
Borlange	5,757	5,314	4,798	4,400	4,434	880
Lulea	4,756	4,556	4,323	3,887	3,791	765
Oxelosund	3,886	3,746	3,441	3,117	3,097	649
Mines	1,561	1,392	1,222	1,054	936	456
Tibnor		2,039	2,020	2,059	2,004	35
Other	1,178	1,077	943	58	80	997
Total	17,138	18,124	16,927	14,575	14,342	3,782

Source: SSAB, *Annual Report*, various issues.

Once the company-wide measures for dealing with employment dislocations were decided at the corporate level with the unions (LO and PTK), the specifics were negotiated at each of the plant sites.

The Role of the Unions

The two labor federations, LO and PTK, asked for representation, from the beginning of restructuring, on the government commission that was to produce a strategic plan (Hedberg, 1979). The unions also formed a task force and study group which would be available to observe the Commission's work, with the assistance of the Swedish

Center for Working Life (Arbetslivscentrum). Oxelosund sent a delegation that had both management and union representatives when serious negotiations among the three firms developed in the Spring and Summer of 1977. This set the tone for future negotiations, and both management and union representatives from each of the three companies were present at negotiations on restructuring. The unions' representatives requested a task force of employees from all of the affected units—steel, mining, railroads. They also called in a consultant, Allan Larsson, who led the union group during negotiations.

The unions appear to have played an important role in the conditions of the merger, which included the purchase by the government of property, patents, and equipment, and they used their political power with the government to push for the government loans that would guarantee the stability of the new company.

Bjorn Wahlstrom, the president of the new company, was able to present a plan, based on the work of the three joint committees, by November 1977. These committees had both union and management representatives. The unions' participation in formulating the plan committed them in part to Wahlstrom's proposal, but they resisted complete acceptance of it. They felt that worker input and the concept of co-determination had been shunted off to a number of boards which had no power. A compromise was reached whereby a joint interim organization was created to handle the transition. The unions wanted the interim organization in order to gain time to study the issues and implications of the merger, to establish a joint union strategy and a strong union front from the different unions and separate production sites, to establish a role for the union representatives in the decision bodies at each site, and to allow a large number of union representatives to be exposed to SSAB's problems. Instead of being presented a plan they would have to negotiate, the unions became part of an interim organization that would develop the plan for restructuring and implementation.

The principal aspects of the arrangement arrived at in the Fall of 1977 were: (1) the unions were committed from the beginning, by their consultant (Larsson), to the merger and restructuring and had already approved the idea; (2) their commitment had been reinforced by their involvement in lobbying for government support for the loan guarantees; and (3) the difficult problem of which facilities would be shut down and which would receive new investment would have widespread effects on the local union members and their communi-

ties. These decisions were postponed by the creation of an interim merger organization that would deal with the issues through a number of working groups.

Management opted for the shared, participative approach rather than formal negotiations. One member of the research team (Hedberg, 1979) concluded that the unions' representatives on the personnel team managed to obtain a very good policy on redundant workers, while the unions' accounting/control group members had little effect. The unions' greatest impact was in the employment area. Internal union problems developed primarily among the three geographic locations. Unions at the local level had to defend their own site as a viable production unit and as a site to maintain overall employment within the larger plan. The local unions were, therefore, in competition with each other for where cutbacks would take place and where new technology would be installed.

Conclusions

The restructuring of the basic steel industry in Sweden in 1978–1982 was in response to a world-wide decline in the demand for steel. Restructuring was shaped by the role of the government in Swedish economic life and centralized collective bargaining between employer associations and the trade union federations. The government-owned steel firm took the lead, with the assistance of two large state loans to cover the new firm's expected losses. The blue- and white-collar union federations actively supported the enactment of these loans in the Riksdag. Restructuring in steel, which began in 1977, also presented labor and management with one of the first tests of the new co-determination legislation. The original long-range business policies, strategies, and forecasts were drawn up by a management team. The unions, however, were involved early on in an assessment of the impact of these plans on their membership and the plant-site communities. Readjustments in the first plans were made when the unions threatened to negotiate everything that impacted on employment under the co-determination act. The central role of the unions' consultant, who could speak for all the unions at the top of the restructuring team, was also crucial. The unions participated in all of the working groups and learned to cooperate with each other, often for the first time. Lack of union experience in some areas, such as finance and accounting, placed them at a disadvantage in the working groups. However, their experience in personnel matters allowed them

to negotiate for a broad package to soften the effects of unemployment for those workers who became surplus. This package included retraining, new training, and early retirement.

References

- Bain, Trevor. "Some Observations on the Limits to Privatization." *Gestion Deux Mille* (Catholic University of Leuven), forthcoming.
- Hedberg, Bo. "Worker Participation in Structural Change: Acting Out the Co-determination at Work Act in the Swedish Steel Merger." Swedish Center for Work Life Working Paper, ISSON 0348-3027. Stockholm: September 1979.
- Martin, Andrew. "The End of the 'Swedish Model'? Recent Developments in Swedish Industrial Relations." *Bulletin of Comparative Labour Relations*, forthcoming.
- McKersie, Robert B., and Werner Sengenberger. "National Practice in the Field of Large Scale Employment Dislocations." Report prepared for the Positive Adjustment Policies Study of OECD, 1981.
- Svenskt Stal (SSAB). *Annual Report of 1978*.

DISCUSSION

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While the media portrayal of corporate raiders and hostile takeovers has given the public debate an aura of the Old West, the private debate in the homes of workers is played to familiar tunes of lost jobs, lost wages, and broken careers. Moreover, takeover sharks promoting labor costs as cost-cutting opportunities have put undue pressure on companies who see themselves as potential targets to demand extraordinary concessions from their employees and their unions. The three papers presented here today all offer some insight into the industrial relations dimension of this problem.

Professor Way's paper appropriately tees up the more panoramic elements of restructuring, for example, shorter product lives and technological cycles, global competitive pressures, and the increasing product specialization by smaller businesses. I do think, however, these pressures are better understood when reviewed in light of the influence of the changing supply characteristics of the U.S. labor force. There is also the uncertainty of the political environment as distinguished from legal developments; however, I am hesitant, as was Professor Way, to predict what that environment will be.

With regard to his remarks on management reorganization in corporate restructuring, I would have enjoyed a more thorough analysis of the so-called "Japanese phenomenon." My experience suggests the Japanese have handled their investments in the U.S. in a way that suggests they are not prejudiced against U.S. workers—unionized or not—but probably are prejudiced against U.S. managers.

Professor Way's paper portrays U.S. unions at the guard with a reactive rather than a proactive strategy. Although that may have been the case, labor's emerging response is quickly becoming a critical factor for consideration by industry and political analysts.

One unique development to consider is that corporate restructuring in the industrial relations context makes for a cluttered bargaining table. The presence of accountants, investment bankers, lawyers, and

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the like, during long hours of tedious bargaining has the potential to create a situation not conducive to settlement. I believe this to be a very serious problem that would benefit from more public review.

Let me make a minor, probably an obvious, point here with regard to all three papers. None of us should lose sight of the fact that the pressures leading to restructuring are often the same ones that have to be dealt with at the bargaining table. Some parties seem to have focused so blindly on reorganization they have sometimes lost sight of this fact.

The Cappelli paper is an excellent industry-specific illustration of corporate reorganization, if only somewhat contaminated by that industrial relations bugaboo—deregulation. With regard to his comments about the advantages or disadvantages of centralized bargaining, I might argue that the monopoly status granted AT&T enabled the parties to focus longer term and develop a relationship with appropriate underpinning to confront more complex issues like the next generation of technology. On the whole, I believe there was little preoccupation with income bargaining in the industry except on a relative basis compared to other national agreements. This was a decided advantage over the experience in transportation where the parties' whipsawing led to intense political scrutiny.

The Cappelli paper raises the very interesting point of whether divestiture's effect on industrial relations has been to replace a former "big bargain" with a "pattern" agreement. And, as the paper suggests, the prospective focus should be on whether or not the pattern holds up, where it is chipped away at, and, indeed, whether it will last past two or three more rounds of collective bargaining. I would speculate that this attempt at pattern bargaining will not fare any better than other pattern agreements of the past decade.

I believe the intriguing development to watch has less to do with future variances in compensation than with issues like job security, employee participation, retraining, and quality of work life. These are the very issues that in the past earned this industry the progressive bargaining reputation it so justly deserved.

As an aside, I am especially curious about what has happened to the industry's Committee on the Future and its model National Quality of Work Life Committee.

Professor Bain has given us a first-rate international perspective on a proactive policy participated in by labor, management, and government to sustain competitiveness. This is the kind of integrated employment policy that in the United States we can only dream about.

After reading this paper, I wonder why we spend so much time on the Japanese model and so little time on the Swedish model.

Its relevance to me, as someone who works for an organization that attempts to think longer-term, is in not only the result, but also the process. The idea of a Commission of Inquiry on Commercial Steel to set the stage for participation by the concerned parties in longer-term strategic decision-making is an idea worth mimicking. I do not propose government ownership as an answer, but government participation as a table-setter, as well as a sounding board and stimulator, might provide the sort of transitional support needed to get the private sector to plan better for the longer term. I encouraged Professor Bain to send his paper to representatives of USX and the Steelworkers.

I thought Professor Bain's comment on the roles of labor, management, and government in the negotiated employment-reduction measure was especially instructive. There are lessons enough for private- and public-sector policy planners in that exercise to fill a book.

In conclusion, I would offer some general thoughts on corporate restructuring and industrial relations. I believe we can surmise with certainty that the unionized status of the workforce as well as the relationship of the union with the employer is influencing pre and post decisions to restructure—witness the case of Carl Icahn. The response by the union to proposed restructuring can be either to facilitate the transaction, to impede it, or to solicit another taker. What bothers me about this role is the politics of that decision, internally as well as externally, places the union under an extraordinary burden by which to measure its effectiveness in representing its members.

Restructuring injects an inordinate amount of stress into the bargaining relationship. Generally, in big corporations and unions, bargaining is either under way or pending, or demands to reopen the contract are made in light of the anticipated reorganization. I know of at least one case where the international union was called upon by the chairman of the board of a major U.S. corporation to ask its members to forgo scheduled wage increases negotiated two years earlier. The resulting monies, the union president was assured, would be used to defend the corporation against a hostile takeover. To me, those kinds of demands will lead unions everywhere in major industries to move to more rigid forms of job and union security. I would go so far as to anticipate legal action by employees—union members—who feel they have been wrongly dismissed after long years of faithful service to

companies closing their doors to meet the financial burdens placed on them to defend themselves in takeover campaigns. This, in turn, will lead to demands for broad-gauged congressional action on restructuring in general, as well as provisions for advance notices not unlike the push for advance notice of plant closings.

At the plant level, it seems to me the local union has become the receptacle for hostile employee feelings when members are faced with the uncertainty of restructuring. More alarming is the fact that very often the local union has been painted by the employer as a factor that influenced its decision to restructure. These pressures will not make collective bargaining any easier, nor are they likely to create alliances in defense against hostile takeovers.

Finally, let me suggest that the type of broadly supported corporate restructuring discussed here today, which seems to have been embraced by the business community, as a climatic condition can do more to erode the worker involvement these same companies have promoted to enhance their competitiveness than any other single factor. Clearly, what is needed to stem this negative tide is more public debate on the real economic value of restructuring fueled exclusively by financial gain, measured against the broader backdrop of productivity, quality, and business relationships with all the communities with which it interacts—including its employees.

IX. DISSERTATION ROUNDTABLE

Employment Training Policy and Politics, 1978–1982: From CETA to JTPA*

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Spurred by the scheduled expiration of the Comprehensive Employment and Training Act (CETA) in 1982, the U.S. Congress designed new employment training legislation, eventually passed as the Job Training Partnership Act of 1982 (JTPA). The focus of my study is twofold: first, on the changing content of U.S. employment training policy; second, on the workings of the policy-making process, with particular attention to the functioning of the leading legislative, bureaucratic, and private actors in the employment training policy system, termed the “subgovernment” (Cater, 1964; Ripley and Franklin, 1984).

Following an examination of leading pluralist and elite theories of policy-making, I construct a model of legislative policy-making, integrating large-scale, intermediate, and individual-level variables (Smelser, 1963; Cobb and Elder, 1983; Eyestone, 1978). At today’s session, I intend to neglect the more abstract theoretical issues, for the most part, in order to concentrate on the content and direction of employment training policy. To summarize quickly, while inclining more to the position of elite theorists (such as Domhoff and the Marxians), I conclude that it is very difficult to gain access to decision-making, but there is some pluralism among the elite (Bottomore, 1966; Domhoff, 1983; Polsby, 1984). In more specific policy-making terms, my discussion stresses the importance of controlling the agenda of

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policy alternatives and the process by which policy preferences gain the active consideration of decision-makers.

Agenda-building is related to the operation of subgovernments, and I develop a typology comparing types of subgovernments, the issues they treat, and the usual influence of the subgovernment in such situations. Previous studies of the employment training subgovernment have found it marked by three factors: internal complexity; vertical integration binding together local, state, and federal components; and functional autonomy, in that those outside the subgovernment had little influence (Davidson, 1972, 1974). My work confirms that these three factors still typify the employment training subgovernment. Finally, the policy model considers the role of the individual congressman within the group-oriented subgovernment model of policy-making, examining especially the roles of the relevant committee and subcommittee chairmen and minority leaders (Kingdon, 1981).

In the development of JTPA, a dominant subgovernment was challenged by a new force, the Reagan Administration, and had to adapt to the Administration's demands. I take an institutional-historical approach to policy development, examining the claims of competing constituencies and the means by which those claims were fashioned into legislation. An alternative approach to identifying the composition and influence of the employment training subgovernment, based on the sociological techniques of network analysis, is rejected on methodological grounds (Knoke and Laumann, 1982; Burt, 1982, 1977).

The policy model generates a set of 16 questions about the employment training policy-making process; those questions, concerning access to the legislative process, the composition and influence of the subgovernment, the subgovernment's responsiveness to outsiders, the methods used to compromise conflicting interests, and the means of controlling the agenda of policy alternatives, guide the analysis of the recent history of employment training policy. A separate chapter examines the influence of the National Commission on Employment Policy, particularly its attempts to justify the continuation of employment training programs within the political philosophy of the new Reagan Administration, and gives it generally high marks. Unfortunately, I don't have time today to discuss the contributions of "policy professionals," those with academic or professional expertise in the area of employment training policy.

Beginning with a summary of CETA in its final form, several chapters trace the history of JTPA from committee hearings to Presidential approval. The major actors in the legislative struggle were local and county governments, which had administered most CETA programs; CETA contractors and subcontractors, who wished to stay in business and were thus allied with the status quo; state governments, whose representatives were determined to gain more control over employment training policy under the Reagan Administration; associations representing business, especially the National Alliance of Business and the U.S. Chamber of Commerce; and “community-based organizations,” a term referring mainly to nonprofit groups that had participated in CETA programs, and representing coalitions of minority groups, women, and labor unions.

Generally, states and business interests, with the backing of the Reagan Administration, united to suggest major revisions in policy, which would have the effect of strengthening state control over programs; their legislative champions were Senate Republicans. City and county governments, community-based organizations, and CETA program operators favored extensions of the existing CETA system, with the backing of House Democrats. Protecting self-interest was the rule of the day, and each interest group worked to influence key congressmen.

Eventually, four bills received serious consideration, and I trace the winnowing of options and the power struggles between various interests and their political representatives. Compromise emerged from arduous three-way bargaining between House Democrats, Senate Republicans, and Administration officials, all with competing agendas. The intricate maneuvering between major subgovernment members provides a classic illustration of subgovernment policy-making as it affects most domestic legislation.

The conclusion summarizes the answers to the 16 questions raised by the model, and I argue that the model is a powerful one, capturing the essence of the subgovernment policy-making process. The employment training subgovernment has been relatively stable in composition for the past 20 years and also relatively impervious to outside influence, a position congruent with subgovernment dominance over policy. Government actors, as in the past, had the most influence in the policy process, with states successfully gaining more control over program design and funding patterns. The partial transfer of program responsibilities from the federal government to the states is now frequently called the biggest change caused by JTPA.

Business groups enjoyed more influence than in previous policy cycles, although their concerns over the need for skill training were subordinated to the desire to cut federal expenditures. Local governments managed to maintain an important, if somewhat diminished, role in program design and execution. Groups outside the subgovernment were virtually ignored.

The Reagan Administration viewed employment training programs as handouts of remedial assistance, to be limited strictly to the “deserving” poor. It successfully resisted the definition of employment training policy as a response to the structural problems of the economy, and imposed its “blame the victim” image on the disadvantaged unemployed. The Administration was most powerful on the most general issue—funding—although even the first tidal wave of the “Reagan revolution” was unable completely to sweep away federally funded employment training.

The Administration had much less influence on issues of program structure and administration, where its representatives were technically and politically outmaneuvered by key congressmen and committee staff. Policy professionals, both those working for the Congress and academics involved in planning or evaluating employment training policy, had considerable influence on more technical issues. The business community abandoned its representatives who had favored more support for skill training and fell in line with the Administration.

Subgovernment-dominated policy-making is best suited to the management of incremental rather than radical change. The Administration’s attempts to force radical change were unsuccessful, but the resulting compromise produced an ungainly system, its administrative structure mismatched to its financial resources, expected to serve the hardcore unemployed but actually rewarded for helping the largest number of the least needy at the lowest unit cost. The success of the subgovernment was to keep the system alive, in anticipation of a time when the problems of persistent structural unemployment and inadequate employment training will gain a higher place on the national political agenda.

The employment training subgovernment has often been buffeted, but its core personnel have proven resistant. As usual, there is today conflicting forces in the air, but the pendulum seems to be swinging back towards a more active interest in employment training, perhaps under the umbrella of “international competitiveness.” For good or ill, a new upheaval of the employment training system may be imminent.

References

- Bottomore, T. B. *Classes in Modern Society*. New York: Pantheon, 1966.
- Burt, Ronald S. *Toward a Structural Theory of Action: Network Models of Social Structure, Perception, and Action*. New York: Academic Press, 1982.
- . "Positions in Multiple Network Systems. Part One: A General Conception of Stratification and Prestige in a System of Actors Cast as a Social Topology." *Social Forces* 56 (1977), pp. 106-31.
- Cater, Douglass. *Power in Washington*. New York: Random House, 1964.
- Cobb, R. W., and C. D. Elder. *Participation in American Politics: The Dynamics of Agenda-Building*, 2d ed. Baltimore: Johns Hopkins Press, 1983.
- Davidson, Roger H. "Policy Making in the Manpower Subgovernment." In *Politics in America: Studies in Policy Analysis*, ed. Michael P. Smith. New York: Random House, 1974.
- . *The Politics of Comprehensive Manpower Legislation*. Baltimore: Johns Hopkins Press, 1972.
- Domhoff, G. William. *Who Rules America Now?* Englewood Cliffs, NJ: Prentice-Hall, 1983.
- Eyestone, Robert. *From Social Issues to Public Policy*. New York: Wiley, 1978.
- Kingdon, John W. *Congressmen's Voting Decisions*, 2d ed. New York: Harper and Row, 1981.
- Knoke, David, and Edward O. Laumann. "The Social Organization of National Policy Domains: An Exploration of Some Structural Hypotheses." In *Social Structure and Network Analysis*, eds. Peter V. Marsden and Nan Lin. Beverly Hills, CA: Sage, 1982.
- Kolberg, William H. *Developing Manpower Legislation: A Personal Chronicle*. Washington: National Academy of Sciences, 1978.
- Polsby, Nelson W. *Political Innovation in America: The Politics of Policy Initiation*. New Haven, CT: Yale, 1984.
- Ripley, Randall, and Grace Franklin. *Congress, Bureaucracy, and Public Policy*, 3d ed. Homewood, IL: Dorsey Press, 1984.
- Smelser, N. J. *Theory of Collective Bargaining*. New York: Free Press, 1963.

The Impact of Technological Change on Collective Bargaining Power*

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This dissertation considers the effects of technological change on the relative bargaining power of unions and management in Canada. It has long been recognized that the relative power of the parties is influenced by features of the environment in which they operate. From Marx, Marshall, and Dunlop, we know that the technological characteristics of the production process constitute one important environmental source of power. In the literature, one can find arguments suggesting technological change as both labor-empowering (Kerr et al., 1964) and management-empowering (Braverman, 1974). The currency of two such diametrically opposed points of view is evidence of how poorly technology is understood as a determining force in collective bargaining. As Kochan (1980, p. 80) has written, "there is little in the way of concrete analysis of the effects of technology on labor-management relations."

The theoretical discussion proposes two principal ways in which technological change can influence union bargaining power. First, there is a macro "membership" effect. This considers the implications of technical advance for union coverage, primarily through its impact on the occupational distribution of employment. The second is a micro "negotiating" effect which focuses on the impact of technological change on the ability of the parties to get what they want through collective bargaining.

The micro-theoretic framework incorporates both the economics and organizational literature. Two classes of factors are seen as determinants of the technological change-bargaining power relationship: (1) the employment impacts of the technological innovation, and (2) the context in which the changes occur. Since employment impacts—in terms of both quality and quantity—are not

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completely determined technologically, the importance of organizational choices made by innovating firms is emphasized.

Empirical analysis on the "membership effect" was carried out at the (Canadian) 3-digit SIC level. Industries were categorized in terms of technology according to a measure based on the structure of intermediate inputs developed by the Economic Council of Canada. The percentage of workers under collective agreements was characteristically low in industries categorized as "high-technology users." Furthermore, there is a negative correlation at the industry level between the rate of technological change and the growth of collective bargaining coverage. While a number of factors may be contributing to the observed membership effect, the results highlight the importance of the occupational composition implications of technological change. Blue-collar workers have the greatest propensity for union membership and, while there is a secular pattern away from blue-collar employment in general, this trend is accelerated in high-technology industries.

Empirical consideration of the "negotiating effect" was based primarily on a 1985 survey of nearly 1000 establishments across Canada. For each respondent, data were gathered on experiences with a wide range of computer-based technologies, aspects of the innovation process including employment adjustments, as well as background information. Over the 1980-1985 period, about 75 percent of the sample introduced some computer-based technology. While office automation was most important in these years, process innovations—computer-aided manufacturing and design, computer numerical control, and automated quality control, for example—were projected by the respondents to increase significantly in the latter part of the decade.

The focus of the analysis is on those establishments which had introduced process automation by 1985. These are primarily in manufacturing and, to a lesser extent, in the primary industries, transportation, communications, and utilities, and pockets of the service sector. The empirical relationship between technological change and bargaining outcomes was considered by comparing these process innovators with noninnovating establishments in terms of wages and employment security provisions.

The conventional measure of union wage negotiating power, of course, is the relative union wage effect. Survey data on blue-collar wages were analyzed to estimate the impact of technological change on the magnitude of this differential. For blue-collar workers, as a

whole, the union premium in 1985 was lower among process innovators than among noninnovators (6–11 percent vs. 21–29 percent). When skilled and unskilled occupations were considered separately, however, the relationship between technology, unions, and wages proved to be more complex.

For skilled workers, the union wage effect was about 10 percentage points higher among the noninnovators than among the innovators. The premium unions were able to extract in technically innovative establishments was very small—between 2 and 6 percent in 1985. Technological change was also associated with a weakened union influence on skilled worker wage increases over the 1980–1985 period. On the other hand, the relationship between innovativeness and the union wage effect was in the opposite direction for less skilled general manual labor. The union premium in these occupations was 6 to 7 percentage points higher among innovators in 1985. Moreover, the greater the extent of establishment technological change from 1980 to 1985, the larger was the union effect on general manual wage growth over this period.

According to these findings, then, process technologies introduced by the respondents had different impacts on skilled and unskilled labor. Where automation was substantial, the collective power offered by unions had an important effect on general manual wages. Presumably, the costs of disruption coupled with the major innovators' "ability to pay" were significant factors. On their own, however, general manual workers did not benefit from technological change. In fact, wage increases in the nonunion sector were lower among innovators than noninnovators.

In contrast, skilled labor in innovative situations received high wages and wage increases in both union and nonunion settings. This success, in the absence of unions in particular, supports the contention that technological change increases the essentiality of these workers. The small union differential does raise questions about why unions cannot extract a still greater premium for their skilled members. Two possible explanations receive some support from the research. First, impacts of technological change may not be reflected in union settings where interoccupational wage relationships tend to be maintained through collective bargaining. Second, unionized firms may innovate differently, with the result that skilled workers are less essential to high-technology production than in nonunion establishments.

The empirical analysis also considered the impact of technological change on the negotiation of job security provisions. Collective agreements were matched with a subsample of survey establishments to compare innovators and noninnovators in terms of bargaining outcomes on 12 issues associated with employment security. Particular attention was paid to changes in these provisions in contracts in force before 1980 and in 1985. The results indicate that unions in noninnovating settings had slightly more success in strengthening employment security clauses over this period than did their counterparts in innovative establishments.

The analysis suggests that, on balance, union effectiveness is being unfavorably affected by computer-based technological change. Collective bargaining in Canada, as elsewhere, is currently facing a number of challenges. Some of these—union coverage and negotiating power—appear to be exacerbated by the new technologies. If the benefits offered by collective bargaining, particularly for skilled workers, are reduced in innovative settings, organized labor must consider new strategies. The results also have implications for public policy. The intention of collective bargaining was to promote just exchange within the firm and equity and efficiency at the level of society. If technological change is systematically distorting the labor-management equilibrium, public policy attention seems warranted.

References

- Braverman, Harry. *Labor and Monopoly Capital*. New York: Monthly Review Press, 1974.
- Kerr, Clark, John T. Dunlop, Frederick H. Harbison, and Charles A. Myers. *Industrialism and Industrial Man*. New York: Oxford University Press, 1964.
- Kochan, Thomas A. *Collective Bargaining and Industrial Relations*. Homewood, IL: Irwin, 1980.

Defined Benefit, Defined Contribution, or No Pension?*

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Most private pensions are classified as either defined benefit (DB) or defined contribution (DC) plans.¹ This study explores the determinants of which type of private pension plan is observed, if a pension is observed at all. The unit of observation is an employee-employer pair; that is, observing a particular type of (or no) pension coverage reflects an employee's preferences over pension options as well as his or her employer's considerations in offering a pension to the workforce. Many of the important factors, both theoretical and empirical, relate to the risks inherent in a pension plan, from the point of view of both employees and pension providers. A distinguishing feature of this model is that the decision-making process is *not* sequential (with first, the pension coverage decision, then the decision of which type). Rather, the three options are considered simultaneously.

The employer's side of the model involves maximization of an objective function over three options (DB, DC, or no pension). The employer's preference is based on consideration of two factors— m , the probability of employee shirking, and p , the probability of the firm's going out of business.

Those firms perceiving a large m need some mechanism for monitoring the productivity of workers, and, therefore, are more likely to offer a pension, *ceteris paribus*. An implicit assumption here is that a high probability of employee shirking exists in firms where direct monitoring is costly or possible only with a substantial time lag. In such cases, deferred compensation schemes are useful since they

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¹ DB pensions specify a formula to determine the exact amount of retirement income to be paid to each pension participant, while DC pensions establish annuity accounts for participating employees.

emphasize the incentive for employees to internalize the costs of their own shirking.² Any existing connection between productivity and pay causes employees to bear the cost of their shirking.³ Even where base pay does not seem to be closely tied to productivity, it is still the case that *future* compensation (i.e., raises and, in extreme circumstances, simply continuing the employment relationship) depends on adequate on-the-job performance. Pensions effectively increase the individual's cost of shirking since his or her future compensation profile (on which benefits will be based) will reflect current and past performance.

The probability of business failure varies with a firm's financial stability and vulnerability to business cycles, among other things. Those firms perceiving a large probability of going out of business, p , would be able to share such risk with employees by offering specifically a defined benefit pension. Some of the risk-sharing is due to underfunding. When a firm with an underfunded pension plan goes out of business, employees (beneficiaries) may be unable to collect their full entitlement.⁴ Further, defined benefits are almost always specified in nominal terms. Formulas that specify benefits as a function of earnings contain a degree of inflation protection, to the extent that wages keep pace with price rises over time. However, when a pension plan is terminated due to bankruptcy, that future inflation protection is lost, causing a worker's future *real* benefits to be less.⁵

A worker is posited to consider the same three options (DB, DC, or no pension) in the context of a portfolio-choice model. That is, workers consider pensions as assets (future income streams), with differing attendant risks depending on the type of pension plan. In a DB pension, workers bear a risk of not receiving their full ("defined") benefit due either to underfunding or to inflation. In a defined

² A growing literature now exists on the incentive effects of "bonding" workers to reduce employee shirking. See, for example, Lazear (1981).

³ While acknowledging the considerable disagreement among industrial relations specialists over the productivity-pay link, we recognize the persistent belief that compensation systems that reward differences in individual performance activate employees to be more productive.

⁴ The Employee Retirement Income Security Act (ERISA) of 1974 established funding rules to eliminate this problem over time, but a lengthy period for coming into compliance has been provided. Further, only vested benefits are insured and ceilings on amounts payable from the government's pension insurance fund limit the extent to which the insurance will "make whole" future beneficiaries of an underfunded pension.

⁵ For a discussion of inflation risks associated with defined benefit pensions, see Ippolito (1986). It should also be noted that defined benefit pension providers occasionally make ad hoc adjustments to benefits to account for inflation. For data on this phenomenon, see Allen, Clark, and Sumner (1986).

contribution pension, workers bear instead the uncertainty associated with the investment of their pension "account." The choice between pension options, then, is considered in the context of the other assets in an individual's portfolio, including human capital.⁶

The primary data source used is the 1983 *Survey of Consumer Finance*, a data set consisting of considerable detail about 3800 representative households' labor market, financial, and demographic characteristics as well as employer-provided pension documentation. To this, several industry-level measures have been added to proxy for relevant firm-side variables.

A multinomial logit (MNL) model of pension outcome as a function of worker and firm characteristics is analyzed. Firm-side variables include firm size and the proportion of the workforce in production jobs, to proxy for m , and return on investment (a measure of profitability), to proxy for p . Worker-side variables include income, tenure, education, union status, and demographic control variables.⁷

The empirical results are supportive of and extend the existing literature on private pensions. The findings indicate that the factors predicted by the theory to influence pension outcome are statistically significant. Specifically, we find: (1) less profitable firms are more likely to have defined benefit pension coverage; (2) larger firms are more likely to have defined benefit pension coverage; (3) unions are associated with defined benefit pension coverage, probably reflecting worker preferences; (4) higher income individuals are likely to have pension coverage and more likely to have defined contribution coverage; and (5) human capital (education and tenure) is strongly associated with coverage of both types of pensions.

With respect to the theoretical concepts of p (the probability of going out of business) and m (the probability of worker shirking), the results suggest that, *ceteris paribus*: (1) firms more likely to go out of business tend to share that risk with their employees by offering defined benefit pensions, and (2) firms where monitoring is more difficult (i.e., larger firms) tend to offer defined benefit pension plans. Perhaps the most important contribution of this thesis is the clear indication that *both* worker and firm factors must be considered when studying employer-provided pension plans.

⁶ The pension options are assumed for simplicity to be mutually exclusive, though in practice one worker may participate in both types of plans.

⁷ It should be noted that union status may reflect either supply or demand factors in this reduced form model.

References

- Allen, Steven G., Robert L. Clark, and Daniel A. Sumner. "Postretirement Adjustments of Pension Benefits." *Journal of Human Resources* 21 (Winter 1986), pp. 118-37.
- Ippolito, Richard. *Pensions, Economics, and Public Policy*. Homewood, IL: Dow Jones-Irwin, 1986.
- Lazear, Edward P. "Agency, Earnings Profiles, Productivity and Hours Restrictions." *American Economic Review* 71 (September 1981).

DISCUSSION

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These three abstracts reflect the continuing topical diversity and empirical usefulness of dissertations which examine employment relationships. Although it is not easy to distill the best parts of a dissertation into a four-page abstract (a point to which I return later), the research presented here appears to make valuable contributions to our knowledge of labor market affairs.

Mr. Collins analyzes how the federal government's employment training policy changed from CETA to JTPA, and particularly how the various actors involved in the policy determination process managed the change. His brief summary of this complex process emphasizes that the specific substance of public policy is dominated by the subgovernment players in the policy arena, a result which confirms the findings of other analysts of the public policy process. However, the analysis also recognizes that the Reagan Administration representatives held the ultimate trump card of control over funding, and as a result they were able to force some key substantive changes.

The normative interpretation of these changes seems to depend upon whether the interpreter is an optimist or a pessimist. The optimists would emphasize that the employment training subgovernment kept the system alive in spite of Administration desires to remove the federal government from the training business altogether. In contrast, the pessimists would emphasize that the revised policy reflects both a diminution of the importance of employment training and an operating reward structure which guides training efforts away from those who need them most. There is no formula which tells us which of these views is more correct, and Mr. Collins seems to have adroitly covered both of these bases in his dissertation.

Mr. Betcherman's exploration of computer-based technological change and union bargaining power will not warm the hearts of business agents who must deal with technologically innovative firms. His findings indicate that such innovation appears to cause jobs to

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disappear and overall union wage differentials to shrink. However, skilled and unskilled workers fare differently. In innovative firms skilled workers receive a very modest union wage premium compared to their skilled peers in noninnovative firms. In contrast, unskilled workers in innovative firms enjoyed a larger union wage premium than their peers in more stable firms (though presumably at the price of many lost jobs).

What is not apparent in this summary is how specific employer-union pairs managed the wage and employment effects of these work process innovations. For instance, did the unions in this study respond to innovation by opting for higher wages and letting the employment chips fall where they may, or did they use their power to prevent some job losses which otherwise might have occurred? Further, is there any evidence from this research that the wage and employment effects of computer-based technological change differ from the effects of other kinds of technological change? These subjects may be beyond the scope of Mr. Betcherman's research, but they might be useful extensions of his work.

Professor Luzadis's analysis of pension coverage is informative. Her analysis appropriately considers both employee and employer characteristics and also the fact that the existence and the type of pension plan are simultaneous rather than sequential decisions. Perhaps her most noteworthy (and least surprising) result is that the rich get richer, for it is the high-income (and better endowed) employees who are likely to be covered by a pension plan. In other words, her results indicate that high-income employees will continue to enjoy their comparative advantage over low-income employees after retirement.

Her union results also are interesting. These findings confirm the well-known union preference for defined benefit plans, which I believe represents a combination of employee desires to avoid risks and union leader desires to point to specific retirement benefits (which cannot be done with a defined contribution plan). The union results also contain some interesting suggestions for future research. For instance, if union preferences for DB plans accurately represent employee preferences generally, does this mean that employers with DC plans have imposed an unwanted type of plan on their employees? Alternatively, do union and nonunion (or low-income and high-income) employees have different pension preferences? Further, how carefully do nonunion employers consider employee preferences when establishing pension plans?

More generally, these three dissertation authors have done an heroic job of describing their research in four (or so) pages. Their assigned task is extremely difficult, and the resulting product does not do justice to their work. I am pleased that the IRRA has adopted and continued the Dissertation Roundtable, but I remain disappointed at the overly brief abstracts the Association insists upon. The individual utility which flows from presenting a full paper is probably greater for recent dissertation writers than for most other IRRA paper presenters, yet the Association imposes a second-class status upon these authors by restricting them to these abstracts. I hope that the IRRA will eliminate this restriction and allow future Dissertation Roundtable authors to present and publish full papers. Such a change will benefit authors, members of the audience, readers of the *Proceedings*, and especially the discussants groping for greater substance to discuss. [Editor's Note: At its December 1987 meeting, the IRRA Executive Board approved full-paper status for the Dissertation Roundtable.]

DISCUSSION

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The diversity of the three dissertations selected highlights the vitality and usefulness of the IRRA as an interdisciplinary forum for research on labor-related issues. The three dissertations presented in this session include (1) an analysis of the political environment surrounding the transition from the Comprehensive Employment and Training Act (CETA) to the Job Training Partnership Act (JTPA) from a political science perspective, (2) an analysis of the relationship between technological change and collective bargaining power from a collective bargaining perspective, and (3) an analysis of pension coverage and type from an economic perspective.

A. Michael Collins presents an informative analysis of the political process regarding the shift from CETA to JTPA in the context of the transition to a new administration that has deemphasized employment programs generally. The analysis stresses the roles of the various actors in the political process in an integrated context, a feature that often seems to be missing from at least the political-economic analyses with which I am familiar. A key insight is that the existing federal government bureaucracy concerned with employment programs (a subgovernment in Collins's terms) has played a central role in the recent policy change. In particular, while this subgovernment could not affect funding levels substantially, it could control the implementation of changes in the existing programs within the limits of new budget allocations.

One interpretation of the analysis that seems favored implicitly by Collins is that the subgovernment is playing a positive caretaker role in maintaining a training establishment until a more favorable political climate reappears. Another, less positive, interpretation is that the subgovernment, which obviously has a vested interest in a vigorous employment policy, is playing an obstructionist role by attempting to block or slow down the deemphasis of employment policy. I would have been interested in some discussion of these opposing viewpoints.

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More fundamentally, it would be useful to consider the objectives of the various actors explicitly.

Gordon Betcherman presents an interesting analysis of the effects of technological change on the outcomes of bargaining through its effects on relative bargaining power. He highlights the relationship of technological change with (1) the extent of unionization, (2) the wage outcomes of bargaining, and (3) job-security provisions of collective bargaining agreements. The key to the analysis is the firm-level survey of 1000 Canadian establishments regarding the extent of computer-based technologies in place that is used as the central indicator of technological change. The most interesting findings relate to the analysis of the outcomes of bargaining broken down by skill group. In particular, for unskilled workers technological change means *larger* union-nonunion wage differentials. However, this is not due to higher wages for union unskilled labor, but to lower wages for nonunion unskilled workers. Skilled workers, on the other hand, have union-nonunion wage differentials that are somewhat smaller where there is more technological change. Betcherman's examination of collective bargaining agreements also showed that unions were somewhat less successful in negotiating job-security provisions where there was technological change.

The set of facts uncovered by Betcherman's analysis is very interesting. There remain some interesting questions of interpretation that are important to consider. Some of these are: (1) What is the mechanism through which technological change affects bargaining outcomes? (2) What is the role of collective bargaining in encouraging or discouraging technological change? (3) Is the relative weakening of job-security provisions and/or wage differentials as a result of technological change good or bad for the economy as a whole? I realize that these are not easy questions, but they are currently the focus of much interest and attention. It would be useful for Betcherman to consider how his findings fit into this bigger picture.

Rebecca Luzadis presents a careful analysis of the determination of the type of pension, if any at all, that workers are eligible to receive on their jobs. There are two innovative aspects to her analysis. First, she considers choice of pension versus no pension simultaneously with the choice of pension type (defined benefit versus defined contribution). Second, she considers the motivations of employers as well as the motivations of workers in building her model. The theoretical considerations are a nice blend of modern economic theories of long-run employment relationships that combine both incentive and

insurance aspects. The empirical analysis is interesting and is broadly consistent with the data in that the set of variables meant to capture the central theoretical constructs generally have the appropriate qualitative effect on the probabilities of the various outcomes.

One problem with the analysis is that, without firm-level data, Luzadis must rely on industry-level data for the variables meant to capture the employer's side of the pension-determination process. This is not satisfactory, and, without some sort of statistical correction, it is likely that the statistical significance of the results are overstated. In fairness to Luzadis, appropriate firm-level data do not exist at this time. I will take this opportunity to argue strongly that a survey that links individual and firm/establishment-level data is crucial in order to answer a wide variety of labor market questions. One possibility is "America at Work: National Surveys of Employees and Employers," recently proposed by the Social Science Research Council to the Department of Labor.

Overall, I was pleased to participate in this IRRA session, and I found the set of papers to be very interesting.

X. METHODOLOGICAL DEVELOPMENTS AND RESEARCH DESIGN ISSUES IN INDUSTRIAL RELATIONS

A Labor Relations Application of the Bootstrap Sampling Technique

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One of the recent developments in the statistics literature has been the so-called "bootstrap sampling procedure" (Diaconis and Efron, 1983; Efron, 1979, 1981; Efron and Gong, 1983). This technique has not attracted much interest as yet among labor relations researchers, but the potential for use in this field is considerable. The need for methodological innovation in labor relations has been noted (Heneman, 1984). This paper and, indeed, this panel session are one response to this call.

The Traditional Parametric Statistical Approach

Traditional statistical tests are parametric procedures. They focus on some characteristic of the sample distribution (e.g., the mean, the standard deviation, the variance, etc.). The assumption is that such a sample parameter is an unbiased estimator of the same parameter in the underlying population from which the sample has been drawn. The actual value of the population parameter may be unknown and unknowable, but most familiar statistical procedures assume that the corresponding parameters in a series of samples drawn from the

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underlying population will be normally distributed about the true value of that population parameter.

When the value of the sample parameter for any variable of interest is determined, it is compared to the value of the same parameter for that same variable in a different sample or to the known population parameter, if that value is available. The likelihood that both values could characterize samples drawn from the same underlying population is then calculated, based on what we know about the shape of the normal bell-shaped curve. The farther away a given sample parameter is from the value of the corresponding underlying population parameter, the less likely the sample in question is to have been drawn from that population. We say that the difference is statistically different at some stated level of improbability.

If the underlying population is not normally distributed, the conditions that parametric statistical tests presuppose cease to exist. Parametric tests are then invalid. This could happen if there were a pronounced skewness or truncation of the underlying population of interest, if the underlying population exhibited a bimodal distribution with respect to the variable of interest, or if the contours of the underlying population distribution for such a variable were more reminiscent of the silhouette of an urban skyline than of any smooth geometrical shape. Under these conditions, the bootstrap sampling approach may be the only avenue to testing hypotheses.

The Bootstrap Sampling Approach

The bootstrap approach examines an underlying population by iteratively sampling that population with replacement. The researcher supplies a series of random numbers from a table as “seeds” for a computer algorithm that selects observations at random from the underlying population. Where the underlying population is skimpy with respect to certain values that a variable of interest might assume, there is less likelihood an observation will be chosen that exhibits such values for any particular sample. Conversely, where observations are plentiful with respect to certain values a variable might assume, the underlying population is more likely to furnish a case with such values to the sample. In this way, the sample mimics the contours and patterns of the underlying population without assuming anything about the shape of its distribution.

A Labor Relations Application

This sampling procedure was employed to compare a traditional model of the union decertification process with a proposed alternative

model. Traditional models of the process have been based only on election cases, implicitly assuming that election cases are a suitable proxy for all cases that are filed (Ahlburg and Dworkin, 1984; Anderson et al., 1979, 1980, 1982; Chafetz and Fraser, 1979; Dworkin and Extejt, 1979b, 1979c; Elliott and Hawkins, 1980, 1982; Fulmer and Gilman, 1981; Krislov, 1956, 1979; Lawler and Hundley, 1983; Tosi et al., 1983).

However, disclaimers can result in the loss of union representational status for a bargaining unit without an election being held by the National Labor Relations Board (NLRB). In addition, withdrawals of petitions by the petitioners themselves and dismissals of petitions by the Board for some deficiency in them both result in the continuation of a union's representational status without an NLRB election. In short, a decertification petition may lead to either an ouster or a reconfirmation of the union bargaining representative, and either result may come about whether an election is held or not. Only about half of all decertification cases filed actually culminate in NLRB elections. If there are systematic differences between certification cases that culminate in elections and those that do not do so, models of the process that are developed exclusively from election cases are suspect.

To test the assumption that an election-case model is an adequate proxy for decertification activity generally, a traditionally developed discriminant model was compared with a series of more broadly based discriminant models. The underlying population consisted of 431 union decertification cases filed in Region 19 of the NLRB for federal fiscal years 1980, 1981, and 1982.¹ The computer algorithm randomly divided these observations into two subsets. One, a model-building subset (MODELSET) consisted of 222 case observations. The other, a hold-out validation subset (VALIDATE), consisted of 209 case observations.

MODELSET contained 116 election cases among its 222 case observations. A discriminant model was developed from these 116 election cases and was used to predict the outcome of the 206 cases in the VALIDATE subset, some of which were election cases and some of which were not.

Using a bootstrap sampling approach, 30 samples of 116 cases each were sequentially drawn from the MODELSET subset. In each

¹ NLRB Region 19 consists of Alaska, Idaho, Montana, Oregon, and Washington. The regional office is in Seattle. A subregional office in Portland, OR, handles all Oregon cases as well as those that arise in extreme southern Washington State along the north bank of the Columbia River. The cases used in this study included all decertification cases filed in Region 19 during federal fiscal years 1980, 1981, and 1982, except those filed in the relatively autonomous Portland subregional office of the agency.

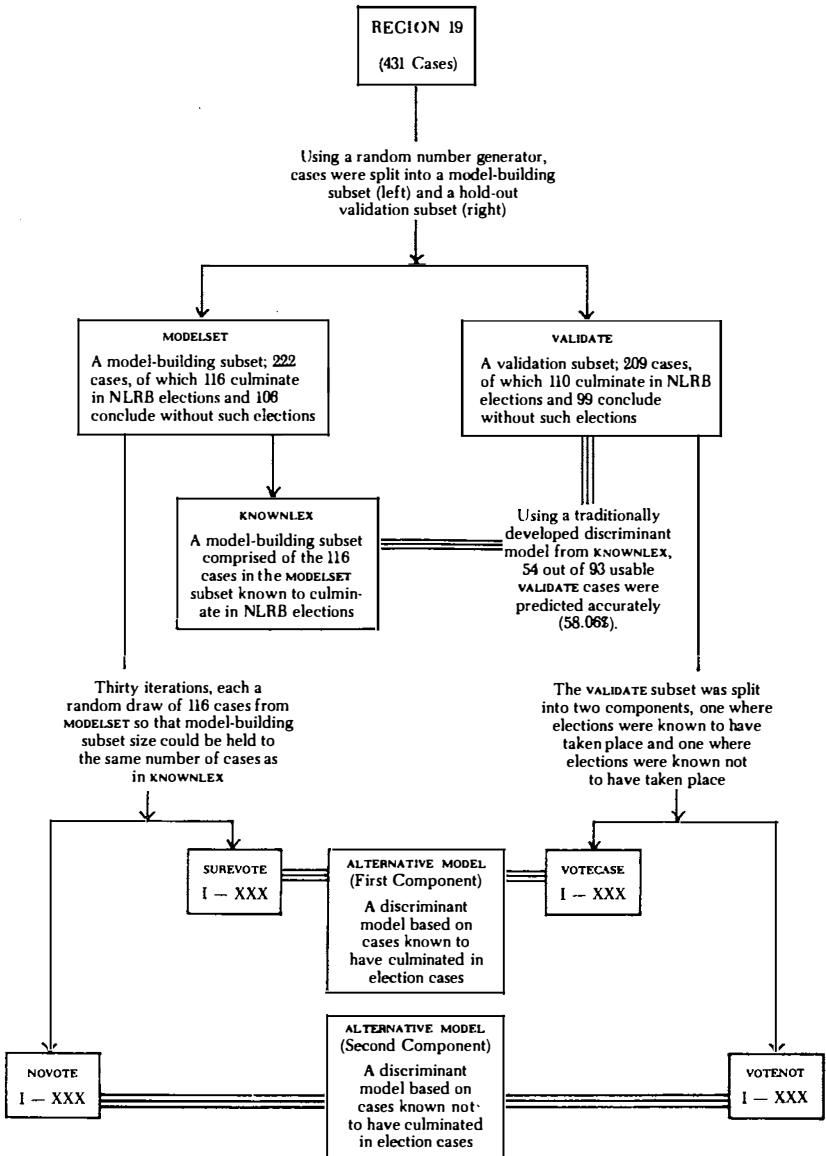


Figure 1.

Flow Chart for the Model Testing Procedure

iteration the 116 cases drawn consisted of both election cases and nonelection cases in varying proportions. A discriminant model was developed independently from each iterative sample, and each such model was used to predict case outcome in the VALIDATE subset. Use of a common pool of hold-out cases facilitated a direct comparison of the predictive capacity of the traditional election-case model with each alternative discriminant model in turn.

If the traditional model and the alternative type of model were roughly equivalent in their respective capacities to predict case outcome, each should prove superior about half the time. That is, the varying character of the sample used to generate the alternative models should produce a slightly better model for some trials, a slightly inferior model on other comparisons. But overall, neither model should consistently outperform the other unless it were an inherently superior model. Thus, a null hypothesis would suggest a .50/.50 ratio of "winning" versus "losing" comparisons for the traditional election-case model. Substantial departures from that ratio would indicate that one model or the other was clearly superior.

The binomial test statistic, a nonparametric test of statistical significance, is the appropriate way to test the results of this iterative series of comparisons.

Results

The alternative models outperformed the traditionally developed election-case model on 29 of the 30 trials. The odds of a fair coin coming up heads on 29 or more times in 30 flips is exceedingly small (2.88×10^{-8}).

$$\begin{aligned}
 p(r \mid n, p) &= \binom{n}{r} p^r q^{n-r} \\
 p(29 \mid 30, 0.5) &= \binom{30}{29} (0.5)^{29} (0.5)^1 \\
 &= \frac{30!}{29! 1!} (0.5)^{30} \\
 &= 2.79 \times 10^{-8} \\
 \sum_{r=29}^{30} p(r) &= 2.88 \times 10^{-8}
 \end{aligned}$$

Over the course of the 30 iterations the alternative models correctly predicted 2,746 or 4,775 cases encountered (65.77 percent) in the hold-out VALIDATE set. In comparison, the traditional election-case model correctly predicted 54 of 93 usable cases (58.06 percent).

The discriminant analysis algorithm that was used deleted cases when missing values were encountered for any specified variable in the hold-out VALIDATE set observation. The traditionally developed election case model occasioned the deletion of 116 (55.50 percent) of the 209 cases available on this basis. The alternative models dropped an average of 69.83 cases (33.41 percent) on each trial for reasons of missing values.

Thus, the decertification models that utilized nonelection cases as well as election cases predicted results in a larger number of cases, did so with significantly greater accuracy, and did so with fewer cases lost because of technical limitations of the model and the available data.

Conclusion

This paper suggests that election cases are not a suitable proxy for modeling the full range of decertification activity. More importantly, this paper illustrates a way in which the bootstrap sampling technique and nonparametric statistical tests may combine to provide new analytical approaches to old labor relations problems. This technique exploits the capacity of modern computers to perform what once would have been an extravagantly large number of mathematical operations in a cost-effective manner. While it requires a large number of observations in the data set, the approach makes no assumptions about the distributional patterns that may characterize such data. Many labor relations dependent variables are dichotomous in nature: a strike is called or not called, the grievance is upheld or denied, the union wins or loses an NLRB election, etc. The method illustrated here is well suited to testing competing models of such processes.

References

- Alburg, Dennis A., and James B. Dworkin. "The Influence of Macroeconomic Variables on the Probability of Union Decertification." *Journal of Labor Research* 5 (Winter 1984), pp. 13-28.
- Anderson, John C., Gloria Busman, and Charles A. O'Reilly. "The Decertification Process: Evidence from California." *Industrial Relations* 21 (Spring 1982), pp. 178-95.
- _____. "Union Decertification in the U.S.: 1947-1977." *Industrial Relations* 19 (Winter 1980), pp. 100-107.
- _____. "What Factors Influence the Outcome of Decertification Elections?" *Monthly Labor Review* 102 (November 1979), pp. 32-36.

- Chafetz, Israel, and C. R. P. Fraser. "Union Decertification: An Exploratory Analysis." *Industrial Relations* 18 (Winter 1979), pp. 56-69.
- Crask, Melvin R., and William D. Perreault, Jr. "Validation of Discriminant Analysis in Marketing Research." *Journal of Marketing Research* 14 (February 1977), pp. 60-68.
- Diaconis, Persi, and Bradley Efron. "Computer Intensive Methods in Statistics." *Scientific American* (May 1983), pp. 116-26, 128, 130.
- Dworkin, James B., and Marian Extejt. "Recent Trends in Union Decertification/Deauthorization Elections." *Proceedings of the 32nd Annual Meeting, Industrial Relations Research Association, Atlanta, 1979. Madison, WI: IRRA, 1980. Pp. 226-34.*
- _____. "Why Workers Decertify Their Unions: A Preliminary Investigation." *Proceedings of the 39th Annual Meeting, Academy of Management, Atlanta, August 1979. Pp. 241-45.*
- Efron, Bradley. "Bootstrap Methods: Another Look at the Jackknife." *The Annals of Statistics* 7, No. 1 (1979), pp. 1-26.
- _____. "Non-parametric Estimates of Standard Error: The Jackknife, the Bootstrap, and Other Methods." *Biometrika* 68, No. 3 (1981), pp. 589-99.
- Efron, Bradley, and Gail Gong. "A Leisurely Look at the Bootstrap, the Jackknife, and Cross Validation." *The American Statistician* 37 (February 1983), pp. 36-48.
- Elliott, Ralph D., and Benjamin M. Hawkins. "Do Union Organizing Activities Affect Decertification?" *Journal of Labor Research* 3 (Spring 1980), pp. 153-61.
- _____. "Union Decertification: Some Recent Trends." *Employee Relations Law Journal* 5 (Spring 1980), pp. 533-48.
- Heneman, Herbert G. III. "Dependent Variables in Union Membership Research." Unpublished paper presented at the 37th Annual Meeting, Industrial Relations Research Association, Dallas, December 1984.
- Fulmer, William E., and Tamara A. Gilman. "Why Do Workers Vote for Union Decertification?" *Personnel* 58 (March-April 1978), pp. 28-39.
- Kendall, M. G. "Discrimination and Classification." In *Multivariate Analysis*, ed. P. R. Krishnaiah. New York: Academic Press, 1966. Pp. 165-85.
- Klecka, William R. *Discriminant Analysis*. Sage Series on Quantitative Applications in the Social Sciences. Beverly Hills, CA: Sage, 1980.
- Krislov, Joseph. "Decertification Elections Increase But Remain No Major Burden to Unions." *Monthly Labor Review* 102 (November 1979), pp. 30-32.
- _____. "Union Decertification." *Industrial and Labor Relations Review* 9 (July 1956), pp. 589-94.
- Lawler, John, and Greg Hundley. "Determinants of Certification and Decertification Activity." *Industrial Relations* 22 (Fall 1983), pp. 335-48.
- Mendenhall, William, and James E. Reinmuth. *Statistics for Management and Economics*, 3d ed. North Scituate, MA: Duxbury Press, 1978.
- National Labor Relations Board. *Annual Reports*. Washington: U.S. Government Printing Office, 1947-1982.
- Overall, J. E., and C. J. Klett. *Applied Multivariate Analysis*. New York: McGraw-Hill, 1972.
- Tosi, Henry L., Janice H. Zahrlly, and Kelly A. Vavarek. "Reasons Underlying Voting Behavior in a Faculty Decertification Election: A Content Analysis." *Proceedings of the Southern Academy of Management Annual Meeting, Atlanta, September 1983.*

Arbitrating Discrimination Grievances: An Empirical Model for Decision Standards*

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The aim of this study is to point out relevant differences between decision-making for labor arbitration in general and arbitration cases involving discrimination. This paper begins with a discussion of the literature explaining decision-making by arbitrators confronted with labor matters such as seniority, discharge, and promotion. Focus then swings to the legal decision rules used by arbitrators to decide discrimination complaints. Thirty-seven recently published arbitration awards are reviewed and compared to identify the decision-making criteria most often applied to discrimination grievances. Finally, a hierarchical model is proposed to explain arbitral decision policy for discrimination cases. Several related topics, including arbitral decision priorities and consistency, are considered.

Background

Probably the best known arbitral decision-making studies suggest that arbitrators reach their awards by combining a multiplicity of decision rules that have evolved from the law. These rules predict, among other things, that arbitrators will follow specific rather than general contract language, that they will give meaning to the intent of the contract, and that they will make their decision on the basis of the issue, the contract, and the record.

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Other research ties the legal decision rules to decision models that are activated by composites of cues (Prasow and Peters, 1983). One such model by Gullet and Goff (1980) argues that arbitrators have built a body of widely held belief systems that shape decision-making in individual cases. Gullet and Goff formulated a Bayesian-type flow chart (yes/no) decision model using 15 decision rules common to arbitration. Their model depicts that arbitrators formulate judgments on the basis of contract language, past practice, precontract negotiations, past arbitral rules, and the common law of arbitration.

Other studies illuminate a variety of aspects of arbitral decision-making. For instance, Drews and Blanchard (1959) subjected 120 arbitration awards to factor analysis and identified five clusters of grievances that arbitrators normally face: central issues, job assignments and promotions, union rights and activities, supervision and working conditions, and coercion. Bass (1965, p. 65) reported a study of demographic characteristics of 146 arbitrators judged by their peers as effective decision-makers. Edwards (1976, 1978) and Coulson (1976) researched the experience of arbitrators with discrimination cases, outlining decision-making difficulties and proper hearing procedures. Oppenheimer and LaVan (1979), whose focus was on case outputs by a group of arbitrators, noted that grievants are more likely to gain a decision over a public-sector than a private-sector employer when discrimination is judged by the arbitrator.

Cain and Stahl (1983) probed beyond the surface of legal reasoning and found that arbitrators are probably quite consistent in the application of their respective decision policies. They found that arbitrators decide most grievance cases on the basis of seven cues: management rights and efficiency, clear language of the contract, past practice, fairness, effect on the worker, negotiating history, and prior awards. When subjected to statistical analysis, these seven cues combine into a three-cue model indicating that arbitrators are actually guided, in order of priority, by consideration for: (1) management rights; (2) equity = fairness + effect on the worker; and (3) stability = contract language + past practice + negotiating history + prior awards.

Methodology

Thirty legal decision rules commonly used by arbitrators (Elkouri and Elkouri, 1973, p. 296; Prasow and Peters, 1983) were randomly placed in a structured questionnaire (Jauch, Osborn, and Martin, 1980). The questionnaire was pretested and refined, and an

explanatory definition of each rule as well as procedural instructions for completion were included.

On four separate occasions three expert judges supplied assessment data. Initially, a single judge evaluated all 37 cases to determine whether any of the 30 arbitral rules were used. The 37 cases constituted nearly 15 percent of the total number of discrimination awards published in *Labor Arbitration Reports* and *Labor Arbitration Awards* since 1974. Three months later, on occasion two, the same cases were reevaluated by the same judge in a dissimilar order to minimize residual effects. In a third instance, using the 30 rules listed in the structured questionnaire, a second judge evaluated two randomly selected cases. The second judge's procedure was replicated by a third judge who evaluated two additional cases. The judges were instructed to answer "not used" in instances of doubt.

The study might have been improved and potential sample bias eliminated by the addition of more judges and a broader sample of cases, including some unpublished awards. Nonetheless, estimated intra- and inter-rater reliability was acceptable. Specifically, the median intra-judge rate/rerate reliability coefficient was exactly .87 for the 30 decision rules with correlational values ranging from .51 to 1.00. Agreement among the three expert judges ranged from 68 to 88 percent, with a median of 81 percent. Kuder-Richardson 20 cluster reliabilities ranged from .36 to .79 with a mean of .58; rate/rerate reliabilities ranged from .69 to .97 with a mean of exactly .87 and a median of .885.

Decision Policy

Whereas other decision policy studies have begun with defined cases, this study began with defined decision rules. The 30 rules were placed in an intercorrelation matrix and subjected to multiple cluster analysis using the Tryon-B coefficient procedure (Fruchter, 1954, pp. 12-17). Six clusters emerged, each of which is comprised of the rules arbitrators use to evaluate information and make judgments about discrimination complaints. When faced with similar discrimination problems, arbitrators consistently applied similar decision clusters to resolve conflict. The clusters which emerged from the procedure are defined as follows:

Cluster 1: Management's action is weighed in terms of equity to the worker and the language of the contract. Employee benefits are commonly assigned on the basis of the decision rules in this cluster when the contract is silent.

Cluster 2: Management's action is examined on the basis of reasonableness and conformity with the parties' past practices. Decision rules in this cluster are often used to interpret parol evidence.

Cluster 3: Management's action is examined on the basis of reasonableness and the law. Decision rules in this cluster often focus on the rendering of awards that do not give an unfair advantage to one party.

Cluster 4: The arbitral award is justified in terms of the language of the contract, the impact on the parties, and the parties' past arbitral awards. Decision rules in this cluster are often used to interpret the law of the shop.

Cluster 5: The arbitral award is justified in terms of the language of the contract and equity to the parties. Decision rules in this cluster commonly emphasize the assignment of the burden of proof and the elimination of unfair evidence.

Cluster 6: The arbitral award is justified in terms of the parties' negotiating history and equity to the parties. Decision rules in this cluster focus on the contract as a whole.

Logic suggests that the six clusters operate as a result of arbitral policy that exists beyond the surface of legal reasoning. To test this logic, the six clusters were compared to see if any of the seven cues proposed by Cain and Stahl (1983) could be found. Eight cues were found, one more than Cain and Stahl identified: management rights, reasonableness, clear language of the contract, past practice, fairness, effect on the worker, negotiating history, and the law.

The actual decision policies followed by labor arbitrators for discrimination complaints were determined and verified by subjecting the first order findings to higher order statistical analysis. While three cues were prioritized in Cain and Stahl's decision policy study, two cues emerged for discrimination cases. First, commonality was found among Clusters 1, 2, and 3 and the basis of management rights. Second, the equity cue was verified statistically at the highest order, making it the common link among all clusters. Indeed, management rights is subservient to equity in discrimination cases. The two-cue model indicates that arbitrators prioritize and are consistently guided in discrimination cases by considerations for: (1) equity = management rights + fairness + negotiating history; (2) management rights = reasonableness + effect on the worker + contract language + past practice + the law.

Conclusion

The legal decision rules used to decide labor arbitration cases in general are also used to decide discrimination complaints. Furthermore, the decision policies posited by earlier studies of labor arbitrators are present in discrimination cases. For example, both kinds of cases require the arbitrator to make interpretations on the basis of the contract, the issue, and the record. Notably, arbitrators apply the same cues to both kinds of cases (see also Gullet and Goff, 1980; Cain and Stahl, 1983). On the other hand, discrimination grievances involve the law more directly than do other types of problems at arbitration. The two types of grievances also differ when decision policy priorities are examined.

Beneath the surface, management rights is a significant connecting link for arbitrators confronted with discrimination grievances. But, stability is not a significant policy-setting force. The needs of the parties for rapid settlement of discrimination complaints are being served by an arbitral decision policy that consistently emphasizes equity as the Number 1 priority. Simply put, equity dominates arbitral decision policy in discrimination cases.

References

- Bass, Bernard. *Organizational Psychology*. Boston: Allyn & Bacon, 1965.
- Cain, Joseph P., and Michael J. Stahl. "Modeling the Policy of Several Labor Arbitrators." *Academy of Management Journal* 26, No. 1 (1983), pp. 140-47.
- Coulson, Robert. "Title Seven Arbitration in Action." *Labor Law Journal* 27 (March 1976), pp. 141-51.
- Drews, D. W., and R. E. Blanchard. "A Factorial Study of Labor Arbitration Cases." *Personnel Psychology* 12 (1959), pp. 303-10.
- Edwards, Harry T. "Arbitration of Employment Discrimination Cases: An Empirical Study." In *Arbitration—1975*, Proceedings of the 28th Annual Meeting, National Academy of Arbitrators. Washington: Bureau of National Affairs, Inc., 1976. Pp. 59-92.
- _____. "Arbitration as an Alternative in Equal Employment Disputes." *Arbitration Journal* 33 (December 1978), pp. 23-27.
- Elkouri, Frank, and Edna Asper Elkouri. *How Arbitration Works*, 3d ed. Washington: Bureau of National Affairs, Inc., 1973.
- Fruchter, Benjamin. *Introduction to Factor Analysis*. New York: Van Nostrand, 1954.
- Gullet, C. R., and W. H. Goff. "The Arbitral Decision-Making Process: A Computerized Simulation." *Personnel Journal* 59 (August 1980), pp. 664-67.
- Jauch, Lawrence R., Richard N. Osborn, and Thomas N. Martin. "Structured Content Analysis of Cases: A Contemporary Method for Organizational Research." *Academy of Management Review* 5, No. 4 (1980), pp. 517-25.
- Oppenheimer, Margaret, and Helen LaVan. "Arbitration Awards in Discrimination Disputes: An Empirical Analysis." *Arbitration Journal* 34 (March 1979).
- Prasow, Paul, and Edward Peters. *Arbitration and Collective Bargaining: Conflict Resolution in Labor Relations*, 2d ed. New York: McGraw-Hill, 1983.

Research Design Issues in Comparative Industrial Relations

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The field of comparative or international industrial relations has proceeded through three discernible stages of development during the postwar period. This paper begins with a discussion of the major elements of each stage in terms of orientation, type of research design, and common features. We then suggest that the field is entering a new stage of development that will eventually offer us an opportunity to develop and test theories that would help explain the different directions of national industrial relations systems. Finally, we present a partial taxonomy that could serve as a basis for field testing across specific national industrial relations systems. Only in this way are we likely to move ahead in explaining national diversity in comparative industrial relations.

Early Postwar Research

The period from the late 1940s through the early 1960s was one in which a number of single-nation studies were published. The primary focus was to provide a comprehensive treatment of a particular nation's industrial relations system. This meant that the author looked at the historical development of trade unions and employer associations, the legal framework, and the system of collective bargaining.

Each of these book-length studies centered on the industrial relations system in a given West European nation. The Scandinavian countries in particular received much attention. Galenson described labor relations in Denmark (1949) and Norway (1952). The Swedish system was described in detail by Myers (1951), Schmidt (1962), and Johnson (1962). Lorwin (1954) gave us insights into the French system of labor-management relations, while Horowitz (1963) provided an understanding of the Italian industrial relations system.

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There were some common characteristics associated with those national studies. The commonalities included the following: most of the books were written by non-natives of the country being studied; the institutional treatment was largely written by labor economists, legal scholars, and historians; in-depth treatment involved visiting the country, interviews, and use of primary and secondary sources; descriptive as opposed to theoretical or analytical methods were used; greater attention was given to the role of the trade unions than to employers; and the focus was on the national level rather than company- or plant-level industrial relations practices.

Comparative Industrial Relations System Framework

The second stage in the development of comparative industrial relations can be traced back to two seminal books. The first was Dunlop's *Industrial Relations System* (1958), which gave a framework or model for studying industrial relations across nations. Having visited a number of countries as part of a team funded by the Ford Foundation, Dunlop was able to identify common factors in the industrial relations systems of the various nations. The factors in his industrial relations systems theory included the key actors, the web of rules, and the impact of power, technology, and market forces.

This framework received further development in *Industrialism and Industrial Man* (1964), where Kerr, Dunlop, Harbison, and Myers formulated their arguments to include both developed and developing nations. On the basis of their field research, they were able to discern commonalities in the features of the industrial relations systems based upon who were the elites in a given nation. There was an underlying assumption, however, that there would be a convergence over time toward a common industrial relations system due to the imperatives of the industrialization process. However, later reexamination by Dunlop et al. (1975) by the same research team suggested that industrialization had not produced greater similarity in industrial relations systems in the major developed nations over the years.

Considerable interest was generated in this industrial relations systems theory approach in both the United States and abroad. Scholars in comparative industrial relations often used the systems approach as a framework for their own research. However, by the mid-1970s there was a growing consensus that the strengths of the systems model were largely centered on providing a taxonomy of variables rather than offering a dynamic theory that could predict developments in a given nation's industrial relations system.

Most of the comparative industrial relations scholarship during this period continued to be descriptions of the major features of the systems in selected West European nations. Some attention was also given to the developing nations (Kassalow, 1969). Because no one person could be well versed in a variety of national industrial relations systems, it was common for an editor to commission a number of experts to write on the system with which they were most familiar.¹ The only common thread was the industrial relations system taxonomy. Often even that bond was lacking.

There are certain similarities among the books on comparative industrial relations that were written during this period. The treatment was largely descriptive and institutional; comparative labor law or labor movements received primary attention; the focus tended to be on the present system rather than explaining the dynamics in the development of the industrial relations system; systematic models and/or hypotheses were lacking; West European nations and the United States received most of the attention; preoccupation was with national systems rather than labor relations at the shop-floor level; and there was a lack of consistency across the literature in the organizing themes.

Problem-Focused Research

The third stage of industrial relations research can best be described as problem-oriented. Early work had devoted primary attention on the stability of national industrial relations systems in the developed world. There was an inherent assumption that labor-management relations had achieved maturity in many of the West European nations. While problems would continue to emerge, the relative power of employers, trade unions, and government would not change dramatically.

Four recent books in the comparative industrial relations area focus on dynamic features of national industrial relations systems. Barkin (1975) looked initially for evidence of growing worker militancy in a number of countries in the relatively prosperous late 1960s and early 1970s. His second edition (1983), however, traced developments in selected West European and North American nations as economic prosperity gave way to union stagnation and malaise in the late 1970s and early 1980s.

¹ Representative books on comparative industrial relations are listed in the Reference section at the end of this paper.

Juris, Thompson, and Daniels (1985) commissioned a number of scholars to write individual chapters dealing with how specific industrial relations systems responded to the economic shocks during the 1973-1983 decade. What emerges from their synthesis of the various national experiences is both similarities and differences. For example, the impact of economic difficulties was less dramatic in Sweden than in America where a chain of events resulted in a major shift of power from unions to management.

Finally, Edwards, Garrona, and Todtling (1986) investigated six labor movements (U.S., U.K., Italy, France, Austria, and Sweden) and analyzed how they responded to recent economic and political challenges.

What clearly differentiates this group of books from many of their predecessors is their focus on the dynamic features of national industrial relations systems as they responded to economic, political, and social changes. The writers also relied more on analysis and interpretation than did some of the earlier authors.

An Emerging Stage

It is clear that no theory has yet emerged that would explain the diversity of industrial relations practices across nations. However, a recent book by Poole (1986) can be viewed as one of the first attempts to construct a largely macro-level conceptual model for the field. The major variables in his model include environmental conditions, intervening conditions, proximal conditions, strategic choices of actors, and outcomes.

The major problem with his framework is that it does not provide us with a testable model for explaining differences across national industrial relations systems. Furthermore, it does not indicate the relative importance of specific parts of the model to the outcome variable.

Advancing the Field

What steps need to be taken to advance the area of comparative industrial relations research? Listed below are some key steps that should be taken if we hope to explain national variation in industrial relations practices.

1. The development of testable models that incorporate the key variables that are common to most, or all, industrial relations practices.

2. The use of a multidisciplinary approach to integrate economic, political, and sociocultural factors that affect the industrial relations system's outcomes.

3. Clarification of what encompasses the commonality of industrial relations outcomes across nations.

4. Formulation of a model that can capture the dynamic features of change and how such change affects the outcomes in the industrial relations system.

5. The articulation of hypotheses that allow us to predict future outcomes rather than relying on after-the-fact explanations for what took place in a given national industrial relations system.

6. The inclusion of both societal and work-level variables rather than the traditional emphasis of scholars on the macro-level industrial relations system in each country.

7. The use of multiple research-design approaches for gathering data, such as interviews, questionnaires, and analysis of primary and secondary data with emphasis on explaining the whys rather than focusing primarily on the factual information itself.

A Comparative Industrial Relations Model

One discerns some commonalities in the comparative industrial relations literature concerning the major variables that should be included in a conceptual or theoretical model. They include, at minimum, the following factors: environmental considerations, the role of unions, the role of management, the collective bargaining system, and industrial relations outcomes. However, the taxonomies one finds in the literature provide minimal help in predicting how a given subfactor affects other parts of the model. Therefore, it is necessary that we develop measurement devices for categorizing or scaling variation in experiences in each of the national industrial relations systems.

This requires that researchers use a multi-research design approach to gather information from government records, statistics available from employers and unions, interviews, and questionnaires. Using such a common framework across various national industrial relations systems, we will be able to identify those subfactors that seem more important in explaining variation in the outcome measures. Only then will we be in a position to develop and test specific hypotheses.

The following taxonomy suggests what needs to be done as a first step in providing a systematic framework for comparing and contrasting national industrial relations systems. Where categories are

used (e.g., high, medium, and low), further definition would need to be given to insure consistent meaning of each category across countries since no one researcher is likely to collect data in all the countries studied. A set of union factors might include:

1. Level of union membership penetration (low, medium, high).
2. Direction of union growth (declining, plateauing, increasing).
3. Influence of labor movement on ruling political party (low, medium, high).
4. Primary orientation of labor unions (political or business unionism).
5. Level of union bureaucratization (low, medium, high).
6. Level of active union-member participation (low, medium, high).
7. Financial strength of unions (low, medium, high).
8. Extent of interunion cooperation (low, medium, high).
9. Strategic response of labor movement (reactive or proactive).
10. Independence of labor movement from the state (low, medium, high).
11. Union influence on work-level personnel system (low, medium, high).
12. Locus of union strength (local, industrial, national level).
13. Shift in direction of union strength, if any (toward local, industry, or national level).

This list of union factors illustrates the many possibilities available for collecting data in various ways that can be categorized to show both commonalities and differences across a number of national industrial relations systems. Similar taxonomies can be developed for other key factors in the model.

The most common situation in recent years has been for an editor to ask a number of experts on specific national industrial relations systems to write individual chapters. The editor may even provide each author with a set of questions to answer. However, in most cases the editor has limited control over the approach the individual author decides to use. The typical result is that each chapter stands pretty much on its own, with only rare instances where comparisons are

made with events and trends in other national industrial relations systems.

However, if the editor of a comparative industrial relations volume provided each author with a taxonomy of key factors and subfactors, as well as clear definitions of the specific categories, then the quality of such volumes could be improved. Furthermore, the editor could then provide a useful integrating chapter by identifying groupings of national experience on the various sets of factors. We might hope that, over time, this disciplined method would allow industrial relations scholars to identify which factors and subfactors are most important in explaining national variance in industrial relations outcomes, such as level of strike activity, wage movements, and effectiveness of grievance administration.

This challenge to develop a systematic taxonomy is important to the field of comparative industrial relations. There is a compelling need for the field to move from description to a systematic and analytic approach to studying comparative industrial relations.

References

- Balfour, Campbell. *Industrial Relations in the Common Market*. London: Routledge and Kegan Paul, 1972.
- Barkin, Solomon, ed. *Worker Militancy and Its Consequences, 1965-1975*. New York: Praeger, 1975.
- . *Worker Militancy and Its Consequences: The Changing Climate of Western Industrial Relations*, 2d ed. New York: Praeger, 1983.
- Blanpain, R., ed. *Comparative Labor Law and Industrial Relations*. Dordrecht, The Netherlands: Kluwer, 1982.
- Blum, Albert A., ed. *International Handbook of Industrial Relations*. Westport, CT: Greenwood Press, 1981.
- Bouvard, Marguerite. *Labor Movements in the Common Market Countries*. New York: Praeger, 1972.
- Bratt, Christian. *Labor Relations in 17 Countries*. Stockholm: Swedish Employers' Confederation, undated.
- Dunlop, John T. *Industrial Relations Systems*. New York: Holt, 1958.
- Dunlop, John T., Frederick H. Harbison, Clark Kerr, and Charles Myers. *Industrialism and Industrial Man Reconsidered*. Princeton, NJ: Inter-University Study of Human Resources in National Development, 1975.
- Edwards, Richard, Paolo Garonna, and Franz Todtling, eds. *Unions in Crisis and Beyond: Perspectives from Six Countries*. Dover, MA: Auburn House, 1986.
- Galenson, Walter. *The Danish System of Labour Relations*. Cambridge, MA: Harvard University Press, 1949.
- . *Labor in Norway*. Cambridge, MA: Harvard University Press, 1952.
- Horowitz, Daniel. *The Italian Labor Movement*. Cambridge, MA: Harvard University Press, 1963.
- Juris, Hervey, Mark Thompson, and Wilbur Daniels, eds. *Industrial Relations in a Decade of Economic Change*. Madison, WI: Industrial Relations Research Association, 1985.
- Kendall, Walter. *The Labour Movement in Europe*. London: Allen Lane, 1975.
- Kerr, Clark, John T. Dunlop, Frederick Harbison, and Charles A. Myers. *Industrialism and Industrial Man*. New York: Oxford University Press, 1964.

- Lorwin, Val. *The French Labor Movement*. Cambridge, MA: Harvard University Press, 1954.
- Martin, Benjamin, and Everett Kassalow, eds. *Labor Relations in Advanced Industrial Societies: Issues and Problems*. Washington: Carnegie Endowment for International Peace, 1980.
- Myers, Charles A. *Industrial Relations in Sweden*. Cambridge, MA: The Technological Press MIT, 1951.
- Poole, Michael. *Industrial Relations: Origins and Patterns of National Diversity*. London: Routledge and Kegan Paul, 1986.
- Roberts, B. C., ed. *Industrial Relations: Contemporary Issues*. London: MacMillan, 1968.
- Rojot, Jacques. *International Collective Bargaining*. Deventer, The Netherlands: Kluwer, 1978.
- Schregle, Johannes. *Negotiating Development: Labor Relations in Southern Asia*. Geneva: International Labour Office, 1982.
- Torrington, Derek, ed. *Comparative Industrial Relations in Europe*. London: Associated Business Programmes, 1978.
- Wilczynski, J. *Industrial Relations in Planned Economies, Market Economies, and The Third World*. New York: St. Martin's Press, 1983.

Research Methodology Needs in Human Resource Management

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Personnel/Human Resource (P/HR) management is an applied subset of the field of industrial relations. P/HR research, like industrial relations research in general, has a long tradition of borrowing and using methodologies from other disciplines, particularly economics and psychology. There are no P/HR methodologies per se, and I doubt there will or should be any. Hence, it is difficult to identify research methodologies needed specifically for P/HR management. It is possible, however, to suggest avenues for application of research methodology concerns to specific P/HR issues. Three such issues are suggested and discussed in the present paper: (a) P/HR program evaluation, (b) P/HR administration, and (c) P/HR decision-making.

P/HR Program Evaluation

With its applied functional focus, P/HR management is very much program-oriented. Indeed, we constantly make reference to training programs, compensation programs, staffing programs, etc. Many of the programs have long histories in both organizational practice and in research. Unfortunately, as many have observed over the years, we have tended to underutilize research as a basis for P/HR program development and improvement (Dunnette and Bass, 1963; Dunnette, 1986; Heneman, 1960).

That is, there has constantly been a rush in organizational practice to develop and implement P/HR programs, and often very costly ones, without an adequate research base. Furthermore, rarely is the effectiveness of such programs systematically evaluated. Current examples that come to mind include pay-for-performance (gainsharing) programs, flexible benefit programs, and "wellness" programs. While much is known of their popularity, little is known of their effectiveness or the conditions influencing their effectiveness.

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In short, there seems to be relatively little importance attached to P/HR research by organizations. This is hardly a new or unique observation. Yet it does raise the question of what, if anything, can be done to make research a more integral, and important, part of P/HR management. One approach to this problem is for us to think about, and practice, P/HR program evaluation in some different ways. I have two to offer: (a) up-front program evaluation and (b) cooperative program evaluation.

Up-Front Program Evaluation

Up-front program evaluation means that as soon as an organization contemplates a new P/HR program, or changing an existing one, it *starts* the process by addressing the issue of how to evaluate the program's effectiveness. This is a reversal of the usual administrative process in which program evaluation is considered last, if at all. Obviously it is difficult to precisely plan the evaluation of a program that has yet to be fully designed, but attempting to do so up front could have some potentially important benefits:

1. Undoubtedly the incidence of program evaluation occurrence would increase. Over time this would make program evaluation a much more natural part of the total programming process.

2. It would force organizations to consider what will be the criteria of program effectiveness and how will they be measured. In turn, this will logically force a detailed consideration and specification of the program's objectives—exactly what is the program supposed to change and by how much.

3. With program objectives clearly specified, assessments of program feasibility may become more important. The organization may be nudged more in the direction of considering both the theoretical and administrative reasons for thinking that the desired changes in fact could (or could not) be achieved.

4. Experimental design issues will receive more attention with up-front program evaluation. First, it will require the organization to confront the issue of whether or not there will be some sort of control or comparison group. In turn, this may lead to more pilot or test programs in order to create control/comparison groups. From purely a research perspective this would be very desirable. Second, it will mean that the question of when to gather the criterion data will have to be addressed. This could be especially beneficial in the case of the "after" measures. That is, this organization will have to ask how long it thinks it will take for the program to have any effect, and how long

it thinks the effect(s) will last. Third, it may increase the usage of both internal and external criterion measures (Campbell and Stanley, 1963) so that we would learn more about both immediate and long-term changes that may be attributable to the program.

5. Potential program costs *and* benefits may receive more attention. By seriously considering program objectives, one can then judgmentally estimate the probability of achieving them. The importance of achieving the objectives, multiplied by the likelihood of achieving them, become the anticipated benefits of the program. These can then be compared with the estimated costs of the program to provide an assessment of the overall desirability of the program and whether or not to undertake it. I predict that if this were done, the incidence of new P/HR programs in organizations would diminish substantially.

Cooperative Program Evaluation

There are obviously many commonalities to the types of programs being implemented across organizations, or across units of the same organization. This creates some possibilities for joint venture arrangements for cooperative program evaluation. Organizations would band together to conduct evaluations of program effectiveness. This could be done privately, or through the auspices of practitioner associations such as the American Society for Personnel Administration or the American Compensation Association. Another possibility would be for academic associations such as IRRA and the Academy of Management to sponsor and direct such cooperative efforts. This suggestion is analogous to the cooperative test validation studies encouraged by the Uniform Guidelines on Employee Selection Procedures (1978).

There would be two major advantages to cooperative program evaluation. First, from a practical viewpoint there would be a pooling of resources and potential evaluation cost-savings for the participating organizations. Second, from a research perspective we could learn much more about how effective programs are, and under what circumstances. This is somewhat analogous to validity generalization approaches (e.g., Hunter, Schmidt and Jackson, 1982) in that there would be an attempt to estimate the overall magnitude of program effects, as well as program effect variability and potential causes of that variability.

P/HR Administration

We know little about how and why P/HR departments are organized and administered. For the most part research on these matters is confined to interorganizational surveys of current practices conducted by the Conference Board and the Bureau of National Affairs. While the results of these surveys are useful in a general descriptive sense, they lack an adequate theory base and are not amenable to additional data analysis.

Developing a better understanding of the administrative aspects of the P/HR function will require a blending of knowledge about P/HR management with concepts from organization theory and strategy. In addition, it will require a blending of research strategies. Three in particular come to mind.

First, we must observe P/HR administration through the use of case study methods. This can help us understand the nature and complexity of the administrative processes, as well as help us formulate hypotheses for future investigation. Recently case study work has begun in earnest, and it needs to continue (for examples, see Dyer, 1983; Parker, Fossum, Blakslee, and Rucci, 1983).

Second, though there would be many problems in doing so, it would be desirable to develop standardized interorganizational data banks. These would be similar in concept to some of the financial data banks like Compustat. However, they would be explicitly constructed with a strong theory base. In this way we could systematically catalog important differences in P/HR administrative arrangements, as well as attempt to explain these differences empirically. Clearly, results from use of case studies could be very helpful as input to the identification of variables that would be included in the data bank.

Third, we need to study P/HR administration over time as a way of learning more about administrative changes and why they occur. One of the major advantages of an interorganizational data bank is that it would greatly facilitate such longitudinal data collection and analysis. There is a direct analog here to financial data banks and how they are used for research purposes.

P/HR Decision-Making

There is constant P/HR decision-making that occurs in an organization. It takes three interrelated forms: (a) decisions by individual line managers, (b) decisions by P/HR staff members, and

(c) decisions by top management. Each of these areas suggests certain research needs and accompanying methodologies.

Individual line managers constantly make P/HR decisions about people in such areas as selection, promotion, training, discipline, and compensation. Until recently, most of the relevant P/HR decision-making research was concentrated in the selection (e.g., interviews) and promotion (e.g., assessment centers) areas. The scope has now begun to expand to compensation (e.g., Fossum and Fitch, 1985; Sherer, Schwab, and Heneman, in press) and grievances (e.g., Labig and Helburn, 1986). Such an expansion is desirable and should continue. It also presents an opportunity for usage of many different methodologies, including policy-capturing, between-subject experiments, and verbal protocol analysis.

P/HR staff members make decisions in diverse areas such as interfaces with line management, program development and change, budgets, policy formulation and enforcement, and resource allocation within the P/HR function. To the extent these have been studied, it has been through case study and survey methodologies. Such usage should continue and, we hope, increase. At the same time, study of decision-making by P/HR staff members might be enhanced by use of the forementioned interorganizational data bank approach.

Strategic decisions by top management can obviously be influenced by P/HR information and considerations. We need to study more systematically the extent to which this occurs. Equally important, we need to study the administrative mechanisms by which top management receives and evaluates P/HR information. Included here would be study of task forces, participation on top management policy committees, data bases, and types of both periodic and special reports. Case study methodologies seem particularly appropriate to these investigations. Results from these studies might well serve as input to the construction of large-scale data banks in the future.

In summary, P/HR management is an eclectic area of study, and an applied one. The research methodologies that we use must reflect these characteristics. Certain content areas within P/HR management have received relatively little research attention. These areas are program evaluation, administration, and decision-making. Each of these areas lends itself to investigation through application and use of numerous research methodologies, and it is this flexibility and diversity in methodological usage which in many respects is our most pressing research need.

References

- Campbell, D. T., and J. C. Stanley. *Experimental and Quasi-Experimental Designs for Research*. Chicago: Rand McNally, 1963.
- Dunnette, M. D. "Being There." Paper presented at the American Psychological Association meeting, Washington, D.C., 1986.
- Dunnette, M. D., and B. M. Bass. "Behavioral Scientists and Personnel Management." *Industrial Relations* 2, No. 1 (1963), pp. 115-30.
- Dyer, L. "Bringing Human Resources into the Strategy Formulation Process." *Human Resource Management* 22 (1983), pp. 257-71.
- Fossum, J. A., and M. K. Fitch. "The Effects of Individual and Contextual Attributes on the Sizes of Recommended Salary Increases." *Personnel Psychology* 38 (1985), pp. 587-602.
- Heneman, H. G., Jr. "Manpower Management: New Wrappings on Old Merchandise." Minneapolis: Industrial Relations Center, University of Minnesota, 1960.
- Hunter, J. E., F. L. Schmidt, and G. B. Jackson. *Meta Analysis*. Beverly Hills, CA: Sage, 1982.
- Labig, C. E., Jr., and I. B. Helburn. "Union and Management Influences on Grievance Initiation." *Journal of Labor Research* 7 (1986), pp. 269-84.
- Parker, D. F., J. A. Fossum, J. H. Blakslee, and A. J. Rucci. "Human Resource Planning at American Hospital Supply." *Human Resource Planning* 6 (1983), pp. 207-18.
- Sherer, P. D., D. P. Schwab, and H. G. Heneman III. "Policy Capturing Managerial Salary Raise Decisions." *Personnel Psychology*, in press.
- "Uniform Guidelines on Employee Selection Procedures." *Federal Register* 43 (1978), pp. 38290-38315.

DISCUSSION

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The diversity of the four papers presented at this session illustrates that the term “methodology” means different things to different people. The diversity also makes it difficult to discuss the four papers jointly. As a result, I will focus on the Peterson and Heneman papers. Although these papers display more differences than similarities, it is possible to infer from them a theme centering around the notions of divergence and convergence.

The Peterson paper suggests a number of observations about the state of research on comparative industrial relations. The observations are based on an exhaustive review of research, and they show tremendous divergence in study design and foci among the students of comparative industrial relations. Further, Peterson’s findings of an absence of theory in the field, a tendency towards descriptive analysis, and a literature primarily compiled by non-natives reveal a field of study in disarray. Although it is common knowledge that comparative industrial relations research has languished in recent years, Peterson’s analysis suggests that the field is in worse shape than might have been imagined. The identification of these serious research and methodological problems is the major strength of the Peterson paper.

Implicit in the Heneman paper is a review of the personnel/human resources management (P/HR) literature. From his knowledge of the P/HR field, Heneman identifies three areas in need of research attention. I agree with his choices, though it seems to me that the areas he has identified are not unique to P/HR. Rather, those areas of research deficiency exist across the social sciences. The strategies outlined by Heneman to improve P/HR research therefore have more general applications. Nevertheless, it is unclear whether the identification of ways to improve P/HR research will lead to better studies. Thus, I believe that the primary strength of this paper is its identification of research deficiencies.

The Heneman and Peterson papers, and the research methodology literature generally, converge in their identification of research and methodological gaps. Unfortunately, the convergence of the literature

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towards the identification of research deficiencies illustrates the weakness of scholarship in the areas examined. That is, researchers have not successfully overcome many methodological problems and they diverge in their opinions regarding the research strategies that should be taken to solve the problems. This divergence suggests some fundamental, underlying research methodology issues that the academic community should address.

First, although scholars have proven to be able critics of research and methodology over time, they have also proven to be resistant to their own methodological advice. Whether the resistance is due to pressure to publish "enough" to get tenure, forced conformity imposed by journal referees and editors, lack of proper data, or astronomical disturbances, there is a need to overcome the well-known research deficiencies so that other methodological problems can be addressed. It is important that scholarly concern over methodological issues be maintained, but not so important that researchers should continue to disregard commonly known problems.

Second, and related to the first issue, I believe that there is a lack of appreciation for sound research methodology among our students and among many industrial relations practitioners. Researchers have been sometimes prevented from addressing specific methodological issues because practitioners will not make available the "confidential data" necessary to conduct a proper study. This problem is at least partly the fault of academics. For the divergence of meaning assigned to "methodology" (to some it is statistics, to others research design, etc.) impinges on our ability to convince others of its importance. Further, this problem could be overcome if we made stronger efforts to convince students of the importance of sound methodology to the success of many work-related activities.

Finally, I worry that the movement toward midrange industrial relations theories and empiricism has caused industrial relations researchers to retreat to their disciplinary bases to the extent that parochialism has come to dominate the field. As Peterson and Heneman have suggested, it is time for joint work across disciplines and broader thinking regarding theoretical frameworks.

I will not pretend to have the answers to the research and methodological problems faced in the field of industrial relations. I will also not pretend to have discussed the Peterson and Heneman papers comprehensively. But scholars have long lamented the state of industrial relations research. This convergence of opinion, however, has not caused a concerted effort to overcome research deficiencies. Yet, that is the convergence needed in industrial relations research.

XI. RELATIONSHIP BETWEEN SOCIAL LEGISLATION AND UNION ORGANIZATION

Unionism and Protective Labor Legislation

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In its formative years, the American Federation of Labor was leary of government programs to aid workers. Union leaders such as Samuel Gompers feared that protective labor legislation such as legally enacted minimums would undermine worker independence and the basis of support for unionism. In ensuing decades the attitude of unions toward legislation to protect labor changed significantly and unions have come to play an increasingly large role, lobbying for social legislation that protects workers and benefits the poor. Indeed, the outcome of union-supported bills in the Congress suggests that union political activity has been more successful in obtaining broad social legislation than in obtaining laws favorable to unions as institutions (see Freeman and Medoff, Chapter 9).

To what extent, if at all, has union-favored protective legislation reduced worker desire for trade unionism and contributed to the decline in union density found in the U.S. and elsewhere in the 1970s and 1980s? Was Gompers right to be leary of state protection of labor?

In this study I investigate these questions by comparing changes in union density across geographic areas with the extent of protective legislation using Western countries and U.S. states as units of observation. While the link from protective legislation to worker attitudes to union density is potentially complex, with uncertain and

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possibly long (generational?) time lags between the passage of legislation and changes in attitudes, the evidence I present reveals *no* tendency for protective activity, measured by social welfare spending or by statutory laws regulating labor, to be associated with reductions in union density. Factors other than protective labor legislation, ranging from aggressive management opposition (due in part to union wage gains) to increased competitiveness in product markets resulting from growth of trade and deregulation of industries, among other factors, and the overall sluggishness of the labor market, not protective labor legislation, are the main causes of weakened unionism in the 1980s (see Freeman, 1985a, 1985b).

Cross-Country Evidence

If social legislation reduces the need for unionism and lowers union density, one would expect countries with the strongest social welfare programs to have experienced the greatest declines in density in the recent era of union weakness. To see if this was the case I present in Table 1 figures for 13 developed Western countries on the level of

TABLE 1
Social Welfare and Government Spending and
Changes in Union Density Across Western Countries

	Union Density %		Change in Density	Social Welfare/ GNP (1975)	Current Disb. of Govt./GNP (1975)
	1970	1980s ^a			
Sweden	73	92	+19	14.2	44.7
Denmark	64	75	+11	13.8	43.5
Austria	64	61	-3	16.9	38.6
Australia	50	55	+5	8.6	27.6
United Kingdom	50	53	+3	9.9	40.6
Netherlands	40	38	-2	24.1	51.0
Italy	39	43	+6	15.6	38.3
West Germany	36	42	+6	17.6	43.3
Japan	35	29	-6	7.7	20.9
Canada	34	40	+6	10.2	36.8
U.S.	30	18	-12	11.4	33.6
Switzerland	29	33	+4	12.5	28.7
France	23	19	-4	20.4	39.2

Sources: OECD, *Historical Statistics* (1986); Australia, Commonwealth Bureau, *Labour Reports*; Troy and Sheflin (1983); Windmuller (1986); U.S. Department of Labor, *Directories*; Japan Ministry of Labor (1983).

^a Year differs by country, depending on latest available figures.

union density in 1970 and in the 1980s, the percentage-point change in union density between the years, and two measures of the extent of social welfare activity in a country, the share of GNP spent on social welfare (used by Wilensky (1975) in his cross-country analysis of the welfare state), and the ratio of current disbursements of government to GNP. The figures in the table suffer, of course, from problems of international comparability. Differences in the nature of union and labor market institutions across countries (for instance, between Australia with its court arbitration method of pay determination and the U.K., with decentralized bargaining) makes union densities at best crude indicators of the importance of unions in labor markets. Differences in the particular expenditures counted as social welfare and in the administration of programs make the measures of spending crude indicators of the legislative protection that might undermine unionism. These provisos notwithstanding, the cross-country data are revealing, for they show, contrary to the hypothesized substitution between unionism and legislated protections, significant positive correlations between the spending variables and changes in density: a rank correlation between the level of welfare spending and change in union density of .48 (columns 3 and 4) and one of .42 between the level of current disbursements of government and change in density (columns 3 and 5). Unions have fared better, not worse, in countries with a greater welfare state in the 1970s and 1980s.

Cross-State Evidence

Union density in the U.S. has, it is widely recognized, fallen sharply in recent years. The extent of the decline differs substantially, it is less widely recognized, across states. BLS figures on state union density (based on union self-reporting) record an average (unweighted) decline in union density from 1970 to 1980 of 4.5 percentage points across states, with a standard deviation of the change of 3.4 points. Data from the Troy and Sheflin *Union Sourcebook* (based on records of dues payments) record a decline in density from 1960 to 1982 of 4.8 points for the average state with a standard deviation of 7.1 points. Some states, such as Arizona, Kansas, and New Jersey, have had relatively large drops in union density which lowered their ranking in any order of states by percent organized, while others, such as New York and Hawaii, have increased their density, at least between some recent years (due to growth of public-sector organization). Similarly, turning from changes in the stock of union membership to data on National Labor Relations Board representation elections show equally

wide cross-state differences in the number of members won by unions per worker in the nonagricultural labor force.

If social legislation favorable to labor reduces worker need for unionism, one might expect the decline in union density to be most severe in states with the most extensive legislation and for unions to win fewer new members via NLRB elections in those states. Accordingly, I have examined the relation between the change in union density across U.S. states and a measure of the degree to which state law protects labor: the weighted number of protective laws in 1985, with weights for importance of the laws as calculated by the Southern Labor Institute (1986). While counts of laws, even weighted for potential importance, are by no means a perfect measure of the type of social legislation that might substitute for unions, they are presumably better than single law measures. In any case, the Southern Labor Institute's rankings are highly correlated with other measures of labor legislation that might also be used to indicate the extent of legal protection, such as levels of state minimum wages, maximum disability payments, etc., and give an a priori plausible ranking of states. The ten most protective states by the Southern Institute measure include large industrial states such as California, Connecticut, Illinois, Massachusetts, New York, and Ohio, while the ten least protective states by the measure include largely southern states such as Alabama, Mississippi, and South Carolina. Finally, while it would be preferable to have a count of laws for an earlier period, the likely strong positive correlation between laws in the period covered suggests that the 1985 index provides a good indicator of protective labor legislation earlier as well.

To analyze the relation between protective legislation and the decline of unionism, I estimate the following equation:

$$(1) \text{ Change in Unionism} = a + b \text{ LAW} + c \text{ Base Density} + d \text{ MFG} \\ + e \text{ Change in Employment} + f \text{ RTW} \\ + g \text{ ULP}$$

where the change into unionism is measured by two variables: change in union density in percentage-point terms, and the ratio of members won through NLRB elections per worker in the nonagricultural workforce. The explanatory variables are defined as follows: *LAW* is the Southern Institute index of legal protection; *Base Density* is the initial year level of union density; *MFG* is the proportion of the state's nonagricultural workforce that is in manufacturing (to measure any effect of the industrial mix of the state); *Change in Employment* is the

log change in nonagricultural employment in the state over the same years as the change in unionism (to measure the likely reduction in union density in growing states due to the lag between creation of new jobs and union organization); *RTW* is a dummy variable for whether or not the state has a right-to-work law; and *ULP* is a measure of employer opposition to unionism, defined as the ratio of management unfair labor practices (CA cases in which the employer was charged with committing a Section 8a violation) per worker eligible to vote in an election.

Columns 1 and 2 of Table 2 record the results of the regressions

TABLE 2
Regression Coefficients and Standard Errors (in Parentheses)
for the Effect of Protective Labor Legislation on
Union Density and Workers Won Through NLRB Elections

Independent Variables	Change in Union Density		Log (Members Won in NLRB Elections/ Nonagric. Employment) 1979
	BLS 1964-80	Troy 1960-82	
Measure of protective legislation	.02 (.15)	.12 (.21)	.0004 (.03)
Right-to-work dummy	-1.20 (1.03)	-1.10 (1.40)	-.001 (.23)
Log change in nonagricultural employment	-12.1 (3.83)	-21.4 (5.27)	.79 (.86)
Proportion of nonagricultural workforce in manufacturing	-11.1 (5.90)	-19.6 (8.23)	-.83 (1.34)
Log of unfair labor practices per voter	.82 (.70)	.15 (.96)	-.52 (.16)
Base year union density ^a	-.59 (.06)	-.54 (.06)	.02 (.01)
Constant	16.7	18.7	-1.23
R ²	.66	.83	.23

Sources: U.S. Department of Labor, U.S. National Labor Relations Board, Troy and Sheflin (1983), U.S. Department of Commerce, Southern Labor Institute.

^a Column 3, base year density, measured as percent private unionization in 1982, using Troy and Sheflin (1983), Table 7.6.

relating changes in union density to the index of statutory protection and other variables. Unlike the cross-country analysis, which yielded a positive link between welfare spending/GNP and the change in union density, these calculations show essentially no relation between state labor legislation and changes in unionism: positive insignificant coefficients in the regressions. The variables which significantly affect the cross-state differences in changes in union density include: the

presence of a right-to-work law (consistent with the findings of Ellwood and Fine, 1983) and the growth of employment.

Column 3 gives the results of regressions of members won in NLRB elections per nonagricultural worker to the labor protection measure and other variables. Here, too, the law variable is insignificant. In this case the variable which dominates the regression is the unfair labor practice indicator of employer opposition. (That it has no effect on the change in density equation is due perhaps in part to the importance of public-sector workers in the density.)

In addition to the results reported in the table, I have performed various other experiments with these data, examining alternative specifications, with comparable results.

What about the potential reverse causal link—the impact of the percentage organized on legislation benefitting labor? To examine this impact I regressed the Southern Labor Institute measure of protective legislation on union density and a set of control variables: the right-to-work dummy, the percentage of nonagricultural workers in manufacturing, and the log of manufacturing wage (to measure any tendency for higher-wage states to pass more protective legislation) and obtained a coefficient on percentage unionized (Troy and Sheflin data for 1982) of .19 with a standard error of .08. The implication is that more highly unionized states are, indeed, more likely to pass protective legislation.

In sum the evidence across states suggests that unionism leads to protective worker legislation, but that such legislation does not have adverse feedback effects on union density.

Further Evidence

The cross-country and cross-state evidence reject the notion that social legislation favorable to labor weakens unionism. Can any evidence be cited in favor of the proposition?

At the level of individual workers, one might expect workers receiving special legal protection, such as minorities and women under antidiscrimination and affirmative action laws, to be less desirous of unions than other workers. After all, if you have the Civil Rights Act and Affirmative Action programs on your side, why seek protection from unions (dominated by white males)? Surveys that ask workers whether or not they would vote for unions in NLRB elections or desire union protection at their workplace contradict this expectation: by race, the group with the greatest desire for unionism are black workers; by sex, women workers tend to express as much or more

desire for unionization as male workers (Freeman and Medoff, Chapter 2).

The other data that one might examine are national time series, linking union density to social welfare spending over time. Neumann and Rissman (1984) have performed such an analysis, obtaining essentially no effect for the welfare variable in a model focused on union density from 1904–1960, but finding a negative effect for the period 1904–1980. The drop in union density in the Reagan period, when social welfare expenditures fell relative to GNP, would presumably weaken this result. Indeed, my reading of their calculations is that the negative welfare effect is sufficiently frail that almost any change in model specification, period covered, or measure of social welfare would yield the insignificant results found in the shorter period.

Interpretation

While a priori the proposition that protective labor legislation can substitute for unionism and thus reduce union density has some plausibility, the evidence suggests that the proposition is not empirically valid, either across countries or across states or workers differentially protected by such legislation in the U.S. (I regard the time series as ambiguous, at most.) The cross-country evidence, in fact, suggests that unions have expanded in countries with more extensive welfare states, while the U.S. state data suggest that stronger unionism is associated with more rather than less protective legislation.

Should we take these findings as resulting from the greater importance of other factors operating in the period under study, or is there a flaw in the argument that legislated gains are a potential substitute for trade unionism? I believe there is a flaw in the argument. The flaw is the implicit assumption that legislated protections, once enacted, are permanent and effective in remedying a situation. Both logic and history suggest this is an erroneous assumption. Welfare policies designed (rightly or wrongly) to aid workers, even those regarded as permanent such as Social Security, can and are continually undergoing change, so that without strong union influence on national policy, the gains of one generation can erode in the next. Laws protecting workers at workplaces require perhaps more union activity to guarantee enforcement, as the case of Occupational Safety and Health Act makes clear. Indeed, it was Gompers's recognition that "enacting a law and securing the realization of the purpose the law is aimed to secure are two vastly different matters" (Gompers, 1969, p. 54) that motivated some of his suspicion about the effectiveness of the legislative route for achieving gains for workers.

Given that legislative protection will remain effective only under pressure from unions and allied groups, my hypothesis is that instead of reducing worker needs for trade unionism, protective legislation *changes* the nature of those needs from collective bargaining to lobbying in the political system and monitoring workplaces to guarantee that labor laws are effective. If this hypothesis is correct, greater protective legislation should cause a shift in union resources to lobbying and monitoring without reducing the extent of unionization. In terms of recent legislation, the passage of Equal Employment Opportunity and Occupational Safety and Health legislation altered but did not reduce worker needs for union activity in the equal employment and occupational health and safety areas. Union support for, and attainment of, protective labor legislation is not, from this perspective, a cause for the decline in union density in the U.S.

References

- Australia, Commonwealth Bureau of Census and Statistics. *Labour Reports*, various editions.
- Ellwood, David, and Glenn Fine. "The Impact of Right to Work Laws on Union Organizing." National Bureau of Economic Research Working Paper No. 1116, 1983.
- Freeman, Richard. "Why Are Unions Faring Poorly in NLRB Representation Elections?" In *Challenges and Choices Facing American Labor*, ed. Thomas A. Kochan. Cambridge, MA: MIT Press, 1985a. Pp. 45-64.
- . "The Effect of the Union Wage Differential on Management Opposition and Union Organizing Success." *American Economic Review* 75 (May 1985b), pp. 92-96.
- Freeman, Richard, and James Medoff. *What Do Unions Do?* New York: Basic Books, 1984.
- Gompers, Samuel. *Labor and the Common Welfare*. New York: Arno Press, 1965.
- Japan, Ministry of Labour. *Japan Yearbook of Labour Statistics*. Tokyo: Policy Planning and Research Department, Ministry of Labour, 1983.
- Neumann, George, and Ellen Rissman. "Where Have All the Union Members Gone?" *Journal of Labor Economics* 2 (April 1984), pp. 175-92.
- Organization of Economic Cooperation and Development. *Historical Statistics, 1960-1984*. Paris: OECD, 1986.
- Southern Labor Institute. *The Climate for Southern Workers*, June 1986, Table 14.
- Troy, Leo, and Neil Sheflin. *Union Sourcebook*. West Orange, NJ: IRDIS, 1983.
- U.S. Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States*. Washington: various years.
- U.S. Department of Labor, Bureau of Labor Statistics. *Directory of National Unions and Employee Organizations*. Washington: U.S. Government Printing Office, various years.
- U.S. National Labor Relations Board. *Annual Report*. Washington: 1980.
- Wilensky, H. *The Welfare State and Equality*. Berkeley: University of California Press, 1975.
- Windmuller, J. E. "Union Membership Trends in Great Britain." "Union Membership in the Netherlands." "Union Membership Trends in West Germany." Ithaca, NY: Cornell University, 1986. Unpublished.

The Impact of Employment-at-Will Judicial Decisions on the Outcomes of NLRB Representation Elections

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The persistent decline in the percentage of the United States labor force unionized or covered by collective agreements continues to be of interest to researchers in industrial relations. Among the many potential reasons that commentators have provided for this decline is the possible existence of a “union substitution effect” associated with the increase in employment-related legislation since the early 1960s, exemplified by such statutes as Title VII of the Civil Rights Act of 1964 and the Occupational Safety and Health Act. The increase in judicial decisions providing workers some protection from “unjust” discharge by their employers has provided additional governmental protection to workers (Neumann and Rissman, 1984; Nash, 1985; Ehrenberg, 1985).

The fundamental argument underlying the notion of a union substitution effect is that the government has taken on more of the task of protecting workers from the undesirable behavior of employers. Such government protection is provided to workers without incurring the costs of union dues or losing the right to negotiate individually with their employers. To the extent that the government provides protection to workers, the argument goes, workers are less likely to turn to unions and collective bargaining for protection. In effect, the government is said to become a “substitute” for collective bargaining and trade unions as a source of protection for workers.

This paper will provide some preliminary evidence that should shed light on the question of whether workers view government protection as a substitute for collective bargaining by examining the

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^o The authors would like to thank Jeanine Pilon for her invaluable research assistance.

question of whether there might be a union substitution effect associated with the emerging judicially promulgated doctrine protecting employees from unjust discharge by their employers. In order to place the entire union substitute notion in context, however, we first review briefly the historical antecedents of this issue. Then, following a short review of the literature, we examine the results of estimating a very crude model of the impact of unjust discharge decisions on the primary choice mechanism for collective bargaining—outcomes of NLRB representation elections.

Government as a Substitute for Unions: A Brief Historical Review

The notion that government and the political process might provide competition for unionism and collective bargaining as the protector of the interests of workers is not new. Indeed, a brief review of the history of the AFL as regards its views of government shows that the relationship between trade unionism and social legislation has long been clouded in ambiguity.

One of the founding principles of the AFL was voluntarism, which dictated that the most productive and permanent method for workers to advance their interests was through organization into trade unions, the sole function of which was the representation of worker interests and the exercise of the economic power that such organizations provided them. Social legislation or governmental support for trade union organizing was antithetical to voluntarism, since government represented an infringement on the freedom of workers. Moreover, given the general hostility of government to trade unionism, the view was that what was given by government could be taken away by government, whereas what the workers obtained through union power was theirs to keep.¹ Testifying before the U.S. Industrial Commission in 1914, for example, then-AFL President Samuel Gompers stated: "The A.F.L. has apprehensions as to the wisdom of placing in the hands of government additional powers which may be used to the detriment of working people. It particularly opposes this power when the things can be done for themselves" (Gompers, 1954, p. 15). Similarly, Gompers stated that the AFL opposed limitation of work hours for adult males, on the grounds that unions had established

¹ See, for example, Gompers (1954); Lorwin (1933), pp. 46-47; Higgins (1969), pp. 2-3, 27-36, 59; Saposs (1971), pp. 75-76; and Fink (1973). During the first quarter of the 20th century, however, there was considerable debate among the leadership as to the wisdom of AFL involvement in politics. See, for example, Taft (1957), pp. 289-301.

shorter workdays on their own and with their own "initiative, power, and influence" (Compers, 1954, p. 15).

Interwoven with the principle of the supremacy of economic power and the principle of trade union organization has been the view that this cautious involvement in politics serves the interests of the unions as organizations by minimizing competition for the loyalty of workers (see, for example, Rogin (1962)). This view does carry with it an element of self-interest for unions, as it is consistent with the elimination of the government or political parties as competitors for the loyalties of workers. But central to voluntarism was the view that such a diversion of interest will ultimately be a disservice to workers because it will weaken the best mechanism for them to secure improvement—the trade union movement.

The union substitution notion and the view that government legislation could be viewed as competition for unions faded between the 1930s and the 1960s when unionization reached its peak in the United States. Given the coincident phenomena of the past two decades of a decline in unionization and a spread in legislation protecting workers, the question of whether government protection for workers is a substitute for union protection has been raised once again. Neumann and Rissman (1984) and Nash (1985) have raised the question to scholars and practitioners in industrial relations. *Business Week* devoted a cover story to it in the summer of 1985 ("Beyond Unions," 1985). Clearly, the issue is ripe for reexamination.

Previous Empirical Work

When considering empirical work on the union substitution effect, we should point out some facts that, taken at face value, would cause one to question the notion of the existence of a substitution effect. First, unions in the United States experienced their greatest growth during the late 1930s and early 1940s, the period during which minimum wage legislation, unemployment insurance, and Social Security, fundamentals of the present system of worker protections, were enacted. This suggests that there was no union substitution effect as regards these basic protections, at least during this early period.

If one is going to consider the union substitution notion, one must also consider the fact that the percentage of the workforce unionized has been declining since 1956. Yet much of the social legislation which is thought to be a substitute for unionism was not enacted until the

mid-1960s and thereafter. Thus, even if such legislation contributed to hastening the decline in unionization of the American workforce over the past 25 years, the timing of the social legislation would suggest that its passage was not a major cause of the decline.

On the other hand, one should also point out that the percentage of NLRB elections in which unions have been selected as collective bargaining representative has declined relatively steadily since 1942 (Block and Wolkinson, 1985), which is what would be expected if there were a union substitution effect associated with the protective labor legislation enacted in the late 1930s. But the union win rate was high by historical standards; it was in the range of 70–79 percent during the 1940s and 60–69 percent during the 1950s. Moreover, the rate of decline did not accelerate during the 1960s (Block and Wolkinson, 1985), when the second major round of protective labor legislation began.

It could be argued, however, that much of this legislation would be unlikely to have a substantial effect on trade unionism since it would not directly compete with a primary function of unions—raising wages and protecting workers from arbitrary or unjust employer treatment. Judicial decisions protecting workers from unjust discharge, however, do address what has always been viewed as a key function of unions—protecting workers from discharge without just cause.²

Thus, if there were a union substitution effect, it is likely that it would show up here. Indeed, findings by Neumann and Rissman (1984) support the existence of such an effect. Their research indicates that, during the period 1964–1980, the percentage of a state's nonagricultural employees that were union members declined faster in those states in which courts had created implicit contract exceptions to the employment-at-will doctrine after those doctrines had been adopted than in states and/or time periods during which this doctrine was not in effect.

A Model, Data, and Empirical Results

In this paper we examine the issue of the existence of the union substitution effect in a manner somewhat different from that of Neumann and Rissman. Our focus is on the impact of judicial decisions modifying the employment-at-will principle on the outcomes of NLRB representation elections. Since such elections are, in a sense, direct observations of union preference at a point in time

² For a discussion of the spread of such decisions, see, for example, Stieber (1984).

and in a particular legal environment, they should provide a reflection of the change in union preferences associated with the perceived availability of government protection from unjust discharge. Thus, the dependent variable will be the outcome of the NLRB elections. The election was coded 1 if the employees, in the election, selected a union to represent them (i.e., a union win) and 2 if the employees did not select a union to represent them (i.e., an employer win).

The dependent variables of primary interest were the presence or absence of a court decision providing employees some protection from unjust discharge in the state in which the election occurred and at least one year prior to the year in which the election occurred. This one-year lag allows time for information on the doctrine to filter through the legal profession and the workforce. In essence, we are analyzing the employment-at-will legal environment at the time and place the election occurred.

Three types of legal protection were coded—an implicit contract exception to the employment-at-will doctrine, a covenant of good faith exception, and a public policy exception. An implicit contract exception was said to exist if the courts had recognized such an exception arising from employer policy manuals, handbooks, and/or other representations. A covenant of good faith exception was said to exist if the court had based a decision on good faith and fair dealing in employment contracts. A public policy exception was assumed to exist if the court had prohibited discharge of an employee who had refused to act in violation of public policy.³

Three other variables were entered as control variables—the percentage of the employees in the state that were unionized, the unemployment rate in the state, and whether or not the state had a right-to-work statute. Percent unionized was entered in order to capture any saturation effects and any widespread attitudes toward unionization in the state. In this sense, the predicted sign on this variable is ambiguous; the saturation effect would suggest that this variable would be associated with an increased probability of a union loss, while if this variable were picking up pronoun attitudes, it would be associated with an increased probability of a union victory. The unemployment rate was entered to capture any cyclical impacts on

³ The coding for the legal situations as regards employment-at-will in each state for any year was based on Dichter, Gross, and Banks (1985), made available to us by Professor Jack Stieber of Michigan State University.

voting, and the presence or absence of a right-to-work law in the state was also entered to capture any statewide attitudes toward unions.⁴

The regression analysis was run on pooled election data for all election cases closed for the period January 1973-August 1985. The data were derived from a tape provided by the NLRB. In order to minimize the possibility that the results would be influenced by factors indigenous to the elections, only single-union, nondecertification elections were analyzed. Excluding cases in which coding errors would not permit identification of the state in which the election occurred, the regression analysis included 39,764 observations.

The results are presented in Table 1. They do not provide any support for the view that the existence of judicially promulgated

TABLE 1
Probit Results, Impact of Employment-at-Will
Judicial Decisions on Outcome of
Representation Elections, 1977-1985

	I	II	III	IV
		(t-values in parentheses)		
Constant	.05860 (2.174)	.15984 (2.187)	.05489 (2.055)	.05431 (1.953)
Unemployment rate	.00568* (1.743)	.00520*** (1.616)	.00705** (2.132)	.00702** (2.074)
Union membership	-.00158*** (3.163)	-.00160*** (3.181)	-.00162 (3.247)	-.00162*** (3.20)
Public policy	-.00658 (0.479)	—	—	.00148 (0.103)
Good faith	—	-.01054 (0.499)	—	.00049 (0.022)
Implied contract	—	—	-.02800** (-1.986)	-.02853* (1.873)
Right-to-work	.05436*** (3.195)	.05572*** (3.409)	.05330*** (3.274)	.05386** (3.145)
X ²	29.0041	29.0239	32.7187	32.7298
N = 39,764				

Note: * Significant at the .06-.10 level; ** significant at the .02-.05 level; *** significant at the .01 level or less.

⁴ Unionization data were obtained from Bureau of Labor Statistics data provided by the AFL-CIO. The only years for which reliable state unionization data were available for the time frame of interest were 1978 and 1980. Data from 1978 were applied to the years 1978-1980. Data for 1980 were applied to the years 1981-1984. This should have a minimal effect on the results, as the rankings of the state are unlikely to have changed a great deal during this period. Unemployment rate data were obtained from *Employment and Earnings* and the *Handbook of Labor Statistics*, published by the U.S. Bureau of Labor Statistics. Data on right-to-work legislation were obtained from compilations of the Bureau of National Affairs, Inc.

exceptions to the employment-at-will doctrine have an impact on the outcomes of NLRB elections. Neither the coefficients on the dummy variables for the existence of a public policy exception nor the existence of a covenant of good faith exception had any impact on the outcomes of the elections. The coefficient on the dummy variable for the existence of an implied contract exception does generate a significant coefficient, but its sign is the opposite of that which would be predicted by the union substitution effect; the variable is associated with an increased probability of a union victory.

As to the other variables, the right-to-work variable generated the expected results; it was significantly associated with the probability of an employer victory. Union membership was associated with an increased probability of a union victory, suggesting the absence of a saturation effect. The unemployment rate variable generated a positive coefficient, suggesting that a loose labor market makes employees less willing to (presumably) act against the wishes of their employer by voting for union representation.

Summary and Conclusions

The results of the analysis presented here are consistent with the view that there is no inconsistency between providing nonunion employees protection from discharge for unjust cause and unionization. There is no indication from this analysis that judicial decisions modifying the employment-at-will doctrine have an adverse effect on the ability of unions to win NLRB representation elections. These results, then, do not suggest that workers view judicial provision of protection from unjust discharge as a substitute for collective bargaining.

In drawing this conclusion, some caveats must be noted. First, it is unclear how many voters in these elections would have been eligible for the protection granted by the decisions studied. If they are not protected, and if they are aware that they are unprotected, then we have not truly examined the union substitution effect. Indeed, it should be noted that the protections afforded employees through such judicial decisions are likely to be much narrower than any protection provided by legislation.

The second caveat involves the question of whether or not these employees are aware of such protection, even if they are covered. The implicit assumption of this study is that information is perfect and the existence of such protections in the state is known throughout the relevant population. If it is not, and if employees are unaware of the

existence of the judicially adopted union "substitute," then these results may be called into question.⁵

Despite these caveats, these results are useful as a preliminary attempt to examine the existence of a union substitution effect. They suggest that those who attribute government protection of workers as a reason for declining unionization may need to look elsewhere for explanations. More work, however, must be done.

References

- "Beyond Unions." *Business Week*, July 8, 1985, p. 72.
- Block, Richard N., and Benjamin W. Wolkinson. "Delay and the Union Election Campaign Revisited: A Theoretical and Empirical Analysis." In *Advances in Industrial and Labor Relations*, Vol. 3, eds. David Lipsky and David Lewin. Greenwich, CT: JAI Press, 1985. Pp. 42-83.
- Bureau of National Affairs, Inc. *State Labor Laws*. Washington: BNA, various years.
- Dichter, Alan S., Allen J. Gross, and Michael L. Banks. "A Survey of Wrongful Discharge Cases in the United States." Prepared for the law firm of Morgan, Lewis and Bockius, Philadelphia, September 1985.
- Ehrenberg, Ronald G. "Workers' Rights: Rethinking Protective Labor Legislation." National Bureau of Economic Research Working Paper 1754, November 1985.
- Fink, Gary M. "The Rejection of Voluntarism." *Industrial and Labor Relations Review* 26 (January 1973), pp. 805-19.
- Gompers, Samuel. *The American Labor Movement* (abstract of testimony before United States Industrial Commission, May 21-23, 1914). Washington: American Federation of Labor, 1954.
- Higgins, George C. *Voluntarism in Organized Labor in the United States, 1930-1940*. New York: Arno and The New York Times, 1969.
- Lorwin, Lewis L. *The American Federation of Labor: History, Policies, and Prospects*. Washington: Brookings Institution, 1933.
- Nash, Peter C. "The NLRA at Age Fifty." *Proceedings of the Spring Meeting, Industrial Relations Research Association*, Detroit. Madison, WI: IRRRA, 1985. Pp. 600-604.
- Neumann, George R., and Ellen Rissman. "Where Have All the Union Members Gone?" *Journal of Labor Economics* 2 (April 1984), pp. 175-92.
- Rogin, Michael. "Voluntarism: The Political Function of an Antipolitical Doctrine." *Industrial and Labor Relations Review* 15 (July 1962), pp. 521-35.
- Saposs, David J. *Case Studies in Labor Ideology: An Analysis of Labor, Political and Trade Union Activity as Influenced by Ideology—Philosophic, Structural and Procedural Adaptations Since World War I*, Monograph No. 3, American Labor Ideology, August 1971. Honolulu: Industrial Relations Center, University of Hawaii, David Saposs and Bertha Tigay Saposs, 1971.
- Stieber, Jack. "Employment-at-Will: An Issue for the 1980s." *Proceedings of the 36th Annual Meeting, Industrial Relations Research Association*, San Francisco, 1983. Madison, WI: IRRRA, 1984. Pp. 1-13.
- Taft, Philip. *The AFL in the Time of Gompers*. New York: Harper and Brothers, 1957.
- U.S. Bureau of Labor Statistics. *Employment and Earnings*, various issues.
- _____. *Handbook of Labor Statistics*.

⁵ Another possibility is that these voters may not be covered by these decisions, but believe, erroneously, that they are covered. If this were the case, then the entire notion of a union substitution effect for such workers associated with employment-at-will decisions depends on workers' possessing imperfect information about legal decisions. The results of Neumann and Rissman (1984), which are consistent with a union substitution effect, suggest that workers may be acting on such imperfect information. But such worker actions are not suggested by the results presented here.

XII. PLANNING FOR THE FUTURE: IMPLEMENTING THE AFL-CIO REPORT

The AFL-CIO's Blueprint for the Future—A Progress Report

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In February 1985 the AFL-CIO issued a report of its Committee on the Evolution of Work entitled *The Changing Situation of Workers and Their Unions*. If not a revolutionary dictate, it was at least an evolutionary blueprint for the AFL-CIO to reshape a Federation of 91 unions into a structure capable of dealing with a rapidly changing workforce. In many ways it was an organizing report. The deliberations of the Committee and its final report concentrated on Labor's ability to attract and retain members. It attempted to answer the question: What can the AFL-CIO and its affiliates do to brake a slide into numerical insignificance?

It is important to understand that the Committee made no attempt to deal with key substantive workplace or social issues. It did not attempt to fashion an ideology for the AFL-CIO; it did not prescribe a legislative, political, or social agenda. Furthermore it did not dwell on or attempt to document the oft-repeated need for labor law reform. The game plan was simple: deal with those critical items over which we can achieve a clear consensus; concentrate on the practicable; look to solutions that are not dependent on political forces and outside parties; develop a Report that, five years hence, an objective observer will be able to review and conclude that this was indeed a workable game-plan that 91 unions with over 13 million members took to heart and used as their blueprint to overcome a serious crisis.

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Membership Benefits and the Associate Membership

Perhaps the most publicized and dramatic method for strengthening and increasing AFL-CIO membership was the recommendation to study and develop a system for providing members direct services and benefits outside the collective bargaining structure. The modern environment of massive employer resistance to both negotiated increases and employees' organizing efforts created the atmosphere for the Committee's search for benefits of union membership other than those a union can wrest from recalcitrant managements. Ironically, the benefit program was a return to the 100-year-old roots of organized labor, when the prime tangible benefit of union membership had little to do with collective bargaining and unions functioned primarily as mutual aid societies for workers.

In the 18 months since the Report's adoption the AFL-CIO not only has conducted a feasibility study, but it has established a Union Privilege Benefits Corporation, negotiated and placed into effect several major consumer benefits and services, and enlisted most of our affiliates' participation in at least some portion of the program. The theory that we should be able, as a 13 million member group, to achieve dramatically attractive consumer benefits proved to be sound.

The Mastercard program provides a credit card to eligible union members with terms far better than anything comparable on the market. The interest rates, now at 12½ and 14½ percent, depending on the type of card selected, and the absence of an annual fee for most cardholders, has caused major media observers to declare the union card a pacesetter that will affect the entire credit card industry. The threshold income eligibility requirements are so low that most members will qualify. Features such as skipped payments during strikes, the prominent display of the union name on the card, and the ability of unions to use the billing system to mail union messages to members have provided the card program with a distinctive union label. It is not surprising that 60 affiliates representing over 10 million members have signed on to the program and that initial mailings have produced a response rate four times greater than any comparable program.

A legal service program is now in place. Union members will be able to talk to a lawyer on the phone or in his/her office and have a simple letter written for no fee. If further legal work is needed, a 25-35 percent discount on the hourly rate applies. This program, free to

union members, is similar to those offered by private operations at anywhere from \$40 to \$100 per year.

A term life insurance program with rates and face amounts well below anything most of our members can obtain on the open market is nearly completed.

An investment services program with a major fund offering sizably reduced fees and amounts for initial participation is now being negotiated.

A poll of a broad cross-section of members and union-represented "free-riders" showed an overwhelming receptivity to this program as a concept, that it would strengthen the membership bond and increase the likelihood of free-riders finally paying their fair share of the cost of union representation by joining. Our hope is that it will tip to our side the cost-benefit analysis that many free-riders employ to rationalize nonmember status.

The benefit program's prompt implementation has caused expeditious consideration of another major departure from traditional concepts of union membership—the associate membership. Finding a key to cope with normal membership turnover dwarfs virtually every significant organizing and membership strategy as a potential basis for union growth. At least 2 million members leave AFL-CIO affiliates each year, the vast majority simply because of a change in job. There are 28 million former union members in the workforce. Moreover, millions of retirees have and will continue to become former union members. An associate membership that rests on a combination of an appreciation for the services the union provided under collective bargaining and eligibility for the consumer benefits offers great potential for an enduring relationship with a wide cross-section of the American workforce.

The associate membership also affords a vehicle for the 30 million people who say they support a union, but who cannot establish exclusive recognition immediately, to join a union of their choice. Hundreds of thousands of workers sign authorization cards or vote yes in an NLRB election every year but do not become members. The unions who attempt to organize them certainly bring major improvements to these employees whether successful or not. They often repeat their efforts in rerun or second and third elections and provide useful, effective services during these drives, but membership doesn't attach unless a contract is signed.

A significant number of major unions have adopted or are seriously considering an associate program. Constitutional and legal hurdles have been cleared and such unions as the Steelworkers, Machinists, Service Employees, Amalgamated Clothing and Textile Workers, Office and Professional Employees, Operating Engineers, Teachers, Communications Workers, Chemical Workers, Laborers, United Food and Commercial, and Boilermakers have either begun, are about to start, or are seriously considering an associate program.

Organizing

The AFL-CIO and its affiliates are experimenting with a variety of new organizing techniques, and mechanisms are mushrooming. The AFL-CIO has pulled together nine affiliates in an attempt to make a breakthrough in the health insurance industry. Sorting out the various interests and claims of the unions involved and doing the strategic research necessary for intelligent planning has delayed any serious organizing breakthroughs; but this preliminary work has been done and initial activity shows a reasonable degree of promise. There are surely no guarantees in a venture like this, but the effort to focus union attention and resources in this key growth sector will play a valuable part in bringing collective bargaining to the predominantly unorganized insurance industry.

The AFL-CIO and several affiliates have accelerated efforts to find better training devices and organizing tools for organizers. We have sought out and hired highly successful organizers to develop information, to build training models, and to function as instructors in organizing training sessions.

Several affiliates and the AFL-CIO have developed organizing films featuring employees, professional organizers, and sympathetic celebrities to help train in-plant organizing committees and to assist organizers in delivering a convincing and attractive message to uncommitted voters.

Systematic use of union members as volunteer organizers has become a key ingredient for several major unions, including the UFCW, Carpenters, CWA, Sheet Metal, and the ACTWU. With good training and careful employment of these committed members, these affiliates have been able to turn around otherwise unsuccessful organizing ventures both within existing bargaining units and totally unorganized units. Expansion of this concept to other unions is an essential organizing goal for the next several years.

Another manifestation of the drive to intensify development of volunteer organizers has been the "one-on-one" program, to spur greater membership interest in the union. Launched as a three-state pilot program that built on an idea germinated by the Machinists, it is too early to tell how deep it will cut as an AFL-CIO program, but several affiliates have seen its value and show indications of follow-through.

A promising development in recent years has been the much broader net unions have cast to recruit organizers both within and outside their unions. There seems to be a clear recognition of the need to have more organizers who are in tune with the workforce where organizing potential is greatest. Unions are recruiting and training a much higher portion of college-educated, female, and minority employees to work as organizers.

Employer opposition to union organizing and collective bargaining has become routinely ferocious and increasingly sophisticated. The system for choosing a union as it has been administered by the NLRB and the courts invites wholesale manipulation. Employees and unions who pursue nothing more than their legal remedies under the NLRA are regularly frustrated. Unions win but half of the elections and gain first contracts in only 60 percent of these hard-fought election wins. When an employer files legal appeals after a union win, the contract rate dips to 30 percent. Recognizing this problem and accepting that at least in the short run, reform of the system will not be forthcoming, the AFL-CIO has put into place a division in its Organizing Department that is devoted to the pursuit of non-workplace tactics that will increase the cost to companies embarking on a course of all-out antiunion conduct. Its ultimate aim is to convince an employer before the organizing campaign begins to be neutral. Failing that, the Division will assist unions in their attempts to induce those increasing number of employers who ignore the results of an election win to honor the results of their employees' organizing efforts.

These developments have led to more judicious use of strikes as an exclusive weapon for fighting back. More unions are resorting to nonworkplace and workplace demonstrations of solidarity short of a strike to achieve gains or prevent cutbacks. The AFL-CIO's goal is to develop an "in-house" capability in a broader number of affiliates, particularly in conjunction with organizing efforts. It is important, in view of the Hormel experience, that this become an instrument of the national union.

A major effort is being made to achieve a better degree of cooperation among affiliates in key labor disputes. The labor movement's response to the Steelworkers' call for help in its lockout at USX produced an unprecedented level of support from more than 30 different unions and the AFL-CIO. A special support committee chaired by ACTWU President Murray Finley spearheaded this effort. A subcommittee of the AFL-CIO Evolution of Work Committee chaired by Steelworkers President Lynn Williams is considering a wide range of options for better union mobilization during bitter labor disputes.

Public Relations

The public perception of unions, their activities, their problems, and the opportunities they provide unorganized employees, is recognized as a major problem. Labor is often a victim of the journalistic axiom that the only news is bad news. There appears to be a greater effort by unions to bring news other than strikes and corruption to the public's attention and to do a better job of dealing with the media in strike situations. The public information department has put together several seminars with labor reporters and international union officers and staff, and we have launched media training programs for labor leaders who regularly appear on camera.

Organizing stories often can be newsworthy and beneficial to labor, even when we lose. The hostile and unfair tactics that employers use during the struggle for union representation must become known beyond labor circles. We are making a systematic effort to educate key news personnel about the organizing process. We are attempting to alleviate fears that organizers have of press intrusion into an organizing campaign and to develop organizing stories that will prove attractive to the media. The agenda is no secret: serious reform of the legal system for choosing a union will come only if the public is sympathetic to the plight of the unorganized workers in their attempt to form a union.

Structural Changes

The AFL-CIO now has in place a procedure for resolving organizing disputes that includes binding arbitration. The arbitrator can and has declared that an affiliate cannot organize a given target in competition with another. Since the procedure was adopted in March 1986 three decisions have issued but, most importantly, 10 cases have been successfully mediated.

Mergers are a necessity, and while they still seem to occur with "all deliberate speed," the AFL-CIO did adopt merger guidelines and is involved in effectuating mergers. The ITU-CWA merger is a case in point. There is little question, however, that mergers will have to occur faster than the two per year clip that is now prevalent.

The AFL-CIO is exploring a revised proposal to improve funding and participation in its State Federations at the February 1987 Executive Council meeting. While consensus on an acceptable formula has proved to be difficult, there is hope that greater assistance to the State Feds will be forthcoming.

DISCUSSION

SANFORD M. JACOBY

University of California, Los Angeles

As Mr. McDonald has informed us, the labor movement today is confronting its membership problems with several imaginative and promising programs to increase union membership. Although skeptics on the sidelines argue that innovation has never been a hallmark of organized labor, the historical record suggests otherwise. Indeed, a brief look backwards shows that constant change in organizing structures and strategies has been the rule, rather than the exception, in American unionism.

For example, although unions first started out as local organizations of workers following a particular trade, economic growth and technological pressures in the late 19th century forced unions to innovate. By the turn of the century, unions had become national organizations, and several of the AFL's craft unions, such as the Machinists and the Carpenters, expanded their jurisdictions to include occupations throughout the metal-working and wood-working industries. Moreover, AFL unions experimented during the 1910s and 1920s with a variety of administrative devices intended to facilitate their organizing efforts, ranging from regional divisions to multi-industry structures. Later, of course, came the industrial unions of the CIO.

Another feature of American unionism has been a willingness to centralize or decentralize organizing efforts according to the situation at hand. During the 1930s, both the AFL and the CIO were able to grow rapidly—despite very different organizing approaches—because their tactics were adapted to the sectors they sought to organize. The CIO unions used centralized “organizing committees” because these proved effective against large, national firms, while the AFL unions tended to follow a decentralized approach that was more appropriate for smaller firms operating in local or regional markets. The AFL unions, however, were not averse to centralization when it was deemed appropriate, as in the early 1930s when the federation

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itself organized and directly chartered numerous federal labor unions. In fact, as far back as 1909, the AFL developed something akin to the organizing committee with its cooperative campaign against the steel industry. This involved the participation of several national unions under the supervision of AFL president Samuel Gompers. The AFL tried this approach again in its steel industry drive of 1919, and later launched similar campaigns in the automobile and textile industries. Thus when viewed in historical perspective, the AFL-CIO's current organizing experiments appear consistent with past trends.

Although the past is an imperfect guide to the present, there nevertheless are some valuable lessons to be learned from examining previous organizing successes and failures. Recently, historians have begun to analyze the process of how unions—in the 1910s and again in the 1930s and 1940s—were able to attract women workers, a group that has become exceedingly important to the labor movement's current and future growth. Studies have found that in the past, the organization of women workers was particularly successful when it was the result of using structures and strategies different from those used to organize male workers. Although some modern feminists object to the claim that working women are different from their male counterparts (because this can lead to "special treatment" and its pernicious results), historians nevertheless have found that efforts to organize women workers were successful when they recognized women's distinctive culture and life experiences. Other factors found to be important include the presence of women in leadership positions in the union, the use of organizers who believed that women could be organized, and the prevalence of women workers holding jobs that they anticipated to be permanent. Clearly, these lessons of history have not been lost on today's labor movement—as demonstrated by the efforts of groups like CLUW and SEIU 925—although some would argue that in this area, organized labor still can learn more from the past.

Historians have also begun to examine the role that community organizations played in previous organizing successes. Prior to the 1920s, working class neighborhoods often were transient places as a result of workers coming and going between their jobs and the families they had left behind in Europe or in rural parts of the United States. There was also the ceaseless movement created by unstable jobs and the constant search for work. But immigration laws sharply reduced foreign-born mobility in the 1920s, and this fostered the formation of stable ethnic communities and enclaves. Then, the

economic depression of the early 1930s forced footloose native workers to return to their farms, leaving behind the most stable elements in the community—immigrant and native workers who had committed themselves and their families to the cities and towns in which they lived, and for whom unemployment was a threat to their new communal ties. Hence, the labor struggles of the 1930s were able to mobilize not just workers, but a whole range of supportive community institutions. And the unions themselves often assumed the role of community organizations: active in local politics, providing day-care for working mothers, promoting public housing, and building extensive educational and recreational programs for their members. Labor Day celebrations and other events were an important link between the unions and communal forms of leisure. Today, organized labor still is an important institution in the community, although it is not as visible as it once was. Labor could probably bolster its organizing attempts by projecting a clearer image of itself as an institution that not only protects workers on the job, but also supports their familial, communal, and even recreational needs.

Finally, let us keep in mind something once pointed out by the noted labor historian, David Brody. During previous growth periods for the unions—such as the years 1897-1904, the 1930s, and World War II—the trigger of growth was external to the labor movement; the unions themselves did not cause this growth. Also, when the environment turned against union growth—as a result of new technology, new laws, or new forms of corporate organization—unions often had little incentive or ability to change the environment and make it more favorable for them. While these seeming historical inevitabilities might be cause for pessimism in the labor movement, it is important to realize that history does not always repeat itself because individuals and organizations are capable of learning from the past. As Mr. McDonald's talk makes clear, the labor movement today is fresher, more open to innovation, and more committed to the task of organizing the unorganized than at any time in the recent past. This proactive stance is precisely what is required if the unions are to begin to grow again, or, at the very least, if they are to be well-positioned for some future, favorable change in the environment.

DISCUSSION

MARYELLEN R. KELLEY
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Mr. McDonald reports on three main strategies being pursued by the AFL-CIO and its affiliate unions to halt the decline in union membership and to improve its organizing efforts. I will comment briefly on each.

Resolving Jurisdictional Disputes

The Federation has recently established a mechanism to resolve jurisdictional disputes among competing member unions, particularly for those occupational groups and employers with little or no established history of unionization, such as among clerical workers and for “high-tech” employers. That effort should be extended to include nonaffiliated unions, such as the Teamsters, the National Education Association, and other independent unions and employee associations. These associations can be expected to continue to expand among clerical and professional workers and, thus, any initiative that fosters closer cooperation, particularly with new, independent labor organizations, can only strengthen the labor movement in the United States.

Organizing

In his progress report, Mr. McDonald describes a number of ways in which unions are experimenting with *how* they go about organizing workers—for example, by casting a wider net in recruiting union organizers and in “one-on-one” organizing efforts designed to encourage greater participation in existing unions. Experiments in bringing in new blood in organizing clerical and service workers are critically needed for the survival and growth of the labor movement. Later in these remarks I will outline some preliminary observations on a new breed of successful clerical organizers, differences in their

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leadership styles, the kinds of organizations they help to create, and how they do what they seem to do so well.

Associate Membership

The AFL-CIO seems to be making the greatest strides in implementing the recommendations of its 1985 Committee on the Evolution of Work for increasing its membership base through the development of an "associate" membership status. As I understand it, this strategy is aimed mainly at former union members who no longer have collective bargaining rights as a result of layoffs from unionized employers, and at "free riders"—nonunion workers who enjoy the benefits of a contract without paying for it. Because of the direction in which major structural changes in the economy are leading and the sources from which substantial growth in union membership is likely to come, I think this strategy is not likely to provide much of a payoff.

Discussion

Fifty percent of the membership of the AFL-CIO unions is in manufacturing and construction. Membership from service industries makes up only about 20 percent. Between 1973 and 1984 there was a net decline of 100,000 manufacturing and construction jobs in the U.S. economy, but a net increase of 17 million service jobs. Over that same period, 7 million new male workers were added to the employed U.S. workforce. However, twice as many—14.3 million—net additional women workers swelled the ranks of the employed.

Attitude surveys of nonunion workers (some of which have been conducted under the auspices of the AFL-CIO itself) show that women and minority workers are more favorably disposed to unions and collective action—that is, they are more likely than white men to believe that group or collective action is more effective than individual bargaining in improving their working conditions, pay, and benefits.

For women, I would argue, a heightened awareness of employment discrimination by sex and race and the experience of tangible benefits from affirmative action and government antidiscrimination enforcement that women, in particular, have gained in the 1970s (as described in the Hartmann and Rêskin and the Blau and Ferber papers appearing elsewhere in this volume) tend to reinforce a collective identity among women workers that is less tied to a traditional class-based identity than to the peculiar experiences and conditions that women workers face. How that "feminist" consciousness may be expressed in new types of labor organizations is most evident in

recently established unions and innovative organizing efforts where women are in the majority. My preliminary research on several such incipient labor organizations suggests that success in organizing the clerical and service workers is likely to depend on strategies quite different from what are implied by the recommendations contained in the AFL-CIO's report on *The Changing Situation of Workers and Their Unions*.

It's wrong-headed to think of union organizing as similar to a political campaign, the objective of which is to "win" over the hearts and minds of employees from the opposition, i.e., the employer. Such a focus leads to a preoccupation with employer tactics and how to beat them and an emphasis on the resources of the "other side" as an explanation for election losses—e.g., the employers' having the advantage of being able to present their side to workers as a captive audience in their own workplace, or the use of slick consultants to manipulate workers, etc. Although I certainly don't want to minimize the significance of employers' efforts to avoid unions, better marketing strategies for organizers, perceived as a kind of traveling salesperson, will not develop a stronger and broader base for rejuvenating the labor movement in the United States.

It is exceedingly difficult to "sell" unionism when the AFL-CIO's own attitude surveys show that conventional trade unions are viewed by the majority of nonunion workers as ineffective. In these polls, most respondents say that, if they had a union, either they would not be better off or their relations with their employers would worsen. Furthermore, when women workers who already find themselves subject to a mostly male management are the target, the perception of a union as an organization with *power over* its members may be a particularly serious impediment to success in union organizing drives based on "selling" the union as a powerful, paternalistic organization that will take care of the powerless, unorganized worker in dealing with her employer.

Greater success may be had over the long term from efforts to *build* new labor organizations rather than from attempts to convince nonunion workers of the benefits from joining conventional trade unions. In the cases I have studied, organizing strategies that aim at developing leadership capabilities among workers and provide participatory mechanisms that are individually as well as collectively empowering in their *own* organizations are what seem to succeed.

New Case Studies

Over the past two years I have studied leadership and organizing dynamics in new clerical and service workers' unions, focusing on labor organizations formed in the past ten years (or less) which have been successful (or nearly so) in organizing workers in these occupations. Rather than looking at why unions fail to win elections for collective bargaining rights, I thought we might learn more about the ingredients for success by examining recent cases that defy national trends. The cases picked for study met two criteria: that women were prominent in the local leadership and that the leadership had adopted an organizing/membership participation strategy that is self-consciously directed as an alternative to mainstream trade unions. The objective of this research is to identify the salient features of these organizations that distinguish their leadership styles, organizing tactics, and structure from more conventional unions. The ensuing comments are based mainly on preliminary observations about and interviews with leaders in two of the four cases selected for study.

These participatory unions seem to be characterized by a lack of hierarchy. There is no single individual who wields the authority that we commonly associated with a local union president. Instead, leadership is exerted through a committee, or team. I can give two examples of this. In one case, the leader of an organizing drive described herself as part of a two-person leadership team, equal in status and authority, but complementary in terms of leadership strengths—one being described as the strategic thinker guiding the organization and the other, as a practical “doer” handling operational problems. In another case, the union was described as run by a six- to eight-person team with a rotating “chair” who was not considered to have a higher status than other committee members. Decisions were reported to be made by majority rule in the committee.

A variety of modes of participation in both the organizing effort and the governance of the union once it is established are provided to members outside of the usual channels of elected offices and general membership meetings. In two different cases of clerical organizing efforts at universities with several thousand workers each, scattered among many different buildings, the central organizing or steering committees include 200–300 members. The bargaining committees at one service workers' union and at another clerical workers' union are also quite large, including over 100 members. Rank-and-file members may also participate in union activities through temporary committees

set up to deal with specific issues, such as health and safety problems around VDT use or the handling of radioactive materials in laboratory settings.

These organizations are also innovative in the ways in which individuals are encouraged to display support and solidarity for the union. In one case, during a two-year long effort to get its first contract, workers were asked to show up at work (prior to the strike deadline) wearing a button saying "I do not want to strike, but I will." In its organizing campaign, another union emphasizes that each individual has something to contribute, whether it be bringing coffee or baking a cake for a meeting or an event sponsored by the union, or simply coming along to a lunch in order to provide some support for an organizer/leader who is trying to get other workers to become active members of the organization. Lending support can simply mean the willingness to have lunch with two or three others and say, "Me, too. I'm also for the union."

The women leaders interviewed thus far perceive their leadership role in unconventional terms, describing it as that of a teacher who develops and nurtures others' capabilities, not in terms of someone who has power to wield as a consequence of holding office. These young women (most are in their 20s and 30s) don't perceive of themselves as having a "career" in the union hierarchy, although they are quite self-conscious of themselves as leaders. When asked what they expect to be doing in five years, few of the women report that they expect to rise in the union hierarchy by going on to regional or national offices or staff positions. Yet they want to remain active in or "connected to" the labor movement, but not necessarily to the extent that they are now.

Indeed, even among the most active leadership, the degree of participation is switched on and off—that is, individuals move in and out of leadership positions as their personal circumstances change. Little effort seems to be made to build a loyal power base within the local in order to sustain the individual's leadership position. That may reflect more on the union's structure than on individuals' lack of aspiration. In three of the four cases we have examined thus far, holding a leadership position does not relieve an individual from his/her full-time job responsibilities, but rather only work-release time is allowed to perform union-related duties. "Retiring" to a less active status as an ordinary member occurs not necessarily because of an election defeat, but because the individual feels in need of a break from such a high level of commitment and involvement in the

organization. These inactive leaders are reported to be called upon periodically by the new leadership to get involved again in some campaign or issue.

Prospects

There are a number of problems and difficulties I see in sustaining this model of unionism. It depends on an extremely energetic leadership and frequent campaigns to mobilize the membership. "Burnout" may become a problem. The variety of participatory modes, the collective or team approach to leadership, and the "teaching" leadership style may all reduce the severity of this problem, permitting individuals to adjust their level of involvement without feeling either that the local will fall apart without them or that "dropping out" means not having any further influence over union activities.

It could be that what we are observing is simply a temporary phenomenon of experimentation by new unions in an early stage of their development. The fluidity and organizational dynamism that we now observe in these unions may diminish over time as these organizations develop more routine ways of operating which lend themselves to a more bureaucratic organizational structure. What militates against such a development is the nonhierarchical committee decision-making structure. In at least one case, that structure has persisted over eight years and through two generations of leaders, despite an annual turnover rate among the unit's workforce that approaches 40 percent. Moreover, in those cases where being a union official continues to carry no special personal benefit (e.g., higher wages) or complete relief from ordinary work duties, an entrenched bureaucracy may be less likely to develop.

Building such a participatory union rather than "importing" the standard model seems to take a long time. In at least two cases the organizing effort spanned a 7- to 10-year period. Yet that long incubation period may not continue to prove to be necessary, particularly if a "steam-roller" effect develops as a consequence of a series of successful, highly publicized drives.

Finally, if such organizations spread, they may become an important force for change in national unions with traditional base memberships in manufacturing industries. From my preliminary discussions with these young leaders, I detect a lack of concern with and independence from national union politics. That does not mean that they are only concerned with their own local or have no

connection to the larger labor movement. Indeed, some are members of local CLUW chapters; others belong to new informal networks of union activists, i.e., "support groups" through which local union leaders share information on how they have handled certain issues and on successful, innovative organizing tactics, or where those with small memberships can get assistance in shoring up a picket line or in swelling the ranks at a local rally. To date, these new associations foster communication and promote a cross-fertilization of ideas about organizing tactics and strategies only among local leaders from labor organizations associated with different national unions (which may or may not belong to the AFL-CIO).

At some time in the future, such local networks may become a well-spring for new regional and, possibly, national associations which depart from the industrial and craft union structures of today. The response of national unions to these new types of union structures and leadership styles will, of course, be important in determining whether these locals remain attached to or break away from their current national affiliations.

DISCUSSION

JOHN J. LAWLER

University of Illinois at Urbana-Champaign

The AFL-CIO report, *The Changing Situation of Workers and Their Unions*, has been described by some as a truly revolutionary document. It is seen to be revolutionary in the sense that several policy options are proposed for serious consideration that, until very recently, were considered to be outside of the mainstream of the American labor movement, even heretical. Mr. McDonald provides an informative, though predictably upbeat, assessment of the efforts to date to implement some of the report's major recommendations. I shall approach the task of commenting on his paper from the perspective of a researcher interested primarily in union organizing tactics and employer union-avoidance techniques.

The establishment of associate membership status and access to various union-sponsored programs for individuals outside of bargaining units is hardly new to American labor, though the practice has not been widespread in recent times. Providing such services as low-cost credit cards, insurance, and so forth is intended to attract nonunion employees and bolster their commitment to the union once they have joined the organization; in the long run this is expected to increase organizing drives and improve the chances of unions' securing majority status. I suspect that this is not likely to be very successful. Most of the behavioral research on the process of commitment-building suggests that providing material inducements to get people to join and participate in an organization is not very effective in securing a sense of long-term commitment to and identification with that organization. Individuals are more apt to develop long-term commitment if they must bear some costs which force them to engage in a process of self-justification for participating in the organization (which is why, in part, military organizations have boot camps and college fraternities have "pledges"). Businesses utilizing contemporary management techniques similarly use ritualism and socialization efforts in order to encourage employees to discover a spiritual basis

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for organizational loyalty. While credit cards and the like may attract individuals to unions, these organizations are going to have to develop techniques which foster an intrinsic and symbolic bonding of the individual to the union.

An organizing campaign that I have studied in some detail illustrates why union membership based on material inducements may have little impact on organizing effectiveness. With about 20,000 faculty members, the California State University (CSU) system is the largest bargaining unit in which a union has secured representation (in either the public or private sectors) in many years. The organizing drive was protracted and involved competition among several unions. From the outset, the organization with the single largest membership was the California State Employees' Association (CSEA). However, the CSEA was never really a strong contender to gain recognition, since most of the CSU faculty who belonged were so-called "insurance members." That is, they joined the CSEA simply to obtain favorable terms on insurance policies and their association with the organization did not seem to impact on their degree of support for unionization.

The widespread use of associate membership programs could raise interesting issues regarding the nature of union representation. Since associate membership may include some assistance by union staff in handling work-related problems and since associate members may come to expect more of these services in return for their dues payments, we might expect a gradual change in the nature of union representation. This could well lead to a relaxation in the practice of exclusive representation, though appropriate changes would have to be incorporated into the NLRA. Under the present system, union representation is an all-or-nothing proposition. Exclusive representation made sense at a time in which unions had widespread appeal and gained recognition in a high proportion of cases. Even given the fairly optimistic figures regarding interest in unions by nonunion employees that are cited in the AFL-CIO report, unions would be expected, on average, to obtain less than 50 percent of the vote in representation elections. Hence, unless employee sentiments regarding unions change dramatically or unless unions are especially careful in selecting organizing sites, they will continue to lose more elections than they win. If, on the other hand, the law provided for alternative forms of recognition short of exclusive recognition, then unions could establish at least some foothold within firms that would remain nonunion under the current system. Perhaps practices will develop in the private sector that are not unlike what we have seen in the public sector (meet and

confer, etc.). The report does, of course, anticipate some major changes in bargaining practices and worker representation, although alternatives to exclusive representation are not considered.¹

I think that the most interesting of recent union tactical innovations is the "comprehensive" or "corporate" campaign.² Patterned after the successful effort to bring J. P. Stevens into line, corporate campaigns may be used in various ways to pressure employers into ceasing or reducing antiunion conduct. This approach is seen to be necessitated by the inability of unions to obtain relief through the NLRB, an agency whose initials many unionists now only half jokingly deride as standing for "Now Largely Representing Business." Corporate campaigns are most commonly used in established bargaining units in which employers are perceived to be failing to engage in good-faith bargaining. But organizing campaigns may also involve corporate campaigns to an increasing degree in coming years. The AFL-CIO report suggests that this tactic should be used primarily to obtain neutrality agreements from employers before elections. However, many in the labor movement see the deck stacked against unions in the election process and think corporate campaigns should be used to secure direct employer recognition, thus circumventing the election machinery.

While I think that corporate campaigns can be an effective and positive tactic for unions, I do have some concerns about abuse. From a public-policy perspective, I am not sure neutrality agreements necessarily contribute to worker free choice in elections. Certainly such agreements might eliminate abusive employer conduct. Yet it is not clear that free choice will be promoted by a complete absence of employer involvement in the campaign. Responsible employer comment, though self-serving, may balance equally self-serving union comments. In addition, there is a coercive quality about certain types of corporate campaigns that I find distasteful. One union official once described the corporate campaign to me as a process of getting the goods on a firm and then threatening to go public with the information if the firm would not cooperate with the union. This has an extortion-like quality to it which could backfire, further undermining the public image of unions. Should this approach be used to secure recognition by means of a card count, I think worker free choice may often be seriously compromised in that employees will be denied the opportunity to express their feelings regarding unionization in a secret ballot.

¹ *The Changing Situation of Workers and Their Unions*, pp. 18-20.

² *The Changing Situation of Workers and Their Unions*, p. 21.

XIII. CONTRIBUTED PAPERS: UNIONS AND COLLECTIVE BARGAINING

Factors Leading to a Decline in Union Win Rates: 1973–1981

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The win rate of unions in NLRB representation elections has declined significantly over time. Factors frequently cited as causes of this decline include structural changes in the economy, a decline in union resources allocated to organizing, and increased management resistance.

This study examines the relative importance of these factors in accounting for the decline in the union win rate between 1973 and 1981. To do so, we estimate a pooled cross-section, time-series regression model using a large data set containing information on individual National Labor Relations Board (NLRB) elections. By estimating this model for elections in 1973 and 1981, we are able to decompose the observed decline in the union win rate into that part due to a change in the size of the regressor coefficients and that part due to a change in the size of the independent variables themselves. To the best of our knowledge, no previous study has taken this approach. Our empirical results do not support the hypothesis that either structural

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Note: A fourth paper presented during this session, "Collective Bargaining in Professional Basketball: An Empirical Investigation," by James B. Dworkin and Jay Park, Purdue University, appeared in the September 1986 issue of the *Journal of Sports Behavior*, pp. 131–40.

change or a decline in union organizing efforts are responsible for the decline in the union win rate. We do find, however, that increased management resistance is a contributing factor.

Literature Review

In a recent article, Richard Freeman (1985) suggests three major hypotheses concerning why the union win rate in NLRB elections has declined over time. The first candidate is structural change. According to this view, economic and demographic changes have reduced the proportion of the workforce in groups with a high propensity to unionize. There are at least four different dimensions of this structural change (see Farber, 1985). The first is the relative shift of employment from the manufacturing sector to the trade, finance, and service sectors of the economy. The second is the growing proportion of women in the labor force. The third is the relative increase in white-collar jobs in the economy. The fourth is the shift in employment to the less unionized states of the South and West. In each case, the effect of the structural change has been to decrease the size of employment groups that historically have had a relatively high propensity to unionize. One reason for the decline in NLRB win rates for unions, accordingly, is that a greater proportion of elections are outside of manufacturing, involve women employees or white-collar workers, or are in states in the southern or western part of the country.

The second hypothesis advanced by Freeman to account for the decline in the union win rate is that it reflects a reduction in the amount of financial resources devoted to organizing by unions. Based on data collected by Paula Voos, Freeman shows that over a 20-year period union real expenditures on organizing per nonunion member declined by about 30 percent. Not all unions or industries have been equally affected, however. Richard Block (1980) has argued that a union's organizing effort will vary inversely with the extent to which it has successfully organized its primary jurisdiction, reflecting the diminishing returns that unions experience from additional organizing expenditures. A number of studies have also noted that organizing success differs among unions (see Cooke, 1983). Perhaps the clearest case involves the Teamsters Union. Relative to other unions, the Teamsters are involved in a much greater number of representation elections each year, but win proportionately fewer. One alleged reason is that the Teamsters take a "shotgun" approach to organizing—holding many elections but spending relatively little on any one in the hope that the sheer volume of elections will more than make up for

their lower win rate. If the share of NLRB elections held in heavily unionized industries or sponsored by the Teamsters has increased over time, therefore, this would help account for the decline in union organizing effort and the concomitant decline in the union win rate. A final consideration concerns the sharp drop over time in the number of multiunion NLRB elections (from 23.7 percent in 1950 to 5.0 percent in 1982). Freeman argues that this has contributed to the decline in the union win rate, since the organizing effort of a union will often be greater where it is competing against a rival union than where it is facing management alone.

The third hypothesis advanced by Freeman is that the union win rate has declined due to increased management resistance to unionization. Increased management resistance can take several forms. One is for the firm to delay the election process with numerous legal objections and appeals. Prosten (1978) and Cooke (1985) have shown, for example, that the longer the time delay between the petition date and election date, the lower is the probability of a union victory. An increase in the length of election delays, therefore, would account for part of the decline in the union win rate. Related to a possible increase in election time delays is the decline in the proportion of NLRB elections that are "consent" elections. In a consent election, the employer agrees to the NLRB's determination of the election unit, resulting in an expedited holding of the election. Prosten has shown that over time the proportion of consent elections has declined dramatically. Finally, a second form management resistance can take is illegal discharge or discrimination against employees for their union activities. Since the early 1970s, the number of unfair labor practice charges sustained against employers has mushroomed, suggesting that employers are increasingly breaking the law in their attempt to remain nonunion. This may have, in turn, substantially reduced the willingness of employees to become actively involved in a union organizing campaign, resulting in a lower number of union election victories (Cooke, 1985).

Empirical Analysis

The discussion in the previous section suggests a number of hypotheses concerning the causes of the decline in the union win rate in NLRB elections. To test these hypotheses, we estimate a pooled cross-section, time-series regression model using data for individual NLRB representation elections for the years 1973 and 1981. The basic

form of the regression model is

$$UNWIN = \alpha + X\beta + \alpha' + X\beta'D + \epsilon$$

where *UNWIN* is a binary variable (union loss = 0, win = 1), *X* is a vector of independent variables, and *D* is a binary variable (*D* = 0 if 1973, *D* = 1 if 1981). The list of independent variables included in the vector *X* is described in Table 1. Also given there are the estimated regression coefficients, *t*-statistics, and other related information. The regression equation was estimated using OLS. The linear probability model provides a good approximation to a nonlinear specification because of the large sample size (*n* = 12,628) and the fact that the mean of the dependent variable is close to .5. Furthermore, the decomposition method used later in the paper is facilitated by the use of OLS.

The regression results reported in column 3 of Table 1 reveal a number of interesting conclusions concerning elections in 1973. First, the demographic variables are important predictors of union success. Union success is negatively and significantly related to the percent of women and blacks in the industry, but positively related to the percent college-educated. Second, only one of the structural variables describing industry, occupation, or location is significant at the 5 percent level. Unions are substantially more likely to win smaller units than larger units. Further, the variable *OFFCLER* comes close to being significant at the 5 percent level, implying that these units are 4 percent less likely to vote for the union than are other units. Third, in terms of union resources, we find that unions are 29.8 percent more likely to win if another union is involved in the election and 5.7 percent less likely to win if it is a Teamster election. Fourth, management resistance appears an important determinant of union success. Three of the five resistance variables are statistically significant at the 5 percent level: the odds of a union win decrease the longer is the elapsed time between petition date and election, and unions are much more likely to win consent elections and substantially less likely to win elections called by the employer. These results agree in almost all cases with the findings from previous cross-sectional studies.

One of the unique aspects of the empirical work represented here is that by pooling data for 1981 with that from 1973 we are able to determine if over time there took place a change in the impact of one or more of the independent variables on the union win rate. Using the 5 percent level of significance, the regression results of Table 1, column 5, reveal that there were four such changes, three of which

TABLE 1
Definition of Variables and Estimated Regression Coefficients

Variable (1)	Definition (2)	β (3)	<i>t</i> -ratio (4)	β' (5)	<i>t</i> -ratio (6)
Structural					
Demographic					
STAGE	Average age of workforce in state	.105	1.618	.012	1.53
STAGESQ	(STAGE ²)	-.002	1.678	(a)	
PERWOMEN	Percent of women in industry's workforce	-.003*	2.667	.004*	2.777
SBLK	Percent of state workforce that is black	-.002*	2.657	.003*	3.240
PERCOL	Percent of industry workforce with college degree	.003*	2.761	-.0004	.2234
Industrial/Occupational/Locational					
DUR	DUR=1 if election in durable manufacturing	-.014	.408	-.0089	.191
NDUR	NDUR=1 if election in nondurable manufacturing	.021	.785	-.043	1.228
OFFCLER	OFFCLER=1 if election unit covers office/clerical workers	-.041	1.848	.097*	3.129
PROTECH	PROTECH=1 if election unit covers professional/technical workers	.011	.277	.624	1.278
SIZE ⁻¹	Inverse of the size of the election unit	.340*	8.346	.624	1.278
PIIR	Percent injury and illness rate in industry	-.007	1.462	.119	1.253
STRW	STRW=1 if state has right to work law	.008	.424	-.033	1.222
Union Resources					
INPUN	Percent of industry's workforce unionized	.0067	1.113	.0003	.313
MULTUN	MULTUN=1 if election involves multiple unions	.298*	12.416	.059	1.553
TEAM	TEAM=1 if election involves Teamsters Union	.057*	4.305	-.005	.312
Management Resistance					
LNDAYS	Log of days from petition to election	-.060*	5.405	.002	.143
CONSENT	CONSENT=1 if consent election	.124*	7.167	-.070	1.842
RM	RM=1 if election requested by employer	-.159*	5.678	-.125*	2.777
REGDIR	REGDIR=1 if election stipulated by regional director	.023	1.352	-.007	.325
PULP	Ratio of unfair labor practice charges in state against management relative to state union membership	.025	1.785	-.019	1.055

TABLE 1—(Continued)
Definition of Variables and Estimated Regression Coefficients

Variable (1)	Definition (2)	β (3)	t -ratio (4)	β' (5)	t -ratio (6)
Economic variables					
STUNR	State unemployment rate	.006	1.168	-.004	.482
Constant		-.645	(b)	-.598*	2.308
$\bar{R}^2 = .062$					
n = 12,628					
F-statistic 20.870					

* t -ratio is significant at 5 percent level

a Estimation technique implied no difference between periods for this variable and the coefficient was therefore constrained to zero in order to estimate model.

b SPSS does not give t -ratio of constant, but does of $\hat{\alpha}D$.

resulted in a turnaround in the impact of structural variables. In particular, while in 1973 the win rate was lower in industries having a higher percent women, blacks, and office and clerical workers, by 1981 industries with these characteristics were more likely to vote for a union. The impact of management resistance also altered during the eight-year interval. While in 1973 unions were only 15.9 percent less likely to win if the election was called by management, by 1981 they were 28.4 percent less likely to win such elections. Using a one-tail test, it can be seen, too, that unions also were less likely to win consent elections in 1981 than they had been in 1973. Finally, it should be noted that the constant, which captures variables excluded from the analysis, became substantially more negative during the eight-year interval. Undoubtedly, part of this is due to the increased use of management consultants and a change in public attitudes, neither of which could be measured and hence included as variables in the analysis.

The decline in the union win rate between 1973 and 1981 was 6.6 percentage points, from .5182 to .4522. In a regression framework this may be attributed to a change over time in the size of the regression coefficients, $\Delta\beta$, or a change in the value of the independent variables themselves, ΔX . For example, part of the decline in the union win rate is due to the decline in the number of consent elections and part to the fact that by 1981 unions were less likely to win consent elections. A unique aspect of the regression analysis presented here is that it allows us to decompose the observed decline in the union win rate into these two components. This is done in Table 2 where the decomposition technique used is given in a footnote. Column 3 gives the percent of the decline explained by changes in means, while column 5 gives the percent of the decline explained by changes in the size of the regression coefficient.

One important conclusion to be drawn from Table 2 is that the decline in union wins during the decade of the 1970s cannot be attributed to structural factors. Table 2, column 2, does demonstrate that, as Freeman suggests, by the end of the decade elections were held in industries employing a higher percent of women and in units which were more likely to be in the white- and pink-collar occupations. However, as column 3 indicates, these structural changes had little impact on election outcomes. Indeed, taken as a whole, these changes would have produced a slight increase in the election success of unions. Of much more interest, however, is the fact that the propensity of certain groups to vote for a union changed dramatically

TABLE 2
Decomposition of Union Win Rates

Variable (1)	Change in Mean (2)	% of Decline Explained by Change in Means ^c (3)	1981 Mean (4)	% of Decline Explained by Change in Coefficient ^a (5)
Structural				
Demographic				
STAGE	2.114	336.36	30.21	563.98
STAGESQ	122.69	-360.60	914.96	^a
PERWOMEN	4.974	-20.15	37.249	199.02
SBLK	4.09	-11.59	15.9	78.78
PERCOL	6.246	32.12	15.79	-10.05
Subtotal		-23.86		831.73
Industrial/Occupational/Locational				
DUR	-0.052	1.07	.251	-3.03
NDUR	-0.045	-1.42	.153	-9.09
OFFCLER	.003	-.18	.086	12.65
PROTECH	.021	.38	.048	4.54
SIZE ¹	-0.007	-5.48	.078	14.09
PIIR	-3.591	37.07	8.572	42.72
STRW	-0.056	-.19	.199	-10.02
Subtotal		31.63		51.86
Union Resources				
INDPUN	-0.468	-.52	30.58	12.12
MULTUN	-0.015	-6.82	.050	4.46
TEAM	-0.035	3.05	.314	-2.42
Subtotal		-4.29		14.16
Management Resistance				
LNDAYS	.209	-19.09	4.077	13.33
CONSENT	-.12	-22.72	.035	-3.71
RM	-0.015	3.52	.032	-6.12
REGDIR	.0012	.05	.188	-2.22
PULP	.64	23.78	1.590	-46.36
Subtotal		-14.46		-45.08
Economic				
STUNR	.316	2.77	5.95	-39.08
Subtotal		2.77		-39.08
Total		-8.21		813.59
Constant	0	0		-906.06
Total of Columns 3 and 5: $-8.21 + 813.59 - 906.06 = -100.68^b$				

^a See note, Table 1.

^b Does not add to 100% because of rounding error.

^c Decomposition: $\overline{UNWIN}_{81} - \overline{UNWIN}_{73} = \alpha + \bar{X}_{81} \beta + \alpha' + \bar{X}_{81} \beta' D - \alpha - \bar{X}_{73} \beta = \Delta \bar{X} \beta \alpha' + \bar{X}_{81} \beta' D$. In the table, the first term is reported in column 3 as a percent of the 6.6% difference in win rates. The second term, also reported as a percent of 6.6, is reported in column 5.

during the decade. The table indicates that if these changes had been the only ones taking place during the decade, unions would have entered the 1980s enjoying substantially higher win rates than they had a decade earlier. Two factors are particularly responsible for this: women were more likely to vote for a union in 1981 than in 1973, and older persons also became more likely to vote for a union during this period.

Table 2 also indicates that the decline in the union win rate cannot be attributed to a decline in union resources, again evidence counter to Freeman's hypothesis. The table does, however, show that management resistance played a substantial role in bringing about the decline. Fewer consent elections translated into fewer victories, as did longer delays. By 1981 unions were also less likely to win in the presence of unfair labor practices than they had been in the early 1970s.

The change in the constant term picks up changes attributable to variables excluded from the analysis. While this includes a wide variety of variables, undoubtedly two of the most important variables excluded (because of measurement problems) were increased use of management consultants and changes in public attitudes towards unions. Unfortunately, we cannot isolate these elements from other, excluded variables.

Conclusion

Freeman proposed three hypotheses to explain the decline in union win rates: structural change, change in union resources, and increased management resistance. Our empirical results support only the latter hypothesis. Indeed, our results show that structural factors alone would have led to an increase in union win rates, not a decrease. It must be borne in mind, however, that the number of workers organized by unions is a function of both the union win rate in NLRB elections and the number of elections held. In this paper we have looked only at the first issue. While structural factors and changes in union resources may not have affected the election outcome, it is quite possible that these factors have adversely affected the probability that an election was called in the first place. Our results also say nothing about whether the union was able to successfully negotiate a first contract after winning the election, a consideration which is another important determinant of union organizing success.

References

- Block, Richard. "Union Organizing and the Allocation of Union Resources." *Industrial and Labor Relations Review* 34 (October 1980), pp. 101-13.
- Cooke, William. "Determinants of the Outcome of Union Certification Elections." *Industrial and Labor Relations Review* 36 (April 1983), pp. 402-14.
- . "The Rising Toll of Discrimination Against Union Activists." *Industrial Relations* 24 (Fall 1985), pp. 421-42.
- Farber, Henry. "The Extent of Unionization in the United States." In *Challenges and Choices Facing American Labor*, ed. Thomas Kochan. Cambridge, MA: MIT Press, 1985.
- Freeman, Richard. "Why Are Unions Faring Poorly in NLRB Representation Elections?" In *Challenges and Choices Facing American Labor*, ed. Thomas Kochan. Cambridge, MA: MIT Press, 1985.
- Prosten, Richard. "The Longest Season: Union Organizing in the Last Decade." *Proceedings of the 31st Annual Meeting, Industrial Relations Research Association*, Chicago, 1978. Madison, WI: IRRRA, 1979. Pp. 240-49.

Employee Involvement Programs: Do They Alter Worker Affinity Towards Unions?

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Even as employment involvement (EI) programs such as quality circles, quality-of-worklife programs, and autonomous workgroups have proliferated,¹ a large number of unions have either remained cool towards these initiatives or directly opposed them.² Underlying union concerns appears to be the assumption that EI programs coopt workers into a managerial view of organizational priorities. Unions fear that workers who join EI programs may lose interest in unionism and, in the extreme, may even oppose their unions to support the management position on a variety of issues. For example, after joining an EI program, workers may become more dissatisfied with their union, less willing to be involved in union office, refrain from going to union meetings, vote less frequently in union elections, etc. This paper develops a number of hypotheses suggested by such union concerns and tests them using survey data from five organizations where EI programs have been in use.

Conceptual Framework

Most unions articulate their concerns in terms of a change in worker attitudes and behavior as a result of participation in an EI

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^o The author wishes to thank Thomas A. Kochan for making the data available for this study.

¹ Two recent surveys conducted by the American Management Association and by *Business Week* indicate that about 35-40 percent of U.S. firms report use of some form of EI programs. As in these surveys, I limit my definition of EI programs to those in which employees *directly* and *formally* participate in on-the-job decisions. This definition excludes all forms of indirect participation such as committees, representation on the board, and the like. Also excluded are programs that involve individual rather than group effort, such as suggestion schemes.

² The International Association of Machinists (IAM) is one of the largest unions to have taken a stand against EI programs. See Kochan, Katz, and Mower (1984) for a detailed description of the IAM position. Rudy Oswald of the AFL-CIO has also articulated union concerns about EI programs (Kochan, 1985, p. 307).

program. Such an impact on workers can be called a *program effect*. Equally, given the voluntary nature of EI programs in North America, it may also be that workers attracted to EI programs may be those who are less interested in unionism. Such a sorting of workers by their preference for unionism may be called a *selection effect* of EI programs. This is an equally important concern even if it is not always articulated by many unions. Each of these effects is examined in turn.

One of the causes of union concern is the kind of training and information provided to workers in EI programs. Management generally provides information on the firm's competitive position in the market, stresses the need to improve productivity, and urges employees to become active partners in the corporate effort to achieve strategic goals of the organization. Unions fear that such activity increases employees' identification with the firm and, further, that an increase in employee identification with the firm comes at the expense of a corresponding decrease in worker affinity towards the union. There is some reason to indicate that union concerns in the case of the former may be warranted. Many management writers argue that increasing employee identification with the firm should be one of the goals of an EI program (for example, see Orr and Blumberg, 1977).³

However, there is little evidence from past research to indicate that the latter belief of unions—namely, that an increase in worker identification with the firm comes at the expense of worker affinity towards unions—may be justified. A number of studies on worker loyalties have found that workers have a dual loyalty; they believe that both union and company are interested in their welfare (Stagner, 1953; Dean, 1954; Purcell, 1960). Thus, workers satisfied with the company were also found to believe the union was doing a good job. These findings on dual allegiance suggest that even if EI programs increase employee identification with the firm, it will not be at the expense of worker loyalty towards the union. In other words, there is no reason to believe an adverse (or negative) program effect exists at least in the case of worker interest in union activity. On the contrary, as EI programs increase worker identification with the firm, it is likely, given union support for the EI program, that worker assessments of the union would also improve. Thus, a positive program effect would be evident.

In examining the selection effect, it is important to consider the formal role of the union in the design and administration of the EI

³ At least one field study reports more positive attitudes towards management among blue-collar workers participating in an EI-type program (Lischeron and Wall, 1975).

program. Kochan, Katz, and Mower (1984) have argued that union endorsement of and involvement in the EI program has major consequences for the type of worker that the program is likely to attract. If the union is involved in the program, workers would perceive it as part of the union's overall plan. Workers who are more active in the union and also those who think more favorably of the union are likely to volunteer to join the EI program. On the other hand, if the union is either cool or opposed to the EI program, workers active in the union would be unlikely to join the program since they would not see it as part of the union's overall plan for its members. Thus, when the union is involved, a *positive* selection effect would be evident. If the union is not involved, a *negative* selection effect may be expected.

Research Design

Workers were surveyed in five organizations in manufacturing, utilities, and publishing industries. Each organization employed some form of an EI program. The union was a joint sponsor of the program in all five cases, even though the extent of its involvement varied. Respondents were randomly selected from among those in the program (participants) and those not in the program (nonparticipants). Since the surveys were conducted only after the EI program was introduced, no preprogram vs. postprogram comparisons were possible. However, in order to examine the true program effect, it is necessary to separate the selection effect from the overall participant-nonparticipant comparison. To accomplish this, nonparticipant respondents were asked if they would volunteer to join the EI program. Since participants were chosen randomly from among volunteers, it is reasonable to assume that such volunteers represent the preprogram profile of workers who are currently participating in the program. A comparison, then, of participants with nonparticipants can be decomposed into two components—one comparison of participants with volunteers, indicating the program effect, and another comparison of volunteers with nonvolunteers, indicating the selection effect.

A total of 857 workers were surveyed, of which 446, or 52 percent, were participants at the time of the survey. Of the remaining 411 nonparticipants, 131 workers said that they either have volunteered or would like to volunteer to join the EI program. Roughly half of the nonparticipants (201) indicated that they would not like to join the program. Because of missing and contradictory information, 79

responses were ambiguous regarding the respondents' intention to volunteer and were, therefore, deleted from the analysis.

Respondents were asked to provide demographic information as well as reports on their union activity and satisfaction with their union. Union satisfaction was measured on a 16-item, 4-point Likert-type scale, as described in Kochan, Katz, and Mower (1984). Internal reliability measured by Cronbach's alpha was high (0.92). This scale was also highly correlated with a 1-item measure of overall satisfaction with the union. Involvement in union office was measured by a 4-item scale that included activity such as running for or holding any union office and membership on the union executive board or a committee. These items showed a high internal reliability ($\alpha = 0.72$). Four other items asked respondents if they had engaged in any of the following activities at least once in the past two years: voted in a union election, gone to a union meeting, called the union office, or filed a grievance. These items were coded 1 for a yes and 0 for a no response. None of the four items were combined in a scale because they were not very highly correlated with each other. Also, none of the four variables was very highly correlated with either union satisfaction or involvement in union office.

Results

Mean scores for all the variables are shown in Table 1 for EI participants with the nonparticipants further subdivided into volunteers and nonvolunteers. Group means were compared using the Student-Newman-Keuls (SNK) procedure. The SNK test is more conservative than a simple test of differences between two means. In the SNK procedure, the combined Type I error for all group comparisons is limited to a total value of (say) 0.05, whereas, in a simple *t*-test, the corresponding allowable error is 0.05 for each comparison between two groups. The results indicate that differences in age, sex, race, and experience across the three groups are either minor or nonexistent. The only sizable demographic difference is in the level of education. Participants are better educated than nonparticipants and volunteers are better educated than nonvolunteers. Of the six variables that capture affinity towards the union, there were no differences between volunteers and nonvolunteers on five variables, indicating an absence of a selection effect. The only exception was filing of grievances which was higher for volunteers (0.33) than for nonvolunteers (0.23).

TABLE 1
Mean Scores on Demographic and Union-Related Variables for EI Participants,
Volunteers and Nonvolunteers

	EI Nonparticipants		EI Participants	Univariate F
	Nonvolunteers	Volunteers		
	(n = 201)	(n = 131)	(n = 446)	
Age (years)	40.3	38.2	39.2	1.89
Sex (1-male; 2-female)	1.3	1.4 ^a	1.3 ^a	2.35
Race (1-white; 2-other)	1.1 ^a	1.2 ^{a,b}	1.1 ^b	4.23 [*]
Experience (years)	13.8 ^a	13.2	11.8 ^a	5.96 ^{**}
Education (5-point scale)	2.2 ^a	2.4 ^a	2.8 ^a	35.11 ^{**}
Satisfaction with union (16-item scale; $\alpha = 0.92$)	2.34 ^a	2.40 ^b	2.64 ^{a,b}	21.90 ^{**}
Involvement in union office (4-item scale; $\alpha = 0.72$)	0.03 ^a	0.02 ^b	0.06 ^{a,b}	4.25 [*]
Voted in union election (0-No; 1-Yes)	0.81	0.81	—	1.01
Went to union meetings (0-No; 1-Yes)	0.36	0.45	—	1.08
Filed a grievance (0-No; 1-Yes)	0.22	0.33	—	1.27 [*]
Called union office (0-No; 1-Yes)	0.63	0.68	—	1.08

Note: Figures sharing the same superscripts (a or b) indicate significant differences in a Student-Neuman-Keuls test.

* and ** indicate significance at the 0.05 and 0.01 levels, respectively.

A stronger indication of a positive program effect was evident in the comparison between participants and volunteers. Participants ranked higher than volunteers on two of the variables: satisfaction with the union and involvement in union office. The other four variables indicating union-related activities could not be used to examine the program effect because most of our respondents had been in the EI program for less than two years.

Next, it was important to examine if these univariate differences would still be evident in a multivariate test. In a multiple linear regression test that controlled for demographic characteristics such as age, sex, race, and education, satisfaction with the union remained significantly higher for EI participants compared to volunteers. These results are not reported in detail due to lack of space.

Summary and Conclusions

These results suggest no evidence of the presence of a selection effect. Workers appear to be opting for EI programs for reasons other than affinity towards the union. The only exception to this general finding is the incidence of filing grievances. However, this difference found in univariate tests disappears when the effect of other characteristics is controlled in a multivariate test. On the other hand, both univariate and multivariate tests suggest the presence of a positive program effect. Workers who have been in the program appear to be more involved in union activities and more satisfied with their union than the volunteers who want to join but have not as yet joined the EI program.

These results support the hypothesis developed in this paper that if the union is involved in the effort, an EI program is unlikely to have adverse outcomes for the union. In fact, the data from five organizations in this study indicate that EI programs generally have positive outcomes for the union when the union is a joint sponsor of the program. In contrast, when the union remains uninvolved, there appears to be a negative selection effect in that workers less interested in union activity appear to volunteer for such programs (Verma and McKersie, forthcoming).

These findings suggest that there is little basis for unions' general and a priori apprehension about EI programs. On the other hand, many unions may be creating a self-fulfilling prophecy by staying away from the programs. Lack of union involvement and support of EI programs is likely to create the very effects unions fear the most. On the basis of these results, union leaders would be advised to find ways and means to get involved in the design and implementation of

EI programs rather than leaving control of the EI process exclusively in the hands of management. Union involvement rather than nonparticipation in EI is likely to serve the interests of workers and their unions.

References

- Dean, Lois. "Union Activity and Dual Loyalty." *Industrial and Labor Relations Review* (July 1954), pp. 526-36.
- Kochan, Thomas A., Harry C. Katz, and Nancy Mower. *Worker-Participation and American Unions: Threat or Opportunity?* Kalamazoo, MI: Upjohn, 1984.
- Kochan, Thomas A. *Challenges and Choices Facing American Labor*. Cambridge, MA: MIT Press, 1985.
- Lischeron, J. A., and T. D. Wall. "Employee Participation—An Experimental Field Study." *Human Relations* 28 (1975), pp. 863-84.
- Locke, E. A., and D. M. Schweiger. "Participation in Decision-making: One More Look." In *Research in Organizational Behavior*, Vol. 1, ed. B. M. Staw. Greenwich, CT: JAI Press, 1979.
- Orr, David, and P. I. Blumberg. "Employee Representation and Cooperation." *Harvard Business Review* (January/February 1977), pp. 36-38.
- Purcell, Theodore V. *Blue Collar Man*. Cambridge, MA: Harvard University Press, 1960.
- Stagner, Ross. "Dual Loyalty in Modern Society." *Monthly Labor Review* (December 1953), pp. 1273-74.
- Verma, Anil, and R. B. McKersie. "Employee Involvement: The Implications of Noninvolvement by Unions." *Industrial and Labor Relations Review*, forthcoming 1987.

Collective Bargaining in Steel: A Strategic Perspective

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The demise of industry-wide bargaining in the basic steel industry signals a major milestone for what has been, at least historically, an essential component of the American industrial relations system. While it may be too early to predict with any certainty the future of collective bargaining in the steel industry, the time may be appropriate for a retrospective examination of the evolution of industrial relations in this sector over the postwar period.¹

One result of the relative lack of attention paid to collective bargaining in steel since the 1960s is that our understanding of the period of disequilibrium and decline leading to the industry's present state is limited. It may be argued that while events in the period 1946–1965 led to the stabilization of industrial relations in the steel industry, forces after that time led to unresolved conflict and disintegration within the system.² One way to outline this process is to use the theoretical framework provided by Kochan, McKersie, and Cappelli (1984), which furnishes an expanded and dynamic model of the industrial relations system. This framework is applied to the steel industry in Figure 1. The three principal actors in the system are the union, the companies, and the government. Each of these actors in turn operate at three strategic levels, namely, overall or global strategy, employee relations, and the level of the workplace.

The traditional focus of industrial relations has centered on the middle level of this system—that of formal collective bargaining, which in the case of steel occurred at the industry-wide level. By the early 1960s this aspect of labor relations had seemingly been firmly established through the routinization of contract negotiations and

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¹ Livernash (1961) outlines the earlier period of collective bargaining, while Stieber (1980) provides an updated overview. Several studies of the steel industry, such as Barnett and Schorsch (1983) and Crandall (1981), have appeared in recent years, but do not deal extensively with labor relations.

² The following analysis is presented in greater detail in Kalwa (1985).

Macro or global level	Steelworkers union Political lobbying Diversification of membership	Steel companies Investment strategy Political lobbying	Government Imports policy Fiscal & monetary policy Environmental policy
Employment relationship, industrial relations system	Bargaining structure Wage and benefit goals Conflict or cooperation	Same as union	Intervention in negotiations Wage & price control
Workplace: individuals & groups	Plant-level issues Rank & file insurgency	Plant-level issues	Civil rights Union democracy Industrial safety & health

Figure 1
Strategy Matrix of Industrial Relations in the Basic Steel Industry

institutionalized cooperation at the national level, most notably through the Human Relations Committee. Following years troubled by major strikes, the union and the companies arrived at a self-regulated truce, while the government, no longer required to intervene regularly to insure industrial peace, was able to withdraw to a relatively distant, neutral role. Although praise for this effort at harmony was widespread at the time, developments occurring at other levels of the system were eventually to break down this cooperation.

Perhaps the first instance of disequilibrium to appear occurred within the union, the United Steelworkers, between the national leadership and the rank and file. In terms of the diagram, this signified tension between the level of industry-wide collective bargaining and the level of the workplace. I. W. Abel's upset of David McDonald in the 1965 presidential election was originally heralded as a turn toward democracy within a traditionally authoritarian union, but events soon indicated that membership demands for increased participation exceeded the capacity of the leadership to respond. While Abel's signing of the Experimental Negotiating Agreement, or no-strike pledge, was widely praised, cooperation at the official level once more became a source of unrest among a younger, better-educated, more diverse membership, culminating in the insurgency of Ed Sadlowski in 1977.

But whatever peace was achieved in the sphere of collective bargaining came at a high cost—guaranteed annual wage increases of 3 percent plus cost-of-living protection—at the same time that steel imports were increasing their share of the U.S. market on the basis of price, despite the elimination of the strike threat. The chief response of the domestic industry was to call for stronger protection from foreign competition and regulatory and tax relief, now in political alliance with the United Steelworkers. The government reappeared in a new dual role, that of both obstacle and protector to the industry.

Recent analysis of the performance of the steel industry has been nearly unanimous in faulting U.S. companies for lack of foresight in the areas of investment and innovation, attitudes arising from the long history of oligopolistic market control enjoyed by steel producers. Originally the level of labor costs were not a matter of concern to the large companies, provided these costs were equalized across the industry. In this way unionization was even able to facilitate the practice of price coordination among the companies.³

Given a new competitive environment marked chiefly by the

³ This argument was first advanced by Ulman (1962).

threat of cheaper imports, the question of fundamental business decisions—strategy in the strict sense—became more crucial. Examinations of steel producers by Chandler (1962) and Rumelt (1974) characterized them as bureaucratic, reactionary organizations with limited capacity to adapt to environmental changes. In the present context this would refer to not only the incongruence between a costly, centralized system of collective bargaining and the larger exigencies of a threatening business environment, but also the problems of productivity and labor-management relations at the plant level.

Kochan, McKersie and Cappelli (1984) offer the general hypothesis that lack of coordination between the different levels and actors in the strategy matrix will lead to higher instability in the industrial relations system. Christiansen (1983) has developed this idea further, noting that better-performing firms are characterized by consistency between strategy at the labor relations level and at the overall corporate level. In her study, firms pursuing a cost-minimizing strategy in the product market tended to follow centralized, formalized labor relations policies, while those seeking differentiation in the product market had more flexible, decentralized, and informal labor relations practices.⁴

The decentralization of bargaining to the level of the workplace, mainly in the context of concessions, has been widely discussed in recent literature (see, e.g., Kochan and Katz, 1983). In the case of the steel industry, this development has been particularly dramatic due to the high degree of coordination which until recently existed between the major companies and the national union. The industry was traditionally dominated by U.S. Steel, the largest producer, which often imposed its own view of labor relations on other members of the Coordinating Committee Steel Companies. U.S. Steel's "hard line" became increasingly evident in the 1980s with pressure on the union for concessions, often accompanied by unilateral aggressive changes of working conditions at the plant level (see, e.g., "Big Steel vs. the USW," 1984).

Individual companies grew dissatisfied with the hegemony of U.S. Steel and began to fall away and develop their own strategies in labor relations and business direction. National Steel, for example, sold a 50 percent interest to the Japanese steelmaker Nippon Kokan, withdrew

⁴ Freedman (1979) also found some evidence that multidivisional firms decentralized their labor relations activities more than did less diversified firms. The need for congruence among elements of a system—for example, between compensation and corporate strategy—has also been stressed by organizational scholars such as Lawler (1977).

from the industry bargaining committee, and moved strongly ahead to cultivate labor-management cooperation at the plant level.⁵ Finally U.S. Steel proclaimed the end of industry-wide bargaining, resolving to obtain whatever concessions the union granted to other companies ("It's Every Man for Himself," 1985).

Pressure for concessions evoked varying responses from steelworkers at the local level, since willingness to accept pay cuts or workrule changes was strongly affected by plant-specific factors such as the age of the facility, market conditions for particular products, and the political outlook of the membership.⁶ After an attempt to maintain some semblance of an industry-wide wage structure, climaxing in the bitter Wheeling-Pittsburgh strike, the national leadership of the union accepted the inevitable and gave its approval to the granting of concessions at the company and plant level, along with rank-and-file ratification ("A Watershed Strike," 1985; "The Steelworkers Offer Survival," 1986).

The process of adjustment in the steel industry has been even more difficult than that experienced in the auto industry, which has been described by Katz (1985). Productivity, for example, did not keep pace with labor cost increases in the steel industry as it did in auto (Anderson and Kreinen, 1981). The institution of "connective bargaining," or standardization of wages and working conditions among all producers, was less rigid under the regime of pattern bargaining practiced by the auto companies than under industry-wide bargaining dominated by U.S. Steel. The phenomenon of "job control unionism," a legalistic, noninvolved approach to shopfloor relations, was accentuated in steel by the comparatively high number of job classifications.

Furthermore, differences across the two industries exist for both management and the union. The auto producers have long operated with a multidivisional corporate structure, enabling them to deal more readily with product differentiation and the decentralization of decision-making. Steel companies have typically been centralized, single-product bureaucracies slow to adapt to market or technological changes. The auto companies have been less willing to abandon their main line of business and thus have been more able to extend viable

⁵ Hall (1980) contrasts the successful strategy of product differentiation pursued by National Steel with the limited results achieved by U.S. Steel through its policy of diversification.

⁶ See Kochan, Katz, and Mower (1984), Ch. 2. Factors determining the likelihood of concessions have also been examined by Cappelli (1985). For limits to concessions in the steel industry, see "Steel Union is Balking" (1986).

alternatives to employees in return for concessions. Finally, the United Auto Workers has been more democratic in its internal affairs and more creative in response to such changes as quality-of-worklife programs than the United Steelworkers.

Recent developments in steel reflect the endgame strategies appropriate for declining industries described by Porter (1980). Some companies have been focusing on specialized segments of the market such as electrogalvanized steel, and have been willing to grant job guarantees or stock ownership in return for labor concessions. The union, by tailoring givebacks to the financial state of individual companies, appears to be attempting to continue its traditional role of price stabilizer in a shrinking market. U.S. Steel, however, has insisted on concessions equal to those granted to weaker companies, and may intend to capture a larger market share through a low-cost strategy ("There's Trouble at USX," 1986).

This review of industrial relations in the steel industry from a strategic perspective indicates the importance of analyzing events occurring outside the formal collective bargaining relationship and determining their interrelations within a larger, dynamic system. This is particularly important at present when many of the most highly developed collective bargaining relationships in the U.S. are being strongly affected by competition or deregulation in their industrial environment, and redefined by concessions and the breakup of bargaining structures. A broader perspective seems necessary to understand the far-reaching changes now transforming U.S. industrial relations.

References

- Anderson, Richard G., and Mordechai E. Kreinin. "Labour Costs in the American Steel and Auto Industries." *World Economy* 4 (June 1981), pp. 199-208.
- Barnett, Donald F., and Louis Schorsch. *Steel: Upheaval in a Basic Industry*. Cambridge, MA: Ballinger, 1983.
- "Big Steel vs. the USW: The Lines Harden." *Business Week*, January 30, 1984, pp. 84-85.
- Cappelli, Peter. "Plant-Level Concession Bargaining." *Industrial and Labor Relations Review* 39 (October 1985), pp. 90-104.
- Chandler, Alfred D., Jr. *Strategy and Structure*. Cambridge, MA: MIT Press, 1962.
- Christiansen, E. Tatum. "Strategy, Structure, and Labor Relations Performance." *Human Resource Management* 22 (Spring/Summer 1983), pp. 155-68.
- Crandall, Robert W. *The U.S. Steel Industry in Recurrent Crisis*. Washington: Brookings Institution, 1981.
- Freedman, Audrey. *Managing Labor Relations*. New York: Conference Board, 1979.
- Hall, William K. "Survival Strategies in a Hostile Environment." *Harvard Business Review* (September-October 1980), pp. 75-85.
- "It's Every Man for Himself in the Steel Business." *Business Week*, June 3, 1986, pp. 75-78.

- Kalwa, Richard W. "Collective Bargaining in Basic Steel, 1946-83." Ph.D. dissertation, Cornell University, 1985.
- Katz, Harry C. *Shifting Gears: Changing Labor Relations in the U.S. Automobile Industry*. Cambridge, MA: MIT Press, 1985.
- Kochan, Thomas A., and Harry C. Katz. "Collective Bargaining, Work Organization, and Worker Participation: A Return to Plant-Level Bargaining." *Labor Law Journal* 34 (August 1983), pp. 324-29.
- Kochan, Thomas A., Harry C. Katz, and Nancy R. Mower. *Worker Participation and American Unions: Threat or Opportunity?* Kalamazoo, MI: Upjohn, 1984.
- Kochan, Thomas A., Robert B. McKersie, and Peter Cappelli. "Strategic Choice and Industrial Relations Theory." *Industrial Relations* 23 (Winter 1984), pp. 16-39.
- Lawler, Edward E. III. "Reward Systems." In *Improving Life at Work*, eds. J. Richard Hackman and J. Lloyd Suttle. Santa Monica, CA: Goodyear, 1977.
- Livernash, E. Robert, et al. *Collective Bargaining in the Basic Steel Industry: A Study of the Public Interest and the Role of Government*. Washington: U.S. Department of Labor, 1961.
- Porter, Michael E. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: Free Press, 1980.
- Rumelt, Richard P. *Strategy, Structure, and Economic Performance*. Cambridge, MA: Harvard University Press, 1974.
- "Steel Union is Balking at Further Cutbacks, Terming Them Futile." *Wall Street Journal*, July 29, 1986, p. 1.
- "The Steelworkers Offer Survival to the Unfittest." *Business Week*, February 3, 1986, p. 33.
- Stieber, Jack. "Steel." In *Collective Bargaining: Contemporary American Experience*, ed. Gerald G. Somers. Madison, WI: Industrial Relations Research Association, 1980. Pp. 151-208.
- "There's Trouble at USX, But Its Rivals Aren't Cheering." *Business Week*, August 18, 1986, p. 41.
- Ulman, Lloyd. "Influences of the Economic Environment on the Structure of the Steel Workers Union." *Proceedings of the 14th Annual Meeting, Industrial Relations Research Association*, 1961. Madison, WI: IRRRA, 1962. Pp. 227-37.
- "A Watershed Strike at Wheeling-Pitt." *Business Week*, August 5, 1985, pp. 26-27.

DISCUSSION

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Underlying both the Verma and Kalwa papers is a basic challenge to unions and collective bargaining today—to ensure the viability of the firm and the union, given often opposing internal and external pressures to adapt to today's environment. Though this is not a new challenge, foreign competition, changes in the labor force, and the current political environment make it a particularly difficult one. The papers address results of these pressures, though at different levels: productivity and quality of worklife programs at the plant level and changes in a bargaining structure at the IR system level. Each can be seen as containing elements which threaten a union's existence in the workplace.

According to Verma, unions have little to fear from EI programs, *if* they are involved in the program's implementation. These fears have been labeled as the program effect and the selection effect. The program effect refers to shifts in worker allegiance toward management and away from unions as a result of participating in the program. Verma correctly also identifies the possibility that individuals who are active in union affairs may, under certain conditions, stay away from these programs (the selection effect). Whether a positive or negative program and selection effect is realized is dependent upon the union's involvement in the EI program. In particular, the fears that unions have regarding the loss of worker identification with the union will be warranted only if the union opposes the EI program.

In discussing the program and selection effects, Verma has presented some very interesting ideas and hypotheses regarding an important and timely issue. Unfortunately, given the data, he cannot directly test many of them. Surveys are taken from workers whose unions were all joint sponsors of existing EI programs. Thus, the question of union involvement or noninvolvement cannot be examined. It would have been interesting, however, to test whether

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the degree of union involvement influences participation or worker satisfaction with the union. The data do allow for a very interesting comparison of means between nonvolunteers, volunteers, and participants, given the participants are randomly chosen from volunteers.

The random selection of participants, however, also has implications for the logit estimates. In analyzing the probability of participation, the author is, in essence, modeling what he has claimed to be random selection. Thus, there should be no differences in demographic characteristics between participants and volunteers. Findings, therefore, are most likely due to differences between participants and nonvolunteers. If this is the case, then results cannot be used as evidence of a positive program effect.

An additional problem exists which also reduces the author's ability to suggest that results support a positive program effect. Findings indicate that those who are more satisfied with the union are more likely to be participants; they do not suggest the reverse. A truer test of the program effect would have satisfaction with the union as the dependent variable, regressed on participation.

These problems make the author's conclusions somewhat premature. In making the comparisons, neither the program effect nor the selection effect is isolated or directly tested using multivariate analyses. As such, additional research is necessary before we can comment on the effects of union involvement or noninvolvement in employee participation programs.

The Kalwa paper examines occurrences at the IR system level rather than at the plant level. This paper stresses the need to take a strategic or holistic perspective in analyzing the recent developments in the steel industry. I agree wholeheartedly with this. Moreover, I believe analyses such as this one are needed in our field to understand what has happened to our previously strong industries. Though not a quantitative piece, it does present recent occurrences from an unbiased perspective—thus, no excuses and no placement of blame on another party.

The Kalwa piece, however, like many others of its kind, raises more questions than it answers. What are we to learn from this analysis? It is in the answering of this question that we begin to see some of the shortcomings of the strategic perspective taken here. For example, the hypothesis is presented that a lack of coordination between the various levels leads to higher instability in the system. Does this mean that once coordination exists in the steel industry,

stability will result? More importantly, what form will this new system take?

The primary shortcoming of a holistic approach, whether it be the strategic perspective taken here or Dunlop's (1958) classic framework, is that it can generally only state what the important factors are. It does not enable specific, testable hypotheses. Thus, Kalwa uses the strategic perspective effectively to *describe* the recent developments in steel, but cannot use it to predict what lies ahead for this industry. Admittedly, space limitations restrict presentation of both description and predictions in this format. I suspect, however, that predictions of the future would necessitate moving away from the strategic perspective. In essence, we cannot use this perspective to say, at this stage, the extent to which the union or management in steel will be able to meet their challenge.

Reference

Dunlop, John T. *Industrial Relations Systems*. New York: Holt, Rinehart, and Winston, 1958.

DISCUSSION

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The papers presented in this session indicate how markedly the industrial relations world is changing. They also demonstrate the fruits of deduction through econometric testing and of the inductive fieldwork-based method. The comments below are confined to the papers concerning union win rates and basketball salary determination.

The analysis of the causes of the downward trend in union election win rates makes four valuable contributions. First, it tests the Freeman model suggested recently (Freeman, 1985). Second, it considers the changing influence of the causal variables over time, rather than presenting a snapshot in a particular time period based on cross-section or pooled time series-cross-section data as is usually done. Third, the paper distinguishes the role of changes in causal variables themselves from the changes in importance attached to them by workers in elections (that is, the changes in the coefficients). Fourth, the results reinforce the ever-growing evidence that demographic and structural variables are relatively unimportant explanations compared to management resistance.

While not wishing to detract from the merits of the analysis, remarks are warranted concerning the operationalization of the variables in the theory, the results, and the theoretical underpinning. No doubt space limitations prevented these questions being dealt with. Further, many of these comments can be applied more widely to other union election studies.

It is inevitably very difficult to operationalize all theoretically relevant variables. The problem in this and other analyses is primarily discovering proxies for union organizing resources and effort, given the absence of organizing expenditure figures and the difficulty of surveys. Some of the variables used here are open to different interpretations. The Teamsters dummy could represent negative

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public opinion of that union, while the extent of union organization could pick up positive social attitudes. Perhaps the way to go is to use organizational variables, such as the percentage of members in the primary jurisdiction (as an indicator of the need to be union service-oriented and of a deemphasis on growth) (Block, 1980), and union density in the state (as a proxy for an existing union network that could aid organization). The political dependency of union leaders on members might also be included, as might the presence of not only bans on union shops, but also agency shops (Block, 1980). Finally, the prevailing wage level indicates potential dues levels and would capture the union's financial incentive to organize (Schmidt and Strauss, 1976).

Regarding management resistance, it would be interesting to see the effect of other measures of resistance, such as rerun elections, and 8(a)3 unfair labor practices (ULPs) prior to petitioning the NLRB and during the campaign period. The ULPs should probably be averaged over the number of elections rather than union members since most occur during organizing or first negotiations. Locational variables representing community attitudes might be better proxied by voting records of local congressmen than by right-to-work laws (Seeber and Cooke, 1983).

The results of the analysis reveal some interesting implications. First, there appears to be evidence of a saturation effect since low win rates were associated with durable manufacturing, large election units, high injury rates, and the absence of right-to-work laws. Second, the positive effect on win rates of ULPs may reflect a tendency of employers to use illegal tactics in situations where a union win is likely. Third, small unit size may also indicate the importance of interpersonal relations in union support. Fourth, the constant may be proxying a wide range of other factors, including legal and economic forces. It would be worth conducting a dichotomous dependent variable analysis using the probit method to assess whether the results are consistent.

While the investigation set out to test a particular set of hypotheses, the theory might be broadened in future analyses, especially given the size of the constant. Other management resistance policies are evident, especially union-substitution policies involving high wages and promotion paths. The economic context may also play a part. Employers may resist unions in competitive or declining industries, while workers may vote for unions when the area inflation rate is high or recent area wage increases are attributed to union power. The legal-

political context is potentially relevant since state worker protection laws may lessen the need for union representation, while, over time, the political complexion of the NLRB may change the groundrules for stipulated elections. Finally, social attitudes are obviously influential. Not all these factors are easy to proxy, and to do so would be time-consuming, but it is necessary if substantial advances are to be made.

The paper concerning basketball salary determination is important because it underlines the significance of human capital and productivity in the process of fixing individual remuneration, but it also shows that institutional factors such as seniority and draft round are pertinent. The discussion of this paper relates to its theoretical foundation and the econometric method employed.

There is probably basic agreement by most people that individual characteristics and productivity strongly influence the salary hierarchy of a National Basketball Association (NBA) club. Indeed, it might be suggested that other characteristics, such as race and position played (especially center), impact on pay. However, salary rankings also depend on inter-club differences in the ability to reward their players: in economic terms, the demand for labor depends not only on the productivity of labor, but also the revenue it generates. Although the salary cap was in place in the 1984-1985 season, club revenue was still relevant to salary levels. First, as the paper says, nearly half of the NBA clubs were given "red-circled" caps above the official ceiling due to prior contractual commitments. This meant that under the cap, historical differentials, based in part on revenue differences, were respected. Second, current revenue levels determined whether clubs could reach the cap or whether they were nearer the salary bill minimum, and whether they could afford to make use of the complicated exceptions to the cap.

In view of this, it would be worth including variables capturing revenue-raising ability, such as stadium size, local population levels, team performance, or player popularity (as indicated perhaps by All-Star voting), or, more directly, ticket prices and attendance averages. Increasingly, local television revenues (which go to the individual club) need to be taken into account.

Without negating this argument, it is also clear that the bargaining power of certain rookies and free agents was limited by the salary cap where teams were not prepared to release other players. Dummy variables for rookies and free agents might be profitably inserted into the econometric equation.

Also on the demand side, the availability of alternative players can be important in player negotiations. When the club has a high draft choice, a bench of quality, and high status like the Boston Celtics, it is easier to replace players. The relevance of these considerations should be analyzed.

The econometric method employed to test the hypotheses advanced is appropriate, but it has shortcomings. First, in obtaining summary factors, the method may lead to the choice of good proxies, but not necessarily the best factors for explaining salaries. Second, the explanations are relatively imprecise, the regression equation indicating the strength and significance of groups of factors rather than individual variables. Third, the results are sensitive to variations in the scales used to measure each variable. It would be interesting to see whether ridge regression—another means of reducing multicollinearity—yields different results (Gunst and Mason, 1980).

Many of the questions raised in this discussion show that while the econometric approach produces interesting findings, surveys and interviews are necessary to produce more advanced theories which explain why and how employers fight unionization, what determines union organizing campaigns, and what factors feature in basketball salary negotiations. When the theories are formulated, more appropriate econometric tests can be conducted.

References

- Block, Richard N. "Union Organizing and the Allocation of Union Resources." *Industrial and Labor Relations Review* 34 (October 1980), pp. 101-13.
- Freeman, Richard B. "Why Are Unions Faring Poorly in NLRB Representation Elections?" In *Challenges and Choices Facing American Labor*, ed. Thomas A. Kochan. Cambridge, MA: MIT Press, 1985. Pp. 45-64.
- Gunst, Richard F., and Robert L. Mason. *Regression Analysis and Its Application*. New York: Marcel Dekker, 1980. Pp. 340-48.
- Schmidt, Peter, and Robert Strauss. "The Effect of Unions on Earnings and Earnings on Unions." *International Economic Review* 27 (February 1976), pp. 204-12.
- Seeber, Ronald L., and William Cooke. "The Decline in Union Success in NLRB Representation Elections." *Industrial Relations* 22 (Winter 1983), pp. 34-44.

DISCUSSION

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The four papers are good studies and worth our careful consideration, first, as representatives of recent and current industrial relations research, and second, for what they and other such research tell us about the state of American industrial relations. Methodologically, our researchers are sophisticated in the use of quantitative techniques to probe problems empirically, though they also recognize that many of the important issues of labor relations are not easily subject to even subtle empiricism. Beyond their ingenious attempts to understand cause-and-effect relationships, as they described relevant institutional features and relate, usually incidentally, the behavior of both business managers and union leaders, they tell the reader a good deal about the state of American industrial relations. The telling provides slight comfort for those who believe that both management and unions confront more serious economic challenges than they have ever faced.

Dworkin and Park consider wage determination in a setting, that for many years was considered untraditional and exceptional for unionization—professional sports. The nature of the relationship between employer and employee in this new arena is all too familiar to historians of the labor movement: employers exploiting a monopsony position to hold wages far below competitive levels.¹ Only at the insistence of the courts did employers agree to bargain collectively over the key *reserve clause*. The outcome was a marked improvement in average salary, in nominal dollars up by more than one order of magnitude.

Distressed with wages determined in a competitive market, since 1983 employers have sought to cap them, and the union agreed, gaining for its members a fixed share of total revenues. Capping may have quashed rampant competition among firms for players, but it

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¹ The average NBA player earned in the neighborhood of \$30,000 per season prior to unionism, and average payroll per player, 1985-1986, was \$385,333.

may also allow the parties to share quasi-rents. What benefits, if any, will accrue to fans remain to be seen; players' performance is still a reasonably significant determinant of salaries.

The implicit picture of industrial relations in the industry that appears in the background is conventional and traditionally American—that is, adversarial. Employers manage and employees obey; employers pay and employees receive. The two occupy vastly different positions of status, authority, and officially recognized managerial role within the employing organization. The nature of industrial relations in this industry is closer to that of half a century ago than to what one might think would be appropriate today given the new, higher skills of the workforce and ever increasing educational attainment of workers; in spirit it still shows a marked resemblance to the harsh confrontations and unilateral bargaining of the Cordwainers and their masters in 1806.

Stephan and Kaufman's paper adds further information about the reasons for adverse outcomes of certification votes. They described the dismal favor unions have found among American employers and the decaying favor they find among American workers. Employers have well demonstrated their willingness and ability to resist union organizing; for nearly 30 years they have skillfully adapted both the new techniques and the old arts of communications in the changing social climate to promote an old managerial conviction—that unions are an unnecessary third party in the firm. Since American managers have long been innovative, it is hardly surprising that they have pursued their old values with new means.

That American unionists, especially in the private sector, over three decades should have proven themselves so lacking in innovative activity and so incapable of serving the modern workforce has surprised me. After the swift organizing of the late thirties and the successes through the forties, I believed the labor movement was to be a central institution of the economy, a continuing source of influence in politics, and a valuable contributor to the society. I and many another young labor scholar bet our professional futures on the movement's continued, vital presence and lost. In share of the labor force organized and in the extent of collective bargaining in the private sector, the labor movement is back in the thirties, and even in absolute numbers of members, it counts no more members than it did more than a generation ago.

Union leaders have generally demonstrated a trained incapacity to conceive of, let alone develop and expand, a growing, lively, innovative labor movement. After 30 years of relative membership decline and a record of accelerating defeats, concessions, and give-backs, they seem to have only traditional—and tired—unconvincing responses to the widespread, common antiunion attitudes and actions of corporate managers.

Verma provides evidence that this harsh judgment of union leaders may be deserved. More than a third of American business firms use employee involvement (EI) programs, though few unions wholeheartedly participate in either their introduction or development. Many union leaders are uneasy about such programs. Even where, as in the United Auto Workers, the union officially supports the programs, many union officials, at both local and national levels, express their doubts and show their suspicion of them, as well as continue their opposition. Other unions have taken official stands against EI, as did one of the largest unions, the International Association of Machinists. One might think that so widespread a program would have bestirred union leaders to examine them carefully and reach some empirical conclusions about their likely effect on their organizations and strength. Verma concludes that unionist concern may be unfounded. If a union is involved in an EI effort, it is unlikely to have an adverse effect for the union. If in fact this preliminary conclusion is sound, then insofar as union leaders have avoided EI programs, they may have missed significant opportunities for strengthening unions and also for helping to develop a new kind of industrial relations system.

Kalwa surveys collective bargaining in the steel industry over the past 20 years, by analyzing the putative strategies pursued by the parties. A *prima facie* case could be made that the most important strategic consideration was that suggested by Michael Porter. Both managers and union leaders acted as if they were engaged in an “endgame.” They continued to push upward the margin of steelworkers’ wages (above average manufacturing wages) all through the sixties and seventies, even as external competition was swiftly eroding sales and markets. The Human Relations Committee may have improved relationships at the top, but it did nothing to change the rigid class division at the place of work and managers’ claim to autocratic authority in the mill.

What managers and union leaders then hailed as a new kind of industrial relations, the Experimental Negotiating Agreement, was merely a new name to an old provision—a no-strike pledge in return

for assured wage increases. There were few, if any, changes in steel's industrial relations; they continued as they had for nearly half a century, both managers and union leaders complacent and unknowing as their economic environment shifted sharply. Managers were different from workers; they did the thinking and workers did the labor. Managers gave orders and workers carried them out. Managers acted and workers might grieve. Neither party conceived of another possibility.

The melancholy labor scene that the four papers imply is all too familiar to labor students. It is the past brought into the present; it is old values expressed in new form, but as bitter, uncomprehending, and adversarial as ever. It ignores any possibility of joint responses to modern workers' needs and today's production requirements. The behavior and actions of each side confirms the fears of those on the other. The suspicions and fears of union leaders are the obverse expression of managerial hostility to unions and collective bargaining. Managers have turned their industrial relations over to experts, most of whom have been our students. We in industrial relations trained technically capable managers, but apparently we did not fire their imaginations with a ken to exploit the potential of new possibilities. If we did strike fire among our students, it was quenched once they left our classrooms. They have been content to explore the managerial opportunities for control inherent in the models of the past.

The result is what we might expect; they are replicating in many firms and in whole industries, not just the past of a few decades ago, but something increasingly resembling the 1920s. There was then a common acceptance of much conflict, and should unemployment decline and competition slacken, that conflict may return with all its turmoil of strikes, lockouts, picketing and mass demonstration, and public unease and discontent.

In summary, the four papers of this session do not present a cheering view of the American industrial relations scene. The leaders of its major institutions are bedeviled by old and out-moded notions of how they might contribute to effective, efficient production and *worthwhile working lives*; for the most part the major actors perceive themselves as opponents, engaged in a zero-sum game and little more. Until among our leaders, both in business firms and in unions, there is more daring, more experimentation, and wider vision than at present, employees at the place of work will find considerably less satisfaction than is possible, and managers will continue to find less productivity and harder-won production than would otherwise be the case.

XIV. INCREASING ECONOMIC INEQUALITY IN THE U.S.? ALTERNATIVE VIEWS

The Facts About Rising Industrial Wage Dispersion in the U.S.

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Wage inequality, measured across industries in the U.S. with data from establishments,¹ has grown consistently and substantially over the past 15 years. Various data sources for the U.S. manufacturing sector, service sector, and the economy as a whole reveal a dramatic increase in the dispersion of industry wages since 1970. This pattern is striking in magnitude by both historical and international standards, as post-World War II industrial wage inequality has generally declined (Cullen, 1956; Reynolds and Taft, 1956), and industrial wage dispersion has remained roughly constant, or increased only slightly, in Western Europe and Japan. While some of the rise in industrial wage dispersion can be explained by labor supply shifts and institutional changes, a substantial portion cannot be so explained. Instead, a dominant cause of rising industrial wage inequality in the U.S. through the 1970s is a strong association between long-run movements in industrial productivity and industrial wages, which contradicts the

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^o The views expressed in this paper do not necessarily represent those of the Federal Reserve Bank of New York.

¹ Analysis with data from households fails to show any significant trend rise in industrial wage dispersion over this period. We are currently evaluating the data closely to discern the causes for this discrepancy.

standard competitive theory and runs counter to the theoretical and empirical conclusions of Salter's classic work (1960). In this paper we document the rising dispersion of U.S. industry wages since 1970 and then evaluate the specific features of U.S. industrial wage flexibility which caused the inequality to occur.

The Facts

Industry wage dispersion has risen dramatically in the U.S. since 1970. Table 1 documents this claim for the U.S. economy for the

TABLE 1
Dispersion in Wages and Compensation^a

Year	Employment and Earnings	National Income and Products Accounts				Census of Manufactures
	Ave. Hourly Earnings	Wages		Compensation		Wages
	(1) Man.	(2) Total	(3) Service	(4) Man.	(5) Total	(6) Man.
1948	.167	.255	.242	.174	.269	
1950	.172	.268	.244	.176	.285	
1955	.202	.284	.261	.202	.303	
1960	.223	.283	.270	.218	.303	.232
1965	.220	.274	.291	.219	.294	.229
1970	.215	.255	.258	.201	.279	.221
1971	.226	.265	.253	.205	.290	.222
1972	.237	.273	.247	.215	.299	.237
1973	.240	.272	.243	.220	.297	.242
1974	.241	.271	.246	.221	.301	.240
1975	.253	.287	.252	.229	.320	.247
1976	.257	.294	.250	.238	.327	.252
1977	.258	.300	.255	.247	.334	.260
1978	.267	.306	.263	.247	.340	.269
1979	.270	.309	.268	.246	.342	.279
1980	.270	.321	.275	.254	.355	.282
1981	.277	.327	.286	.259	.359	
1982	.282	.332	.293	.268	.366	
1983	.286	.343	.296	.267	.375	
1984	.291	.342	.306	.270	.373	
1985	.293	.346	.315	.281	.377	

^a All variables represent the standard deviation of the ln of the relevant variable.

period 1948 to 1985, using various establishment data sources for the entire economy, the manufacturing sector, and the service sector, at various levels of industry aggregation. The consistency of this finding across data sets implies that the trend in industry wage behavior is unlikely to be an artifact of the data or the group of industries

analyzed; moreover, the existence of this trend in both manufacturing and service industries implies that it is not simply a consequence of different rates of employment growth in these sectors. One important implication of this analysis is that rising industrial wage dispersion is not exclusive to heavily capital-intensive, unionized sectors (Lawrence and Lawrence, 1985), but instead is a more uniform and pervasive phenomenon.

The trend increase in industrial wage dispersion through the 1970s and 1980s could, theoretically, result from either a sudden deterioration in the historically documented rank order stability of the U.S. wage structure (OECD, 1985; Papola and Bharadwaj, 1970), or from a widening of the differential between wages paid to workers in high- and low-wage sectors. Our analysis strongly supports the latter proposition. The industrial wage structure, in terms of the relative position of industries in the wage ranking, has been very stable over this period. The rank correlation of industries over the period 1970 to 1982 is greater than .9 in each of the data sets reported in Table 1, indicating that very little shifting of industries has occurred within the industry wage structure. The rising trend in industrial wage dispersion results instead from a widening of the gap between wages paid to workers in high- and low-wage sectors. For example, when we examine the average wage in the highest wage quartile of industries and compare it to the average wage in the lowest wage quartile of industries in 1970 and 1982,² we find that the ratio rose from 1.07 to 1.84 in the National Income and Products Accounts Data (NIPA) and from 1.79 to 2.09 in the Census of Manufacturers Data (COM).

In Table 2, we evaluate the international wage data in order to determine the extent to which the pattern of rising industrial dispersion is uniform across countries. As can be seen from Table 2, the pattern of increasing dispersion in the 1970s is unique to the U.S. Our calculations reveal that the industry wage structures of the major OECD countries have been relatively stable, with at most a modest level of increasing industrial wage inequality in a few countries. We are therefore dealing with peculiar changes in the industry wage structure of a magnitude that distinguishes the U.S. from other developed countries.

² These calculations, and the regression analysis which follows, are taken from Bell and Freeman (1984), with NIPA and COM data available at that date, and prior to the release of the NIPA data revisions. Because the revised NIPA data (which appear in Table 1) show rising dispersion of nearly identical trend to the old data, the data changes are unlikely to qualitatively affect any of our statistical tests with the unrevised data.

Causal Factors

In this section we explore briefly various explanations for the secular increase in industrial wage dispersion which has occurred in the U.S. since 1970. In particular, we distinguish among "competitive"

TABLE 2
Industry Wage Dispersion in Other Countries

	1975	1982
Japan (N = 30)	.269	.288
France (N = 29)	.164	.156
West Germany (N = 31)	.164	.173
Spain (N = 14)	.210	.202 ^a
Switzerland (N = 16)	.167	.166
U.K. (N = 31)	.169	.170
Italy (N = 31)	.192	.122
U.S. (N = 37)	.271	.334

Source: International wage data, U.S. Department of Labor, Bureau of Labor Statistics, Office of Production and Technology.

Note: Numbers are standard deviations of ln hourly compensation costs for production workers based on U.S. equivalents.

^a 1977 and 1981 figure, respectively; no figure available for 1975, 1976, and 1982.

factors and those which have no competitive market explanation. Competitive factors would be those which shift labor supply or labor demand to the relevant industry, necessitating wage changes as a means of equilibrating the labor market. For example, if the distribution of skills were to change systematically across industries in a way which increased their interindustry dispersion, or if scarcity of certain skills changed their market valuation over time, then wages could become more unequal across industries. Similarly, industry-specific disturbances could result in short-term industry wage differences in response to shifting labor demand. In either case the expectation would be, of course, that wage differences would narrow when workers obtain information and training, and eventually move across sectors.

By contrast, consider a labor market in which wages respond to industry-specific changes in value productivity per worker for reasons other than changes in skill content, changes in skill differentials, or the need to attract labor along upward sloping labor supply schedules. While downward flexibility of wages in response to declines in value productivity per worker can still "save" jobs, upward flexibility of wages will, in the same sense, "cost" jobs, with industries experiencing rapid value productivity growth hiring too few workers. The net result of this type of flexibility could be harmful overall to employment,

depending on the mix of disturbances and the degree to which wages respond to positive and negative shocks.³ Because industrial wage flexibility may thus, in theory, imply different things for employment, characterizing the causes of rising inequality among industries in the U.S. is not only a useful micro exercise, but a potentially valuable macro exercise as well.

Because the underlying factor in the industry wage structure are wages by industry, we estimate equations linking changes in industry wages over the period 1970–1982 to various potential wage-influencing characteristics. We focus exclusively on wage behavior over this period in order to evaluate and explain the changes in the industry wage structure which have led to rising industrial wage dispersion through the 1970s. We include as explanatory variables in our regressions a set of variables to account for supply-side shifts and institutional changes likely to affect industry wages, and an “industry-specific” variable intended to account for the influence of industrial performance on industry wages. While the competitive model predicts that industry wages will be linked only to aggregate productivity in the long run, the notion that industrial productivity trends affect industry wages has a long history in economic thought, with early post-World War II studies of industrial wages finding evidence of a weak positive link between changes in wages and productivity at the industry level (Dunlop, 1948; Garbino, 1950).

In Table 3, we list our key regression results. As is clear from the table, industry-specific performance, as reflected in industry-specific productivity and output price movements, has had a significant impact on long-term industry wage movements. We report this result for both the NIPA economy-wide data (at the 2-digit industry level), and the COM manufacturing data (at the 4-digit industry level). While interindustry changes in the percent of female workers, in the percent covered by collective bargaining, in the proportion of young workers, and in a variable constructed to capture changing skills,⁴ matter for wages in the expected manner, they do not substantially reduce the coefficient on changes in value productivity. In sum, the fact which

³ If, for example, wages responded more to relative declines in productivity than to relative increases in productivity, and productivity shocks were normally distributed among sectors, then a flexible wage system would result in more employment than an inflexible system. If the reverse scenario is true, then flexibility may be harmful to employment expansion.

⁴ We calculate an index of skill mix for each industry, weighting the proportion of workers in a given occupation by the national wage for the occupation, calculated using median weekly occupational earnings from the *Statistical Abstract of the U.S.* for the years 1970 and 1982. The industry-specific change in this index is then entered into our regressions.

emerges consistently throughout our analysis (in both reported and unreported tests) is that industrial performance matters for industry wages, to an extent not predicted by the theory.⁵

In the bottom row of Table 3, we summarize the performance of

TABLE 3
Industry Wage Regressions
Dependent Variable: Change in ln Wage

Independent Variable	NIPA DATA (1970-1982)			COM DATA (1970-1980)	
	(1)	(2)	(3)	(4)	(5)
1. $\Delta \ln (VA/L)_i$	.351° (.094)	.304° (.107)		.290° (.021)	.226° (.024)
2. ΔF		-.642° (.298)	-.858° (.330)		
F 1970		-.306° (.090)	-.358° (.101)		
3. $\Delta \ln \text{skill}$		.275 (.480)	-.136 (.523)		
4. Union		.001 (.001)	.001 (.001)		
5. ΔYoung		-.376 (.488)	-.396 (.558)		
Young 1970		-.234 (.543)	-.478 (.613)		
6. Three-digit industry dummies					XX
R^2	.216	.655	.528	.274	.611
N	53	30	30	450	450
Mean ($\Delta \ln \text{wage}$)	.077	.078	.078	.072	.072
S.D. ($\Delta \ln \text{wage}$)	.011	.010	.010	.011	.011
Share of dispersion explained by model:	29%	83%	70%	41%	87%

each of the reported regressions in explaining the increase in industrial wage dispersion in the U.S. economy over the period 1970-1982. According to our criterion, an equation performs well if it yields a series of predicted 1982 industry wages which give rise to an increase in industrial wage dispersion of similar magnitude as the actual

⁵ While more exhaustive tests uncover the identical wage-productivity pattern, we do not believe this results from shifting labor demand. To the extent that changing wages reflect shifting industrial demand, they should be associated with greater industrial employment. In fact, in results not reported here (Bell and Freeman, 1985), we find the reverse to be the case. Industries with above-average wage movement over the period 1970-1982 had below-average employment movement, making it difficult to give a comparative static interpretation to the U.S. industry wage behavior.

increase in wage dispersion. By the same criterion, a model performs poorly if it is incapable of producing variation among industry wages of sufficient magnitude to yield a sizable rise in dispersion. Columns 2 and 5 of Table 3 show that supply-side changes and value productivity movements jointly account for greater than 80 percent of the total rise in industry wage dispersion over the period 1970 to 1982. Note that movements in industry value productivity alone (columns 1 and 4) are capable of explaining about one-third of the rise in dispersion in the economy as a whole, and an even greater share of the rise in dispersion in manufacturing.

Conclusion

In this paper we have documented the rising dispersion of industry wages in the U.S. using various data sources for the economy as a whole, the manufacturing sector, and the service sector. We find that while part of the rising dispersion originates in changes which have taken place on the supply side, an independent cause of the wage patterns we observe is a strong positive correlation between industrial wage and productivity movements. In sum, we can account for greater than three-quarters of the rise in industrial dispersion by these two sets of factors. Because we believe that industrial performance has mattered for industry wages to an extent unrelated to shifting labor supply or labor demand, the normative consequences of U.S. industrial wage flexibility for employment performance are uncertain, and warrant continued research.

References

- Bell, L., and R. B. Freeman. "Does a Flexible Industry Wage Structure Increase Employment? The U.S. Experience." National Bureau of Economic Research Working Paper No. 1604, April 1984.
- Cullen, D. E. "The Interindustry Wage Structure, 1899-1950." *American Economic Review* 46 (June 1956), pp. 353-69.
- Freeman, R. B., and J. Medoff. "New Estimates of Private Sector Unionism in the United States." *Industrial and Labor Relations Review* 32 (January 1979), pp. 143-74.
- Garbarino, Joseph. "A Theory of Interindustry Wage Structure Variation." *Quarterly Journal of Economics* 64 (May 1950), pp. 282-305.
- Lawrence, C., and R. S. Lawrence. "Manufacturing Wage Dispersion: An End Game Interpretation." *Brookings Papers on Economic Activity* 1 (Winter 1985).
- Organisation for Economic Cooperation and Development (OECD). *Employment Outlook*, September 1984.
- _____. "Relative Wages, Industrial Structure, and Employment Performance." Mimeo, 1985.
- Papola, T. S., and V. P. Bharadwaj. "Dynamics of Industrial Wage Structure: An Inter-Country Analysis." *Economic Journal* (March 1970).
- Reynolds, L., and C. H. Taft. *The Evolution of the Wage Structure*. New Haven, CT: Yale University Press, 1956.
- Salter, W. E. G. *Productivity and Technological Change*. Cambridge, MA: Harvard University Press, 1960.

What Is Making American Wages More Unequal?

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The distribution of income in the United States has become more unequal since the late 1960s by a variety of measures. One particularly striking indication of this trend is found in the interpersonal distribution of annual wages and salaries. After declining for 15 years, in 1978 the variance in the logarithm of wage income began to increase steeply. Following the 1978 "U-turn," wage and salary inequality rose so rapidly that by 1983 it had reached its highest level since 1964 (Harrison, Tilly, and Bluestone, 1986).

In a previous paper we reported time-series analysis over the period 1963-1984 (Harrison, Tilly, and Bluestone, 1986). In this paper we present the results of a more fine-grained, cross-sectional analysis of the sudden increase in interpersonal wage and salary inequality in the late 1970s and early 1980s. This analysis depends on a series of variance decompositions for 1978 and 1984, in which we analyze data from the annual March Current Population Survey. We use this analysis to distinguish among several alternative explanations of increasing labor market inequality.

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We start by investigating the relative importance of explanations that depend on increasing interpersonal variation in work experience (hours worked per week, weeks worked per year) versus those that depend on increasing interpersonal variation in hourly wage rates (changes in the "wage structure"). Then we evaluate four specific hypotheses or conventional wisdoms about the causes of increasing inequality. These hypotheses suggest that: (1) Demographic changes, especially the disproportionate growth in the numbers of women, nonwhites, and young workers in the labor force, have been the major cause of growing inequality. (2) Changes in the distribution of human capital have played a major role in the growth of inequality. (3) Changes in the sectoral mix of employment have *not* contributed to growing inequality. (4) The growing incidences of involuntary part-time and part-year work schedules do *not* play an important part in the increase in inequality.

We show, first of all, that most of the rise in overall inequality is due to increasing interpersonal dispersion in hourly wage rates rather than greater inequality in hours worked per week or weeks worked per year. Then we reject all four of the hypotheses suggested above. On the one hand, demographic changes in the workforce and changes in the distribution of human capital account for very little of the growth in wage and salary inequality. On the other hand, changes in industry employment shares and the growth of involuntary part-time work did contribute to rising wage and salary inequality.

Recent Research on the Growth of Inequality

Recent research has generated a variety of claims about the nature and causes of the growth in earnings inequality. One area of controversy is the degree to which the growing inequality reflects polarization in hourly wage rates as opposed to polarization in work experience. Medoff (1985), in work using the May Current Population Survey, reports only a small increase in the variance of the logarithm of *hourly* wages between 1981 and 1984. Reiff (1986), who uses the March CPS, reports a relatively small increase in the variance of the logarithm of *weekly* wages between 1978 and 1985. The apparent implication of these findings is that the U-turn observed by Harrison, Tilly, and Bluestone (1986) must be mainly the result of increasing variation in the number of hours and weeks worked. There has also been controversy about the underlying causes of inequality growth. Models of the growth of inequality fall broadly into two categories: supply-side and demand-side.

Supply-side explanations hold that increased wage and salary inequality is due to increased variation in the quality and quantity of labor supplied by workers. Thus, they stress changes in the distribution of demographic characteristics and human capital in the workforce. One leading supply-side explanation, advanced by Lawrence (1984), is that the entry of large cohorts of young workers into the labor market has increased income inequality. The entry of baby-boomers could increase inequality through two channels. First, since young workers have experience well below the mean, their entry increases the interpersonal dispersion of human capital, and thus of wages. Second, if young workers are not easily substitutable for older workers, growth in the supply of young workers (given a fixed demand) will further depress their wages. Arguments similar to that of the baby boom can be made for groups of women and nonwhites, who have entered the labor force in increasing numbers.

A final possible supply-side explanation stresses changes in the distribution of human capital. If the distributions of education and experience have become more unequal, a human capital model would predict that the earnings distribution will also become more unequal.

Demand-side explanations point to shifts in firms' demand for labor. A number of analysts have suggested that shifts in the country's industry mix have led to increasing inequality. Bluestone and Harrison (1982) argue that deindustrialization, and the resulting shift from manufacturing to service employment, have driven up inequality because the expanding service industries manifest higher wage variance than the declining production industries. (Impressionistically, insurance includes large numbers of high-wage executives and low-wage clerks, rather than many production workers with a few managers and a few sweepers.) Sectoral shifts in investment and employment would also increase inequality in wages to the extent that manufacturing industries tend to be more uniform in their wage structures, while there is greater interindustry variation among the segments of the service sector (e.g., generally high-wage professional and business services vs. generally low-wage personal services).

Reiff (1986) disputes the importance of sectoral shifts in the growth of inequality. He reports that interindustry shifts contributed only a negligible amount to the increased variance in the logarithm of weekly earnings between 1978 and 1983; most of the increase was due to greater inequality *within* industries. Lawrence (1984) also argues that industry shifts are not driving the rise in inequality.

The supply-side and demand-side models discussed above are designed to explain growing inequality in hourly and weekly wage rates. However, the changing distribution of hours worked per week and weeks worked per year must also be explained. Such changes in work experience could be the result of either supply-side or demand-side stimuli. On the one hand, a greater proportion of new workers may be *choosing* to work part time or for only part of the year—perhaps because so many of the new workers are women with children. On the other hand, firms may be creating more part-time and part-year jobs in conjunction with new employment arrangements (such as temporary work), with greater flexibility and less commitment to their workforces (including provision of fewer fringe benefits). Appelbaum (1986) argues that the growth of part-time work is the result of decisions by employers, not changes in labor supply. Subcontracting may also shift jobs from firms with more stable, full-time work arrangements to smaller contractors providing more irregular employment (Bluestone and Harrison, 1982).

Methodology and Data

Studying income distribution requires choosing a measure of inequality and the relevant population to study. We are interested in labor market outcomes, so we choose to study individual annual wages and salaries. Any broader definition of earnings—such as one including self-employment income—tends to be contaminated with nonlabor income. To summarize inequality in the interpersonal wage and salary distribution, we use the variance in the logarithm of annual wages and salaries. This measure of inequality is invariant to inflation and is tractable to three decomposition techniques to be described momentarily.

We wish to explain trends in wage inequality at the most aggregate level. Since we are investigating the effect of changes in workforce demographics, industry mix, and distribution of hours worked, it is not appropriate to narrow the population to males, or private nonagricultural workers, or full-time workers, as some other authors have done. Thus, most analyses in this paper are conducted on a population that includes all persons age 16 and over who had wages and salaries for the year greater than zero, weeks worked during the year greater than zero, and usual hours worked per week during the year greater than zero. We label this population the “wage-earning population.”

However, for certain of our variance decomposition exercises, we are forced by the data available to narrow the population further in

order to obtain more accurate weekly and hourly wage variables. In analyses where we construct weekly and hourly wage variables by dividing annual wages and salaries by weeks worked and annual hours worked, we limit the population to people whose *longest* job over the course of the year was for wages or salaries. We call this smaller population, which includes 99 percent of wage-earners, the “wage and salary subpopulation.”

We use three methods to decompose wage and salary inequality. The first decomposition method, which we call *multiplicative decomposition*, allows us to divide the overall variance in the logarithm of annual wages and salaries into components due to variation in weeks worked, hours worked per year, hourly wage rates, and a residual covariance term:

$$(1) \text{VAR} [\text{Log}(\text{Annual Wage})] = \text{VAR}[\text{Log}(\text{Weeks})] \\ + \text{VAR} [\text{Log}(\text{Hours per Week})] + \text{VAR}[\text{Log}(\text{Hourly Wage})] \\ + \text{Interaction Term}$$

The second method, *subgroup decomposition*, breaks down total variance into the contributions of different subgroups such as men and women. Using this decomposition, the total change in variance between two years can be written:

$$(2) \text{VAR} = \text{WTS1} + \text{WTS2} + \text{SPREAD} + \text{WITHIN} + \text{INTERACTION}$$

Each term has a specific meaning. *WTS1* indicates the amount of change in variance due to employment shifts between high-variance and low-variance subgroups, holding within-group variances constant. *WTS2* measures the amount of change in total variance due to employment shifts between groups whose means are different distances from the overall mean. *WTS1* and *WTS2* together measure the effect of employment shifts, holding within-group characteristics constant. *SPREAD* refers to changes in the spread among the means of subgroups. *WITHIN* shows changes in overall variance caused by changes in the within-group variances in wage. Finally, the *INTERACTION* term is what is left over.

Note that *WTS1*, *WTS2*, and *SPREAD* can be summed to obtain an *among-group effect*. To the extent that the among-group effect is large and positive, changes in the relative sizes and wage levels of the subgroups help to explain the increase in inequality over time.

The third decomposition of variance is the familiar one: *ordinary least squares regression*. OLS is, after all, simply a multivariate analysis

of variance. In particular, the *R*-squared statistic measures the ratio of explained variance to total variance in the dependent variable. We estimate an augmented human capital model in which the logarithm of the real hourly wage (constructed by dividing annual wages and salaries by weeks worked during the year and usual hours worked per week during the year, and deflated to 1978 dollars with the CPI) is regressed on years of education; years of work experience (defined as [age - education - 6]); years of experience squared; dummies for female and married; interaction terms between female and married, experience, and experience squared; dummies for black racial identification and Spanish ethnicity; and dummies for residence in the Northeastern, North Central, and Western Census regions.

We draw our data from the March 1979 and March 1985 Current Population Surveys, which give information on calendar years 1978 and 1984, respectively. The sample consists of more than 70,000 individuals in each year. We apply CPS weights to approximate the full wage-earning population of more than 100 million.

Results

Growth in Inequality

Between 1978 and 1984, the variance in the log of annual wages and salaries in the wage-earning population increased by .189—from 1.704 to 1.893. This represents a very large increase in inequality, in both historical and statistical terms. Historically, the increase amounted to bringing inequality back up to the level that existed in 1965. Statistically, simulation shows that such an increase in variance would correspond to shifting more than 1 million workers from the 1978 mean of wage and salary income to the maximum and minimum incomes (\$50,000 and \$1) reported that year, in a mean-preserving spread. Alternatively, the same increase in variance could be achieved by shifting more than 31 million people from the mean income to the 25th and 75th percentile income levels. (These shifts are strictly hypothetical, since in the actual population not even 1 million people earn precisely the mean income.)

Work Experience vs. Hourly Wage Rates

Application of the multiplicative decomposition demonstrates that about two-thirds of the rise in overall inequality in annual wages and

TABLE 1
 Multiplicative Decomposition of the Variance of the Log
 in Annual Wages and Salaries, for the Wage and Salary Subpopulation

Year	Annual Weeks	Weeks	Hours per Week	Hourly Wage	Interaction Term
1978	1.661	0.429	0.208	0.519	0.515
1984	1.794	0.414	0.210	0.608	0.562
Change, 1978-1984	0.133	-0.015	0.002	0.089	0.057
Percent of total change	100%	-11.3%	1.5%	66.9%	42.3%

Note: The wage and salary subpopulation includes only workers whose longest job over the course of the year was for wages or salaries. Decomposition is based on equation (1) in the text.

salaries is due to growing interpersonal dispersion in hourly wage rates (see Table 1). The remaining third is due to greater inequality in hours worked per week or weeks worked per year, or to changes in the covariance of wage rates with work experience. The large interaction (covariance) term indicates that the full contribution of changes in the distribution of hourly wage rates is actually even larger than two-thirds. Our finding that changes in the structure of hourly wages account for the bulk of the growth inequality appears to contradict the findings of Medoff (1985) and Reiff (1986); we believe that the difference lies primarily in the broader population that we analyze. Given this finding, it seems appropriate to evaluate a series of hypotheses offering reasons for the changing wage structure.

Demographics

In contrast to prevailing thought, demographic changes in the workforce account for essentially *none* of the growth in wage and salary inequality. That is, all of the changes in inequality took place *within* race, age, and gender groups (see Table 2). Indeed, if we performed the experiment of permitting the gender, race, and age composition as well as the relative mean wages of gender, race, and age groups to vary, *while holding the within-group variances constant*, the net effect would actually be a *decrease* in overall earnings variance. (The net effect of this experiment is given by the "among" subtotals in Table 2.) For example, the proportion of women in the workforce has increased, which would tend to increase measured inequality. However, narrowing the male-female wage differential cancelled this effect. Most strikingly (given the claims of Lawrence (1984) and others), the entry of baby-boomers into the workforce did not contribute to the increase in measured inequality at all.

TABLE 2
Decomposition of the Variance in the Log of Annual Wages
and Salaries, 1978 and 1984, and of the Change in Variance 1978-1984,
by Demographic Subgroups, for the Wage-Earning Population

Type of Subgroups	Components of Change, 1978-1984						Total
	WTS1	WTS2	Spread	Among-Group Variance	Within-Group Variance	Inter-Action Term	
Sex							
Percent of total change	2%	1%	-32%	-29%	129%	0%	100%
Race							
Percent of total change	0%	0%	0%	0%	100%	0%	100%
Age							
Percent of total change	-6%	2%	2%	-2%	101%	0%	100%

Note: The terms of the decomposition of change in variance are defined in equation (2) and adjacent text. Race subgroups are white, black, and other. Age subgroups are 16-34, 35-54, and 55+.

Human Capital, and a Final Supply-Side Test

Neither changes in the interpersonal distribution of human capital nor changing returns to human capital explain the surge in inequality. In fact, the interpersonal variance in both education and work experience have actually *declined* since 1978—even as the variance in wage income rose (see Table 3).

TABLE 3
Variance of Human Capital Variables, 1978 and 1984,
in the Wage-Earning Population

Variable	Variance, 1978	Variance, 1984
Education (years)	7.9	7.4
Experience (years)	228.5	202.6

Note: Experience is defined as (Age - Education - 6). The variances are almost identical for the wage and salary subpopulation.

Using the regression analysis of variance, we find that our augmented human capital equation accounts for only about 15 percent of the increase in inequality in hourly wages between 1978 and 1984 (see Table 4). This would seem to provide evidence that the traditional

TABLE 4

Variance Explained by Augmented Human Capital Model
and Total Variance in the Log of Hourly Wages and Salaries,
1978 and 1984, for the Wage and Salary Subpopulation

Analysis of Variance	1978	1984	Change, 1978-1984
Explained variance	.151	.164	.013
Total variance	.519	.608	.089
Explained as a percent of total	29.1%	27.0%	14.6%

Note: Regression model is described in the "Methodology and Data" section.

supply-side variances included in the model explain little of the growth in inequality of hourly wages.

Industry

In contrast, changes in industry employment shares and wage levels—notably the extraordinarily rapid deindustrialization of the durable goods sector since 1978—do appear to have contributed to growth in inequality. About 22 percent of the increase in inequality in the wage-earning population is accounted for by among-industry shifts (see Table 5). Greater proportions of the workforce have shifted

TABLE 5

Decomposition of the Variance in the Log of Annual Wages
and Salaries, 1978 and 1984, and of the Change in Variance 1978-1984,
by Industry Subgroups, for the Wage-Earning Population

	Components of Change, 1978-1984						Total
	WTS1	WTS2	Spread	Among- Group Variance	Within- Group Variance	Inter- Action Term	
Percent of total	13%	3%	7%	22%	78%	2%	100%

Note: The terms of the decomposition of change in variance are defined in equation (2) and adjacent text. There are 13 industry subgroups, including agriculture/forestry/fisheries, mining, construction, durable goods, nondurable goods, transportation/communication/public utilities, wholesale and retail trade, finance/insurance/real estate, business and repair services, personal services, entertainment and recreational services, professional services, public administration, and unemployed after leaving the armed forces.

to high-inequality industries in the service sectors (*WTS1*), and wage levels have grown more rapidly in high-wage than in low-wage industries (*SPREAD*). This finding lends support to the deindustriali-

zation-based account of growing inequality proposed by Bluestone and Harrison (1982). It appears that Reiff's (1986) and Lawrence's (1984) dismissal of the importance of interindustry shifts is premature.

Part-Time Work and Part-Year Work

Finally, we return to that part of the growth in inequality that is due to changes in hours and weeks worked. We find that the combined effect of a rising proportion of part-time workers (defined here as those who *usually* work fewer than 30 hours per week) and lower average annual wages for these part-timers accounts for a substantial portion (about 42 percent) of the jump in inequality (see Table 6). Moreover, a large minority (40 percent) of the net new part-time workers between 1978 and 1984 stated that they were working part time for economic reasons—that is, involuntarily. (Using the more conventional BLS definition of “part-time”—namely, those who worked less than 35 hours in the previous week during one of the 12

TABLE 6
Decomposition of the Variance in the Log of Annual Wages
and Salaries, 1978 and 1984, and of the Change in Variance 1978-1984,
by Hours per Week and Weeks per Year Subgroups,
for the Wage-Earning Population

Type of Subgroups	Components of Change, 1978-1984						Total
	WTS1	WTS2	Spread	Among-Group Variance	Within-Group Variance	Inter-Action Term	
<i>Hours</i>							
Percent of total	4%	11%	26%	42%	56%	2%	100%
<i>Weeks</i>							
Percent of total	-21%	11%	24%	-7%	110%	-4%	100%

Note: The terms of the decomposition of change in variance are defined in equation (2) and adjacent text. Hours subgroups are < 30 hours/week, 30-40 hours/week, and > 40 hours/week. Weeks subgroups are < 50 weeks/year and 50-52 weeks/year.

survey months—more than three-fourths of all net new part-time employees since 1978 would have preferred full-time jobs.)

On the other hand, the incidence of part-year work—employment for less than 50 weeks a year—*decreased* over the period in question (although we have found in other research that a rising proportion of those who *did* work part-year did so involuntarily). Part-year work schedules do not help to account for the U-turn.

Conclusions

We interpret these findings, taken as a whole, as evidence for the general hypothesis that growing wage and salary inequality is driven in substantial part by changes in the demand side of the labor market rather than by changes in labor supply characteristics.

A large portion of the increase in inequality is not accounted for by *any* of the variables we examine. By default, this leaves open the possibility that institutional mechanisms rather than simply supply or demand shifts play an important part in the U-turn in inequality. For example, some of the increase in inequality may be explained by the growth of domestic outsourcing or two-tiered or pay-for-performance wage systems, whose "flexibility" from a management perspective almost certainly increases wage inequality among workers, even within industries. Further investigation is therefore necessary to provide a fuller explanation of the U-turn in inequality.

References

- Appelbaum, Eileen. "Restructuring Work: Temporary, Part-Time, and At-Home Employment." In *Computer Chips and Paper Clips: Technology and Women's Employment*, Vol. II, eds. Heidi Hartmann, Robert Brant, and Louise Tilly. Washington: National Academy of Sciences, 1986.
- Bluestone, Barry, and Bennett Harrison. *The Deindustrialization of America*. New York: Basic Books, 1982.
- Harrison, Bennett, Chris Tilly, and Barry Bluestone. "Wage Inequality Takes a Great U-Turn." *Challenge* (March-April 1986), pp. 26-32. Reprinted in *The Changing American Economy*, eds. David Obey and Paul Sarbanes. New York: Basil Blackwell, 1986. Pp. 111-34.
- Lawrence, Robert. "Sectoral Shifts and the Size of the Middle Class." *Brookings Review* (Fall 1984), pp. 3-11.
- Medoff, James. "The Structure of Hourly Earnings Among U.S. Private Sector Employees: 1973-1984." Manuscript. Cambridge, MA: National Bureau of Economic Research, 1985.
- Reiff, Bradley. "Industry and Occupation Employment Structure and the Income Distribution." Manuscript. Cambridge, MA: Department of Economics, MIT, 1986.

Family Income Inequality in the United States: 1967–1984*

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In terms of real dollars per capita, personal income in the United States grew at annual rates of 3.7 percent during the 1960s, 1.5 percent during the 1970s, and 1.3 percent during the first five years of the 1980s. Perhaps partly in response to the declining rate of growth of real income, there seems to be growing interest in issues related to its distribution. Indeed, a fairly heated debate has emerged in both the popular and academic literature over the nature and meaning of changes that have allegedly taken place in the distribution of income in the United States over the past 15 to 20 years. At the heart of this debate is the claim that the distribution of income is becoming increasingly unequal. In this connection, there seem to be two major issues in dispute. The first issue simply concerns the validity of the claim that income inequality is increasing. For example, a number of analysts have purported to offer evidence that the distribution of income in the U.S. is becoming more unequal and that the U.S. is becoming a nation of “haves and have nots” with little in between (e.g., see Kuttner, 1983; Thurow, 1984). In contrast, other analysts have flatly denied the assertion that the income distribution is becoming more spread out and have argued that the facts suggesting a decline are really artifacts of the measures used to examine changes in the income distribution (e.g., see Samuelson, 1983; Levitan and Carlson, 1984; Medoff, 1984). In principle, this issue would be easy to resolve if agreement could be reached on appropriate measures of income inequality. However, many different measures have been used and they often seem to support conflicting conclusions.

The second major issue, which is closely related to the first, involves the explanation of any trend toward increased income inequality. Some economists have argued that any observed increase is

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fundamentally underlain by the operation of demographic forces such as the entry into the labor market of the relatively young baby-boom generation (e.g., see Lawrence, 1984). One clear implication of this hypothesis is that increased inequality is relatively transitory in nature (i.e., that the income distribution will become less disperse as the baby-boomers grow older). Other economists have argued that any increase in income/earnings inequality is primarily reflective of changes in the structure of the American economy such as "deindustrialization" and the conversion of the economy from one that is mainly manufacturing-based and high-wage to one that is mainly service-based and low-wage (e.g., Bluestone and Harrison, 1982). This hypothesis implies that we should view increased inequality as somewhat more permanent in nature and perhaps as part of a long-term development in which the income distribution will tend to become increasingly disperse.

The purpose of this paper is to investigate trends and patterns related to income inequality in the United States. Two main questions will be addressed:

1. Has there been growing inequality in the distribution of income in the United States? If so, how economically meaningful have the changes been?
2. What factors underlie the patterns and changes in the distribution of income?

Measurement Issues

A size distribution of income is defined by an underlying income concept—e.g., annual income or hourly wages—and by an income unit to which the measure of income corresponds, such as a family or an individual. In what follows, we focus on the distribution of total income across families. Total income refers to the sum of income received by all family members from all reported income sources. The family is defined to include both Census families (i.e., two or more related persons living together) and unrelated individuals living alone or with persons to whom they are not related.

Results are calculated that give all families equal weight. We also report results for the distribution of what we call "equivalent income across persons." This distribution is constructed by dividing the level of income for each family by the number of equivalent adults in the family, determined through a set of equivalence scales. Each person is assigned the equivalent income of his or her family, with inequality measured across persons. As pointed out by Danziger and Taussig (1979), this distribution relates more closely to well-being than the

distribution of family income since it explicitly recognizes certain key differences among families (e.g., that large families need more income to achieve a given level of welfare than do small families). The equivalence scales used are those implicit in the BLS poverty lines developed by Orshansky (1965).

In studying income distribution, our main focus is upon their dispersion (i.e., on income inequality). We measure dispersion in two ways. First, we compute a Gini coefficient—a positive function of the degree of dispersion that takes on values between zero and one.¹ Second, we use a more descriptive set of measures that separates income units into five income classes, defined as (1) lower class (LC)—incomes less than or equal to 60 percent of the median income; (2) lower middle class (LMC)—incomes above 60 percent and less than or equal to 100 percent of the median; (3) middle class (MC)—incomes above 100 percent and less than or equal to 160 percent of the median; (4) upper middle class (UMC)—incomes above 160 percent and less than or equal to 225 percent of the median; and (5) upper class (UC)—incomes above 225 percent of the median.

While this “class method” of measuring dispersion does not always allow us to say that inequality is higher or lower when comparing two distributions, it does allow us to see roughly where the changes in the distribution are occurring. Also, it is less sensitive than the Gini coefficient to errors of measurement (such as top-coding of incomes by the Census Bureau). The major shortcoming is its insensitivity to changes in the distribution of incomes within classes.²

Our data consist of 10-percent samples of income units contained in the March Current Population Surveys from 1968 through 1985. The income data we use, which relate to the calendar year prior to the March in which the survey was conducted, include cash transfers, but do not include capital gains; they are pre-tax. Since Pechman (1985) has shown that the U.S. tax system is roughly proportional over the income distribution, the results presented can, in principle, be viewed as referring to either before- or after-tax income.³

¹ In Blackburn and Bloom (1987) we examine several other measures of family income inequality. The choice of inequality index does not appear important to assessing the trend.

² For example, if incomes received by families in the lower class were to fall, but the percentage of the population in that class did not change, the class profile also would not change, though inequality has obviously increased.

³ Other problems associated with the March Current Population Surveys are discussed in Blackburn and Bloom (1987). The implicit assumption we make here is that any biases due to the nature of the data have a stable magnitude over the period and do not bias any conclusions concerning the trend.

Changes in Income Inequality: 1967-1984

Table 1 reports Gini coefficients and income-class percentages for

TABLE 1
Inequality of Total Family Income in the U.S., 1967-84

Year	Gini	LC	LMC	MC	UMC	UC
1967	.395	.297	.203	.275	.143	.083
1968	.389	.296	.204	.274	.145	.080
1969	.393	.294	.206	.258	.151	.091
1970	.406	.304	.196	.261	.144	.095
1971	.405	.300	.200	.251	.142	.107
1972	.404	.297	.203	.256	.142	.102
1973	.403	.299	.201	.253	.140	.108
1974	.393	.302	.198	.262	.143	.095
1975	.400	.291	.209	.257	.139	.103
1976	.410	.306	.194	.237	.152	.112
1977	.409	.306	.194	.238	.144	.117
1978	.402	.296	.204	.229	.152	.119
1979	.412	.307	.193	.230	.155	.115
1980	.392	.297	.203	.246	.144	.110
1981	.412	.299	.201	.235	.145	.119
1982	.414	.307	.193	.232	.142	.126
1983	.425	.313	.187	.219	.148	.132
1984	.416	.298	.202	.225	.145	.130

the distribution of total family income in the years 1967-1984. The Gini coefficient increases during the period under question. Though the Gini actually declined in nine of the 17 adjacent-year comparisons, the overall trend is significantly positive and contrasts sharply to the trendless pattern from the late 1940s to 1970 (see Danziger and Taussig, 1977).⁴ The class percentages show a substantial decline in the middle class and increases in the upper-middle and upper classes, but no clear trend for the lower end of the distribution.

The results for the distribution of equivalent income are reported in Table 2. The Gini coefficient increases for this distribution also, mostly during the last four years. The adjacent-year comparisons reveal an increase in 11 of the 17 pairs. For the class percentages, the major change appears to be a movement from the lower-middle to the lower class.

How sizable are these changes? One way of assessing the magnitude of the observed increase in inequality is to devise a tax/transfer scheme that, when applied to one year's income distribution, causes measured inequality for that distribution to be equal to the

⁴ Standard errors for the estimated Gini coefficients are on the order of 0.003.

TABLE 2
Inequality of Equivalent Income Across Persons in the U.S., 1967-84

Year	Gini	LC	LMC	MC	UMC	UC
1967	.367	.255	.245	.277	.129	.094
1968	.360	.237	.263	.287	.126	.087
1969	.364	.246	.254	.276	.131	.094
1970	.367	.242	.258	.273	.139	.088
1971	.371	.239	.261	.277	.128	.095
1972	.362	.245	.255	.290	.125	.084
1973	.363	.233	.267	.269	.143	.088
1974	.362	.243	.257	.284	.130	.086
1975	.364	.254	.246	.267	.144	.089
1976	.367	.255	.245	.291	.125	.084
1977	.358	.251	.249	.276	.140	.083
1978	.361	.243	.257	.273	.140	.087
1979	.363	.252	.248	.274	.141	.086
1980	.357	.257	.243	.283	.138	.079
1981	.380	.271	.229	.270	.139	.091
1982	.390	.270	.230	.253	.145	.102
1983	.395	.280	.220	.259	.135	.106
1984	.391	.280	.220	.272	.128	.100

inequality measure for the distribution in some other year. For instance, denote the Gini coefficients in two different years by G_1 and G_2 , where $G_2 > G_1$. Now redistribute income in the first year in the following way: transfer a lump sum of k dollars from every family unit with (pre-redistribution) income less than the median to a family unit with (pre-redistribution) income above the median. This redistribution scheme leaves the mean income unchanged, but increases inequality. It can be shown that the level of k necessary to make inequality the same in the two years is $2Y_1(G_2 - G_1)$, where Y_1 is the mean level of income in year 1. Thus, the size of the lump-sum tax/transfer as a percentage of the first year's mean income is $2(G_2 - G_1)$.

TABLE 3
Lump-Sum Redistribution Required to Restore
1967 Level of Inequality

Comparison Year	Lump-Sum (k) as a Percentage of Mean Income	Lump-Sum (k) in 1984 Dollars
1973	1.6	381
1979	3.4	809
1983	6.0	1427
1984	4.2	999

Table 3 reports the value of the lump-sum tax that would leave the 1967 distribution with the same Gini coefficient as that observed for selected later years.

The numbers reported in Table 3 indicate that a lump-sum redistribution of 4.2 percent of mean income in 1967 (i.e., 1000 1984 dollars) would increase the 1967 Gini coefficient to the level it reached in 1984. Although not a trivial sum, real personal income per capita grew 30.3 percent over the same period, while the average level of equivalent income grew 25.3 percent. Thus, at most, income inequality has shown a moderate increase since the late 1960s.

Explaining the Changes

As explained earlier, economists have hotly debated the underlying determinants of the increase in income inequality. The leading arguments in the debate have placed heavy emphasis on the effects of (1) the baby boom, and (2) sectoral shift. Both of these explanations work through the distribution of earnings across individuals, which we have not considered here. However, we can shed some new light on two alternative hypotheses we have proposed elsewhere (see Blackburn and Bloom, 1985): the business cycle, and the increased labor force participation of married women.

Business-cycle fluctuations clearly affect the location of the income distribution. It also seems likely that they will be associated with changes in income inequality, although the direction of the effect is ultimately an empirical issue. In this regard, the statistics in Table 1 reveal that the proportion of families falling into the lowest segment of the income distribution is strongly countercyclical. In contrast, no clear cyclical pattern emerges for the upper end of the distribution. Rather, the upper class shows a steady secular increase over the years considered. The lower end of the equivalent income distribution also moves cyclically, though there is still some secular increase in the size of the lower class (especially for the later years). Thus, macroeconomic conditions do seem to be correlated with changes in the shapes of the income distributions considered here.⁵

The labor force participation rate of married women increased from 37 percent in 1967 to more than 52 percent in 1984. Since the

⁵ These results tend to be confirmed by regressions of different inequality measures on cyclical indicators and a trend variable. Blinder and Esaki (1978) reach a similar conclusion in their study of the relationship between shares of income going to different quintiles of the family income distribution (i.e., Census families) and macroeconomic variables such as unemployment and inflation. Their analysis is based on data for the years 1947 to 1974.

incomes of two-earner families tend to be relatively high, this trend may account for some movement of families into the upper tail of the income distribution.

The work of Danziger (1980) and Betson and van der Gaag (1984) seems to cast doubt on the hypothesis that growth in the percentage of married couples with both husband and wife working has contributed to increasing income inequality. Both studies conclude that the earnings of married females has an equalizing impact on the income distribution, with Betson and van der Gaag arguing that the equalizing impact actually grew stronger over the 1968-1980 period. However, both studies look at the impact of wives' earnings on the distribution of total family income among married couples only. This ignores the impact that increases in married female labor force participation have had on the differences in mean incomes between married couples and all other families.

We measure the impact of wives' earnings on inequality using the approach of Danziger, and Betson and van der Gaag (i.e., we compare inequality actually observed to inequality that would be hypothetically observed if all married females' earnings were set equal to zero). Table 4 presents this comparison for selected years, for two

TABLE 4
Gini Coefficients for Actual and Simulated
Family Income Distributions

Year	Married Couples		All Families	
	Actual	Simulated with Married Females' Earnings = 0	Actual	Simulated with Married Females' Earnings = 0
1968	.323	.339	.389	.397
1973	.334	.352	.403	.406
1979	.327	.347	.412	.408
1983	.355	.376	.425	.422
1984	.351	.380	.416	.421

distributions: total income across married couple families (columns 1 and 2), and total income across all income units (columns 3 and 4). For married couples, we find the same result as the earlier studies (i.e., working wives have a negative impact on income inequality that has increased over time). However, for the distribution across all income units the equalizing impact is small and declines over time (actually

reversing direction in 1979 and 1983). Thus, in contrast to both our prior expectations and to previous literature, changes in the relative income received by two-earner couples actually seem fairly neutral in their impact on family income inequality.

Conclusions

Over the past two decades, the distribution of family income has become increasingly unequal. The fraction of families in the middle portion of the income distribution has declined, while the fraction in the upper portion has increased. The lower end of the income distribution tends to move countercyclically, with little indication of a secular trend. There is less evidence of increased inequality if one examines the distribution of equivalent income across persons (except for the last four years considered).

With either measure of income, it seems clear that the increase in inequality has not been very sizable in magnitude. Thus, concern over the so-called decline of the middle class relates more to whether the trend will be ongoing rather than to the magnitude of the change that has occurred. Although the debate over the underlying determinants of increased inequality has been carried out mostly with reference to the effects of the baby boom and sectoral shift, our results suggest that the state of the business cycle is also of importance. On the other hand, the growing number of two-earner families does not appear to have contributed to recent increases in income inequality.

References

- Betson, David, and Jacques van der Gaag. "Working Women and the Redistribution of Income." *Journal of Human Resources* 19 (Fall 1984), pp. 532-43.
- Blackburn, McKinley L., and David E. Bloom. "The Effect of Technological Change on the Distribution of Income and Earnings in the United States." Report to the National Academy of Sciences, 1987.
- . "What Is Happening to the Middle Class?" *American Demographics* (January 1985), pp. 18-25.
- Blinder, Alan S., and Howard Y. Esaki. "Macroeconomic Activity and Income Distribution in the Postwar United States." *Review of Economics and Statistics* (November 1978), pp. 604-608.
- Bluestone, Barry, and Bennett Harrison. *The Deindustrialization of America*. New York: Basic Books, 1982.
- Danziger, Sheldon. "Do Working Wives Increase Family Income Inequality?" *Journal of Human Resources* 15 (Summer 1980), pp. 444-51.
- Danziger, Sheldon, and Michael Taussig. "Conference on the Trend in Income Inequality in the U.S." Special Report 11. Madison: University of Wisconsin, Institute for Research on Poverty, 1977.
- . "The Income Unit and the Anatomy of Income Distribution." *Review of Income and Wealth* (December 1979), pp. 365-75.
- Kuttner, Robert. "The Declining Middle." *Atlantic Monthly* (July 1983), pp. 60-72.
- Lawrence, Robert. "Sectoral Shifts and the Size of the Middle Class." *Brookings Review* (Fall 1984), pp. 3-11.

- Levitan, Sar A., and Peter E. Carlson. "Middle Class Shrinkage?" *Across the Board* (October 1984), pp. 55-59.
- Medoff, James. "The Structure of Hourly Earnings Among U.S. Private Sector Employees." Manuscript. Cambridge, MA: National Bureau of Economic Research, 1984.
- Orshansky, Mollie. "Counting the Poor: Another Look at the Poverty Profile." *Social Security Bulletin* (January 1965), pp. 1-26.
- Pechman, Joseph. *Who Paid the Taxes, 1966-85?* Washington: Brookings Institution, 1985.
- Samuelson, Robert J. "Middle-Class Media Myth." *National Journal* (December 1983), pp. 2673-78.
- Thurow, Lester. "The Disappearance of the Middle Class." *New York Times*, November 5, 1984.

XV. NEW RESEARCH IN ORGANIZATIONAL BEHAVIOR AND HUMAN RESOURCE MANAGEMENT

Dualism in Contemporary Union-Management Relations

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Union-management relations in the United States have diverged during the 1970s and 1980s. In some industries, unionized workers have gained an unprecedented amount of representation and participation in company-wide managerial decision-making as illustrated by the naming of union representatives to company boards in the automobile and airline industries. In other industries, such as newspaper printing and longshoring, management has gained greater control of work by adopting new technologies which have deskilled many jobs and facilitated impersonal control of workers and their productivity. These divergent trends imply a dualism in the course of union-management relations, whereby workplace authority has been redistributed between labor and management in diverse ways in different industries.

This emerging dualism is fundamentally relevant for sociological theories of workplace control. These theories attempt to explain how social, economic, technological, and political variables affect the changing capacities of labor and management to control the implementation and outcomes of economic production. Yet, as I argue below, these theories have neglected this dualism, positing instead a unilinear, secular decline in worker control of the workplace.

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The purpose of this paper, then, is to examine the causes of the emerging dualism in industrial relations with special attention to the rise of worker participation in managerial decision-making. I refer to "worker participation," throughout this paper, as formal, joint labor-management bodies (e.g., committees) which address issues other than those that pertain directly to the employment relationship at the company and/or industry decision-making levels. Examples of worker participation include union representation on company boards and joint committees on long-range planning for restoring industry competitiveness. Worker participation, as used here, excludes participatory schemes at the shop-floor decision-making level such as quality circles. After reviewing sociological theories of workplace control and worker participation, I examine the causes of the emerging dualism with a recent comparative study of industrial relations trends in 14 U.S. industries. I conclude with implications of the emerging dualism for a sociological theory of workplace control.

Theories of Workplace Control

Despite the advent of worker participation in managerial decision-making in some U.S. industries and many West European nations, sociological theories of workplace control have posited a decline in worker control. Furthermore, these theories have neglected the developments in worker participation in managerial decision-making.

Two theories have been recently presented on post-World War II changes in the distribution of workplace authority. First, Marxian theorists, such as Braverman (1974), hold that capital accumulation, along with the related processes of centralization, technological change, and workplace rationalization, have led to the simplification or deskilling of work, yielding greater managerial control of work (also, see Shaiken, 1986). Similarly, Edwards (1979) and Burawoy (1979) argue that management has relied increasingly on bureaucratic means, such as the formal, labor allocation and compensation rules of internal labor markets, for controlling and gaining the compliance of workers.

Second, Bell's (1973) postindustrial theory holds that workplace authority has shifted away from owners and managers and toward a salaried professional elite. According to Bell, technological change and the separation of ownership from control have rendered greater importance to specialized knowledge, rather than property relations, as a source of workplace authority. Moreover, with the growing

proportion of white-collar workers and their aversion to unionization, the strength of organized labor has diminished.

The Marxian and postindustrial theories, despite their differences, posit a decline in worker control of work. Indeed, the theories may be regarded as complementary parts. The inexorable trend toward workplace rationalization of Marxian theory may partly depend on the specialized expertise of professionals (e.g., lawyers, engineers, human resource experts) identified by postindustrial theory.

However, the declining worker control which is implied by the Marxian and postindustrial theories is inconsistent with the recent institutionalization of worker participation in managerial decision-making, a trend which is neglected by both theories. This neglect may stem from the emphasis in these theories on changes at the shop-floor level of the firm, where work rationalization efforts are implemented, rather than on the enterprise decision-making level where worker participation schemes have been established. In sum, sociological theories of workplace control, by omitting developments in worker participation at the enterprise decision-making level, provide an incomplete view of the post-World War II redistribution of workplace authority. These recent developments are, however, addressed by sociological theories of worker participation.

Theories of Worker Participation

Sociologists have recently begun to develop theories of worker participation. The purpose of these theories, which are based largely on the West European, Yugoslav, and Israeli experiences during the post-World War era, is to explain the rise of institutionalized worker participation in managerial decision-making.

Two types of theories have been put forth. The first one, which I shall refer to as the "crisis-vacuum" theory, is exemplified by the work of Blumberg (1968, p. 10) and King and van de Vall (1978, pp. 101-102). According to this theory, worker participation was established during periods of national, political, and economic crisis. In such periods, a power vacuum was created whereby "the legitimacy of an established economic elite was shaken and repudiated" (Blumberg, 1968, p. 10) and workers were able to gain access to managerial decision-making. The establishment of West German codetermination is one of the illustrations of the theory offered by Blumberg (1968) and King and van de Vall (1978). The legitimacy of the German business class, which had supported Hitler, declined after the war and

“provided fertile ground for the partial triumph of the dormant ideology of codetermination” (Blumberg, 1968, p. 10).

Although crisis-vacuum theory describes the occasion (i.e., crises) when worker participation has been established, it fails to account for the forces which compel and facilitate the sharing of workplace decision-making among parties who were adversaries prior to the crisis. The theory seems to suggest that, out of the power vacuum created by the national crisis, worker participation is spontaneously generated by labor, management, and the national government. Yet, as Cutcher-Gershenfeld (1985, p. 99) recently put it, “there have been many crises that have not prompted [labor-management] cooperation.”

The second theory, which I shall refer to as “worker power” theory, is illustrated by the work of British sociologists Poole (1978) and Brannen (1983). The main emphasis here is on the role of increased worker power, especially the growth of trade unionism, in facilitating the establishment of worker participation. According to Poole (1978, pp. 37-47), the likelihood of worker participation is a positive function of worker power and the presence of societal values which legitimate the redistribution of workplace authority. Worker power, in turn, varies directly with aggregate employment levels, industrial concentration, and government actions which encourage trade union growth (for a similar argument, see Hill [1981, pp. 164-75] and Brannen [1983, pp. 46-47]). Poole (1978, p. 44) cites the “revolution of rising expectations” as evidence for the impact of societal values on the “desire for . . . workers’ participation programmes in almost every European country during the late 1960s and early 1970s.”

In emphasizing the role of power in facilitating worker participation, worker-power theory, like crisis-vacuum theory, neglects the forces which compel or motivate adversaries to modify their adversarial employment relationship by sharing managerial decision-making. Although increased worker power, in the form of trade union growth, may allow for the realization of worker participation, it does not necessitate it. Indeed, the worker-power theory of worker participation differs little from the standard, neoclassical economic explanation of trade union growth offered by Ashenfelter and Pencavel (1969). Although societal values may legitimize worker participation, worker-power theory provides no explanation of the origin of these values, much less explains how the nebulous concept of “rising expectations” has been operationalized

specifically as worker participation or as any other effort to redistribute workplace authority. The case of emerging dualism in U.S. industrial relations suggests some of the forces which may have motivated and facilitated the uneven emergence of worker participation schemes among industries during the 1970s and 1980s.

Dualism in U.S. Industrial Relations

During the post-World War II era, especially since the late 1960s, worker participation schemes have been established in several industries, including the railroads and airlines, steel, automobiles, aircraft, coal mining, telecommunications, meatpacking, and retail food (Weinberg, 1982; Cornfield, 1987). Unlike most of the labor-management committees of the World War I, 1920s, and World War II eras, which mainly addressed wage and hour adjustments at the shop-floor decision-making level (Slichter, 1941; de Schweinitz, 1949), these post-World War II initiatives involve worker participation in company- and/or industry-wide managerial decision-making on issues other than those which pertain directly to the employment relationship. In this respect, they are similar to the small number of union-management arrangements which were established in the railroads and textiles during the 1920s (Jacoby, 1983a). The post-World War II worker participation arrangements have taken various forms, including worker representation on company boards, joint labor-management lobbying efforts for changes in legislation and government regulatory practices, and joint labor-management committees on productivity, long-range planning, technological change, industry competitiveness, and job security.

Worker participation schemes have been established in only a tiny fraction of business enterprises and they have developed unevenly among U.S. industries. Indeed, in other industries, such as longshoring, newspaper printing, insurance, and air traffic control, the traditional adversarial relationship prevails—with or without collective bargaining—and, with rapid technological change, management has increased its control of work and workers (Cornfield, 1987). Increased managerial control has been achieved through job deskilling and computerized monitoring of workers and their productivity.

The simultaneous occurrence of these two industrial relations trends implies a continuum of changes in workplace control. At one end are the industries with increasing worker participation and at the other are those with increasing unilateral managerial control. Each end of the continuum may be regarded as an ideal type, with actual trends

consisting of a blend of each type. In this respect, these opposite trends imply an emerging dualism in U.S. industrial relations.

In order to explain the rise of worker participation and the emerging dualism in industrial relations trends, I compared the characteristics of seven industries with increasing worker participation to those of seven industries with increasing unilateral managerial control. The industries in the former group are automobiles, steel, aircraft, construction equipment, coal mining, public sanitation, and telecommunications; those in the latter group are agriculture, newspaper printing, longshoring, insurance, the U.S. Postal Service, air traffic control, and public education. Given the space limitations here, I will summarize these results which I have presented in greater detail elsewhere (Cornfield, 1987).

Worker participation schemes are often assumed to be the antithesis of the adversarial, collective bargaining relationship. Indeed, much of the research on labor-management cooperation has focused mainly on unionized settings (see, for example, Kochan and Dyer, 1976; Dyer, Lipsky, and Kochan, 1977; Schuster, 1983, 1985; Thomas, 1985). In contrast, I shall argue that unionization has been a necessary prerequisite for the development of worker participation in the U.S. Indeed, a recent survey shows that unionized workers are more likely than nonunion workers to favor participation schemes (see Fenwick and Olson, 1986).

Unionization is related to three industry characteristics which, together, increase the likelihood of worker participation: worker interest vested in the survival of the employer, worker bargaining strength, and an external threat to the industry.

First, unionization has contributed to the vesting of worker interests in employer survival. As a long-time advocate of seniority rules, the labor movement contributed in no small way to the development of internal labor markets and to the "decasualization" of labor in the 20th century (Jacoby, 1983b, 1984). With nonportable seniority rights, a worker could no longer afford to quit or to witness the demise of his/her employer, lest his/her wages, job security, retirement pension, and other fringe benefits be jeopardized. Similarly, with the shift from craft to industrial unionism, the local union came to represent employees of specific shops rather than serving as a hiring hall for casual, craft workers. Therefore, the survival of the local union came to depend increasingly on that of the employer (Cornfield, 1986). Although there are no data indicating the prevalence of seniority rules in U.S. industries, labor turnover and job

tenure data imply that the workers in the seven industries with increasing worker participation have a vested interest in employer survival. In all of these industries (with the exception of public sanitation for which data are unavailable), the rate of quitting was below average and/or the median job tenure was above average. In most of the seven industries with increasing managerial control, the rate of quitting was above average and/or job tenure was below average. This implies that worker participation has occurred in industries where workers are attached to their employers. In Hirschman's (1970) terms, worker participation may exemplify the exercise of "voice."

Second, unionization increases worker bargaining strength by facilitating strikes or a strike threat. With this bargaining strength, unionized workers have been able to demand participation in managerial decision-making. In no period during the 20th century has worker participation in managerial decision-making been implemented in nonunion industries (Cornfield, 1987). The percentage of unionized workers was above average in all seven industries with increasing worker participation and below average in most of the other industries.

Third, in order for labor and management to overcome their adversarial relationship, or to share decision-making within an adversarial context, an external threat to both profits and job security must be present. The major threats of the 1970s and 1980s include the internationalization of capital and government deregulation, both of which have often occurred in highly unionized industries with 40- to 50-year traditions of collective bargaining. All of the seven industries with increasing worker participation are experiencing one or more of these threats, including increased foreign and domestic, nonunion competition, declining demand from product substitution, and declining government support and protection. In contrast, all of the seven industries with increasing managerial control have experienced no threats and have maintained high growth rates.

Although the external threat compels the adversaries to share responsibility in the restoration of industry or firm competitiveness, it has often compelled each of them to pay a price for worker participation. For management, the price is decreased authority and less decision-making flexibility; for labor, the price has included wage concessions, two-tier wage structures, and reductions in employment and union membership (Cornfield, 1987).

In sum, although this purposive sample of 14 industries is not representative of the U.S. economy, it yields results which suggest the following proposition for further investigation: the likelihood of worker participation varies directly with the extent to which worker interest is vested in the employer, the degree of unionization, *and* the degree of adversity in product market conditions; also, the likelihood of increasing managerial control varies inversely with these variables.

Conclusion

The emerging dualism in U.S. industrial relations has four implications for a sociological theory of workplace control. First, the theory ought to address the unevenness in the development of workplace arrangements rather than posit a unilinear trend. The Marxian and postindustrial theories, by neglecting the emergence of worker participation and emphasizing the trend of increasing managerial control, are most applicable to high-growth, nonunion industries.

Second, in order to account for diverse trends in industrial relations, the theory ought to address decision-making at all levels in the firm and industry, including the company- and industry-wide levels where worker participation has been implemented. The Marxian and postindustrial theories, in contrast, are limited by their emphasis on the shop-floor level of decision-making, where technological change and work rationalization have altered job content and the occupational structure.

Third, as Dunlop (1958, pp. 62-93) suggested, the theory ought to address the impact of the environment which is external to the workplace, including such institutional actors as foreign and domestic competitors and government, on the elaboration of workplace rules. The Marxian and postindustrial theories, by emphasizing the effects of such intraorganizational variables as technological change and work rationalization, lack an explanation of the external forces which may compel adversaries to seek a common ground for shared decision-making.

Fourth, the theory ought to depict workplace rules and arrangements as conflict-laden outcomes of a dynamic bargaining process. The Marxian and postindustrial theories suggest an unhalting, secular decline in worker control. However, the proposition presented above not only addresses interindustry variation in industrial relations trends, but also allows for the possibility of reversal in such trends within industries. Each of the two industrial relations trends contains

the seeds of its own reversal. For example, increasing managerial control—the regimented, bureaucratic workplace—has been regarded as a source of worker alienation and, therefore, a cause of unionization. Similarly, the price paid by labor (e.g., two-tier wage structures and declining employment and union membership) and by management (e.g., loss of authority and decision-making flexibility) for worker participation arrangements could generate tensions which lead to the dismantling of these arrangements. Labor's price may promote rank-and-file unrest, while management's price could further the development of "coproduction" arrangements, substituting effectively international alliances among corporate managements for labor-management alliances within the U.S.

In conclusion, a sociological theory of workplace control can contribute to an understanding of the uneven emergence of diverse industrial relations trends, as well as to the changing course of these trends. Such an understanding may illuminate not only the dynamic changes in the balance of power between both parties of the employment relationship, but also their impact on the fortunes of labor and management.

References

- Ashenfelter, Orley, and John Pencavel. "American Trade Union Growth: 1900-1960." *Quarterly Journal of Economics* 78 (August 1969), pp. 434-48.
- Bell, Daniel. *The Coming of Post-Industrial Society*. New York: Basic Books, 1973.
- Blumberg, Paul. *Industrial Democracy: The Sociology of Participation*. New York: Schocken Books, 1968.
- Brannen, Peter. *Authority and Participation in Industry*. New York: St. Martin's Press, 1983.
- Braverman, Harry. *Labor and Monopoly Capital*. New York: Monthly Review Press, 1974.
- Burawoy, Daniel. *Manufacturing Consent*. Chicago: University of Chicago Press, 1979.
- Cornfield, Daniel. "Declining Union Membership in the Post-World War II Era." *American Journal of Sociology* 91 (March 1986), pp. 1112-53.
- . "Labor-Management Cooperation or Managerial Control?" In *Workers, Managers and Technological Change: Emerging Patterns of Labor Relations*, ed. Daniel Cornfield. New York: Plenum, 1987.
- Cutcher-Gershenfeld, Joel. "The Emergence of Community Labor-Management Cooperation." In *Industrial Democracy: Strategies for Community Revitalization*, eds. Warner Woodworth, Christopher Meek, and William Foote Whyte. Beverly Hills, CA: Sage, 1985.
- de Schweinitz, Dorothea. *Labor and Management in Common Enterprise*. Cambridge: Harvard University Press, 1949.
- Dunlop, John. *Industrial Relations Systems*. New York: Henry Holt, 1958.
- Dyer, Lee, David Lipsky, and Thomas Kochan. "Union Attitudes Toward Management Cooperation." *Industrial Relations* 16 (May 1977), pp. 163-72.
- Edwards, Richard. *Contested Terrain*. New York: Basic Books, 1979.
- Fenwick, Rudy, and Jon Olson. "Support for Worker Participation: Attitudes Among Union and Non-Union Workers." *American Sociological Review* 51 (August 1986), pp. 505-22.
- Hill, Stephen. *Competition and Control at Work*. Cambridge: MIT Press, 1981.

- Hirschman, Albert. *Exit, Voice, and Loyalty*. Cambridge: Harvard University Press, 1970.
- Jacoby, Sanford. "Union-Management Cooperation in the United States: Lessons from the 1920s." *Industrial and Labor Relations Review* 37 (October 1983a), pp. 18-33.
- _____. "Industrial Labor Mobility in Historical Perspective." *Industrial Relations* 22 (Spring 1983b), pp. 261-82.
- _____. "The Development of Internal Labor Markets in American Manufacturing Firms." In *Internal Labor Markets*, ed. Paul Osterman. Cambridge: MIT Press, 1984.
- King, Charles, and Mark van de Vall. *Models of Industrial Democracy*. New York: Mouton, 1978.
- Kochan, Thomas, and Lee Dyer. "A Model of Organizational Change in the Context of Union-Management Relations." *Journal of Applied Behavioral Science* 12 (January/February/March 1976), pp. 59-78.
- Poole, Michael. *Workers' Participation in Industry*, rev. ed. London: Routledge & Kegan Paul, 1978.
- Schuster, Michael. "The Impact of Union-Management Cooperation on Productivity and Employment." *Industrial and Labor Relations Review* 36 (April 1983), pp. 415-30.
- _____. "Models of Cooperation and Change in Union Settings." *Industrial Relations* 24 (Fall 1985), pp. 382-94.
- Shaiken, Harley. *Work Transformed*. Lexington, MA: Lexington Books, 1986.
- Slichter, Sumner. *Union Policies and Industrial Management*. Washington: Brookings Institution, 1941.
- Thomas, Robert. "Quality and Quantity? Worker Participation in the U.S. and Japanese Automobile Industries." In *Technological Change and Workers' Movements*, ed. Melvyn Dubofsky. Beverly Hills, CA: Sage, 1985.
- Weinberg, Edgar. "Labor-Management Cooperation: A Report on Recent Initiatives." In *Labor-Management Cooperation*, eds. Labor-Management Services Administration and Bureau of Labor Statistics, LMSA Publication 6 and BLS Bull. No. 2153. Washington: U.S. Government Printing Office, 1982.

Research on Procedural Justice: Implications for Industrial Relations

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Our charge today is to summarize briefly the research on the social psychology of procedural justice and its implications for industrial relations research. "Procedural justice" here refers to the perceived fairness of methods and procedures as designed and applied to determine outcomes, as opposed to the fairness of the outcomes themselves. The presentation is organized as follows: First, we will define the major issues in procedural justice research by describing two of the original studies in the field. Second, we will in a somewhat editorial fashion summarize the major conclusions that can be drawn from the research to date. Finally, we will discuss how, in our view, both social psychologists interested in procedural justice and industrial relations researchers could benefit from focusing on some of their mutual interests.

Original Procedural Justice Research

Consider the perspective of subjects in the following studies: In the first study (Folger, 1977), subjects are employees performing a menial task in a temporary organization set up by the experimenter. Subjects are paid in two installments. In the first installment, all subjects are paid equally. Pay for the second installment is manipulated in a typical 2x2 social psychological fashion, first in whether subjects are provided (or not provided) the opportunity to give input to the decision as to how much they should be paid (called a "voice" manipulation by Folger). Second, subjects' levels of pay either increase or decrease from the first to the second installment (called an "improvement"

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manipulation by Folger). The central question in this study is which factor most affects the perceived fairness of the second pay installment: presence of voice, or level of pay.

In the second study (Walker, LaTour, Lind, and Thibaut, 1974), subjects are creative directors for a team of students competing with a similar team for an advertising contract. The subject's team wins the contract, but is accused of cheating by the other team. Subjects are then asked to indicate which of four procedures they would consider most fair in resolving the dispute between the teams: (1) *bargaining*, in which the two creative directors handle the dispute by themselves; (2) *mediation*, in which a neutral third party helps discern the evidence and arguments bearing on the problem, leaving the ultimate determination of the solution in the hands of the creative directors; (3) *arbitration*, in which the disputants determine and present evidence and arguments bearing on the problem, but a neutral third party determines the solution to the disagreement; and (4) *autocratic*, in which a neutral third party both determines evidence and arguments and determines the disposition of the problem as well. Again, this can be conceptualized as a classic 2x2 social psychological study in which the two factors are who controls the arguments and evidence-gathering *process* and who controls the ultimate *decision* (labeled "process control" and "decision control," respectively—see Thibaut and Walker, 1975, 1978).

These two studies encapsulate most of what has been studied and concluded from later procedural justice research. The key elements of research on procedural justice, then, are:

1. It involves a reaction to the strict focus on outcomes (while ignoring the means through which these outcomes are determined) which was typical of earlier research on equity theory (e.g., Adams, 1965).

2. It concerns either problems involving conflicts of interest between or among two or more parties, or problems involving resource allocation.

3. The primary questions to date have been: (a) whether procedures or outcomes have greater effect on perceptions of fairness, and (b) what procedures are considered most fair.

4. It tends to be based on simple, elegant procedures that are incompletely ecologically valid models of procedure, such as Thibaut and Walker's (1975) four-fold classification.

5. The results of the research have been very consistent and (at least for many people) counterintuitive. A large number of studies in several cultures, in laboratory as well as legal, political, and organizational field contexts, lead to two very general conclusions: (a) *how* a decision was reached is frequently more important than the actual outcome of the decision in determining peoples' perceptions of the fairness of the decision, and (b) arbitration-like procedures are considered the most fair of the four procedures outlined earlier.

Recent Trends in Procedural Justice Research

Of course, as with all straightforward conclusions, there have been qualifications and extensions to these two findings (5a and 5b, above) in the more recent research. We will discuss briefly some of the major recent trends in procedural justice research before turning to its relationship to industrial relations.

Trend 1: To Question Why

One obvious direction for more recent research to take would have been to ask the question, "Why?" Surprisingly, only a few studies have directly considered why procedural fairness is important and why arbitration is preferred. Some preliminary answers do exist, however. Concerning why procedures are important, they appear to have both instrumental and value-expressive purposes for people (Tyler, 1986). By instrumental we mean that people appear to have an intuitive understanding of the notion of expected value. That is, a fair procedure may occasionally generate an unfair outcome, but in general fair procedures are believed to generate fairer outcomes than unfair procedures. Thus, peoples' concern for procedure appears to contain an appreciation for fairness over repeated plays of the game. It is certainly easier to worry about the fairness of a frequently used procedure as opposed to the fairness of decisions on a case-by-case basis. Such a view is not unlike the major premise upon which the institutional perspective of industrial relations is founded (e.g., Commons et al., 1910-1911; Dunlop, 1958). "Value-expressive" simply means that some elements of procedure appear to have value for the subjects for their own sake. People, for example, just like to have their way.

Concerning why arbitration is preferred, three primary arguments exist (Sheppard, 1985). The first we shall call the competency principle. According to this view, the most able and least biased actors

are given process control (i.e., the disputants) and decision control (the third party) in arbitration. Who but the disputants themselves could better express the evidence and arguments, for example (especially if all sides are provided equal opportunity to do so)? Thibaut and his colleagues have provided the most support for this position. The second argument we shall call the check-and-balance principle. According to this view, arbitration provides the optimal level of control over abuse of power or unintentional mismanagement of the dispute. A neutral decision-maker in theory controls for power differentials between disputants, while a two-sided presentation of arguments by disputants controls for premature conclusion of data-gathering by a neutral or a biased presentation by one party or the other. Recently we have found evidence for this position in some limited circumstances. The third argument is the value-expressive principle described earlier—that is, “voice” appears to have value in and of itself (Tyler, 1986).

Trend 2: Contingency Perspective

A second trend has been to search for the boundary conditions to these conclusions. Some do exist. For example, it appears that while arbitration is preferred for legal disputes in China, very few disagreements are considered “disputes” (Leung and Lind, 1986). Similarly, Cohen (1985) suggests that the preference for arbitration is restricted to legal contexts (see also Brett, 1983). Finally, Heuer and Penrod (1986) found that preferences for arbitration are limited to disputes for which a negotiated settlement is not possible, whereas mediation is preferred for disputes in which negotiation is possible.

Trend 3: Extensions

Another predictable trend in the research has been the development of extensions of the original models of procedure. We have been heavily involved in pursuing this perspective through the development of a richer, more complex model of procedure (e.g., Sheppard, 1984, 1985). From this research several preliminary conclusions can be derived. Most importantly, it appears that the key issue in the preference for arbitration is the disputants’ capacity to present their own points of view. Also, it seems that providing disputants some input into the design of the procedure and some capacity for appealing an undesirable outcome increases perceived fairness. Another important extension has been to consider the role of

procedure implementation in peoples' subjective judgments about procedure. Bies (1986) calls this tack the study of "procedural" control.

Trend 4: Application

The final trend has been to consider the application of principles derived from procedural justice research into new, more applied domains. Of particular interest to this audience is the recent spate of research on procedural justice in organizations. For example, Greenberg (1986) has conducted research on procedural justice and performance appraisal. From this research it appears that six principles originally derived by Leventhal (1980) apply widely in organizational settings. Leventhal suggests that for procedures to be fair, they should (1) be applied consistently, (2) utilize accurate information, (3) provide for correction, (4) be representative, (5) suppress bias, and (6) be consistent with local ethics or norms.

Summary of Recent Trends

To summarize then, recent research on procedural justice has taken very predictable directions, searching for boundary conditions, contingencies, complexities, and applications of the initial findings. These efforts have yielded very useful consequences.

Relation to Industrial Relations

From this all-too-brief overview, let us turn to consider why you should have listened to this presentation. The obvious reason for considering the research on procedural justice is the strong parallel of concern. Managing disagreement and resource allocation are key issues for both industrial relations and procedural justice researchers. Bargaining, mediation, and arbitration are identified by both groups as major vehicles for handling these (and related) issues. However, the problem with pointing to these parallels is that doing so may prompt one to ask, "So what's new?" We will next attempt to deal with this reaction.

Most importantly, procedural justice research is beginning to indicate which procedures people consider most fair, and why. Such data and theory should help in efforts to reconsider the American labor relations system (see Kochan, Katz, and McKersie, 1986). Clearly, such specification is needed as competing and contradictory assertions exist as to what labor and management consider fair. Thus,

this research may help provide fresh empirical and theoretical perspectives to an important debate.

A second, related benefit is to provide empirical support for the institutional approach to labor relations. People appear to understand the value of systems for managing a range of related problems. Some of the recent piecemeal federal labor legislation suggests that some of our legislators have forgotten this perspective.

Finally, some of the more recent procedural justice research directs attention to potentially important factors not frequently considered in industrial relations research. These include, among others, the importance of the implementation of procedure, the value of contingency-based systems in which multiple methods for managing issues exist, and the identification of criteria for evaluating procedures within a given system.

The value of joint efforts is not a one-way street, however. Social psychologists clearly would benefit from collaboration with industrial relations researchers. For example, procedural justice researchers have largely ignored such issues as imbalances in power, system contexts, and the effect of repeated exposure to a procedure in their theory and research. Clearly, the study of procedural justice in a labor context would require consideration of these and other key problems in the development of a truly general theory of procedural justice. It would appear that a collective effort is called for.

References

- Adams, J. S. "Inequity in Social Exchange." In *Advances in Experimental Social Psychology*, Vol. 2, eds. L. Berkowitz and E. Walster. New York: Academic Press, 1965.
- Bies, R. J. "The Interpersonal Dimensions of Procedural Justice: Broadening the Concept of Procedure." In *Research on Negotiation in Organizations*, Vol. 1, eds. R. Lewicki, B. Sheppard, and M. Bazerman. Greenwich, CT: JAI Press, 1986.
- Brett, J. "Procedural Justice." Paper presented at the Annual Meeting of the Academy of Management, Dallas, August 1983.
- Cohen, R. L. "Procedural Justice and Participation." *Human Relations* 38 (1985), pp. 643-63.
- Commons, J. R., U. B. Phillips, E. A. Gilmore, H. L. Sumner, and J. B. Anderson. *A Documentary History of American Industrial Society*, Vols. 1-10. Cleveland: A. H. Clark, 1910-1911.
- Dunlop, J. T. *Industrial Relations Systems*. New York: Henry Holt, 1958.
- Folger, R. "Distributive and Procedural Justice: Combined Impact of 'Voice' and Improvement on Experienced Inequity." *Journal of Personality and Social Psychology* 35 (1979), pp. 108-19.
- Greenberg, J. "Organizational Performance Appraisals: What Makes Them Fair?" In *Research on Negotiation in Organizations*, Vol. 1, eds. R. Lewicki, B. Sheppard, and M. Bazerman. Greenwich, CT: JAI Press, 1986.
- Heuer, L. B., and S. Penrod. "Procedural Preference as a Function of Conflict Intensity." *Journal of Personality and Social Psychology* 51 (1986), pp. 700-710.

- Kochan, T. A., H. C. Katz, and R. B. McKersie. *The Transformation of American Industrial Relations*. New York: Basic Books, 1986.
- Leung, K., and E. A. Lind. "Procedural Justice and Culture: Effects of Culture, Gender, and Investigator Status on Procedural Preferences." *Journal of Personality and Social Psychology* 50 (1986), pp. 1134-40.
- Leventhal, G. S. "What Should Be Done with Equity? New Approaches to the Study of Fairness in Social Relationships." In *Social Exchange: Advances in Theory and Research*, eds. K. Gergen, M. Greenberg, and R. Willis. New York: Plenum Press, 1980.
- Sheppard, B. H. "Third Party Conflict Resolution: A Procedural Framework." In *Research in Organizational Behavior*, eds. B. Staw and L. Cummings. Greenwich, CT: JAI Press, 1984.
- . "Justice Is No Simple Matter: Case for Elaborating Our Model of Procedural Fairness." *Journal of Personality and Social Psychology* 49 (1985), pp. 953-62.
- Thibaut, J., and L. Walker. *Procedural Justice: A Psychological Analysis*. Hillsdale, NJ: L. Earlbaum Associates, 1975.
- . "A Theory of Procedure." *California Law Review* 66 (1978), pp. 541-66.
- Tyler, T. R. "When Does Procedural Justice Matter in Organizational Settings?" In *Research on Negotiation in Organizations*, Vol. 1, eds. R. Lewicki, B. Sheppard, and M. Bazerman. Greenwich, CT: JAI Press, 1986.
- Walker, L., S. LaTour, E. A. Lind, and J. Thibaut. "Reactions of Participants and Observers to Modes of Adjudication." *Journal of Applied Social Psychology* 4 (1974), pp. 295-310.

New Technology and New Research Opportunities

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The focus of this paper is on the impact of new technology on organizations. The goal is to identify a critical set of research issues or problems that need to be addressed by researchers interested in industrial relations systems. The paper is organized into three sections. First, the concept of new technology is presented. Next, we take a brief look at some of the research on new technology in organizations in order to set the stage for an enumeration of research opportunities. We conclude with a set of research issues that are relevant for researchers in industrial relations.

Meaning of New Technology

Technology in this paper refers to a system of components that act on or change an object from one state to another. "New technology" for me includes, but is not limited to:

- Computer Aided Design
- Computer Aided Manufacturing
- Computer Integrated Manufacturing
- New Management Information Systems
- Expert Systems

The use of the word "new" is a bit arbitrary. What I mean is that the proliferation of robotics, vision systems, and CIM systems is primarily a phenomenon of the past five or six years. We need to identify their unique attributes and determine how these attributes bear on the organization and the industrial relations system.

The following are some of the critical attributes:

- Computer and software technology are the critical driving forces.

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- There are new skill requirements. All of these technologies require new knowledge and skills about computers, software, electronics, hydraulics, and so on.
- There is more emphasis on integration of activities and, hence, greater need for coordination.
- With greater integration, consequences of malfunctions are more costly. For example, in one organization involved in our research, failure of one piece of software will shut down the total operating system.
- There is a major explosion of information for all employees relevant to the management of the enterprise.
- In most cases computers replace directly or indirectly human activities. The robot does the welding in the automobile plant. The expert system does the production scheduling.

State of the Literature

The literature on new technology can be divided into two general areas: impact studies and process studies. The impact studies focus on the consequences of these new technologies on the individual, group, management, and the organization. The process studies focus on issues such as the adoption of new technologies, the diffusion of new technologies, and the introduction and implementation of new technologies.

Argote, Goodman, and Schkade (1983) examined the impact of robotic machine cells on the worker. They found that workers received more recognition or learned new skills and at the same time experienced more stress and greater isolation. A study by the Office of Technological Assessment (1984) reports similar findings: workers experience greater boredom, did more monitoring activities, and experienced more stress. The basic theme from these impact studies is that there are benefits *and* unanticipated negative effects on the workers.

Other research (cf. National Academy Press, 1986) has focused on the impact of new technology on management. It reports that there is: (1) a change in the skill mix of managers, with greater emphasis on computer literacy and problem-solving or analysis skills; (2) shifts in power, with computer operators and software engineers gaining more control over line production processes; (3) new modes of communication through computers vs. people; and (4) threats to job security through obsolescence and downsizing.

Impact research (cf. National Academy Press, 1986) at the organizational level indicates that the new technologies have led to the (1) emergence of new roles (super maintenance personnel); (2) emergence of more emphasis on work teams; (3) blurring of boundaries between traditional occupational roles such as maintenance vs. production; (4) challenges to existing job classification and reward systems; (5) challenges to training strategies; and (6) emergence of conflicts between introducing new technology and job-security policies and practices.

The process studies have focused primarily on decisions to adopt new technology and on the process of implementing new technology. For example, Goodman and Dean (1982) have proposed a model for the implementation of advanced technology based on a set of antecedent, process, and criterion variables. The antecedent variables include characteristics of the organization (e.g., technology, strategy), characteristics of the technology, characteristics of vendor-supplier relationships, and the implementation strategy (e.g., training program).

The antecedent variables affect a set of critical processes—socialization, commitment, reward allocation, diffusion, and sensing and recalibration, which, in turn, affect the degree of successful implementation. The concept of implementation is based on four subdimensions: knowledge about the technology, behavior utilization, attitudes toward the technology, and normative consensus toward the technology. This model helps organize prior research on the implementation process and generates a series of testable propositions.

The objective of this section is not to provide a comprehensive review of the literature on the impacts and on processes related to advanced technology. Rather, it is to illustrate the types of studies that have been done as well as some of the emerging findings. One should also note that although there are some emerging findings: (1) there are not many studies in this area; (2) most of the studies are case studies; (3) there are very few studies that systematically attempt to propose and test models about new technology in organizations; and (4) there are very few studies that attempt to study the dynamic properties of new technology over time.

Research Opportunities—Some Potential Issues

Much of this research has been done by psychologists, sociologists, or researchers in organizational behavior. There has not been a lot of attention to issues in human resource management or industrial

relations. Below are a set of opportunity areas and issues for future research.

Training

Firms introducing new technology are investing millions of dollars in training. Indeed, training is the primary strategy to introduce advanced technology. There are a lot of important issues people have noted, but not studied.

1. *Assessment of Training.* We know of few, if any, attempts to assess or evaluate the training for new technology. There is need to think of new methods to understand what people are learning as well as to assess the outcomes of training.

2. *Evaluating Alternative Strategies.* Firms introducing new technology have been experimenting with new forms of training strategies such as using learning simulators, developing learning centers, placing employees with vendors for periods of time. The targets of training represent different populations with different needs. Retraining the displaced worker, enhancing the knowledge of a skilled tradesman, or providing computer literacy to the middle manager requires different training strategies. There is no research contrasting different strategies with different targets.

3. *Evaluating Alternative Trainers.* There has been a movement away from the company trainer to training hourly employees as trainers, relying more on vendors as trainers, or letting employees do self-instruction with a PC at work or at home. We know little about the effectiveness of these options.

4. *Evaluating Content.* There has been a big switch to training a worker in *multiple* technical skills *and* social and employee-involvement skills, rather than single technical skills. We know little about the effectiveness of these alternatives.

5. *Responsibility for Training.* The introduction of new technology raises an issue of the responsibility for developing new skills in the workforce. The issue is to what extent government, education institutions, and firms should assume responsibilities for changing the skill mix of the workforce.

Reward Systems

The new technology impacts the firm's reward system and its effectiveness, in turn, is determined by the firm's reward system. There are a variety of issues that have been noted, but not studied.

1. *Job Evaluation.* The new technology changes the nature of work and its potential value. In our studies on robotics, the introduction of robots both removed noxious aspects of work and added new activities. The issue is evaluating the worth of the new job activities. In our research, this was always a point of controversy between labor and management.

2. *The Advanced Technology and Job Classification Systems.* The advanced technology requires multiskilled labor, flexibility in labor to work on different jobs, and fast reaction times when malfunctions occur. Traditional job classification systems, which focus on one person and one cluster of skills, seem in conflict with these new requirements. Given the institutional structure of most classification schemes, the question is how can they be modified to reflect the requirements of the new technology and the needs of the parties that established these systems.

3. *The Role of Pay-for-Knowledge Systems.* There has been some interest in introducing pay-for-knowledge systems in new high technology plants. The rationale is that this pay system facilitates the development of a flexible, multiskilled workforce. We know little about the effectiveness of pay-for-knowledge systems in this environment.

4. *New Incentive Contracts and New Organizational Forms.* The introduction of new information systems and new incentive contracts have led to the creation of new organizational forms such as satellite organizations that have not been studied by researchers in human resource management or industrial relations.

Commitment

From our research (Goodman and Dean, 1982), it is clear that the commitment process is important in successfully introducing technology. There are a number of unresolved issues about how to bring about that change.

1. *Who should be involved and when?* Involving people in the decisions about new technology is one way to increase levels of commitment. There are two related questions. Who should be involved, and when? Typically, decisions about new technology are made by the management-technical side of the organization. To what extent should hourly employees become involved? What is the role of the union? All of these actors can be involved in the initial decision of adoption through design, testing, and implementation. Should union officials participate in initial design decisions at the corporate level or

at the plant implementation level? What types of information need to be shared? What institutional frameworks should be used? We do not have very much information with respect to advanced technology about different models of involvement and their impact on labor-management relations.

2. *Employee Involvement and Introduction of New Technology.* We have observed the following anomaly in a number of organizations. The organizations have introduced both advanced employee involvement programs and advanced technology. These two strategies of organizational improvement are done by different people, are not coordinated, and typically have different assumptions. For example, the employee-involvement programs are based on increased participation, greater security, and control over one's environment. The introduction of new technologies often have not been based on participation, greater security, or control. The issue is whether these two strategies are in conflict and the implications of this conflict for organizational effectiveness.

3. *Job Security and Displacement.* It will be difficult for employees to develop high levels of commitment to new technology in an environment characterized by high uncertainty about job security. This is not just an issue for the hourly worker; it occurs at all levels of the organization. There has been a history of examining the effects of new technology on worker displacement in the industrial relations literature. It seems appropriate to see how lessons learned from the "automation" and other studies pertain or do not pertain to the current and future technological environment.

Conclusion

The proliferation of new technology will continue at a rapid rate. New forms of technology have important consequences for employees, management, and the organization. In this paper I have identified a set of research opportunities that are relevant for researchers interested in industrial relations systems.

References

- Argote, Linda, Paul S. Goodman, and David Schkade. "The Human Side of Robotics: How Workers React to a Robot." *Sloan Management Review* 24 (Spring 1983), pp. 31-41.
- Committee on the Effective Implementation of Advanced Manufacturing Technology. *Human Resource Practices for Implementing Advanced Manufacturing Technology.* Washington: National Academy Press, 1986.
- Goodman, Paul S., and James Dean. "The Process of Institutionalization." In *Changes in Organizations*, ed. Paul S. Goodman. San Francisco: Jossey-Bass, Inc., 1982.
- U.S. Congress, Office of Technological Assessment. "The Effects of Programmable Automation on the Work Environment." In *Computerized Manufacturing Automation.* Washington: U.S. Government Printing Office, 1984.

DISCUSSION

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This session on “New Research in Organizational Behavior and Human Resource Management” is part of the recent effort of the Industrial Relations Research Association to provide opportunities for scholars in disciplines other than economics to present their research findings to the Association’s membership.¹ In the opening paper of this session, Daniel Cornfield tells us that U.S. industrial relations feature increasing worker participation in one segment of the economy and increasing managerial control in another segment. This conclusion is based on the findings of 14 separate studies of technological change and industrial relations that were recently assessed by Cornfield (1986).

It is interesting to note that neither sociological theories of workplace control nor sociological theories of worker participation are helpful for explaining this “dualism” in industrial relations. According to Cornfield, this is because workplace control theories—namely, Marxian and postindustrialization theories—focus on the shop floor and ignore the growth of worker participation at the enterprise level, while worker participation theories—namely, crisis-vacuum and worker power theories—neglect environmental forces that motivate changes in traditional adversarial employment relationships.

Unquestionably the most important conclusion reached by Cornfield is that unionism is a prerequisite for the development of worker participation in U.S. industrial relations. Unionism is asserted to increase workers’ vested interest in the survival of the employer, increase workers’ bargaining power, and coalesce employer and worker energies in responding to “external threats” to the firm (or industry)—threats such as increasing foreign competition. However, it is not clear empirically that the seven industries reported by Cornfield to have experienced increasing worker participation differ significantly on these three dimensions from the seven industries reported to have experienced increasing managerial control. Moreover, the

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¹ See, for example, the papers and discussions included in “Historical Analysis” (1986) and “Theories of Labor History and Industrial Relations” (1986). Also see Lewin (1987a, 1987b).

question of whether unionism has contributed to the rise of foreign competition in the first set of (seven) industries is not addressed by the author.

In light of these findings, Cornfield concludes that any new sociological theory of workplace control should be able to account for (1) the "unevenness" (non-linearity) of U.S. industrial relations, (2) the multiple levels of decision-making in the firm with respect to industrial relations (3) the external (environmental) factors that shape industrial relations in the firm, and (4) the dynamic (and thus reversible) bargaining process that characterizes workplace control.

To this observer, the "crisis-vacuum" theory previously identified by Cornfield appears to address some of these factors (such as #3 above), and it would be helpful to know if the type of theory development advocated by Cornfield is (or is not) in the tradition of mid-range theories that have been said to characterize sociology as a field of study (Merton, 1968). Further, if there is indeed a dualism in industrial relations within the unionized sector, then perhaps sociologists should extend the concept of dualism to examine differences between the declining union sector and the growing nonunion sector of the U.S. economy.

In this session's second paper, social psychologists Blair Sheppard and John Minton summarize the research on procedural justice. This research indicates that the perceived fairness of procedural justice is more important than the outcomes of this dispute settlement process, and that arbitration is perceived to be the fairest of all such processes. Following the research tradition of social psychology, virtually all studies of procedural justice are experimental in nature and involve laboratory subjects. Consequently, major questions may be raised about the external validity and, thus, generalizability of the findings emanating from these studies.

This is no mere "academic" issue or one confined to social psychology. Rather, it pertains to the growing body of experimental research in industrial relations and organizational behavior more broadly, such as that on negotiating behavior (Magenau, 1983; Neale and Bazerman, 1983), the effects of the permissive-mandatory distinction in labor law on bargaining outcomes (Delaney, Sockell, and Brockner, 1986), and the effects of layoffs on employees who remain with their employer (Brockner, Davy, and Carter, 1985).

Further, the heavy emphasis on process issues in the research on procedural justice should perhaps be better balanced with research on the outcomes of procedural justice. Consider that Lewin and Peterson

(1987) recently found that grievance filers in unionized settings experienced significantly lower promotion rates and performance ratings and significantly higher turnover rates in the post-grievance-settlement period than comparably matched nonfilers. Similar findings are reported by Lewin (1987) in his study of nonunion grievance procedures in three large U.S. companies, including one whose grievance procedure culminated in binding arbitration. This evidence raises the question of whether employers (or other primary parties to organizational conflict resolution) exercise retribution against employees (or other secondary parties) who utilize grievance or other procedural justice systems.

Sheppard and Minton offer two other important observations in their paper. First, procedural justice systems vary according to the dominant cultures of particular societies. This raises the question of whether or not a contingency theory of industrial (and other) conflict resolution would help to advance the study of industrial relations. No such theory has so far emerged in the industrial relations literature despite the fact that contingency theories abound in the organizational behavior literature. Second, employee (and other individual) loyalty is apparently increased by the presence of a procedural justice system or process. This provocative finding suggests that industrial relations researchers should undertake full tests of the exit-voice-loyalty model advanced by Hirschman (1970). To date, the industrial relations research that ostensibly employs this model is heavily oriented toward exit (behavior and data) and partly oriented toward voice, but totally ignores loyalty.²

The final paper in this session, by organizational behavior specialist Paul Goodman, reviews the literature on the introduction of new technology into organizations. Goodman distinguishes between "impact" studies and "process" studies; the former examine the consequences of new technology for individuals, groups, and organizations, while the latter focus on the adoption, diffusion, and implementation of new technologies. Most of the research in this area consists of case studies, few formal tests of hypotheses have been conducted, and there is a dearth of time-series investigations. Consequently, numerous opportunities are available for researchers to study the introduction of new technology into organizations.

² See, for example, Freeman (1980). One study that attempts to get at loyalty in the context of the exit-voice model is Anderson and Lewin (1983).

What are these opportunities? Goodman proposes three areas for research—namely, training, reward systems, and commitment processes. The first of these calls for assessments of the effects of technological change on the evaluation of training needs, alternative strategies of training, and the locus of responsibility for training. The second directs researchers' attention to the effects of technological change on job evaluation schemes, pay-for-knowledge systems, and pay-incentive plans. The third "opportunity set" requires investigation of the effects of technological change on employee involvement, job security arrangements, and worker displacement.

For this discussant, Goodman's paper leads to several additional questions—and potential research opportunities—for industrial relations scholars. First, why is there no existing theory of the introduction and implementation of technological change in organizations, given the large literatures on managing change and the diffusion of knowledge?³ Second, and following Cornfield's notion of dualism, is there a conflict between the introduction of new technology (usually determined solely by the employer) and the use of employee involvement programs (which usually seek "joint" acceptance of the new technology)? Third, and again following Cornfield's findings, does the presence of a union facilitate or frustrate the process of implementing technological change? Fourth and last, if the key questions about technological change involve training, reward systems, and commitment processes, should doctoral students in industrial relations programs shift to organizational behavior programs? Put differently, one may question whether the research agenda proposed by Goodman is one that matches the competencies and interests of industrial relations faculty and graduate students.

Taken together, the papers presented at this session indicate that a variety of questions involving industrial relations and organizational behavior are being addressed by scholars in several disciplines, notably sociology, psychology, and social psychology. While theoretical and empirical advances differ markedly among these fields, and while the fields trail economics in the development of overriding analytical paradigms, this should not deter new generations of industrial relations scholars from employing the models and concepts of these fields to explore contemporary industrial relations issues and problems. Indeed, such explorations would be entirely

³ See Tushman and Romanelli (1986) and Sahal (1981).

consistent with the multidisciplinary, if not interdisciplinary, nature of industrial relations as a subject of academic inquiry.⁴

References

- Anderson, John C., and David Lewin. "The Role of the Union in the Employee's Decision to Leave: A Test of Exit, Voice, and Loyalty." Paper presented at the Spring Meeting, Industrial Relations Research Association, Honolulu, March 1983.
- Brockner, Joel, J. Davy, and C. Carter. "Loyoffs, Self-Esteem, and Survivor Guilt: Motivational, Attitudinal, and Affective Consequences." *Organizational Behavior and Human Decision Process* 36 (August 1985), pp. 229-44.
- Cornfield, Daniel B., ed. *Workers, Managers, and Technological Change: Emerging Patterns of Labor Relations*. New York: Plenum, forthcoming 1987.
- Delaney, John T., Donna Sockell, and Joel Brockner. "The Mandatory Permissive Distinction and the Collective Bargaining Process." Paper submitted to the Second Columbia Conference on Behavioral Research in Industrial Relations, November 1986.
- Freeman, Richard B. "The Exit-Voice Tradeoff in the Labor Market: Unionism, Job Tenure, Quits, and Separations." *Quarterly Journal of Economics* 94 (December 1980), pp. 643-73.
- Hirschman, Albert O. *Exit, Voice, and Loyalty*. Cambridge, MA: Harvard University Press, 1970.
- "Historical Analysis: Industrial Relations Eras." *Proceedings of the 38th Annual Meeting, Industrial Relations Research Association*, New York, 1985. Madison, WI: IRRRA, 1986. Pp. 227-53.
- Lewin, David. "Dispute Resolution in the Nonunion Firm: A Theoretical and Empirical Analysis." *Journal of Conflict Resolution* 31 (September 1987 forthcoming).
- _____. "Insights from Industrial Relations into the Study of Attainment: Summary Notes on the Special Session." *Proceedings of the 39th Annual Meeting, Industrial Relations Research Association*, New Orleans, 1986. Madison, WI: IRRRA, 1987. Pp. 513-18
- _____. "Industrial/Organizational Psychologists and Industrial Relations: A Symposium." *Proceedings of the 39th Annual Meeting, Industrial Relations Research Association*, New Orleans, 1986. Madison, WI: IRRRA, 1987. Pp. 507-12.
- Lewin, David, and Peter Feuille. "Behavioral Research in Industrial Relations." *Industrial and Labor Relations Review* 36 (April 1983), pp. 341-60.
- Lewin, David, and Richard B. Peterson. *The Modern Grievance Procedure: A Theoretical and Empirical Analysis*. Westport, CT: Quorum, forthcoming 1987.
- Magenau, John M. "The Impact of Alternative Impasse Procedures on Bargaining: A Laboratory Experiment." *Industrial and Labor Relations Review* 36 (April 1983), pp. 361-77.
- Merton, Robert K. *Social Theory and Social Structure*, 2d ed. New York: Free Press, 1968. Ch. 2.
- Neale, Margaret A., and Max H. Bazerman. "The Role of Perspective Taking Ability in Negotiating Under Different Forms of Arbitration." *Industrial and Labor Relations Review* 36 (April 1983), pp. 378-88.
- Sahal, D. *Patterns of Technological Innovation*. Reading, MA: Addison-Wesley, 1981.
- Salvatore, Nick, and David Lewin. "Theories of Labor History and Industrial Relations: A Roundtable, Summary Notes on the Panel Discussion." *Proceedings of the 38th Annual Meeting, Industrial Relations Research Association*, New York, 1985. Madison, WI: IRRRA, 1986. Pp. 384-90.
- Tushman, Michael, and Elaine Romanelli. "Organizational Evolution: A Metamorphosis Model of Convergence and Reorientation." In *Research in Organizational Behavior*, Vol. 7, eds. Larry Cummings and Barry Staw. Greenwich, CT: JAI Press, 1986. Pp. 171-222.

⁴ For more on this theme, see Lewin and Feuille (1983).

XVI. SECTORAL STUDIES OF COLLECTIVE BARGAINING: HEALTH CARE

The Changing Financial Environment and Hospital Industrial Relations: A Tale of Two Cities*

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The health care industry is experiencing major changes in the financing and delivery of health care services which have important labor relations implications. With a focus on hospitals, in this paper we examine the effect of these changes on the industrial relations system, including (1) the industry's economic environment; (2) bargaining structure, process, and outcomes; (3) contract implementation; and (4) internal union and hospital functioning.

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* The order of the authors' names is random. We acknowledge our gratitude to those union leaders, hospital administrators, and neutrals who generously shared their time and insights.

Note: A fourth paper presented during this session, "Changes in the Financing and Structure of Health Care Delivery: Professional Staff Response," by Richard U. Miller and David R. Zimmerman, appeared in a recent issue of *Journal of Medical Practice Management*.

Method

Although the health care industry also includes nursing homes, clinics, and hospices, hospitals dominate the industry in terms of revenues and employment. A comparative case study method is used to analyze the impact of health care financing on hospital industrial relations. Two locations are investigated in depth: the Twin Cities of Minneapolis-St. Paul and Philadelphia. During 1986, representatives of all major hospital unions, hospital human resource managers and neutrals were interviewed in both cities. These interviews provided perceptions about the history, current status, and future of hospital collective bargaining.

Both Philadelphia and the Twin Cities (TC) areas have large and varied health care industries with established bargaining relationships at many hospitals. However, substantial product market differences exist between the cities. The TC metropolitan area is one of the nation's most competitive hospital markets. Health maintenance organizations (HMOs) grew by 50 percent between 1980 and 1983,¹ and per capita hospital spending increases in Minnesota are among the lowest in the U.S. Many observers think the TC experience is a prelude to events in other cities.

Medical care costs in Philadelphia rose by 11.5 percent, twice the national average, from January 1984 to January 1985. Admissions remained stable during this period, perhaps because of the area's below-average HMO enrollment, while hospital stays shortened (Appelbaum and Granrose, 1986). This meant that all but three Philadelphia hospitals finished in the black during fiscal year 1985 (*Philadelphia Inquirer*, 1986).

The Model

Figure 1 displays a model outlining effects of the economic/financial environment on the industrial relations system. The solid line from environmental influences to hospitals indicates that the primary direct influence of recent environmental changes is through employers. Environmental influences also affect unions, but presumably less directly. In this model employers and unions affect and, in turn, are affected by bargaining structure, issues, and process. Bargaining structure, issues, and process also have a reciprocal relationship with bargaining power. Collective bargaining outcomes

¹ Although reliable data are not available for the TC, as of 1983 about 17.8 percent of state residents were HMO members (Council of Community Hospitals, 1984). This figure almost certainly underestimates the TC percentage.

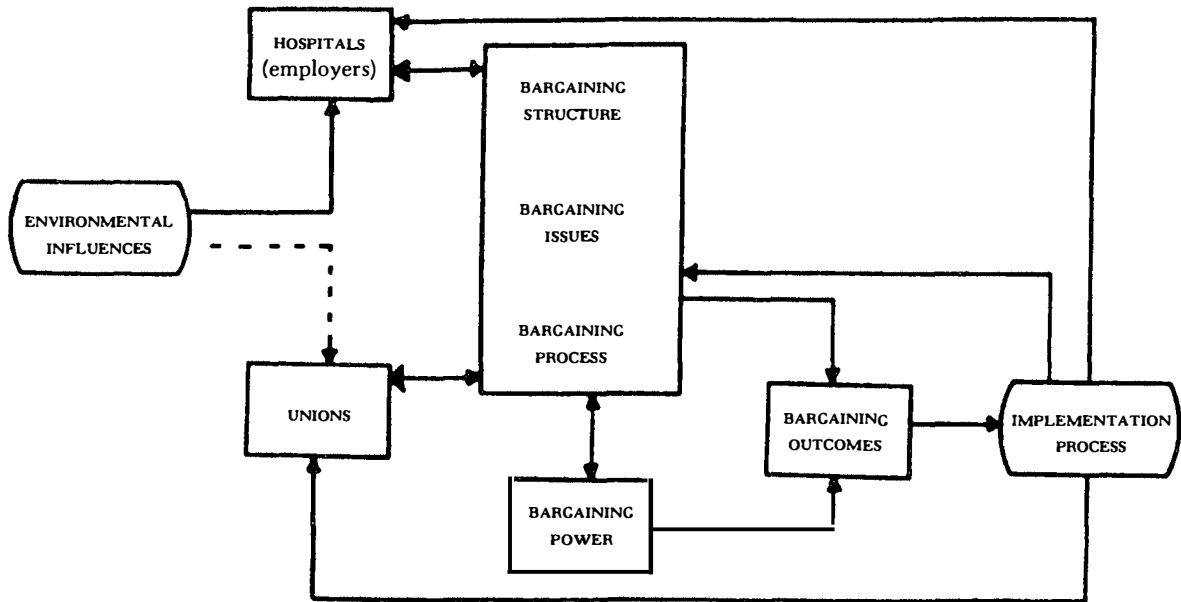


FIGURE 1
Analytical Model of Hospital Industrial Relations

are a function of structure, issues, process, and relative bargaining power.

Bargaining power has feedback effects. As shown later, implementation affects subsequent bargaining structure, issues, and process. Additionally, implementation influences the parties' internal functioning.

Environmental Influences

Between 1960 and 1982 the percentage of GNP spent on health care rose from 5.3 to 10.5 percent (Gibson, Waldo, and Levit, 1982). Because of accelerating costs, in the 1970s government policy shifted from guaranteeing health care accessibility to cost containment. Attention focused on careful regulation of existing programs, changing health care financing arrangements, and, in some respects, industry structure.

The 1973 Federal Health Maintenance Organization Act encouraged establishment of health maintenance organizations. HMOs have many forms, but all insure and provide health care and thus have strong efficiency incentives. HMOs absorb costs in excess of revenues, but benefit financially when revenues exceed costs. In contrast, traditional health care financing shifts risks from consumers to third-party payers such as employers, governments, and insurers with few (or no) risks assumed by health care providers.

In 1983 the federal government began a radically new system of paying Medicare providers who previously got retroactive payments based on costs: the Prospective Payment System (PPS). PPS encourages efficiency by reimbursing hospitals preset amounts for treatment. Payments are based on diagnostic related groups (DRGs) which reflect diagnosis, required procedures, and patient's age. Hospitals must absorb costs above the preset amounts. In addition, many state governments are limiting hospital reimbursements. Private-sector payers are also trying to reduce payouts with increased deductibles, coinsurance, mandatory second opinions, and preferred provider organizations (PPOs).²

These policies increase consumer (and payer) sensitivity to costs and decrease demand for some services. Table 1 illustrates the level and rate of change between 1983 and 1985 of some hospital characteristics in the U.S., Philadelphia, and the Twin Cities. TC occupancy rates are lower and change in admissions is higher than

² A PPO is a health care provider that negotiates reduced rates with payers in exchange for the payer's requiring those covered to use the facility.

TABLE 1
Selected Hospital Characteristics for the U.S.,
Philadelphia, and the Twin Cities, 1983, 1985

	U.S.			Philadelphia			Twin Cities		
	1983	1985	Change	1983	1985	Change	1983	1985	Change
Admissions (000)	36,152	33,449	-7.48%	624	618	-.96%	319	288	-9.71%
Occupancy Rates (%)	73.5	64.8	-11.84	82.4	71.8	-12.86	68.8	63.0	-8.43
FTE ^a RNs (00)	6,982	7,095	+1.62	150	157	+4.67	79	76	-3.80
FTE LPNs (00)	2,298	1,868	-18.71	37	30	-18.92	15	10	-33.33

Source: American Hospital Association (1984 and 1986), Table 6.

^a FTE indicates full-time equivalent.

those of the U.S. and Philadelphia. In response to these trends, hospitals are cutting costs, roughly 60 percent of which are labor costs, and introducing new technology.³ This has staffing effects. Employment of registered nurses rose in Philadelphia and the U.S. generally, but dropped in the TC by about 4 percent between 1983 and 1985. During the same period employment declines for licensed practical nurses (LPNs) were both widespread and severe.

Employers

To survive, hospitals have moved from easily passing on costs to being extremely cost conscious. Hospital adjustment strategies in this new and dynamic environment include: product market specialization and differentiation through advertising; mergers, alliances, and coalitions; system adaptations including selective and advantageous use of PPS and PPOs; and increasing staffing flexibility, especially for professional nursing staff, and greater use of part-time employees.

Unions

Three unions represent most organized TC hospital employees: (1) Minnesota Nurses Association (MNA), an American Nurses Association affiliate, represents registered nurses (RNs); (2) Service Employees International Union (SEIU) Local 113 represents LPNs, service, and some maintenance employees; and (3) Local 70 of the International Union of Operating Engineers (IUOE) represents stationary engineers.

District 1199 C is the major union in Philadelphia. Established during the early 1970s and fueled by the civil rights movement, it represents service workers, LPNs, and some professional workers. There are also several Pennsylvania Nurses Association (PNA) RN units.

Bargaining Structure

Multiemployer bargaining in the Twin Cities dates back to 1947 (Perlmutter, 1981). Currently, Health Employers, Inc. (HEI) negotiates a master contract with each union on behalf of roughly 18 TC hospitals.

This long-standing multiemployer unit is under pressure due to increased hospital competition and the goal of increased staffing flexibility. For example, in 1982 and 1984, a major hospital employer

³ Another incentive for capital investment is its favorable treatment in Medicare reimbursement formulas (Appelbaum and Granrose, 1986).

unit left HEI to negotiate separately with MNA, but remained in the unit for its non-RN employees. The desire for autonomy has resulted in the extensive use of subcommittees during negotiations.

Philadelphia has a tradition of pattern bargaining in which the economic package of two large hospitals set the standard for other hospitals. Historically, 1199 wanted to formalize a multiemployer unit. Now, concerned about the possible impact of multiemployer bargaining on financially marginal employers, it is not actively pursuing multiemployer bargaining. In addition, employers suggested the need for autonomy and appear less willing to follow patterns. The importance of autonomy does not do away with employer interdependence, however. In fact, one hospital recently reduced a wage package already on the bargaining table in response to pressure from other hospitals.

Bargaining Issues

In the Twin Cities the increased importance of job security is the most significant effect of environmental change on bargaining issues. Because labor costs constitute about 60 percent of total costs, staffing issues became central in times of financial stringency. Hospitals use layoffs, shift cancellations, and part-time workers to adjust to lower and unpredictable patient census. Thus, balancing hospital staffing flexibility and cost containment needs with worker job security concerns is an ongoing problem.

Future issues in the TC are: (1) hospital usage of rent-a-nurse services; (2) jurisdictional problems such as patient care responsibilities of RNs and LPNs; (3) training to increase staff flexibility; (4) stress resulting from working increasingly with critically ill patients; and (5) for HMOs, scheduling to cover the extended service hours resulting from increased competition for members.

In Philadelphia, most labor force reductions came from attrition and hiring freezes, but there were a few layoffs. Subcontracting caused one strike in 1986. However, some hospitals are reluctant to subcontract because of possible political repercussions resulting from layoffs in a primarily black labor force.

One observer characterizes the Philadelphia situation as one with people "waiting for the other shoe to drop." Clearly, however, increases in the economic package will be limited and job security issues such as retraining, contracting out, and floating pools will be raised.

Bargaining Process

Historically, hospitals pled poverty during negotiations. In the current environment, unions find this claim credible. They see employers as scrutinizing all economic proposals, and are in the position of deciding between wages *or* benefits.

Some evidence indicates that the current environment makes the bargaining process more adversarial. In the TC, an eight-year no-strike agreement with both SEIU and MNA lapsed in 1980 when none of the parties saw its retention as advantageous. An MNA strike was narrowly averted in 1982. In 1984, MNA struck for 39 days for contract language outlining the role of seniority in layoffs.

Other than the strike over subcontracting, there is no evidence of more adversarial relationships in Philadelphia, and hospital industrial relations were described as "mature." However, one observer expressed concern that the paucity of experienced hospital industry mediators could be a future problem as bargaining issues become more complex.

Bargaining Power

In the TC competitive product market characterized by large marketing expenditures, some hospitals are unwilling to take a strike for fear of its effect on their public image. Although labor costs are important, they are also seen as being an investment in market share. In turn, unions are hesitant to strike when one result may be staff reductions as in the 1985 MNA walkout. In Philadelphia the subcontracting strike ended with the onset of striker-replacement hiring.

Bargaining Outcomes

In the Twin Cities, union job security efforts have affected the settlement of economic issues. Although there have been no wage concessions, SEIU agreed to delay increases for new hires to improve the economic package for other members. In addition, one settlement included increases in employee health care plan contributions.

Job security also resulted in contract language changes increasing protection for senior employees. For example, the 1984 MNA settlement provided nurses with more job protection and transfer rights than previous contracts.

The increasing use of part-timers resulted in changes in benefit eligibility definitions, facilitating their access to benefits. Some contracts limit hospital rights to cancel shifts and limit the number of

shifts an employee can have cancelled prior to being classified as unemployed and eligible for unemployment compensation.

Philadelphia settlements also reflect economic changes in the industry, but job security has not been a bargaining issue. There have been no wage concessions, but several agreements include health care cost containment measures such as second opinions and billing audits.

Contract Administration

Twin Cities employers and unions reported increasingly complex contract administration and a greater number of arbitration cases. One observer described the number of arbitrations as "unheard of," while another reported more arbitrations since 1984 than in the preceding 13 years.

Unpredictable staffing needs, scheduling complications, and shift cancellations cause increased complexity in contract administration. More rules cover scheduling as hospitals attempt to control staffing costs and unions attempt to prevent unduly heavy workloads. A compounding factor is that hospitals, even those in the multiemployer unit, schedule differently.

Employee rights and discipline are also contract administration issues of growing prominence. Employers are enforcing workrules stringently, particularly those involving absenteeism and job performance. These issues are sensitive ones for workers concerned with job security.

Finally, the 1984 MNA settlement recall language resulted in many arbitration cases. Although these cases will end soon, other contract administration issues will continue to be difficult to resolve because of the changing economic environment.

Although environmental changes appear to mean more adversarial relationships between unions and hospitals, in one instance the changing climate helped foster labor-management cooperation. One TC hospital and MNA, SEIU, and IUOE have two years of experience with a labor-management cooperation agreement. The hospital believes that the necessary radical staffing changes would be impossible if each change involved a labor-management confrontation. In addition, the hospital sees employee input as valuable both in establishing employee commitment and in generating new approaches to issues and problems.

Grievances and arbitrations have not increased noticeably in Philadelphia, and the one attempt at labor-management cooperation is no longer active. However, in a recent case a large hospital went to

arbitration to defend its right to use a broad management rights clause to control staffing. The decision upheld the hospital's staffing control, and it may have major importance in the future.

Feedback Effects

Hospitals are tightening up personnel policies, hiring selectively, and contemplating development of new positions, e.g., the "super aid." Staffing changes have, in turn, affected internal union functioning. Increased numbers of part-timers result in political pressure for contractual protection for these workers, some of whom are union activists and shop stewards. The increased use of part-timers also results in more informal communication as people compare and question scheduled hours. Internal communication is also of growing importance in developing member understanding of the economic pressures faced by employers and the tradeoffs between wages and economic security.

Because staffing flexibility is important to employers, some union leaders are talking to members "very carefully" about training as a way to protect jobs, and PNA has introduced training as a bargaining issue. Local 1199 has a training fund equivalent to 1 percent of the wage bill. Reduced employment has led to internal union conflict over eligibility for and distribution of these funds.

All of these unions anticipate membership declines that will be difficult to offset with organizing. Although unorganized workers appear to be interested in unionization, NLRB policy appears to make organizing difficult.

Conclusion

Recent hospital industry experience shows vividly how public policy and resulting product market changes affect collective bargaining. Cost containment measures have increased product market competition and made necessary staffing reductions and flexibility. These changes, in turn, affected bargaining structure, issues, and process, as well as internal union functioning.

These changes are more pronounced in the Twin Cities than in Philadelphia, probably because of differences in product market competition. However, bargaining relationships in both cities are in a state of flux, and the future is anticipated to be both more difficult and more complex than in the past. Job security and staffing flexibility will continue to be important issues, while unions and employers grapple with the problems created as fewer workers care for increasingly

sicker patients. New issues include concession bargaining, cross-training, and calls for increased labor-management cooperation.

References

- American Hospital Association. *Hospital Statistics*. Chicago: American Hospital Association, 1984 and 1986.
- Appelbaum, Eileen, and Cherlyn S. Granrose. "Hospital Employment Under Revised Medicare Payment Schedules." *Monthly Labor Review* 109 (August 1986), pp. 37-45.
- Council of Community Hospitals. *Twin Cities Hospitals and HMO Factbook*, 1984 ed. Minneapolis: Council of Community Hospitals, 1984.
- Gibson, Robert M., Daniel R. Waldo, and Katharine Levit. "National Health Expenditures, 1982." *Health Care Financing Review* 5 (Fall 1983), pp. 3-4.
- Perlmutter, Irving. "Multiemployer Bargaining—The Minnesota Experience." In *Handbook of Health Care Human Resource Management*, ed. Norman Metzger. Rockville, MD: Aspen Systems Corp., 1981. Pp. 721-28.
- The Philadelphia Inquirer*, October 19, 1986, Section C, p. 1.

Hospital Competition, Labor Demand, and Labor Productivity*

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These are turbulent times in the hospital industry. After three decades of explosive growth in output, employment, and expenditures, the industry is for the first time facing severe financial constraints. Public and private health insurers, whose passive cost-based reimbursement policies facilitated the expansion of the system during the fat years, have declared that the coming years shall be lean.

The structural changes in the health care environment include both market-oriented and regulatory features, and so cannot be compared directly with the process of deregulation we are witnessing in transportation, communications, and other industries. In terms of its present and future effects on employment, earnings, and other labor-related characteristics of the industry, however, the turn of events in the health care sector does bear striking resemblance to the experiences of recently deregulated industries. In 1984, for the first time in decades, hospital employment fell. Northern California has just witnessed its longest health care strike in decades, as the unionized Kaiser system sought (and obtained) a two-tier wage system to help it compete with nonunionized rivals in an increasingly price-sensitive environment.

In order to interpret current events in hospital industrial relations and to predict their future evolution, we need a solid theoretical and empirical understanding of how market structure in this inherently localized industry influences hospital personnel policies. This paper analyzes the impact of nonprice competition among hospitals on nurse and nonnurse employment in the period up through 1982. The year 1982 marked a clear turning point, when the system was knocked off one growth trajectory and onto another one, the features of which are not yet fully clear. I begin with a brief review of earlier research by

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myself and other authors on hospital competition and then present results from labor demand and production function analyses.

Product Market and Labor Market Effects

Traditionally, the hospital industry has been characterized by vigorous nonprice competition and an almost complete absence of price competition. Consumer ignorance concerning appropriate diagnosis and therapy for the serious forms of health problems that lead to hospitalization produced a series of institutional arrangements which effectively eliminated price as a major consideration in the decision of whether to be hospitalized and, if so, where. These arrangements included the legally sanctioned professional monopoly of physicians, the whole edifice of professional ethics and obligations to function as the patient's agent without regard to economic considerations, and, of course, extensive insurance coverage for inpatient services.

Hospitals competed vigorously with one another for market share via nonprice strategies. As most patients maintained ongoing relationships with community-based physicians, hospitals competed for physician staff affiliations. Nonprice competitive strategies included maintaining excess capacity (Joskow, 1980), providing state-of-the-art clinical technologies (Luft et al., 1986), and administrative procedures giving maximum physician discretion over patient length of stay (Robinson et al., 1987). Needless to say, patients were themselves interested in many of the nonprice features of their hospital experience, and hospitals competed on the basis of amenities such as flexible admission and discharge dates (few patients admitted at Christmas time), home-like birthing suites, etc. The net result was an average cost of care 20 percent higher in competitive than in monopolistic local markets (Farley, 1985; Robinson and Luft, 1985).

An important characteristic of the hospital, from the perspective of both physicians and patients, is the level of staffing by nurses, medical technologists, service workers, and others. Physicians generally view higher nurse staffing as a component of medical care quality, and also appreciate the ability to delegate tasks to allied health professionals while continuing to bill the patient for overall case management. Staffing level also importantly influences the quality and comfort of the hospital visit as perceived by the patient. Other things equal, therefore, one expects to observe higher staffing levels in competitive than in concentrated hospital markets.

A contrary prediction concerning the relationship between hospital staffing and local competition is obtained when one focuses on the labor market rather than the product market. Wage rates tend to be substantially higher in competitive than in concentrated hospital markets and this should lead to a substitution of nonlabor for labor inputs (prices of many nonlabor inputs do not vary among local markets, as medical equipment is sold on a national market). The cost of living is invariably higher in the large cities that support competitive hospital labor markets. Given the relatively few nonhospital employment options for nurses and some types of medical technologists, moreover, monopolistic hospitals in small towns enjoy some monopsonistic power to hold down wage rates (Yett, 1975).

This discussion contains important implications for analyses of production and productivity in the hospital industry. Labor is both an input required by the technology of production and a component of the hospital's marketing strategy. Conventional production or cost function analyses that ignore this marketing component may seriously misinterpret the nature of hospital technology.

Data and Specification

The foregoing discussion implies the following general specification for hospital labor demand and production functions. Labor demand is modelled as dependent on the structure of the local product and labor markets, the output level, the vector of prices and wages for variable hospital inputs, and the vector of quantities of fixed hospital inputs. Output is a function of market structure and the vector of quantities for both variable and fixed inputs. Patient case mix severity, hospital ownership type (public, private nonprofit, for-profit), and hospital teaching role need to be controlled for in both sets of analyses.

I use data on 3651 nonfederal short-term hospitals from the 1982 Annual Survey of Hospitals, conducted by the American Hospital Association. The AHA survey contains information on nurse and nonnurse employment and earnings, number of affiliated physicians, number of beds, number of medical housestaff in training, annual number of patient admissions, teaching role of the hospital, plus 12 case-mix variables. Annual earnings for manufacturing workers in the county where the hospital is located is used as an index for the price of locally produced nonlabor inputs.

The structure of the local market is measured based on latitude and longitude hospital coordinates, from which straight-line distances between each pair of hospitals can be calculated. While the sample of

3651 hospitals is limited to those institutions that answered all relevant questions on the 1982 survey, the market structure measure was developed using coordinates for all short-term nonfederal hospitals in the continental United States. The local market for each individual hospital is defined in this study as including all other institutions within a 15-mile radius (700 square miles). The 15-mile figure corresponds to the hospital employee travel-to-work time of approximately 20 minutes calculated using the 1980 Census of Population one in one thousand sample. The market structure measure used is the logarithm of the Herfindahl index for hospital beds in the local market. To control for city size effects, county population is included as a separate explanatory variable.

TABLE 1
Market Structure, Wage Costs, and Hospital Labor Demand

	Log of Nurse Staff	Log of Nonnurse Staff
Log Herfindahl Index	-0.034 (0.007)	-0.065 (0.006)
Log Nurse Earnings	-0.498 (0.014)	-0.181 (0.012)
Log Nonnurse earnings	-0.210 (0.018)	-0.337 (0.016)
Log Manufacturing worker earnings	0.054 (0.010)	0.017 (0.009)
Log Annual admissions	0.540 (0.019)	0.462 (0.017)
Log Hospital beds	0.346 (0.022)	0.454 (0.019)
Log Physician staff	0.190 (0.009)	0.105 (0.007)
Log Physicians-in-training	0.015 (0.005)	0.030 (0.004)
County population	0.00014 (0.00051)	0.0019 (0.0004)
Teaching hospital	-0.0039 (0.0260)	0.151 (0.023)
Public hospital	-0.072 (0.012)	-0.036 (0.011)
For-profit hospital	-0.188 (0.021)	-0.295 (0.018)
Adjusted R ²	0.94	0.94
N	3633	3633

Note: Regressions also include 12 case-mix control variables.

Results

Table 1 presents labor demand equations for nurse and nonnurse hospital employees, measured in logarithmic units. As hypothesized, the structure of the local market exerts a strong effect on employment. According to these figures, a two standard deviation decrease in the Herfindahl index (i.e., an increase in the degree of structural potential for competition) would increase nurse employment by 8.1 percent and nonnurse employment by 15.5 percent. It is interesting to note that the effect is almost twice as large for nonnurses as for nurses, reflecting the substantially greater prevalence of sophisticated clinical technologies requiring specialized technicians in competitive compared to concentrated markets.

Labor demand is also sensitive to input prices, albeit with elasticities substantially less than one. Higher wage rates for nurses and

TABLE 2
Translog Production Function Estimates for Hospital Admissions

	Log Annual Admissions
Log Herfindahl index	0.068 (0.005)
Log Nurse staff	0.294 (0.057)
Log Nonnurse staff	0.061 (0.066)
Log Hospital beds	0.653 (0.052)
Log Physicians	0.060 (0.032)
Log Physicians-in-training	-0.012 (0.024)
County population	-0.00076 (0.00040)
Teaching hospital	-0.090 (0.022)
Public hospital	0.025 (0.010)
For-profit hospital	0.093 (0.018)
Adjusted R^2	0.95
N	3651

Note: Regressions also include 12 case-mix control variables plus second order terms and cross-products for the five inputs. Estimated using conventional homogeneity restrictions.

nonnurses reduce employment, other things equal. Increases in wage rates for manufacturing workers in the county increase the demand for hospital labor. This suggests a modest degree of substitutability between labor and nonlabor inputs in the production of hospital services.

Larger hospitals and ones with greater utilization of capacity (measured by number of admissions) require more nurses and nonnurse staff. Controlling for bed size and capacity utilization, hospitals with more affiliated physicians and physicians in training require more staff support. Membership in the Council of Teaching Hospitals, an index of high involvement in medical education, is associated with higher demand for nonnurse staff but, surprisingly, not for nurses. Public and for-profit hospitals use less staff than otherwise similar private nonprofit hospitals.

Table 2 presents parameter estimates from a translog production function estimated with the same body of data. Controlling for nurse, nonnurse staff, physician, physician-in-training, and hospital bed inputs, institutions in more concentrated local markets "produce" substantially more admissions per year than do hospitals in competitive local markets. Otherwise stated, hospitals in competitive local markets maintain more excess capacity than do hospitals in concentrated markets. This excess capacity may be manifested in longer lengths of patient stay, controlling for case mix severity, as well as in lower bed occupancy rates.

Hospitals with strong medical school affiliations are less "productive" than other institutions, presumably resulting from a combination of more severe patient case mix and greater excess capacity due to the large number of very specialized hospital units they often maintain. Compared to private nonprofit institutions, public and for-profit hospitals treat significantly more cases over the course of the year.

Conclusions

The hospital industry has been changing rapidly in the four years since these data were collected. Prospective as distinct from cost-based reimbursement on the part of Medicare and some state Medicaid programs, combined with increased price competition for privately insured patients, are reversing the incentives created by the cost-reimbursed, nonprice competitive financing structure. One of the most important outcomes of this changing institutional environment is a sharp decline in demand for hospital labor, due both to a decline

in admissions and average length of patient stay and to a cost-cutting reduction in staffing levels for occupied beds. The statistical results presented in this paper suggest that the most wrenching changes can be expected in structurally competitive local markets. It is in these markets that we need to pay closest attention to the traditional markers of industrial relations performance: accessions, layoffs, quits, union representation elections, and strikes.

References

- Farley, Dean. "Competition Among Hospitals: Market Structure and its Relation to Utilization, Costs, and Financial Position." U.S. Department of Health and Human Services, National Center for Health Services Research, Hospital Cost and Utilization Project Research Note 7, August 19 .
- Joskow, Paul. "The Effects of Competition and Regulation on Hospital Bed Supply and the Reservation Quality of the Hospital." *Bell Journal of Economics* 11(2) (Autumn 1980), pp. 421-47.
- Luft, Harold, James Robinson, Deborah Garwick, Susan Maerki, and Stephen McPhee. "The Role of Specialized Clinical Services in Competition Among Hospitals." *Inquiry* 23(1) (Spring 1986), pp. 83-94.
- Robinson, James, Harold Luft, Stephen McPhee, and Sandra Hunt. "Hospital Competition and Surgical Length of Stay." School of Public Health, University of California, Berkeley, draft 1987.
- Robinson, James, and Harold Luft. "The Impact of Hospital Market Structure on Patient Volume, Length of Stay, and the Cost of Care." *Journal of Health Economics* 4(3) (December 1985), pp. 333-56.
- Yett, Donald E. *An Economic Analysis of the Nursing Shortage*. Lexington, MA: D.C. Heath, 1975.

Bargaining in the Health Care Industry—A Study Revisited*

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Nonprofit hospitals were excluded from the national labor policies. Over the years, the National Labor Relations Board assumed jurisdiction over proprietary hospitals and later over nursing homes, but the not-for-profit institutions were exempt from federal law coverage until August 25, 1974, and passage of amendments to the National Labor Relations Act (Public Law 93—360). The amendments provided that all nonprofit hospital workers, numbering some 1.6 million employed in 3400 facilities, be granted the same rights and privileges under the NLRA that had been available to most workers for 39 years. In addition, the law provided special dispute-resolution procedures for employees of all health care facilities (except public) to lessen the likelihood of a strike and to lessen the impact if one did occur.

This paper provides a summary overview of the current state of bargaining and dispute settlement in the health care industry and is a modest attempt to update an earlier 471-page report.¹

Collective Bargaining Characteristics

Collective bargaining in hospitals, nursing homes, and other health care facilities is fairly recent. Until the late 1960s only about 9 percent

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¹ The study, "Impact of the 1974 Health Care Amendments to the NLRA on Collective Bargaining in the Health Care Industry," was prepared by the Federal Mediation and Conciliation Service. Lucretia Dewey Tanner, Harriet Goldberg Weinstein, and Alice Lynn Ahmuty, of the Office of Research, served as principal authors. The study was financed by the Labor Management Services Administration, U.S. Department of Labor, and was released in 1979.

of all hospital workers were represented by labor organizations; in 1977 the figure was placed at 20 percent, and in some geographic areas much higher. According to current estimates, 13 percent of private and 37 percent of public medical-sector workers are organized.²

In the 1974-1976 period, three unions dominated health care bargaining: the Service Employees International Union (SEIU), District 1199, and affiliates of the American Nurses Association. These three accounted for two-thirds of all contracts, although a total of 43 unions had one or more contracts.

Almost a decade later these three unions still dominate bargaining in the health care industry, although their share of all contracts has dropped to about 56 percent. Now more than 50 unions—AFL-CIO affiliates and others—represent health care workers.

Close to four out of five negotiations take place in 11 states, with nearly half occurring in four states alone: California, New York, Michigan, and Pennsylvania. Other heavily organized states include Minnesota, Massachusetts, Wisconsin, New Jersey, Washington, Connecticut, and Ohio. With only minor variations in ranking, these also were the states with the heaviest bargaining in the 1975-1976 period.

In Fiscal Year 1986, a total of 737 bargaining situations were recorded by the Federal Mediation and Conciliation Service: 23 percent were concluded for less than 24 months, 40 percent extended from 24 to 35 months, and 36 percent were for three years or longer. These 737 agreements involved 119,000 people in the bargaining units, or an average of 162 people covered by each contract. Total employment in these health care facilities was approximately 450,000. If the largest institutions are deleted—those with 5000 or more employees—the establishment size drops from an average of 608 to 443 persons. As originally noted in the 1976 study, the health care industry is geographically dispersed and is composed of small-size units—a situation that has not changed in the intervening years.³

² See Bureau of National Affairs, *Government Employee Relations Report*, Vol. 23, No. 1123 (1985), p. 1089.

³ In the 1975-1976 study, a total of 2585 collective bargaining situations had been recorded over a 28-month period, an average of 92 per month. The total number annually would average 1104, which is higher than the 737 for Fiscal 1985. This lower number, in the face of increased organizing, could be attributed to several possible factors: Fiscal 1985 was a low bargaining year in the two- to three-year cycle; not all health care notices are sent to FMCS notifying the agency of intent to reopen a contract; and units are being consolidated.

Initial contracts represent 13 percent of all industries and 15 percent of all health care cases. The rate of first contracts has slowed from a decade ago when organizing accelerated following passage of the 1974 amendments. In that early period initial agreements represented about 30 percent of all health care bargaining.

Close to two out of three health care contracts are negotiated for two years or less. Just the reverse occurs in all other industries, where almost 60 percent of the contracts are for three years or longer. Negotiation of shorter agreements was observed in 1974–1976 and the pattern apparently has not changed.

The drive to organize, while slowed, is continuing. For example, the SEIU and the United Food and Commercial Workers have a joint campaign to organize and negotiate with Beverly Enterprises, Inc., the nation's largest nursing home chain with 940 homes and 87,000 employees. According to reports, the unions have won 62 representation elections involving 9000 employees in 21 states and have lost 27 elections ("Drive to Organize," 1985, p. 52).

Cooperation between unions is not new and was noted in the 1976 FMCS study as a way for unions to become more effective and avoid jurisdictional conflicts. Joint efforts and negotiations of multiunion agreements have existed in Buffalo since the 1960s, when seven unions formed the Hospital and Nursing Home Organizing Committee, and in Chicago where the SEIU and the International Brotherhood of Teamsters have formed the Hospital Employees Labor Program (HELP).

Wage and Employment Trends

One of the concerns of some supporters of the 1974 legislation was the large number of low-wage earners and the high turnover rate in the health care industry, which tended to create instability in the industry. In the years prior to the amendments, hourly earnings in hospitals were 20 to 30 percent below rates in manufacturing and were either slightly below those for all other services or about the same. Some legislators sought to correct the imbalance through granting of collective bargaining rights in order to continue the supply of workers the industry needed. As pointed out by the Bureau of Labor Statistics, the supply of health care workers grew rapidly throughout much of the post-World War II period. The demand for health care services escalated with the growth in private health insurance coverage and the introduction of large-scale public programs, including Medicare and Medicaid (Kahl and Donald, 1986).

In the years following the 1974 amendments, wage differentials have, in fact, changed dramatically. Hospital earnings have been gaining on rates paid to those employed in manufacturing establishments, and the differential has been dropping since the mid-1970s. By 1985 the differential was a mere 6 percent—\$9.01 average hourly hospital earnings compared to \$9.52 for all manufacturing. When hospital rates are compared to those for all services over a decade, the changes again are dramatic. In years prior to the 1974 act, earnings of all services were higher than those in hospitals, but hospital wages gained after the law and, as of 1985, they were 13 percent above all service rates—\$9.01 compared to \$7.97.⁴

To determine whether the dramatic increases were attributable solely to increased collective bargaining, rates for selected occupations were compared in areas high in organization with those not organized to a great extent. Rates in three highly organized areas—San Francisco, New York City, and Minneapolis-St. Paul—were compared to those in Atlanta, Houston, and Miami Beach, areas with relatively little organization. Four occupations were compared: registered nurse, general duty; admitting clerk; nursing aid; and stationary engineer. The highest wage gains between 1975–1976 and 1985 in the six areas were in Minneapolis-St. Paul and the lowest were in New York City, both highly organized. The highest actual rates for all occupations were in San Francisco, followed by New York City and Minneapolis-St. Paul.⁵ Although wages in the less unionized areas were and are below those in highly organized areas, the percentage gains registered during the decade exceeded or equalled those in the highly organized areas.

Unions operating in the health care industry have been successful in resisting pay cuts and give-backs to a greater extent than unions in other industries. The Kaiser Permanente, for example, sought several concessions, including a 20-percent pay cut, in their negotiations with the California Nurses Association (CNA). Instead of a pay cut, the CNA, which represents more than 5000 nurses, was able to negotiate pay increases of 4 percent in 1985 and 5 percent in 1986, although it agreed to eliminate one of the two premium pay options for nurses working on a holiday (“California Nurses,” 1985, p. 51). New York

⁴ Derived from Bureau of Labor Statistics, *Employment and Earnings*, various monthly issues.

⁵ For wages, see Industry Wage Survey: *Hospitals*, August 1975–January 1976, Bull. 1949 (Washington: U.S. Department of Labor, Bureau of Labor Statistics, 1977), and individual area wage surveys for August 1985, released in late 1985 and early 1986.

City's largest and longest strike of 44 days in 1984, involving 52,000 employees and 45 private nonprofit hospitals and nursing homes, ended with two 5-percent pay increases for members of District 1199, only, however, after Governor Cuomo indicated that the state's Blue Cross/Blue Shield would be reimbursed for the higher cost ("New York City's Longest," 1984, p. 60). The subsequent agreement negotiated in 1986 between the League of Voluntary Hospitals and Homes and 1199 also provided for increases of 13 percent over three years, although entry rates over the contract term will average less—9 percent.⁶

Thus, the change in the relationship in hospital wages could be explained by a number of factors, including collective bargaining, slowed growth in rates of all manufacturing and service industries, and the demand for hospital workers. Whether this development can be sustained in light of increased cost containment remains to be continuously studied.

Dispute Resolution

Because of the critical nature of health care provision, Congress adopted unique dispute resolution provisions. These required that any party to a collective bargaining agreement who wishes to negotiate must provide the other party with a 90-day notice and also must submit a 60-day notice to the Federal Mediation and Conciliation Service. (In all other industries, the notices required are 60 and 30 days, respectively.) These notices allow the FMCS to carry out its mandated mediation function (unique to this industry) and to decide if an impasse is likely. If an impasse is reached, or is likely, the FMCS may appoint a Board of Inquiry that makes nonbinding fact-finding recommendations. The amendments also require a union to give the institution a 10-day notice of its intention to conduct a work stoppage and when it will occur.

In the years immediately after passage of the health amendments, the FMCS established a number of Boards of Inquiry, generally selecting a single outside person experienced in arbitration from its in-house roster, although it did, on a few occasions, establish a three-person panel. In the first two years under the amendments, the FMCS appointed 111 Boards of Inquiry, which represents three-quarters of all 150 Boards appointed in the 10-year period. The heavy initial use of

⁶ See Bureau of Labor Statistics, *Current Wage Developments* (November 1986), and "Developments in Industrial Relations," *Monthly Labor Review* (December 1986).

BOIs allowed FMCS to examine and review the role of FMCS mediators and the BOI process, to assess the effectiveness of the time limits, and to observe the parties' reaction to the new process.

The FMCS soon discovered that, as in all other industries, serious bargaining usually does not occur until very near the contract expiration date. Thus, the law's specified time-constraints for appointing a fact-finder (within 30 days of receipt of the 60-day notice or 30 days before the expiration date of the contract) were too early and too confining. The law's requirement was found to be incompatible with the negotiating process and dispute settlement experience.

In order to gain the flexibility needed and remain within the law, the Mediation Service developed an alternative approach, asking the parties to sign a stipulation in which they agree that in the event of a threatened strike, a fact-finder or third-party neutral could be appointed at a more appropriate point in the negotiations.⁷

In its effort to make the process more responsive to the parties' needs and interests, the FMCS now allows them to jointly select the BOI third parties and to choose binding arbitration rather than a BOI or fact-finding to resolve their impasse. (Parties in some states were comfortable with binding arbitration, having experienced it under state law.)

Both the Boards of Inquiry and the fact-finding board render advisory, nonbinding recommendations to the parties. As of May 1986, a total of 104 of these fact-finding boards have been named, but, again, as in the case of the Boards of Inquiry, their use has diminished in the past few years. Only two BOIs and one fact-finder were used during the 1985-1986 period.

Work Stoppages

A primary objective of the 1974 health care amendments was to extend collective bargaining rights while minimizing the possibility of strikes. This was what prompted the framers of the act to include mandatory mediation, Boards of Inquiry, and strike notice procedures. Despite the safeguards, strikes do occur.

During Fiscal 1985, there were 32 strikes in the recorded 737 bargaining situations in the health care industry, or 4 percent of the total. This percentage has remained relatively stable compared to the

⁷ Several court decisions had further limited FMCS discretion in applying the time limits—*Affiliated Hospitals of San Francisco v. Searcy* (1978), and *Sinai Hospital of Baltimore v. Searcy* (1977).

earlier period when the rate was 5 percent. Based on estimates of the strike rate throughout the economy, the 4-percent rate appears comparable.⁸

Bargaining units involved in a strike are relatively small, averaging 216 workers; one involved a unit of 1000 or more workers. Strikes during Fiscal 1985 varied in length from two days to the longest one, 204 days. Excluding this stoppage and another one that lasted 129 days, the average duration was 20 days. Not all strikes ended with an agreement, however. The unions lost six strikes, including the one that lasted 204 days. In addition to the six strikes that resulted in no contract, an additional 51 bargaining situations, or 8 percent of the total, appear to have culminated in no contract. In some cases the union was decertified, the situation was referred to arbitration, there were legal problems, no mediation took place, or it is unknown how negotiations were resolved.

Recent Developments

One of the issues in framing the amendments and in early discussions concerned the question of unit determination. Both Senate and House reports on the bill cautioned against a proliferation of bargaining units that would result in small units closing down a whole facility, lead to jurisdictional disputes, interfere with health care team workers, and present excessive administrative costs. Despite its words of caution, Congress left the determination of appropriate units to the National Labor Relations Board.

In its initial review and hearing on the history of health care bargaining, the NLRB decided that five units were appropriate: registered nurses, all other professional employees, technical employees, clerical workers, and, finally, a service and maintenance unit. This determination lasted until the Board's decision in *St. Francis v. International Brotherhood of Electrical Workers* cases I and II in which the facility refused to bargain based on an allegation that the unit certified was inappropriate. On August 13, 1984, the Board announced the adoption of "a disparity of interest standard" and remanded the case back to the NLRB regional director. The

⁸ BLS no longer maintains strike statistics, except for stoppages involving 1000 or more workers, a small number of the total bargaining situations. In the 1976 study it was estimated that about 3000 strikes occur at contract termination time and, of the 70,000 contracts negotiated each year (about 165,000 in total), the strike rate was 4-5 percent (see "Impact" study cited in note 1, p. 344).

interpretation of the Board's decision is that, rather than five units, only two—professional and nonprofessional—are appropriate.

Since this Board decision, Congressional hearings have been held on the issue, and the unions contend that the NLRB is misreading the legislative intent and the long history of bargaining.⁹ In view of the reduced number of recent initial contracts compared with the earlier period, the decision may well be having a chilling effect on organizing efforts.

Conclusion

The health care industry has emerged from being a low-paying, relatively unorganized industry to one, if not high-paying, that is better paying and highly organized in some areas. Aside from mediation, the dispute resolution procedure outlined in the 1974 amendments has not been utilized to a great extent in the past few years, compared to the heavy use immediately following the act's passage. The strike rate appears to have changed little over the years, remaining stable at about 4 percent. From another perspective, it can be said that 96 percent of all collective bargaining contracts are negotiated peacefully. Over the 10 years since the amendments, health care labor relations have become increasingly similar to private-sector labor relations—a moderate number of work stoppages, a primary reliance on negotiation, and mediation to settle disputes, with BOIs, fact-finding, and arbitration used rarely.

References

- Barrett, Jerome T. "A Discussion on Health Care Research." *Labor Law Journal* (August 1977).
- "California Nurses Association Settles." *Monthly Labor Review* (June 1985).
- "Drive to Organize Nursing Homes Successful." *Monthly Labor Review* (September 1985).
- Kahl, Anne, and Clark E. Donald. "Employment in Health Services: Long Term Trends and Projects." *Monthly Labor Review* (August 1986).
- Miller, Richard U. "Hospitals." In *Collective Bargaining: Contemporary American Experience*, ed. Gerald G. Somers. Madison, WI: Industrial Relations Research Association, 1980. Pp. 373-433.
- "New York City's Longest Health Care Strike Ends." *Monthly Labor Review* (November 1984).
- Searce, James, and Lucretia Dewey Tanner. "Health Care Bargaining Experience." *Labor Law Journal* (July 1976).

⁹ Joint hearings before the Subcommittee on Labor-Management Relations of the Committee on Education and Labor and the Manpower and Housing Subcommittee of the Committee on Government Operations, 98th Congress, 2d Session, October 3, 1984.

XVII. CONTRIBUTED PAPERS: LABOR ECONOMICS AND LABOR MARKETS

Occupational Skill Training and Transferability: How Does the Military Fare?

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Of long and continued interest to researchers is the transferability and economic impact of occupational skill training.¹ Recent controversy has surfaced concerning the transferability of military-provided training and whether the military is justified in advertising itself as “a great place to start.”² In the research reported in this paper, we used data from the Youth Cohort of the National Longitudinal Survey to investigate training transferability. First, the data set is described briefly. Next, evidence on the amount of skill transfer between training providers and employment for those in the sample is presented. Some reasons for differences in skill transferability across training providers are suggested. Last, the impact of skill training and skill transfer on the wage and salary income of those in the sample is summarized.

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¹ For examples of such work, see Freeman (1974), Adams (1978), and Adams and Mangum (1985).

² The controversy seems to have originated with a *Wall Street Journal* article of October 9, 1985, entitled “Rude Awakening: Many Veterans Find Military No Road to Civilian Success.” This article has been followed by segments on the NBC Nightly News and the ABC news program Nightline.

The Data

The data for the analysis are drawn from the NLS youth cohort, a stratified nationally representative sample of approximately 13,000 young men and women ages 14 to 21 when first interviewed in 1979. The sample analyzed includes individuals who at the initial interview were not currently enrolled in school and who, at the time, reported their last enrollment as being between July 1, 1975 and December 31, 1979. The military portion of this sample is those meeting this school-enrollment criterion who chose to enter the military at some point during the 1975-1979 period; those meeting the enrollment criterion but never serving in the military constitute the civilian portion of the sample. Of the 4513 meeting the enrollment criterion, 1178 had military experience as of the 1984 interview. This number includes 628 who completed a full enlistment and left the military by the 1984 interview date, 246 who left the military prior to completing an enlistment term, and the remainder who completed a tour of duty and were still serving in the military as of 1984. Members of the first group are referred to as veterans, the second group as attriters, and the third group as still-serving completers.

Evidence of Skill Transfer

To explore the extent of skill transfer between training acquired in the military and civilian employment, the individual records of veterans and attriters in the sample were examined and their military occupational specialties determined. Postmilitary employment histories yielded the occupation of each reported civilian employment. Using the Department of Defense's *Occupational Conversion Manual* (1982) and *Military Career Guide* (1985), we compared occupational specialties for which military training was received to occupations held in postmilitary civilian employment. Skill transfer was defined to exist when military occupational specialty and occupation of civilian employment matched.³

To place the information on military skill transfer in perspective, individuals in the sample who did not serve in the military but who reported participation in postschool occupational training programs were identified. Of the 3335 in the sample who had not served in the military, 24.7 percent reported completing such a program of 30 days

³ Of the 874 veterans and attriters in the sample, there was sufficient information on all but 63 individuals to determine whether or not skill transfer had taken place under the above definitions. Of the 811 cases that could be analyzed, skill transfer was established in 47.1 percent of the cases—47.8 percent among veterans and 45.1 percent among attriters.

TABLE 1
Skill Transfer Among Members of the 1975-1979 Sample Who Participated in Postschool Occupational Training, by Institutional Provider of Training^a

Institutional Provider of Training	Number of Sample Cases		Percentage Distribution		Percent Skill Transfer to Employment ^b	
	Male	Female	Male	Female	Male	Female
Civilian Training Providers:						
Business college	18	47	4.7	13.3	22.2	55.3
Nursing program	6	32	1.6	9.1	66.7	59.4
Apprenticeship	34	5	8.9	1.4	70.6	40.0
Vocational/technical institute	125	90	32.9	25.5	52.0	61.1
Barber/beauty school	4	25	1.1	7.1	75.0	64.0
Flight school	8	0	2.1	—	0.0	—
Correspondence course	45	40	11.8	11.3	26.7	15.0
Company/employer	95	62	25.0	17.6	85.3	82.3
Other	45	52	11.8	14.7	46.7	55.8
Missing	50	40	—	—	—	—
Total	430	393	100.0	100.0	56.3	57.8
Total (without company/employer included)					46.7	52.6
Military Provided Training	535	276	—	—	49.8	45.8

Source: National Longitudinal Surveys—Youth Cohort, 1979-1984.

^a Number of cases missing data on provider of training not incorporated into calculation of percentages (provider distribution and skill transfer).

^b Reflects weighted data.

or longer duration between 1979 and 1984. Individual work histories were examined and instances of training transfer recorded. The results of this effort are reported in Table 1.

The percentage of individuals in the sample who received occupational training in the military and transferred these skills to civilian employment is very similar to the percentage of individuals trained by nonmilitary providers and able to transfer their acquired skills to civilian employment. This comparison is particularly strong when employer-provided training is excluded from consideration, since it constitutes training within an internal labor market and a resultant near-guarantee of transferability and job relevance.

It is useful to examine the impact of the different training providers on the probability of skill transfer, controlling for other factors. To this end the likelihood of an occupational match between training and employment was modeled as a function of educational attainment and AFQT score, labor market experience, occupational area of training, institutional training provider, and years of posttraining labor market exposure. A minority status variable was included to capture any difference in probability of skill transfer due to differential labor market treatment on the basis of race.⁴ Table 2 summarizes the results of this analysis.

For the sample analyzed, males receiving their occupational training through apprenticeship programs or employer-provided training were significantly more likely to record skill transfer between training provider and employment than were those receiving occupational training in the military. Among females, those receiving training through their employers (company-provided training), nursing programs, and beauty schools were significantly more likely to find jobs in the occupation for which they were trained than were women who received training in the military.

Controlling for training provider, males trained in the craft, operative, or service occupations were significantly more likely to find employment in the occupation for which they were trained than were men trained in management, sales, or clerical occupations. For

⁴ Among the participants in occupational training provided by civilian-sector training institutions, there were 256 individuals who had previously served in the military long enough to have been assigned occupational specialties and to have received military-provided occupational training. For purposes of the logistic regressions, these individuals (who had two training providers—one military, one civilian—and an opportunity of transferring skills from either or both training experiences) were treated as two separate individuals—one taking the nonmilitary training values on provider, occupation, and skill transfer; the other having the military training characteristics on provider, occupation, and skill transfer.

TABLE 2

Logistic Regression Estimates of the Effect of Training Provider, Occupation, and Other Variables on the Probability of Skill Transfer^a

(Standard errors in parentheses)

	Males		Females	
AFQT	0.001	(0.005)	0.017**	(0.006)
Highest grade completed	0.083	(0.080)	0.067	(0.092)
Labor market experience	0.029**	(0.013)	0.001	(0.015)
Experience squared	-0.0002*	(0.0001)	-0.0001	(0.0001)
Minority	-0.413**	(0.201)	0.269	(0.240)
Training provider (military omitted category)				
Apprenticeship ^b	1.368**	(0.540)	0.873**	(0.349)
Vocational/technical institutes	-0.090	(0.265)		
Proprietary business colleges and correspondence courses	0.063	(0.339)	0.387	(0.331)
Nurses programs ^c	—		1.530***	(0.498)
Barber/beauty school ^c	—		1.693***	(0.574)
Company-employer	1.659***	(0.360)	1.700***	(0.425)
Other	-0.429	(0.357)	0.756*	(0.386)
Occupation of training (management/sales/clerical omitted category)				
Professional/technical ^d	0.092	(0.257)	-0.500**	(0.231)
Craftsmen and operatives ^{e,h}	0.762***	(0.239)		
Service ^f	0.907***	(0.289)	-0.308	(0.244)
Farm, transportation, construction, laborers ^g	-0.025	(0.288)	1.056*	(0.628)
Intercept	-2.220**	(0.964)	-2.209**	(1.112)
-2 log likelihood/Chi square	1031.61/123.11		741.43/51.53	
Sample size	833		581	

Source: National Longitudinal Surveys—Youth Cohort, 1979–1984.

^a Logistic regressions also included a proxy for length of posttraining exposure (year of participation in training or exit from military). The results for this variable were largely insignificant and are omitted in the interest of space.

^b For females, the categories of apprenticeship and vocational/technical institutes are combined.

^c Included in "Other Provider" category for males.

^d Includes professional/technical occupations in civilian occupations and (1) communications and intelligence, (2) medical, and (3) electronics specialties of the military.

^e Includes civilian "craft and operative" occupations and military specialties "craftsmen" and "electrical/mechanical equipment repair."

^f Includes civilian "services" categories and military "service/support."

^g Includes civilian "laborers" and military "combat arms"; for females, also includes crafts and operatives.

^h Included in "laborers" category for females.

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

females, the probability of skill transfer was significantly lower for those trained in professional, technical, craft, operative, and laborer occupations than for those trained in sales and clerical occupations.

Ability or achievement as proxied by AFQT was a significant predictor of skill transfer likelihood for females, while labor market experience proved significant for males. In the equation for males, the probability of skill transfer was significantly lower for minorities relative to whites, controlling for other factors.

The importance of internal labor market structure and institutional linkage between training institution and employer in affecting the probability of skill transfer is implied in these results. Company-provided training is by definition related to an internal labor market environment in which some level of commitment and mutual interest exists between employer and worker. It is this mutual interest that often motivates the investment in the individual by the firm. Many apprenticeship programs are jointly operated by management and union and are therefore akin to employer-provided training in their internal labor market implications. Where apprenticeship is unilateral rather than jointly sponsored, the program still entitles the individual to access to the tools of the industry's internal labor market such as the union hiring hall. Similarly, in many localities certain nursing programs constitute the most important port of entry into area health facilities. In the case of beauty schools, informal linkages frequently are established in which the contacts of the instructor provide students with linkages to employers. The relatively high rate of turnover in the profession further facilitates the matching process.

That the probability of skill transfer for those trained by the military is significantly less than for some of these other providers, such as apprenticeship and company-provided training, is not unexpected inasmuch as (a) some portion of military training is institution-specific and by definition unlikely to be transferable; (b) military-provided training typically occurs in a different geographic area than where the individual hopes to reside and consequently limits the possibility of linkage-building; and (c) analysis for the military does not include those trained in the military's internal labor market who opt to remain in the military and do in fact serve in the position for which they were trained. In contrast, for company training, this analysis does include those trained for and employed in the internal labor market and counts them as successfully transferring the skills in which they were trained.

That the probability of skill transfer between military training and civilian employment is on par with the probability of skill transfer of vocational and technical institutes, proprietary business colleges, and so forth, controlling for other factors, speaks to the viability of military-provided training relative to other training providers in facilitating entrance into and movement through the world of work.

Training Providers and Labor Market Outcomes

Beyond the transferability of skill training is the question of the value given transferability in the marketplace. What impact does the transfer of skill training have on labor market outcomes? Does this impact vary with the institutional provider of the training? While occupational skill training was proxied in a number of alternative ways in various model specifications (some of which are detailed later), a set of variables common to each specification forms the basic model. In this model, labor market outcomes as reported at the 1984 interview are treated as a function of variables, including:

- highest grade of formal schooling completed and AFQT scores—measures of educational achievement and accumulated human capital;
- weeks employed since leaving school (not including military experience), weeks served on active duty, and tenure (months employed in current or last job)—measures of labor market experience and accumulated human capital;
- race, marital status (married with spouse present contrasted with other possibilities), and whether health conditions exist that limit employment options—measures of personal characteristics;
- residence in a Standard Metropolitan Statistical Area (SMSA) and residence in the South—measures of geographical/location influence;
- whether or not wages are set by collective bargaining—a measure of an institutional influence thought to impact on labor market outcomes.⁵

While the results of this investigation are only summarized here due to space constraints, full regression tables are available from the authors upon request. Our discussion here focuses on the results for males. Training participation was initially proxied by a variable taking

⁵ Space limitations preclude presentation and discussion of results concerning these control variables. Such a presentation is available upon request.

the value of one if the individual ever participated in any type of postschool skill training, zero otherwise. The variable was significant in the hourly wage equation, but not significant in the wage and salary income equation. In this equation where training was insignificant, veteran status contributed significantly to income.

Proxying participation in training by the institutional provider of training, only military training and business college training were statistically significant in the wage and salary income equation. Introducing skill transfer into the analysis by means of a simple zero/one variable and controlling for provider of training, males able to transfer their skill training to employment received a wage and salary income premium of 15 percent when compared to those who did not participate in postschool skill training.

A further specification sought to contrast the transfer of military training and the transfer of civilian-provider training by dividing the zero/one dummy into military and nonmilitary skill transfer variables. Individuals receiving their training from the military and able to transfer their training to employment received 16 percent higher wage and salary income than those in the comparison group, controlling for other factors. Participants transferring training from nonmilitary providers to employment averaged a 13 percent wage and salary premium relative to the control group. Permitting interaction between institutional training provider and skill transfer, transferred company provided training and transferred military provided training were significantly related to income.

Much less can be said about these relationships for females in the sample. Females receiving training in schools of nursing had significantly higher wage and salary incomes than females who did not receive skill training. Relative to the interaction between training provider and skill transfer, only transferred beauty school training and transferred nursing training were significant in the wage and salary regression for females.

Discussion

Some of these results appear surprising at first glance. Particularly striking are the results in the outcomes regressions relative to employer-provided training and apprenticeship, in contrast to the results for military training. While employer-provided training and apprenticeship exhibited significant levels of skill transfer, this influence was not reflected in labor market outcomes for this sample of individuals. One explanation may involve the average age of

individuals in the sample (approximately 24 years). Wage levels at this age may partially reflect continued on-the-job training investment, with returns to training investment still in the future. At these ages much of the employer-provided training is not the executive development and mid-level management programs that many identify with company training. Some indication of this is found by comparing the distribution of occupations for which training occurred across the providers of training. Only 8.9 percent of the males in the sample receiving training from employer-provided programs reported training in professional or technical occupations. In contrast, 56.3 percent of the reported training by business colleges, 26 percent of the training at vocational or technical institutes, and 22.6 percent of the military-provided training were for professional or technical occupations. While 37 percent of company training was in sales, clerical or service occupations, only 17 percent of military training, 18 percent of business college training, and 7 percent of vocational and technical institute training was so classified. Training in the crafts accounted for 84.6 percent of apprenticeship, 53.1 percent of vocational training, and 31.7 percent of company training.

Conclusion

This study suggests sizable amounts of skill transfer between military and civilian sectors, with the skill transfer percentages between military training and civilian employment and between nonmilitary training providers and employment being quite similar. Controlling for other factors, the likelihood of skill transfer of employer-provided training and apprenticeship for men and employer-provided, beauty school, or nursing training for women, were significantly greater than the likelihood of military training skill transfer. This result is not surprising in light of the institutional linkages and internal labor market characteristics of these training institutions. Individuals trained by vocational education schools, technical institutions, business colleges and so forth were not significantly more likely to achieve skill transfer than were those trained by the military. While the age of individuals in the sample and the distribution of occupations in which training was received may influence these results, analysis of this sample finds no reason not to view the military as a viable training provider. The armed forces are not a poor place to start, especially for males.

References

- Adams, Van. "The Stock of Human Capital and Differences in Post School Formal Occupational Training for Middle-Aged Men." *Southern Economic Journal* (April 1978).
- Adams, Van, and Stephen Mangum. "Post-School Occupational Training and the Private Sector." *Proceedings of the 37th Annual Meeting, Industrial Relations Research Association*, 1984. Madison, WI: IRRRA, 1985. Pp. 122-29.
- Freeman, Richard B. "Occupational Training in Proprietary Schools and Technical Institutes." *Review of Economics and Statistics* (August 1974).
- U.S. Department of Defense. *Occupational Conversion Manual: Enlisted/Officer/Civilian*. Washington: 1982.
- . *Military Career Guide: Employment and Training Opportunities in the Military*. Washington: 1985.

The Economic Returns to Military Service

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The purpose of this study is to assess the extent to which service in the military is a good career investment for young men. Some people believe that the answer is "yes," including many young men who are entering the Armed Forces with the anticipation that their training and experiences will enhance their civilian careers. However, many others seem to hold the negative view that skills obtained through military training have little payoff in the civilian labor market. Proponents of the negative view often point to what might be termed "low-tech" jobs in the Army, and especially in the combat arms, as being particularly disadvantageous.

The economic returns to military service have been the subject of much research over the years. However, this issue has taken on added significance since the end of the draft and the institution of the AVF in 1973. Now that military service is primarily a matter of individual choice, the military must compete for young people with civilian employers and educational institutions (Blair and Phillips, 1983). Based on the observation that young people's decisions about allocating time among major activities such as schooling, the military, and the civilian labor market depend on perceptions about the degree to which these activities enhance future earnings capacity, recruiting efforts by the military have increasingly emphasized the training value of military service. In an analysis of 1980 data on youth, Kim (1982) found that the desire for occupational training and the desire to accumulate resources to finance higher educational attainment were primary factors in the enlistment decision. To perhaps a greater degree than ever before, young people entering the military are viewing military service as an investment in human capital.

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Unfortunately, earlier research may be of only limited value in assessing the returns to military service during the AVF era since previous research suggests that the returns to military service vary across historical time periods. Several studies have found that the relative earnings of veterans of World War II and the Korean conflict were higher than for nonveterans (e.g., Fredland and Little, 1980; Detray, 1982). In contrast, studies of Vietnam-era veterans have generally yielded a negligible or negative impact of veteran status on civilian earnings (e.g., Berger and Hirsch, 1983). In perhaps the most thorough examination of this era, Berger and Hirsch (1983) found the earnings of veterans and nonveterans to be similar.

Data and Strategy

Data for the study are from two cohorts of men sampled as part of the National Longitudinal Surveys of Labor Market Experience (NLS). The first cohort is comprised of over 4000 young men between the ages of 22 and 26 in 1984 who were interviewed annually since 1979. The second cohort is comprised of over 5000 prime-age men ages 29 to 39 in 1981 who were interviewed 12 times since 1966.

Our general strategy is to model the earnings trajectories of young men who, after leaving high school, make different choices about whether to enter the military, college, or the civilian labor market. Thus, one of our first tasks was to partition the young men in the sample into three groups corresponding to the military, college and civilian options. A guiding factor in developing these definitions was that we were mainly concerned with the major activity chosen by these young men during the first few years after high school. Thus, the military group included young men who entered the military and completed a tour of duty by age 23. Attriters were excluded from the analysis. Individuals were considered to have completed a tour of duty if they served at least 33 months.

Young men were included in the college group if they completed 16 years of schooling by age 23. Young men who did not meet either of these criteria were included in the civilian labor market group. In order to take advantage of the longitudinal nature of the data for young men and to better analyze earnings trajectories, we created a pooled cross-section time-series data file for the years 1978 to 1983. The dependent variable was wage and salary annual earnings adjusted to 1985 dollars.

Several sets of explanatory variables were included in the model. The first set of explanatory variables consisted of life-cycle variables

designed to capture the changes in earnings over the life cycle for our three groups (see Table 1). We also included several human capital,

TABLE 1
Effects of Choice-Life Cycle Variables
on Annual Earnings

Choice-Life Cycle Factor	Model					
	(1)		(2)		(3)	
	Coeff.	(t)	Coeff.	(t)	Coeff.	(t)
In military	1776	(5.1)	1776	(5.1)	1775	(5.1)
Discharge year	-1018	(1.8)	-1018	(1.8)	-1025	(1.8)
Completed military tour	-1029	(1.2)	-489	(0.5)	-130	(0.1)
Years since military	408	(1.1)	526	(1.4)	154	(0.1)
Years since military squared					77	(0.2)
College graduate	-2631	(4.3)	-2639	(4.3)	-3049	(2.5)
Years since college	2003	(7.7)	2006	(7.7)	2443	(2.2)
Years since college squared					-88	(0.4)
Years since high school	1386	(7.8)	1394	(7.9)	1574	(3.6)
Years since high school squared	-78	(3.6)	-79	(3.7)	-130	(1.1)
Years since high school cubed					4	(0.5)
Educational bene- fits			-1465	(1.7)	-1400	(0.7)
Ed ben * Yrs since mil.					-40	(0.0)

background, and demographic factors to minimize the effects of individual differences. These control variables included education through high school, mental ability, locus of control, health limitations, race, region of residence, and background measures such as the presence of an adult male, and the amount of literature in the home. Ordinary least squares was used to estimate the equation. In a model such as ours, ordinary least squares yields unbiased and consistent estimates of the parameters, but yields biased estimates of the standard errors. Error components models can oftentimes be used to overcome this problem. However, we did not have access to an estimation procedure which could deal with a nonrectangular data file like ours (i.e., a file in which observations for an individual may be missing for one or more years because they were enrolled in school, overseas, and not interviewed, etc.)

Results

Column 1 of Table 1 shows the results of a simplified version of our model. These results indicate that, taking into account the value of quarters and subsistence in kind, young men in the military earn about \$1776 more than civilians who are comparable in terms of measured experience, education, abilities, and background. The negative coefficient for the discharge year term reflects the drop in earnings that typically occurs when one leaves the service and enters the civilian labor market. The coefficients for completed military tour and years since military suggest that while former servicemen are at a disadvantage relative to civilians with equivalent characteristics at the time of discharge, their earnings rise faster and overtake civilian earnings about two to three years later.

As discussed above, a substantial proportion of servicemen plan to further their education after discharge. And even though the members of our sample entered the service prior to the substantial rise in recruit quality during the early 1980s, one-half participated in educational benefits programs. The results in column 2 of Table 1 show that even though we excluded observations from the analysis for those years in which individuals were enrolled in school, veterans who participated in educational benefits programs tended to earn less during the first few years out of the military than veterans who did not participate.

To more accurately model the shape of the life-cycle effects we added selected linear and curvilinear terms (Table 1, column 3). Although this more complete model fits the earnings trajectories most accurately, the high degree of collinearity among the linear, square, and cubic terms implies that the value of a given coefficient may vary considerably depending upon the values of the other terms in the model. Thus, the coefficients must be interpreted together. Perhaps the best way to do this is to calculate standardized earnings trajectories for the four options. Hence, we calculated earnings trajectories for the first nine years after high school for young men who either choose the military with education benefits, the military without education benefits, college, or the civilian labor market (Figure 1). These earnings trajectories are standardized in that they control for the human capital, demographic, and environmental variables in the model.

These trajectories show that during the first few years after high school, while servicemen are still in the military, their earnings are higher than for comparable civilians. However, when they are discharged, their earnings drop significantly to below those of civilians. However, this disadvantage is temporary as the earnings of

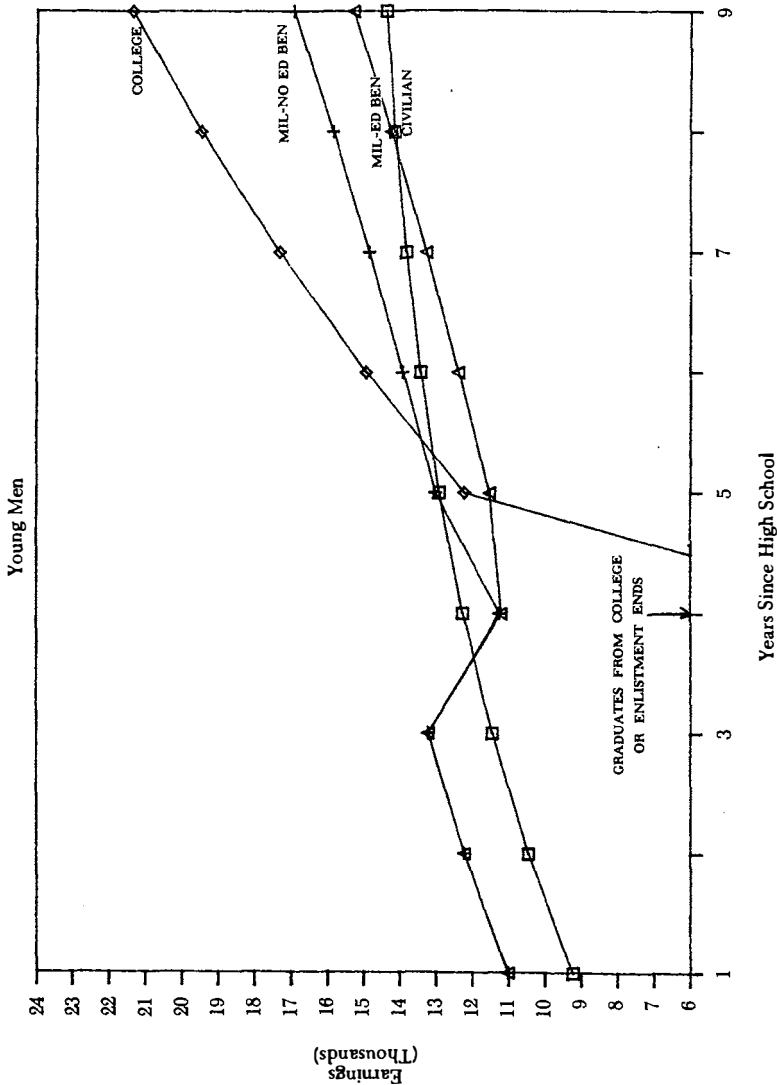


FIGURE 1
Standardized Earnings Trajectories

veterans rise faster than those of men who never served. For veterans who did not participate in educational benefits programs, earnings overtake the earnings of civilians only one year out of the service or five years out of high school. The earnings of veterans who participated in educational benefits programs are lower, presumably because of their less extensive participation in the labor market. The

question is: will this emphasis on learning rather than earning enhance their earnings in the future?

Longer-Term Returns

To examine the longer-run economic value of military service, we estimated earnings models for our sample of prime-age men, ages 29 to 39 at the time that earnings were measured in 1981. In most respects the model is very similar to our model for young men; however, some differences exist. We include only one observation per individual. The choice-life cycle variables included in the analysis for prime-age men were analogous to those included in the analysis for younger men. However, data on prime-age men extend further into their careers, so that we were able to measure whether an individual who did not invest in and graduate from college relatively soon after high school, did so later. We calculated five earnings trajectories for five different (constrained) choices concerning post-high-school options and different routes to a college degree. The first choice is "college," that is, obtaining a college degree by age 24. The second choice is "military—no college," that is, serving in the military (for at least 21 months) and not obtaining a college degree. The third choice is "military-college," that is, serving in the military service and then obtaining a college degree. The fourth choice is "civilian—no college," that is, participating in the civilian labor market after high school and not obtaining a college degree. The fifth choice is "civilian-college," that is, participating in the civilian labor market after high school and then obtaining a college degree. For the purposes of calculating our standardized earnings trajectories, we assumed that veterans completed their tour of duty four years after completing high school, post-high-school college graduates graduated four years after completing high school, and post-military and post-civilian college graduates graduated from college eight years after high school.

The standardized earnings trajectories for our five groups are shown in Figure 2. Consistent with the trajectories for young men, the earnings of the military-no college and civilian-no college groups are approximately equal 10 years after high school. In addition, as suggested by the trajectories for young men, the earnings of veterans rise slightly faster over the next four to five years. However, the earnings advantage of veterans then begins to decline and is almost eliminated by 19 years after high school. Taken together, our results for young and prime-age noncollege men suggest that the earnings of men who served in the military were as high or higher than the

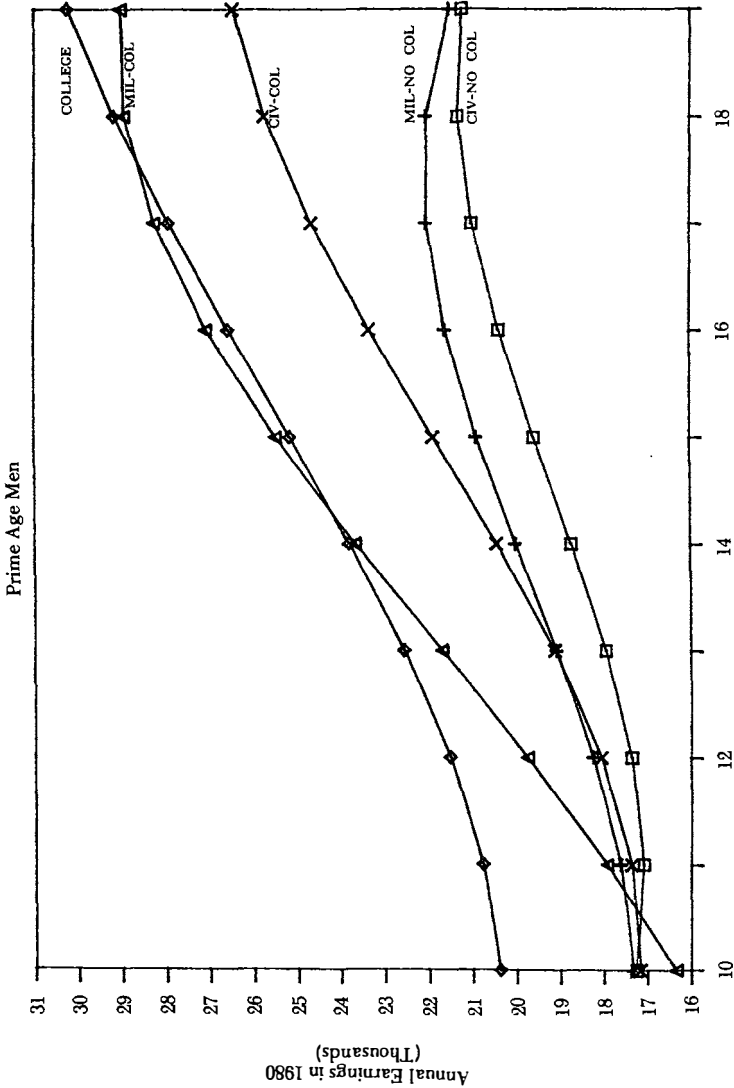


FIGURE 2
Standardized Earnings Trajectories

earnings of men who did not serve for all but about two of the first 19 years following high school.

The trajectories in Figure 2 demonstrate the substantial payoff to a college education. Regardless of whether the investment in college was made soon after high school or later after some time in the military or the civilian labor market, the earnings of college graduates rise to a

point substantially above those who do not obtain a college degree. However, the shapes of the earnings trajectories vary depending upon the route taken to obtain a college degree.

Earnings rise quite rapidly after college graduation. Hence, men who invest in college and obtain their degree soon after high school have substantially higher earnings than all other groups 10 years after high school. Although the military-college group obtains their degree later in the life cycle, their earnings rise very quickly such that they are approximately equal to the earnings of the college group at about 14 years after high school. However, it does appear that the earnings of the military-college group may taper off at a slightly lower level than the earnings of the college group. While the earnings of the civilian-college group rise after college, they do not rise as quickly as the earnings of the military-college group. The military-college group has a substantial earnings advantage over the civilian-college group over most of the period covered by this analysis. Taken together, these results suggest that completing a tour of military service and then obtaining a college education is an effective career strategy for those who, either due to constraints or choices, do not go to college right after high school.

Conventional wisdom seems to hold that the returns to military service are highest for those who hold technical jobs and lowest for those in the combat arms. To examine the effects of military jobs on civilians, we reestimated our earnings model adding military job variables (combat arms, technical, other) on a sample restricted to young veterans during their post-military years. Interestingly, we found that in terms of civilian earnings, the payoff to technical jobs in the military is trivially greater than the payoffs to jobs in the combat arms and slightly lower than other jobs. These results suggest that the great emphasis placed on technical training and its transferability to civilian jobs in some analyses of the returns to military service is misplaced.

Conclusions

Our analyses of the returns to military service yielded several findings:

1. Consistent with recent comparisons of military and civilian pay, we find a significant earnings advantage for young men while in the service relative to their civilian counterparts.
2. The earnings of servicemen drop substantially at the time of discharge.

3. However, the civilian earnings of former servicemen rise rapidly after discharge and overtake the earnings of their civilian counterparts within one to four years.

4. Once their earnings overtake those of men who never served, the higher earnings for veterans persist until the end of the period covered by the study, approximately 19 years after high school.

5. Men who complete a tour of military duty and then invest in a college education earn more than men who work in the civilian labor market and then invest in a college education. However, they generally earn somewhat less than men who invest in a college education soon after high school.

6. Only small differences exist among those who held combat arms, technical, and other types of military jobs in terms of their subsequent civilian earnings.

These findings have several research and policy implications:

1. The different shapes of the earnings trajectories for those with and without military service demonstrate the necessity of a life-cycle analytical strategy.

2. Our results suggest significant temporary or frictional unemployment problems just after discharge, resulting from imperfect information in the labor market and the slowness of the job-search process.

3. The sustained steeper slope of earnings trajectories for veterans suggests the possibility that many civilian employers undervalue training obtained in the military. That is, due to negative images of the military resulting from the Vietnam War, negative publicity about the problems of the AVF during the late 1970s, and recent media stories on the nontransferability of skills obtained through the military, employers may underestimate the skills and potential of veterans. It is only after veterans eventually have an opportunity to demonstrate their true individual value to employers that their earnings become commensurate with their skills.

4. Taken together, our results suggest that the economic returns to military service are multidimensional. Mechanisms for the payoff to military service appear to include: (a) technical training, (b) work attitudes such as self-confidence, social maturity, acceptance of legitimate authority, (c) opportunities to develop and display leadership skills in the military, (d) signaling effects such as acting as a substitute for educational credentials, and (e) military educational benefits.

5. Educational benefits programs such as VEAP, the ACF, and the GI Bill, and post-military education play an important role in enhancing the civilian labor market careers of veterans.

References

- Berger, M. C., and B. T. Hirsch. "The Civilian Earnings Experience of Vietnam-Era Veterans." *Journal of Human Resources* 18 (Fall 1983), pp. 455-79.
- Blair, J. D., and R. L. Phillips. "Job Satisfaction Among Youth in Military and Civilian Work Settings." *Armed Forces and Society* 9 (Summer 1983), pp. 555-68.
- DeTray, D. N. "Veteran Status as a Screening Device." *American Economic Review* 72 (March 1982), pp. 133-42.
- Fredland, J. E., and R. D. Little. "Long-Term Returns to Vocational Training: Evidence from Military Sources." *Journal of Human Resources* 15 (Winter 1980), pp. 49-66.
- Kim, C. "Youth and the Military Services: 1980 National Longitudinal Survey Studies of Enlistment, Intentions to Serve, Reenlistment and Labor Market Experience of Veterans and Attriters." Columbus: Center for Human Resource Research, Ohio State University, 1982.

Why Do We Learn So Little from Impact Evaluations of Employment and Training Programs?

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The labor market problems of high school dropouts have been a concern of employment and training programs since the 1960s. There has been a succession of programs designed for unemployed dropouts which continue today under the Job Training Partnership Act (JTPA). After more than 20 years of experimenting and experience, we should know how to prepare dropouts for the labor market to reduce their extremely high rates of unemployment. This does not appear to be the case, however, based on a review of recent impact evaluations to design an optimal employment and training program for dropouts.¹ The conclusion drawn from the review was that little has been learned about “what works for dropouts” and, unfortunately, too much about what doesn’t work for evaluations; only two of the eight sets of studies published in the 1980s were sufficiently strong to yield policy implications that were deemed reliable. The purpose of this paper is to examine the practical pitfalls of conducting evaluations of employment and training programs, using the dropout studies as examples, and to make recommendations for avoiding the problems in the future.

The Problems in Evaluations

Experimental Design

A major emphasis of any course or text on evaluation is the strength of various experimental or quasi-experimental designs. Students invariably are taught about the threats to internal and external validity

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^o This paper was originally written for the Manpower Demonstration Research Corporation (MDRC). The views are solely those of the author who gratefully acknowledges the support of MDRC and the comments of J. Ball, B. Blum, E. Cavin, J. Gueron, and R. Ivry.

¹ The eight studies, all published in the 1980s, are noted by an asterisk in the references. It should be recognized that these were the best studies available, in that they all incorporated at least a comparison group.

of various designs. Problems of comparability between program participants and comparison group members are discussed at great length and the students are instructed whenever possible to perform a true experiment because of its superior internal validity. In reviewing the studies, it was found that four of the eight actually employed this methodology. Since these were studies conducted in the late 1970s and early 1980s, it would appear that this lesson is being learned by evaluators and funders of evaluations.²

However, evaluations are still being conducted which employ comparison groups which are substantially different from the participants. For instance, the evaluation of the Ventures in Community Improvement (VICI), a demonstration program under the Youth Employment and Demonstration Projects Act (YEDPA), selected a comparison group from among youth who applied to the program but were too low on the waiting list to be included (Public/Private Ventures, 1982). The results are highly suspect because the extremely low employment levels of the comparison group members would indicate that they were very atypical.³

Poor Program Implementation

Experimental design unfortunately does not insure that a true test of the impact of a model will ensue. This can be demonstrated by two experiments conducted under YEDPA—the Alternative Youth Employment Strategies Project (AYES) and the Career Intern Program (CIP). The AYES provided for random assignment to the program or to a control group, thus creating a true experiment. Three models were established, and of those assigned to the program, some were allowed to choose which of the models they would participate in, while others were assigned randomly to the model. While its design was strong, the AYES project suffered serious implementation problems which limited its usefulness. A very short period of program implementation, from 12–14 months, meant that intake and program

² Another indication of the lessons having been learned is the recent contract issued by the U.S. Department of Labor calling for classical experiments to be used to evaluate JTPA.

³ Recent experience where five studies using data from the U.S. Department of Labor's Continuous Longitudinal Manpower Survey (CLMS) presented widely varying estimates of the impact of CETA, although based on the same data set, indicates further that the method used to adjust for noncomparability between comparison group members and participants is crucial to the study's results (Mathematica Policy Research, 1984). Since none of the methods employed was demonstrated to be inherently superior in adjusting for selection bias, the problems of noncomparability in using quasi-experimental designs remain unresolved.

service delivery were performed simultaneously by the same staff, there was no “shake-out period” for setting up the program, and staff turnover was high. Also, one model was not fully implemented because of coordination difficulties with the educational and training institutions that were to provide their services, and job development and placement services were limited due to uncertain and declining resources (Sadd et al., 1983).

Similarly, the CIP, which established alternative high schools with the objective of allowing the students to earn a regular high school degree and to prepare them for employment, suffered from limited duration which severely affected the level and consistency of program leadership and direction. These, in turn, led to nonsignificant findings for one cohort and significant results for another and to sizable differences between sites. The authors state, “[I]t is important to recognize that outcome measurements taken when a program is not properly or fully implemented reveal little or nothing of what would happen if the same program were implemented as intended” (Tallmadge and Yuen, 1981, p. 100).

Low Response Rates

The findings of many of the evaluations studied are suspect because of the low response rates attained in the follow-up of the participants or control group members. The Service Mix Alternative Demonstration Program (SMAP) introduced in three sites in 1978-1979 was similar to the AYES program in testing alternative models of classroom training and work experience with attempts to assign matched youth randomly to the different models. Problems arose, however, in the collection of follow-up data; in Fort Lauderdale only 57 percent completed the initial instruments and the three-month follow-up, and in Oakland and Los Angeles combined only 54 percent completed the initial and three-month follow-up instruments and 19 percent completed the eight-month follow-ups. Moreover, there appears to be bias introduced by differential attrition rates on the basis of sex, race, and poverty status (Freeberg and Rock, 1981). The VICI demonstration had similar problems with response rates of only 38 percent for the comparison group and 58 percent for the participants.

Inadequate Length of Post-Program Follow-up

It has been well established that the effects of employment and training programs may change with the passage of time after the program concludes. Unfortunately, while some evaluations have

extended follow-up periods, there is still the tendency to use early findings as the basis of policy recommendations.⁴ For instance, under YEDPA a common battery of measures, the Standard Assessment System, was administered three and eight months after participants had left the program. The limited value of such short post-program periods is demonstrated by the results of another evaluation of two youth pre-employment services programs. There, follow-up interviews were conducted 9, 14, and 24 to 40 months after enrollment. At the first and second follow-up interviews, weekly earnings were found to be raised significantly by participation for one program, but to be significantly higher only at the first follow-up for the second program. The analysis of the third follow-up of the program with gains at both of the earlier data collection points found there was no statistically significant difference in weekly earnings for the sample as a whole. The authors concluded that there were positive effects of participation in pre-employment training, particularly for males, but that these decay after roughly 12 months and for the women there may be statistically negative effects in the later post-program period. They hypothesized that the comparison group finds employment on its own and catches up (Public/Private Ventures, 1983). Findings such as these make estimates using data collected at most eight months after participation, as was done by Rock et al. (1982) and in the SMAP and AYES studies, extremely vulnerable to criticism.

Receipt of Services by Control/Comparison Group Members

The purpose of a control or comparison group is to demonstrate the experience of the participants in the absence of the program. Usually the null situation is assumed to be that where no services at all are provided. In the real world, however, once an individual seeks out and volunteers to receive program services, even if denied the services of that specific program, he or she is likely to receive some other set of services. Obviously the impact of receiving one set of services rather than another will be smaller than that for receiving services as compared to being left completely untouched.

This is illustrated by the Career Intern Program (CIP) which found at some sites the control group was significantly better off, while at others the interns were in a preferred position. This was ascribed by

⁴ In many cases this is a situation where politicians looking for a solution to a pressing problem of unemployment grasp any idea that seems promising, although the final results of evaluations have not yet become available.

Tallmadge and Yuen (1981) in part to the availability of other alternative schools at the various locations.

Knowledge of the Services Received by the Participants

The ultimate goal of an evaluation would be to determine "what works best for whom." There are two ways this could be determined. The first is by calculating the impacts by randomly assigning individuals with similar characteristics to alternative treatments. This was attempted in the SMAP and AYES evaluations. Unfortunately, in the former the results were inconsistent and their value was limited because of the implementation and follow-up problems discussed above. For the AYES evaluation where random assignment was to type of program and treatment or control, no overall differences were found between types of service offered. It was the authors' opinion that the participants' improvements in finding employment arose from the "program's creating an environment and network that assisted participants in finding work" rather than the specific training or work experience that they received (Sadd et al., 1983, p. 171).

The second approach, which is more common, is to calculate the impacts separately for different groups of participants in a program. This procedure would be correct *if all participants received identical services*. In reality, however, this condition is probably unlikely to be met. Program operators adjust services to meet client needs, e.g., persons with poorer educational achievement levels will usually receive greater remedial education or will be assigned to training in occupations which require lower reading and mathematics abilities than those who have higher educational levels. Further, since many programs are open-exit by design and participants are always free to withdraw from any program, those individuals who enter a program with high skill levels or the ability to learn faster, or persons who find they cannot learn, may have shorter program durations. Thus, there may be problems of multicollinearity. None of the evaluations seemed to recognize this, however, and even the best—the Supported Work Demonstration—did not differentiate the services received from the characteristics of the participants (Maynard, 1980).

Inclusion of Cost Data

Gains in earnings and employment and reduction in transfer payments have become standard dependent variables in impact evaluations of employment and training programs; they have even been specified for measurement in the Job Training Partnership Act.

Many studies, however, fail to relate these outcomes to the cost of the programs (e.g., cost data were not included in any of the YEDPA evaluations reviewed). Obviously a program with no impact cannot be cost-effective, but a program that does have positive outcomes must be measured against its cost. A program like Job Corps with government expenditures of approximately \$13,000 per slot must have substantially larger gains than pre-employment counselling where the outlays may be only several hundred thousand dollars.

Recommendations

Evaluation techniques have progressed substantially over the past two decades. Many of the problems and issues identified in the early days of employment and training program studies (see Borus and Buntz, 1972) have been resolved. On the other hand, increased sophistication by evaluators has led to the identification of a new set of questions. For instance, experience with various methods to account for selection bias yielding different findings emphasizes the desirability of using a true experimental design. Although such a design does not guarantee that the results will be externally valid, the internal validity questions raised constantly about the comparability of the comparison groups when quasi-experimental designs are used place a tremendous burden on any evaluation that does not provide for random assignment.⁵

One continuing threat to the external validity of any evaluation, whether an experiment or quasi-experiment, is the lack of full implementation of the program's design on a continuing basis. The review shows that in too many cases programs were evaluated before they were fully operational and that many had such short durations that the projects were not true tests of what would happen if they were operated as regular employment and training entities. Demonstration programs that are poorer operations than the real programs that might succeed them probably are not worth the effort to evaluate.

Just as the programs being examined must be implemented fully, in the same way so must the evaluations. To conduct a full-scale evaluation is very expensive and time-consuming. On the other hand, to conduct an evaluation with low response rates, poor design of data collection, and inadequate analysis is even more costly; an evaluation which does not answer with some degree of confidence even the basic

⁵ For instance, the results of the Supported Work experiment are much more believable than are those of other evaluations.

question of whether the program works or not wastes whatever funds have been spent on it, regardless of how little they may have been.

The evaluation should have a benefit-cost component. To know that a program increases the earnings and employment of the participants is not enough; the benefits must be placed in a context of the resources that are devoted to the effort. While evidence of benefits is necessary, it is not a sufficient condition to justify a program.

To know what works best for whom, it is necessary to be able to determine who is receiving what services. This has not been accomplished in most prior studies. Records on services received by individuals and process (implementation) analyses are necessary if the evaluation is to say more than a "black box" of a program worked or did not work.

Likewise, the benefits that arise from a program obviously depend on what would happen to its participants in its absence; it is necessary to know what services would be provided were the program not in existence. This requires that careful records be maintained on the provision of alternative services to control group members.

To assess which elements of a program account for impacts, it is desirable to build planned variation into the program design. For instance, many of the evaluations indicate that benefits are positively correlated with duration of participation. It is not clear, however, whether this is a direct relationship or one arising out of unmeasured individual characteristics which are also associated with benefits and duration. While sophisticated statistical techniques may be employed in an attempt to determine this, establishing programs of differing lengths will give a more clear-cut answer. Unfortunately, these variations add to the complexity and cost of the design by increasing the size of the samples required and the number of programs that must be implemented. Thus, the number of variations which can be tried should be limited and carefully thought through.

Many of these suggestions have been incorporated into previous evaluations. In fact, almost all were present in the Supported Work experiment. They require, however, levels of expertise and expense that go beyond those which typically have been devoted to such efforts. The costs of good studies must be weighed against the alternative—continuing programs that may accomplish little. Carefully crafted programs and evaluations are necessary to avoid the possibility that in another 20 years reviewers will once again question the lack of knowledge about which programs work.

References

- Borus, Michael E., and Charles G. Buntz. "Problems and Issues in the Evaluation of Manpower Programs." *Industrial and Labor Relations Review* 25 (January 1972), pp. 234-45.
- *Freeberg, Norman E., and Donald A. Rock. *Evaluation of a Service Mix Alternatives Demonstration Program for Out-of-School Youth*. Technical Report 7. Princeton, NJ: Educational Testing Service, 1981.
- *Mallar, Charles. *Evaluation of the Economic Impact of the Job Corps Program: First Follow-Up Report*. Princeton, NJ: Mathematica Policy Research, 1978.
- *Mallar, Charles, et al. *Evaluation of the Economic Impact of the Job Corps Program: Second Follow-Up Report*. Princeton, NJ: Mathematica Policy Research, 1980.
- *Mallar, Charles, Stuart Kerachsky, Craig Thornton, and David Long. *Evaluation of the Economic Impact of the Job Corps Program: Third Follow-Up Report*. Princeton, NJ: Mathematica Policy Research, 1982.
- Mathematica Policy Research. *An Assessment of Alternative Comparison Group Methodologies for Evaluating Employment and Training Programs*. Princeton, NJ: Mathematica Policy Research, 1984.
- *Maynard, Rebecca. *The Impact of Supported Work on Young School Dropouts*, Vol. 1 of the Final Report on the Supported Work Evaluation. New York: Manpower Demonstration Research Corporation, 1980.
- *Public/Private Ventures. *The Impact of Pre-employment Services on the Employment and Earnings of Disadvantaged Youth*. Philadelphia: Public/Private Ventures, 1982a.
- _____. *Ventures in Community Improvement: Final Report of Demonstration*. Philadelphia: Public/Private Ventures, 1982b.
- _____. *Longer Term Impacts of Pre-employment Services on the Employment and Earnings of Disadvantaged Youth*. Philadelphia: Public/Private Ventures, 1983.
- *Rock, Donald A., Norman E. Freeberg, Donald A. Trisman, and Jules M. Goodison. *Demonstration Programs for Youth Employment Training: The Evaluation of Various Categories of YEDPA Program Sites*, Final Data Base Report 2, Technical Report 24. Princeton, NJ: Educational Testing Service, 1982.
- *Sadd, Susan, Mark Kotkin, and Samuel R. Friedman. *Alternative Youth Employment Strategies Project: Final Report*. New York: Vera Institute of Justice, 1983.
- *Tallmadge, G. Kasten, and Sandra D. Yuen. *Study of the Career Intern Program Final Report—Task B: Assessment of Intern Outcomes*. Mountain View, CA: RMC Research Corporation, 1981.

DISCUSSION

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All of the papers in this session are related to the effects of job training. This subject is of considerable importance, especially in view of the fact that the nation's unemployment rate has been stuck for several months at about 7 percent, a high rate for a sustained expansion. I will be discussing the two papers on the effects of the military. Mangum and Ball's work examines the extent of skill transferability associated with military training, while Daymont and Andrisani take a bottom-line approach to the impact of military experience: Does it pay off in the form of higher wages or protection from unemployment?

Mangum and Ball are interested in whether those who complete training while in military service learn marketable skills. Implicit in the setup of their paper is the idea that more of this learning has taken place for those whose subsequent civilian employment is in the same occupation in which their military training was given than for others. There is a certain intuitive appeal to this notion in that being hired by a firm in the same occupation for which one received military training may be some evidence that the training was effective. Of course, completion of a military training program may also serve as a market signal even if the training doesn't add any value to the recruit. In the signalling case, the training still has private value. However, I believe that the authors' definition of skill transferability as an indicator of the value of military training is too restrictive. Specifically, skills learned in training of one type may be of value in other jobs. Further, people trained in a particular craft may be in a better position to move into managerial positions (e.g., carpenters becoming construction contractors).

The foregoing remarks suggest that a more appropriate test of the effectiveness of military training is to estimate the impact of training in particular occupations on subsequent labor market outcomes, *not* controlling for whether one stayed in the same occupation. Wages are

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an obvious indicator of success and are used in some of the analyses, although not in the way suggested here. However, another indicator is employment, especially in light of high youth unemployment rates: Do military training programs protect young workers from future unemployment? As discussed below, Daymont and Andrisani examine this issue.

In estimating the effects of military training, attention needs to be paid to crucial econometric issues. In particular, people choose whether or not to enlist in the military (in the age of the all-volunteer force) and, to some degree, what training programs to participate in there. Issues of selectivity bias arise in comparing wages of those who enlisted with those who did not, since the choice of enlistment presumably depends on a comparison of the expected future benefits of military service with current civilian opportunities. If, for example, those who enlist have worse prospects than those who do not, measurable factors (education, etc.) constant, then wage comparisons between veterans and nonveterans will give an estimate of the effects of the military that is downward biased. Correction of such a bias may well involve estimating a model of military enlistment, an effort of interest in its own right. Similar selectivity issues complicate the analysis of attriters, veterans, and still-serving completers: Why did these groups make the decisions they did? Further, if military training really does protect one from future unemployment, then some portion of postmilitary experience or job tenure in the civilian labor market is due to military service. Along these lines, military training may enhance one's chances of eventually obtaining union membership (e.g., airline pilots). If these indirect effects of military training occur, then controlling for civilian experience, tenure, or union membership in a wage regression gives an understatement of the total wage effect of the military. The same comment applies to the Daymont and Andrisani paper. Finally, in estimating the wage effects of skill transfer, an additional selectivity problem arises. One achieves skill transfer, according to the authors' definition, only if one finds and accepts a job in the same field for which one received training. We do not observe rejected wage offers.

In measuring exposure to training, Mangum and Ball distinguish individual episodes of military or civilian training. In fact, there are really four categories: those with no formal training, those with military training only, those with civilian training only, and those with both civilian and military training. All of these groups should be distinguished in analyses of labor market outcomes. Exposure to both

types of training should in principle have the greatest effects. Does military training enhance the effectiveness of civilian training?

Daymont and Andrisani's paper is part of a larger project on the effects of military service. This project examines many interesting issues, including long-term wage effects, protection from unemployment, and racial differences in the impact of military service. I have some suggestions for further research as well as some comments on the results. While the authors use a cross-section time-series approach, I would suggest constructing profiles for each member of the sample and thus take advantage of the longitudinal nature of the NLS data. Further, the authors mention that the military can affect work attitudes, but they control for attitudes in their analysis. This procedure creates a downward bias in estimating the wage effects of the military; in addition, estimating the effects of the military on attitudes would be of considerable interest in its own right. Finally, the data could be used to investigate the impact on women of military service.

In thinking about Daymont and Andrisani's results, the same comments I have raised about selectivity would apply here. In addition, the authors exclude the unemployed or those who earned less than \$500, while, as I have indicated, employability may be a further effect of military training. According to Daymont and Andrisani's estimates, it can be questioned whether there are any wage effects of civilian or military experience. In many of their analyses, the military-related variables have insignificant coefficients in wage regressions. However, the effects on reducing subsequent unemployment are strong and significant. The strongest conclusion one can make about the effects of military service is that it protects one from future unemployment.

Daymont and Andrisani find that wages (measured by annual labor income) are much higher while one is serving in the military than immediately afterward. Part of the effect during actual service may be an hours phenomenon and could be investigated by using hourly wages as a dependent variable. Military service has large but less statistically significant effects for minorities than for the whole sample. White-nonwhite comparisons would be facilitated by estimating separate equations for whites. In addition, the effects of college seem weaker and less significant for minorities than for the whole sample. These results could have important implications for racial differences in the labor market and should be investigated further.

In looking at both papers on the effects of the military, it is evident that particular types of military experience can have an important effect on subsequent civilian labor market success. Future work should take a closer look at what people actually learn while serving in the military, at those factors that lead people to enlist, and the impact of the military on overall inequality in the labor market.

DISCUSSION

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I'm going to start off by commenting briefly on Michael Borus's paper. There is nothing in the paper I disagree with. The points are all reasonable ones. What I would like to do, though, is to add one additional consideration to his list of the problems with impact evaluations.

Implicit in all program evaluations are some very basic assumptions about the way the labor market operates. It makes sense to measure the success of a project by the experience of those who take part in it if one believes the standard human capital model of the labor market. In that case the increased earnings of the participants are the main effects of the program. Unless the program is very large, the supply of skills is not likely to be shifted significantly, so the effects of the program on other workers are not likely to be important. However, if one holds an alternative view of the labor market—that to a large extent the wage structure is given and independent of the qualifications of the workforce—then evaluations fail to examine an important consequence of the programs under study when they do not consider the effects of the program on nonparticipants as well as participants. The question is the extent to which programs which train workers for better jobs simply replace one set of workers with another.

In the view of many of the people who did the early work on the labor market segmentation paradigm, that was the main effect of the Great Society programs. When they were successful at all, they succeeded only in moving one group of workers into the good primary-market jobs at the expense of others. Professor Borus's failure to mention this point probably reflects the fact that the labor market segmentation perspective had until very recently been held in relatively low regard by the mainstream of the profession. However, that is beginning to change, so it is probably time again to start thinking about the implications of the perspective for policy.

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There are at least two reasons for this Renaissance of the labor market segmentation perspective. The first is the considerable interest in nonmarket-clearing models of the labor market, including “efficiency wage” models and “insider-outsider” or “rent-sharing” models. In such models wages are determined mainly by the nature of the job and not so much by the skills of the worker. The second reason is the recent boom in empirical studies examining the relevance of such models. Work on interindustry wage differences by Krueger and Summers (1986) and by me and Lawrence Katz (1986), and my work with Kevin Lang on dual labor markets (1985) are examples of this.

With this perspective, it is possible for job training programs to help eliminate specific skill shortages or to promote equality of outcome between different groups, but it is inappropriate to assume that any income growth that individual participants experience reflects an increase in their productivity. Instead, it may reflect only a change in their position in the job queue.

Both the Mangum and Ball and the Daymont and Andrisani papers are interesting attempts to get at the question of whether the Armed Forces really are a good place to get practical skills that can be used in civilian jobs. Both papers suggest that the answer is “yes.” Mangum and Ball first consider the question of what fraction of those who leave the Armed Forces find civilian jobs that are similar to their work in the services. The answer is an impressive 50 percent for men and 46 percent for women. As the authors note, this compares favorably to most sources of civilian job training. This is an interesting finding and the authors’ other finding—that those who find a match earn about 16 percent more than those whose civilian employment does not make use of their military training—suggests that the authors’ interpretation of these facts is probably correct. Still, one can’t help wondering exactly what is meant by a match between the training received in the Armed Forces and in a civilian job. The authors should give more attention to this question—particularly if they want people to take seriously the comparison to civilian job training. Many of the civilian programs they are examining involve months or even years of training. How much training is involved in the skill matches the authors are finding between military and civilian jobs? The Daymont and Andrisani finding that Armed Forces leavers with technical training do little better in the civilian job market than those who don’t have it contributes to this concern.

Still the results are suggestive and are helpful in answering the question the authors are concerned with. But in answering that question, they also raise another. If a substantial amount of Armed Forces training is transferable, how do career paths compare for those who begin in the military and those who don't, for different types of careers? This is the question that Daymont and Andrisani address. Again I find the answer that they get convincing to a large degree. To the extent I don't, it is because we can never be sure of whether the earnings profiles of the different groups are what they are because of the differences in the training they have received or because different types of workers have sorted themselves into the different groups. There is no easy way to solve this problem. Looking at a period when the draft was in place might eliminate some of the problem of the noncomparability of the military and nonmilitary samples, but not all of it.

The standard sample selectivity corrections would be difficult to apply here, first, because of the multinomial nature of the choice problem. The authors are dealing with five different groups of workers. Estimating a five-choice probit is very difficult, as would be getting the appropriate correction factors. Second, the authors are concerned not only with differences in the intercepts, but also with differences in the slopes between different groups of workers. If unobserved ability affects the shape of the experience profile, standard sample selection corrections won't do much good.

An approach which won't solve the problem of unobserved characteristics, but would at least allow for the possibility of different slopes for workers of different observable backgrounds, would be to pair workers with identical observable backgrounds but different career choices. If these results were similar to those presented in the paper, that would help to suggest that selectivity was less of a problem.

References

- Dickens, W. T., and L. Katz. "Industry Characteristics and Industry Wage Differences." In *Unemployment and the Structure of Labor Markets*, eds. K. Lang and J. Leonard. New York: Basil Blackwell, 1986.
- Dickens, W. T., and K. Lang. "A Test of Dual Labor Market Theory." *American Economic Review* 75 (September 1985), pp. 792-805.
- Krueger, A., and L. Summers. "Reflections on Interindustry Wage Differences." In *Unemployment and the Structure of Labor Markets*, eds. K. Lang and J. Leonard. New York: Basil Blackwell, 1986.

XVIII. WHAT'S NEW ABOUT TECHNOLOGICAL CHANGE?

Technological Change and Employment: Fears and Reality

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Since the dawn of the industrial age, workers have feared technological change as an immediate and tangible threat to their livelihoods. From the early 19th century English Luddites, through the "job scarcity consciousness" theory of Selig Perlman developed during the 1930s, to current concerns about robots and office automation, fears of displacement of man by machine have flourished.¹ Further, these fears have occasionally become intense enough to dominate public policy debate.

The last major outbreak of this problem in the U.S. was in the early 1960s with the automation scare. Widespread commercial application of electronic data-processing equipment was proceeding at the same time that a sluggish recovery from the 1957-1959 recession was keeping unemployment rates higher than acceptable to policy-makers. Concern over the employment impacts of this "technological revolution" led to the establishment of a National Commission on Technology, Automation, and Economic Progress to look into the matter.² Of course, we all know that by the time the National

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^o Facts and observations presented in this paper are the sole responsibility of the author. The viewpoints do not necessarily represent positions of the W. E. Upjohn Institute for Employment Research.

¹ See Florman (1981) for a manufacturing engineer's reaction to these attitudes.

² See Bowen and Mangum, eds. (1966) for a summary treatment of the National Commission report.

Commission could complete its work in 1966, the economy (bolstered by the 1964 tax cut) had returned to health, and there was very little left to explain.

There are many reasons why we tend to misunderstand the impact of new technologies.³ First, we probably tend to exaggerate the revolutionary aspects of any new technology. Much of this is done in the name of salesmanship, of course, but there is also a tendency to concentrate on the elements of change rather than constancy when looking at any new development. Second, we tend to be wildly overoptimistic about the rate of diffusion of new technologies. The fact is that old and new technologies usually co-exist very effectively over long periods of time, even in relatively competitive markets. Third, it is far more difficult to identify new jobs that will be created in the future by new technologies than to identify today's jobs that are threatened. Our imaginations cannot possibly work out all the ramifications of new products and new processes, but we can see the workers whose jobs are at risk right now.

When we turn to the research results that should provide some guidance to public perceptions about the magnitude of such problems, we find it far too easy to overgeneralize results from narrow case studies. Case studies of technological innovation tend to showcase "state-of-the-art" installations, but these are never representative of the "run-of-the-mill" situation. Then there is the potential misuse and misunderstanding of data and statistics that relate to employment and technology. This is demonstrated in the current infatuation of students and educators with the rapidly growing occupations rather than the occupations with many entry opportunities. The Bureau of Labor Statistics occupational forecasting system is constantly indicted for not focusing sufficiently on the "emerging" occupational opportunities.

The final danger in predicting the impacts of technological change lies in the apparent ease of projecting things which are truly unknowable in advance. It is not possible to predict supply shocks, market outcomes, or changes in tastes, yet such influences may be critically important in determining future events. In the face of a public clamor to know such things, there are those who will respond, without pausing to consider the limits of prescience.

³ This analysis is inspired by Whitley and Wilson (1982).

Research Contributions to the Fears of Displacement

Unfortunately, the research community has not always kept its feet on the ground in its contributions to this public policy debate either. Ayres and Miller (1983), in a very influential early piece of research that fed the flames of the robotics hysteria during the 1982 recession, used a small survey ($n = 16$) of corporate robot users to estimate the job displacement potential of then current robot technology at approximately 1.5 million manufacturing workers. Further, they speculated that robots with sensory capabilities (the next generation of robots) could theoretically do the work of an additional 4 million workers at some point in the future.

But the Ayres and Miller study did not analyze the economic incentives in substituting robots for humans, nor the very real gap between technological possibilities and probabilities, nor the specificity of occupational tasks across industries. They simply asked about the technical possibility of substituting robots for humans on a list of occupations (with which the respondent may not have been completely familiar) and then inflated those numbers to represent the entire universe. This work clearly is guilty of overgeneralization from a narrow empirical base.

Leontief and Duchin (1986), in another widely quoted study, would appear to be prone to a different problem—taking technological optimism to its ultimate conclusion even if the results do not make good common sense. They attempted to isolate the impact of computer-based technologies on employment with the aid of a dynamic input-output model. They sketched out scenarios based upon technological assumptions about the spread of computer-based technologies and their direct productivity impacts; then they used an input-output model to derive the employment implications.

The results of this exercise are very hard to summarize, but what attracted notice was the projection that up to 20 million fewer workers (nearly 12 percent of all employment) would be required to produce national output in the year 2000, assuming the most aggressive application of computer-based technologies. Their contradictory conclusion that the U.S. will suffer from labor shortages by the year 2000 (with the severity depending on the rapidity of diffusion of computer-based technologies) derives largely from the fact that no other productivity improvements are allowed to enter the model—only those due to computer-based technologies.⁴ With a balanced

⁴ This is discussed more fully in Hunt and Hunt (1986).

expansion of national income and final demand, this means that enormous employment increases would be necessary to meet demand in sectors with little computer application.

In addition, the Leontief and Duchin study appears to be plagued by a serious case of technological optimism. As one example, they assume that word-processing technologies will increase clerical productivity by an *average* of 500 percent. However, the fact is that very few word-processing applications offer this magnitude of gain.⁵ More importantly, the study takes insufficient cognizance of the variations in impacts of similar technologies in different applications. Word-processing has tremendous productivity impacts in offices with lots of "boiler plate" production, but much less in an office with less routine production requirements.

Neither of these studies can be regarded as a valuable contribution to the debate about the employment impacts of technological change or the policy response that may be required. A much more useful piece of work is the Office of Technology Assessment study (1984) of programmable automation. This eclectic review of the implications of automation for employment, education and training, and economic policy issues marshalled all the data available and utilized numerous expert panels to aid in the digestion of the information. This balanced approach led to the judgment that only inferences as to the general directions of occupational and industry employment were possible with current data and methodologies.

Nevertheless, the study concluded that some patterns were discernible. While it did not seem that programmable automation would generate significant net national unemployment in the near term, regional unemployment problems were likely to be exacerbated, particularly in the industrial heartland where metalworking industries are concentrated. A general demand bias in favor of technical, engineering, and upper-level manager jobs was also revealed with negative impacts more common among operatives and clerical personnel. Such efforts have rarely commanded appropriate public attention or provided adequate explanations of the actual impact of technological change on employment, however.

Recent developments in econometric estimation of translog and other flexible form production functions promise to finally provide satisfactory quantitative answers to these questions. One outstanding example is the study of occupational demand at Bell Canada by

⁵ See Strassman (1985) for a general discussion of this subject.

Denny and Fuss (1983). This effort is noteworthy in that it is one of the very few cases where appropriate data were available across time on the levels of output, all inputs, including labor by occupational group, and an indicator of technological change (proportion of direct distance telephones).

The conclusions reached by Denny and Fuss in this analysis are very stimulating. First, they determined that the specific technological change (direct distance dialing) was labor-saving in general, especially for operators who were replaced directly by the technology. In addition, there was a displacement bias against the least skilled occupations, while job creation tended to augment demand for more highly skilled workers. Lastly, the study estimated the magnitude of the different determinants of employment change over time. For the telephone operators displaced by direct distance dialing technology, the Denny and Fuss estimates (1983, pp. 173-74) are that the overall decline of 3 percent per annum in their employment from 1952 to 1972 was composed of an increase in demand of 4 percent annually due to output growth, a technological displacement rate of 7 percent annually, and no net impact from relative factor prices.

Another outstanding example of the application of translog methodology to the study of the employment effects of technological change is a paper by Levy, Bowes, and Jondrow (1984).⁶ They have improved on the Denny and Fuss work in at least three dimensions. First, they have extended the analysis to five basic industries: steel, automobiles, aluminum, coal, and iron ore. Second, they did not find ready-made indicators of technological change, so they had to develop them in each case. Third, they compared the estimated labor displacement rates to measured turnover rates in each industry to provide some dynamic perspective for the analysis.

The estimated direct effect of technological change on employment was negative in all industries. The output enhancement effect of technological change (through lower prices and greater demand for output) was positive in all cases except the steel industry. According to the authors:

On balance, the direct effect of technical change on labor demand has been the substitution of other inputs for labor in all five industries. However, the effect has proceeded gradually at a generally constant or even declining rate, and its impact on employment has often been smaller than

⁶ See also Levy and Jondrow (1986).

declines due to changes in wage rates and output, particularly in the recession years 1979 and 1980. (P. 89.)

Furthermore, when comparing the rates of displacement of labor to normal rates of turnover in the five industries,

. . . the fact remains that the rate of attrition has been far above the employment effects of technical change and has cushioned the effects of employment reduction. Even in the steel industry, with the lowest quit rate (4.1 percent) and a negative total effect of technical change on employment, voluntary turnover has been more than adequate to cover employment reduction. (P. 93.)

It is expected that as additional studies accumulate, they will continue to demonstrate that overall growth in demand is generally the largest determinant of the level of employment. Technological change will be revealed to be a factor of secondary importance in determining employment levels. These quantitative results will carry a message of reality to combat the fears of technological displacement and they will help in the development of policies to facilitate the adjustment to technological change.

Conclusions and Solutions

This selective review has shown two things about the fears of the effect of technology on employment. First, there is a "Gresham's Law" of research on employment policy issues at work. Bad news (and maybe bad research) seems to crowd out the good news in the media and from the public consciousness. This is unfortunate, but it simply means that we have to try harder to bring reasonable analyses to bear on the problem.

Second, it is only recently that adequate research methodologies have been available for the analysis of the effects of technological change on employment. The application of translog production function methodology to this problem for the first time promises the opportunity to make a credible determination of what is actually going on. Being able to explain what part of employment change in a given industry has been a consequence of factors such as scale effects, price effects, and technology effects will prove to be extremely valuable in addressing the fears of the man-in-the-street about technological change.

However, we need more empirical research on these issues, specifically including much more work on developing technology indicators for a wide variety of industries. We also need to make a concerted effort to develop better measurements of the capital stock in use over time. As we have argued elsewhere (Hunt and Hunt, 1985), measurements of the labor inputs to production are arguably sufficient, but we have almost no measures at all for the capital inputs. Further, we have no way to tie the two together in most instances. It is time to initiate new establishment-based data collection efforts to provide the same detail about capital and labor in production that we have had on labor supply for many years.

In addition, our society will have to provide an adequate mechanism to smooth the adjustment process when workers *are* displaced by technological change (or any other structural change). Much of the opposition to technological change comes from the fear that each of us might become a victim. Generous retraining and relocation allowances are necessary to calm those fears. It is entirely appropriate for this to be a public responsibility, since it is the public at large that reaps most of the benefits of technological change, but we simply must provide assurances to the workers who bear the brunt of these adjustments that they will not be sacrificed in the name of technological progress.

With more adequate data and more effective analytic techniques, all that will remain is to do a more effective job of getting the story out to the public. Then, it may be possible to look forward to the day when fears of technological displacement are behind us.

References

- Ayres, Robert U., and Steven M. Miller. *Robotics Applications and Social Implications*. Cambridge, MA: Ballinger, 1983.
- Bowen, Howard R., and Garth L. Mangum, eds. *Automation and Economic Progress*. Englewood Cliffs, NJ: Prentice-Hall, 1966.
- Denny, Michael, and Melvyn Fuss. "The Effect of Factor Prices and Technological Change on the Occupational Demand for Labor." *Journal of Human Resources* 17 (Spring 1983), pp. 161-76.
- Florman, Samuel C. *Blaming Technology: The Irrational Search for Scapegoats*. New York: St. Martin's Press, 1981.
- Hunt, H. Allan, and Timothy L. Hunt. *Clerical Employment and Technological Change: A Review of Recent Trends and Projections*. Research Report Series 86-14. Washington: National Commission for Employment Policy, February 1986.
- Hunt, Timothy L., and H. Allan Hunt. "An Assessment of Data Sources to Study the Employment Effects of Technological Change." In *Technology and Employment Effects: Interim Report*, Panel on Technology and Women's Employment, National Research Council. Washington: National Academy Press, 1985.
- Leontief, Wassily, and Faye Duchin. *The Future Impact of Automation on Workers*. New York: Oxford University Press, 1986.

- Levy, Robert A., Marianne Bowes, and James M. Jondrow. "Technical Advance and Other Sources of Employment Change in Basic Industry." In *American Jobs and the Changing Industrial Base*, eds. Eileen L. Collins and Lucretia Dewey Tanner. Cambridge, MA: Ballinger, 1984.
- Levy, Robert A., and James M. Jondrow. "The Adjustment of Employment to Technical Change in the Steel and Auto Industries." *Journal of Business* 59 (July 1986), pp. 475-91.
- Strassman, Paul A. *Information Payoff: The Transformation of Work in the Electronic Age*. New York: Free Press, 1985.
- U.S. Congress, Office of Technology Assessment. *Computerized Manufacturing Automation: Employment, Education, and the Workplace*. Washington: 1984.
- Whitley, J. D., and R. A. Wilson. "Quantifying the Employment Effects of Micro-Electronics." *Futures* 14 (December 1982), pp. 486-95.

Public Policy and Collective Bargaining Responses to New Technology in Canada

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It could be said that the institution of collective bargaining emerged as a response to industrialization and technological change. However true this general statement may be, the collective bargaining process periodically has been confronted by issues associated with the adoption of specific new technologies. During the 1950s and 1960s considerable academic concern and bargaining activity was aroused by automation and other production changes that reduced unit labor requirements without radically changing job content (see, for example, Dunlop, 1962; Somers, Cushman, and Weinberg, 1963). Automation increased the importance of employment and income security issues in collective bargaining and challenged the participants in the process to devise new ways of balancing workers' security needs with the benefits to management of technological change. Twenty years later the diffusion of microelectronic technologies that both threaten worker security *and* frequently alter job content (Shaiken, 1984) has refocused attention on technological change as a subject of collective bargaining.

In the United States, national labor policy has fluctuated on the degree to which technological change issues are considered a proper subject of collective bargaining and for the full exercise of bargaining power. Recent critiques of the distinction between mandatory and permissive subjects of bargaining under the National Labor Relations Act (NLRA) have argued that, during the Reagan Administration in particular, the scope of mandatory bargaining over technological change has been progressively narrowed to such an extent that management decisions regarding new technology are largely insulated

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from collective bargaining (Sockell, 1986; Ashford and Ayers, 1986). The vagaries of this policy approach under the NLRA may help explain the general lack of explicit technological change provisions in U.S. collective bargaining agreements (Bureau of National Affairs, 1979; U.S. Bureau of Labor Statistics, 1981). Instead of general, anticipatory provisions, collective bargaining responses to technological change in the U.S. seem most often to take the form of ad hoc agreements such as the Modernization and Mechanization Program in the West Coast ports during the 1960s (Healy, 1965) and the recent technology and employment agreements in the automobile industry (United Automobile Workers, 1984).

By contrast, Canadian labour policy does not draw a distinction between mandatory and permissive subjects of collective bargaining (Adams, 1985). Therefore, there has been no administrative limitation of collective bargaining over technological change subjects. Indeed, four Canadian jurisdictions have provided positive statutory support for such bargaining. In this paper we describe the Canadian policy context and assess the extent of recent collective bargaining over technological change in Canada. Specifically, we address the question of whether the proportion of collective agreements containing technological change provisions or changes in this proportion in recent years vary across Canadian jurisdictions depending upon whether a statutory requirement exists or not. Given the policy objective of encouraging anticipatory collective bargaining over technological change, we would expect to find a larger proportion of agreements containing technological change provisions in the jurisdictions with statutory requirements than in the nonstatutory jurisdictions. This analysis will aid in assessing the actual bargaining impact of public policy in Canada and in comparing the potential role of collective bargaining in responding to technological change in Canada and the U.S.

The Canadian Public Policy Framework

Compared with the dominant federal jurisdiction in the U.S., the Canadian industrial relations system is relatively decentralized. The system contains eleven jurisdictions—ten provincial and the federal jurisdictions. The federal jurisdiction covers approximately 10 percent of the civilian workforce engaged in such industries as transportation, communications, and banking, with the provincial jurisdictions covering the remainder of the workforce (Craig, 1985, p. 117). Labour legislation in three of the provincial jurisdictions (British Columbia,

Manitoba, and Saskatchewan)¹ and the federal jurisdiction² contain provisions encouraging collective bargaining over technological change and explicitly requiring that management provide advance notice of technological change.

"Technological change" is generally defined in each of the statutory provisions as "the introduction by an employer into his work, undertaking or business of equipment or material of a different nature or kind than that previously used by him . . . [and/or] a change in the manner in which the employer carries on the work, undertaking, or business that is directly related to the introduction of that equipment or material." The Saskatchewan provision additionally includes within its definition "the removal by an employer of any part of his work, undertaking or business." Each of the statutory provisions requires that a "significant" number of employees be affected by a technological change before the legal requirements come into effect. Only Saskatchewan's regulations³ provide a specific formula for determining what a "significant number of employees" is in any given case, with the other three statutes leaving this threshold determination to the discretion of the respective labour relations boards.

Both the length of notice of technological change and the method of resolving disputes over technological change during the term of a collective agreement vary across the jurisdictions. Under the *Canada Labour Code*, at least 120 days' notice is required, while the Manitoba and Saskatchewan statutes require 90 days' notice. Under the *Labour Code of British Columbia*, an arbitration board may order that an employer postpone a technological change (and, hence, provide notice of the change) for *up to* 90 days. Each of the statutory provisions permits either the labour relations board or an arbitration board to determine whether a technological change has occurred and to order reinstatement of laid-off employees to give effect to the notice requirement. In addition, each of the statutes provides for midterm reopening of collective agreements and bargaining over the effects of technological change, although the British Columbia

¹ *Labour Code of British Columbia*, Ch. 212, Secs. 74-78; *Trade Unions Act of Saskatchewan*, Secs. 41-43; *Labour Relations Act* (Manitoba) (S.M. 1972, C. 75, Cap L 10), Secs. 72-75.

² *Canada Labour Code* (Part V) 1973 (R.S.c. 1970 c. L-1 as amended by Stat Can 1972 C. 18, 5.1), Secs. 149-153.

³ *Saskatchewan Regulations* 171-72, Sec. 3, which provides the following formula for determining what a "significant" number of employees is: (1) where an employer has from 2 to 9 employees inclusive, 2 employees; (2) where an employer has from 10 to 19 employees inclusive, 3 employees; (3) where an employer has from 20 to 29 employees inclusive, 4 employees; (4) where an employer has 30 or more employees, 20 percent of his total number of employees.

legislation expresses an implicit preference for arbitration over the reopening of a collective agreement.

Though these four Canadian legislative provisions go no further than requiring an employer to give advance notice of technological change and empowering unions to compel an employer to bargain or arbitrate over the effects of a change, the policy approach is markedly different from that of the other Canadian jurisdictions and especially the U.S. It remains to be understood, however, to what extent the presence of statutory requirements has influenced the *negotiation* of explicit technological change provisions. In addition to advance notice, such provisions might relate, for example, to income and/or employment security in the face of technological change, training or retraining, and the creation of joint labor-management committees to address technological change issues.

Collective Bargaining Responses to Technological Change

Data on a sample of 1132 Canadian collective agreements were acquired from Labour Canada. The data are unusual in that the sample of collective agreements was selected to permit the first internally consistent analysis of *changes* in the extent of collectively negotiated technological change provisions over a period of years, in this case 1978–1984. Previously available data sets did not allow comparisons across time of precisely the *same* sample of collective agreements. The sample of collective agreements used here is reasonably representative of the distribution of Canadian collective bargaining across jurisdictions, major industries, and bargaining unit size (Knight and McPhillips, 1986).

The proportions of collective agreements containing each of four types of technological change provisions in 1978 and 1984 are presented in Table 1. Proportions are provided for agreements negotiated in jurisdictions having statutory technological change provisions, those lacking statutory provisions, and for the total sample.

The statutory/nonstatutory groups of collective agreements are not greatly different in their industry or bargaining unit size distributions, two factors which, in addition to the presence or absence of statutory requirements, could influence the extent of collective bargaining over technological change and the negotiation of specific provisions (Knight and McPhillips, 1986). The nonstatutory group contains a larger proportion of manufacturing agreements (44 vs. 18 percent),⁴

⁴ The coded major industry groups are: resource extraction, manufacturing, transportation, communications and utilities, retail and wholesale trade, services, health care, education, and public administration.

TABLE 1
 Proportions of Collective Agreements
 Containing Technological Change Provisions in
 Canadian Jurisdictions Requiring and Not Requiring
 Collective Bargaining over Technological Change

		Technological Change Provisions			
		Advance Notice	Income or Employment Security	Training or Retraining	Union Management Committee
Jurisdictions with statutory requirements (n = 314)	1978	34% (107)	18% (56)	30% (95)	11% (36)
	1984	44% (139)	22% (68)	37% (117)	10% (31)
Other jurisdictions (n = 818)	1978	28% (228)	19% (158)	21% (169)	14% (112)
	1984	33% (274)	20% (164)	26% (214)	14% (117)
Overall (n = 1132)	1978	30% (335)	19% (214)	23% (264)	13% (148)
	1984	36% (413)	20% (232)	29% (331)	13% (148)

and the statutory group has a larger proportion of transportation agreements (32 vs. 2 percent) due to the inclusion of the federal jurisdiction in the statutory group. In addition, the statutory group contains 22 percent more collective agreements in the *smallest* category of bargaining unit size (0-100 employees)⁵ than does the statutory group.

These differences would, if anything, lead to an overstatement of the extent of collective bargaining over technological change in the *nonstatutory* jurisdictions given findings for the sample as a whole that a consistently higher proportion of agreements in manufacturing than in transportation contain technological change provisions and that the extent of technological change bargaining is positively associated with bargaining unit size (Knight and McPhillips, 1986).

Though the coded data allow for a range of provisions of each type, in practice there is not sufficient variance in the nature of negotiated provisions to warrant treating them as continuous variables. Hence, the provisions have been collapsed to the dichotomous variable of a provision being present or absent in a collective agreement. Figures in parentheses following the proportions are the absolute number of agreements containing the provision.

⁵ The coded bargaining unit size categories are: 1-100, 101-500, 501-1000, 1001-2000, and 2001+ employees.

Not surprisingly, Table 1 shows that collective agreements negotiated in jurisdictions with statutory technological change requirements were considerably more likely to contain advance-notice provisions in 1984 than those negotiated in the nonstatutory jurisdictions. Further, the proportional increase of notice provisions in the statutory jurisdictions between 1978 and 1984 was twice that of the others. This difference undoubtedly reflects the fact that incorporating the statutory requirements into the collective agreement imposes no additional "costs" on an employer since the statutory notice requirements would apply whether or not they are expressly included in a collective agreement. In the total sample of collective agreements, fully 36 percent contain advance-notice provisions.

The difference between the statutory and nonstatutory jurisdictions is much smaller on the proportion of collective agreements containing income or employment security provisions (severance pay, SUB, wage guarantees, employment guarantees, transfer rights, layoff by attrition, etc.). With a somewhat greater growth in the proportion of agreements containing security provisions, the statutory jurisdictions had only a marginally larger proportion of collective agreements containing such provisions in 1984 than did the nonstatutory jurisdictions.

The statutory jurisdictions again have a greater proportion of agreements containing training or retraining provisions, though the increase in the proportion of collective agreements containing such provisions between 1978 and 1984 was only marginally greater in those jurisdictions. Therefore, in the presence of statutory support for *minimal* collective bargaining over technological change, unions also have achieved greater success in negotiating employment commitments to provide training in response to technological change.

Finally, a somewhat larger proportion of collective agreements negotiated in the *nonstatutory* jurisdictions call for joint union-management committees than do agreements in the statutory jurisdictions. Additionally, while the *number* of collective agreements in the nonstatutory jurisdictions containing joint committees increased by five between 1978 and 1984, this was offset by a *decrease* of five collective agreements containing committee provisions in the jurisdictions with statutory requirements. All of the joint union-management technological change committees in the sample are advisory only, and only a minority of the committee provisions prescribe specific joint committee tasks or objectives.

Conclusion

The data presented here provide mixed answers to the question of whether statutory technological change bargaining provisions in four Canadian jurisdictions have resulted in more negotiated provisions than exist in jurisdictions with no such requirements. This *has* been the case for provisions regarding advance notice of technological change and training or retraining of employees. Furthermore, for all of the provisions covered by the data except joint labor-management technological change committees, growth in the proportion of agreements containing the provisions was greater between 1978 and 1984 in the statutory than in nonstatutory jurisdictions.

Nonetheless, the proportion of agreements in the two groups containing income and/or employment security provisions is roughly equal, with only 2 percent more of the statutory agreements having security provisions in 1984. The proportion of agreements providing for joint union-management committees has declined slightly in the *statutory* jurisdictions and was somewhat lower in those jurisdictions than in the nonstatutory ones.

On the whole, it is fair to conclude that public policy has succeeded to some extent in fostering anticipatory collective bargaining over technological change. As compared with the relatively ad hoc approach to technological change bargaining in the U.S., the entire Canadian collective bargaining system appears to be more conditioned to the treatment of technological change as a legitimate subject of collective bargaining. This is seen in the substantial proportions of collective agreements containing technological change provisions even in the Canadian jurisdictions lacking any statutory requirements, though it must be recalled that the extent of technological change in the nonstatutory jurisdictions may be overstated somewhat relative to the statutory jurisdictions in the present sample due to distortions in the sample groups in their industry and bargaining unit size distributions.

The collective agreement provisions addressed in this analysis represent the "traditional" technological change issues that emerged in response to automation in the 1950s and 1960s. Technological change based upon microelectronics presents a new set of issues in addition to the traditional ones. There will be profound changes in not only the quantity but the content of work with the application of "smart" technologies. Further, technology "Bill of Rights" issues arise in the worker surveillance potential of many new computer applications as well as in the new hazards to health and safety posed by some

microelectronic technology (Shaiken, 1985). Both the Canadian and the U.S. labor movements have expressed increasing demands over the right to participate in the selection and implementation of new technologies. Effective collective bargaining responses to these new issues will require that a more collaborative approach be taken by unions and management than has generally been possible within an essentially adversarial framework. Such collaboration and trust will be necessary *both* to protect worker rights *and* to gain the competitive advantages offered by new technologies.

References

- Adams, George W. *Canadian Labour Law*. Aurora, Ont.: Canada Law Books, 1985.
- Ashford, Nicholas A., and Christine Ayers. "Changes and Opportunities in the Environment for Technology Bargaining." Report to the U.S. Department of Labor, Office of the Assistant Secretary for Policy, 1986. Mimeo.
- Bureau of National Affairs. *Basic Patterns in Union Contracts*, 9th ed. Washington: BNA, 1979.
- Craig, Alton W. *The System of Industrial Relations in Canada*, 2d ed. Toronto: Prentice-Hall Canada, 1985.
- Dunlop, John T., ed. *Automation and Technological Change*. Englewood Cliffs, NJ: Prentice-Hall, 1962.
- Healy, James J., ed. *Creative Collective Bargaining*. Englewood Cliffs, NJ: Prentice-Hall, 1965.
- Knight, Thomas R., and David C. McPhillips. "Recent Trends in Collective Bargaining Over Technological Change. *Proceedings of the 29th Annual Meeting of the Canadian Industrial Relations Association*, ed. Mark Thompson, 1986.
- Shaiken, Harley. *Work Transformed: Automation and Labor in the Computer Age*. New York: Holt, Rinehart and Winston, 1984.
- Sockell, Donna. "The Scope of Mandatory Bargaining: A Critique and Proposal." *Industrial and Labor Relations Review* 40 (October 1986), pp. 19-34.
- Somers, Gerald G., Edward L. Cushman, and Nat Weinberg. *Adjusting to Technological Change*. IRRA Series. New York: Harper and Row, 1963.
- United Automobile Workers. "UAW-GM to Decide Jointly on Investments for New Jobs." *UAW-GM Report*, September 1984.
- U.S. Bureau of Labor Statistics. *Characteristics of Major Collective Bargaining Agreements*, 1981.

Technological Change and Industrial Relations: An International Comparison

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Technological change has emerged, or re-emerged, during the past decade as an issue of major importance for industrial relations. Technological change may be defined as “the process by which economies change over time in respect of the products they produce and the processes used to produce them” (Stoneman, 1983). Technological change may involve any change in equipment or process, through the application of knowledge and skills, which results in a significant alteration in the relationship between labor, capital, and raw materials. Opinions differ over the degree to which recent changes in technology have transformed society and created a “new industrial revolution.” Nevertheless, there is broad agreement that the pace of technological change increased during the past two decades, as did the extent of its impact on economies and societies.

Trade Unions and Technological Change

Bamber and Lansbury (1987) have argued that in countries with adversarial traditions in industrial relations (such as most English-speaking countries), unions are more likely to oppose technological change than their counterparts in countries with recent traditions of social partnership in industrial relations (such as West Germany and the Scandinavian countries). These broad international differences between union responses, however, may be less significant than differences between occupations, sectors, and types of unions. Kassalow (1986) has noted that in North America, craft unions traditionally resisted technological change, fearing that it would reduce or eliminate the need for particular skills. By contrast, industrial unions were more likely to adjust to technological change since it affected only a small fraction of their membership. In recent

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years, however, the impact of new technology has been all-pervasive and has resulted in major work and organizational change. Kassalow cites a number of cases where unions and management have cooperated on the introduction of new technology. For many unions, this has been a defensive move in order to preserve their members' job security; for the employers it has often been a way of minimizing the degree of resistance by unions to technological change that is designed to make their businesses more competitive. The long-term impact of new technology on employment is yet to be seen, but Kassalow argues that collective bargaining is still a viable method of negotiating change. However, he also acknowledges that the North American approach to collective bargaining on a company or plant level (rather than the industry-wide approach as in most of Western Europe) does make U.S. unions more vulnerable when employers use the new technology to establish new nonunion plants.

A number of unions, especially in Northern Europe, have sought to challenge the rights of management to introduce technological change in the workplace unilaterally and have successfully negotiated "new technology agreements" (see Evans, 1985; also Williams and Steward, 1985). The Geneva-based International Federation of Commercial, Clerical, Professional and Technical Employees (FIET) has issued a model agreement for its affiliates which contains 38 clauses (see ILO, 1985). Such agreements usually cover both procedural and substantive issues. The former concerns matters such as the method and scope of consultation, the development of union expertise, the protection of individuals' privacy when data about them are collected and stored by using information technology, and the provision of joint reviews of any technological changes. Substantive issues include redundancy provisions, changes in working hours, payment for new skills, job design, retraining and reskilling, occupational health and safety, and equal employment opportunity. Not all of these concerns have arisen solely from technological change, but perceived threats associated with microelectronics have caused many unions to review and update their earlier policies.

Union responses to technological change are influenced by a variety of factors. The economic environment may have two contradictory influences. When unemployment is high, unions respond to pressure from their members to seek to influence the course of technological change; yet unemployment commonly reduces union bargaining power. On the other hand, when the unemployment rates are low, unions generally have more power to oppose change but less

incentive to do so, since displaced workers can more easily find alternative employment. The structure of union organization is also important. When there is industry unionism and strong central union confederations, the union movement has usually been more successful in gaining influence in strategic decision-making about new technology at both the national and sectoral levels. However, influence on decisions at the company or plant level requires strong union organization at the workplace, which is sometimes lacking under a more centralized system. In West Germany, for example, attempts by unions to strengthen the role of the works councils at the workplace level encountered a setback in 1983 when a Federal Labor Tribunal ruled that works councils at Pan Am had no general right to codetermination on the layout of visual display units. This decision was reversed in a subsequent case when it was shown that the introduction of technology could be used to monitor employee performance and productivity. Nevertheless, unions cannot always count on favorable decisions by tribunals, and their degree of influence depends on their ability to exert pressure at all levels.

Employers and Technological Change

Jacques Rojot (1986) has noted that while technological change has always been an important element in the role of management, it has become more essential to management's competitive strategy in recent times. In the early years of assembly-line manufacturing, argues Rojot, the principal reason for introducing new technology was to reduce direct labor costs by achieving economies of scale and standardization of production. In more recent years, however, the main objective of technological change in manufacturing has been to achieve a greater degree of flexibility in the production process through the use of innovations such as CAD/CAM and robotics. Although the desire to reduce labor costs is still a significant factor in management strategy, increasing emphasis is given to achieving customization of product and fast reaction times in terms of changes in specification, delivery times, and so on.

The policies of employers' associations with regard to technological change are generally broad and vague, in order to accommodate the wide range of attitudes among their members across different industries and companies. However, most national employer bodies regard technological change as both necessary and inevitable. In general, employer groups emphasize the positive benefits to be gained from new technology which will make work less repetitive, more

interesting, and safer by eliminating those aspects that are dangerous or boring. The Swiss Employers' Association, for example, argues that since microelectronics offer benefits for everyone, the material conditions of life and social status of employees will be improved as a result of technological change (Bodmar, 1983). Similarly, the French Employers' Federation (CNPF) has issued a report that emphasizes the role of computers in helping and enriching human work as well as improving the competitiveness of enterprises.

The degree to which consultation between management and employees on the introduction of new technology is encouraged varies between employer bodies. Windmuller (1984) has noted that in recent years "the issue of codetermination has been of foremost concern to employers' associations in several countries, in part because it has involved the state in the shaping of new modes of industrial relations through legislation which affects the system of collective bargaining, threatens management prerogatives and usually increases union power." Rojot states categorically that "the acceptable degree of consultation [to employers] is strictly limited" and that most employers argue that decisions about the introduction of new technology "remain and must remain with management alone." He also notes that among international employers' associations there is a strong belief that new technology should not be used as a basis for the imposition of additional requirements for "information, consultation or bargaining obligations."

The Role of Government and Technological Change

A recent OECD report on Industrial Relations and Technological Change (1985) recommended that "the state should not only seek to create the best possible climate for [technological] change but it also has a general duty to deal with such social problems arising from technological change as cannot be resolved by employers and workers and their unions." Dror (1986) has noted that government policies regarding technological change are of relatively recent origin. One important contributing factor to the expanding role of the state in this field has been the growth of government expenditure for military purposes, much of which has involved investment in new, if not revolutionary, technology. The Strategic Defense Initiative (SDI) in the United States and the European Research Coordination Agency (EUREKA) are two such examples. Many of these projects involve international cooperation, for both political and economic reasons, and the technological developments that emerge have important

ramifications for the world as a whole. Changes in information technology which have resulted from military research, for example, have profoundly affected the existing division of labor not only within the workforce, but also between people and machines.

Governments also use macroeconomic policy to effect technological change. A variety of incentives exist to encourage investment in new technology in the belief that this will have long-term economic and social benefits. Freeman (1985) has shown, for example, that the two countries with the highest average rate of investment in technology in the past ten years, U.S. and Japan, have also registered among the lowest rates of unemployment. He also argues that a profound techno-economic change is occurring in the advanced industrial world as it passes from an era of energy-intensive standardized mass production technology of the 1950s and 1960s, to information-intensive, flexible systems technology of the 1970s and 1980s. The ability of governments to cope with such changes will determine their political futures. Indeed, economic pressures have forced many governments to seek technological solutions to trimming their deficits, especially in public-sector enterprises such as railways where new technology is being used in an effort to boost productivity, albeit at the cost of higher unemployment.

While there have been moves toward deregulation in some countries, such as the United States, others have experienced greater government intervention or regulation. The active encouragement of "new technology agreements" by governments, especially in Europe, is an example of a new approach which seeks to avoid industrial disputes over technological change. However, governments are also legislating in areas which have traditionally been the domain of collective bargaining such as hours of work, employment security, and occupational health and safety as well as in new fields such as protection for workers against racial or sexual discrimination. Although these developments have not emerged directly as a result of technological change, they have been brought into sharper focus by new technology. While employers have tended to oppose greater intervention by government, many unions have actively sought a wider government role, especially where they judge their bargaining position to be relatively weak. However, this trend could lead to a further "marginalization of collective agreements" and a diminishing role for trade unions which are unable to cope with the new challenges presented by technological change.

The Challenge of Technological Change to Traditional Systems of Industrial Relations: Towards Greater Flexibility?

A number of commentators have questioned the degree to which traditional forms of collective bargaining can effectively deal with issues arising from technological change. Kochan and Tamir (1986) have highlighted problems inherent in the North American approach whereby management seeks to determine all basic decisions (e.g., the introduction of new technology) and unions simply negotiate over the impact of these decisions. New technology, they argue, is forcing unions to expand into areas of decision-making which they previously considered to be outside their domain. Furthermore, those systems which provide a role for employee representatives at earlier stages of the planning and decision-making process are more likely to respond effectively to changes. The new Saturn division of General Motors, which was established with the cooperation of the UAW to build a small car on a competitive basis in the United States, is cited as one example of a new approach to labor-management relations of this kind (see also Kassalow, 1986). Stronger links need to be forged between collective bargaining at the workplace or micro level, where the focus is on immediate on-the-job issues, and the national or macro level where the emphasis is on policy issues such as economic growth and employment. If unions in the United States are to cope effectively with technological change, they will need to play a stronger role at the strategic level of decision-making.

In Western Europe technological and structural changes, combined with relatively high levels of unemployment, have already brought about major changes not only in the implementation of existing collective agreements (involving issues such as redundancy and retraining), but also in the bargaining levels of new agreements. In many countries there has been a shift away from centralized bargaining at the national level toward industry- or enterprise-level bargaining, in which local economic conditions can be taken into account more readily. Both the process and substance of collective bargaining has changed from the more militant negotiations of the 1970s to an emphasis on greater cooperation and concessions of the 1980s. Yet in other parts of the world, such as Australia, economic recession has caused a return to a more centralized system of wage negotiations, with less bargaining at the local or industry levels. This underlines the fact that there has emerged a greater diversity of

industrial relations processes during recent periods of major economic and technological change.

A common theme to emerge in most advanced industrial economies, however, is a desire for greater flexibility in industrial relations, particularly among employers and governments, as a means of coping with changes in technology and other external pressures. New technologies which emphasize flexibility place job control of the North American and British models at risk, as employers bargain more strongly for new systems of work organization. Nevertheless, the need for greater flexibility may open up new opportunities for unions and employers to break out of the traditional "scientific management" model of tight job descriptions and narrow classifications and introduce more discretion, variety, training, and opportunities for personal growth into work roles and organizations. These new forms of work organization should also require a higher level of employee participation in task-related decision-making due to the analytical content of the work associated with new technology.

Many of the new high technology industries associated with computers are in the small to medium enterprise category and are therefore benefiting from such opportunities for greater flexibility. On the other hand, unions are finding it difficult to recruit members in this sector and are concerned that employers may seek to use the conditions obtaining in these enterprises to undermine coverage and activities in more traditional areas. Yet the trend toward greater flexibility in industrial relations appears to be well established in most advanced market economies and may emerge as one of the most significant and lasting effects of technological change.

References

- Bamber, G. J., and R. D. Lansbury. *International and Comparative Industrial Relations*. London: Allen and Unwin, 1987. Ch. 1.
- Bodmer, W. "Reflexions sur l'application de la micro-electronique." *Bulletin de Documentation Economique*. Geneva: S.D.E.S., 1983.
- Davis, E. M., and R. D. Lansbury, eds. *Democracy and Control in the Work Place*. Melbourne: Longman Cheshire, 1986.
- Dror, D. "Industrial Relations Implications of Government Policies Towards Technological Change." Hamburg: International Industrial Relations Association, 1986.
- Evans, J. "Model Agreements for Negotiating Technological Change." In *The Management of Technological Change*. London: Commonwealth Secretariat, 1985.
- Freeman, C. "Technical Change and Unemployment." *Proceedings of an International Symposium on Microelectronics and Labour*. Tokyo: Japan Institute of Labour, 1985. Pp 347-59.
- International Labour Office. *Technological Change: The Tripartite Response, 1982-85*. Geneva: ILO, 1985.

- Kassalow, E. "Technological Change: Unions and Employers in a New Era." Hamburg: International Industrial Relations Association, 1986.
- Kochan, T. A., and B. Tamir. "Collective Bargaining and Technological Change: Some Preliminary Propositions." Hamburg: International Industrial Relations Association, 1986.
- Lansbury, R. D., and E. M. Davis, eds. *Technology, Work and Industrial Relations*. Melbourne: Longman Cheshire, 1984.
- Organisation for Economic Cooperation and Development. *Industrial Relations and Technological Change*. Report of a Joint Meeting of Management and Trade Union Experts under the OECD Labour/Management Programme, Paris, 1985.
- Rojot, J. "Employers' Responses to Technological Change." Hamburg: International Industrial Relations Association, 1986.
- Stoneman, P. *The Economic Analysis of Technological Change*. Oxford: Oxford University Press, 1983.
- Williams, R., and F. Steward. "New Technology Agreements: An Assessment." *Industrial Relations Journal* 16, No. 3 (1985), pp. 58-73.
- Windmuller, J. "Employers Associations in Comparative Perspective: Organisation, Structure, Administration." In *Employers Associations and Industrial Relations: A Comparative Study*, eds. J. P. Windmuller and A. Gladstone. Oxford: Oxford University Press, 1984.

XIX. PART-TIME WORK AND PART-TIME WORKERS

Older Workers and Part-Time Work

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Part-time work seems the natural way for older workers to make the transition from full-time work to retirement. Economic models of how workers make their long-run plans for work and compensation support this intuition. Further, in responding to surveys, older workers say that they want to retire gradually. Yet, sudden retirement, not part-time work, is the norm.

Why is retirement usually sudden? Is there a problem in this labor market? Are there federal policies that would increase the availability of part-time work for older workers, without major cost to business or taxpayers? These are the central questions addressed in this paper.

Older workers say that they would like to work, but perceive that their current jobs would not be available on a part-time basis and that comparable part-time jobs are rare. If true, this perception raises further questions: Is the unavailability of part-time jobs particular to older workers—either because of discrimination or some other reason—or are part-time jobs scarce economy-wide and, if so, why?

When we ask why retirement is sudden, it is not to suggest that the state of retirement is itself puzzling. It is easy to imagine preferences and rates of pay that would make not working preferable to working during part of one's life. What is puzzling (violating the usual

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assumption of gradualness) is the suddenness of the transition from working to not working. We inquire, in this research, into the inconsistency between expectation—that older workers will retire gradually, going from full-time work, through part-time work, to retirement—and what observation suggests is reality—that most older workers retire completely without a transition of part-time work.

Our preferred explanation of why part-time employment for older workers is not the norm draws on the research of Barzell, Lewis, and H. Rosen. The essence of our theory is that part-time work is less productive and more costly to employers, per hour, than full-time work. As a consequence part-time workers get less compensation per hour than full-time workers, and in making lifetime plans, workers place emphasis on either full-time work or complete retirement.

The idea that part-time work is more costly per hour than full-time work requires some explanation. We start with the distinction between employment costs that are actually a part of compensation (such as health insurance) and those which are not (such as job-specific training, which is of value only to the firm). The former costs are similar to wages. Even if they were higher per hour for part-time workers than for full-time workers and so required that part-timers accept a lower wage to make up the difference, part-time workers would accept the lower wage because nonwage compensation was higher per hour. What discourages part-time work are those employment costs that are not considered compensation and that do not shrink proportionately as hours are reduced below full time.

Note that our explanation of the scarcity of part-time work assumes that decisions about wages and hours are made by both workers and employers; it recognizes that there are two sides to the employment bargain. Workers tend to shy away from part-time work because it is low paid relative to full-time work. Employers offer low pay for part-time work because part-time work involves a penalty in productivity and employment costs. It is the interaction of the workers' and employers' responses to the unattractive features of part-time work that results in it being far less common than full-time work or retirement.¹

Policy Analysis

In this section we show how the theory we develop in the text is used to estimate the effect of federal policy. We consider three

¹ A fuller explanation of the theoretical and empirical underpinnings of this model can be found in our earlier work, "Older Workers in the Market for Part-time Employment," Center for Naval Analyses Professional Papers 396 and 397, August 1983.

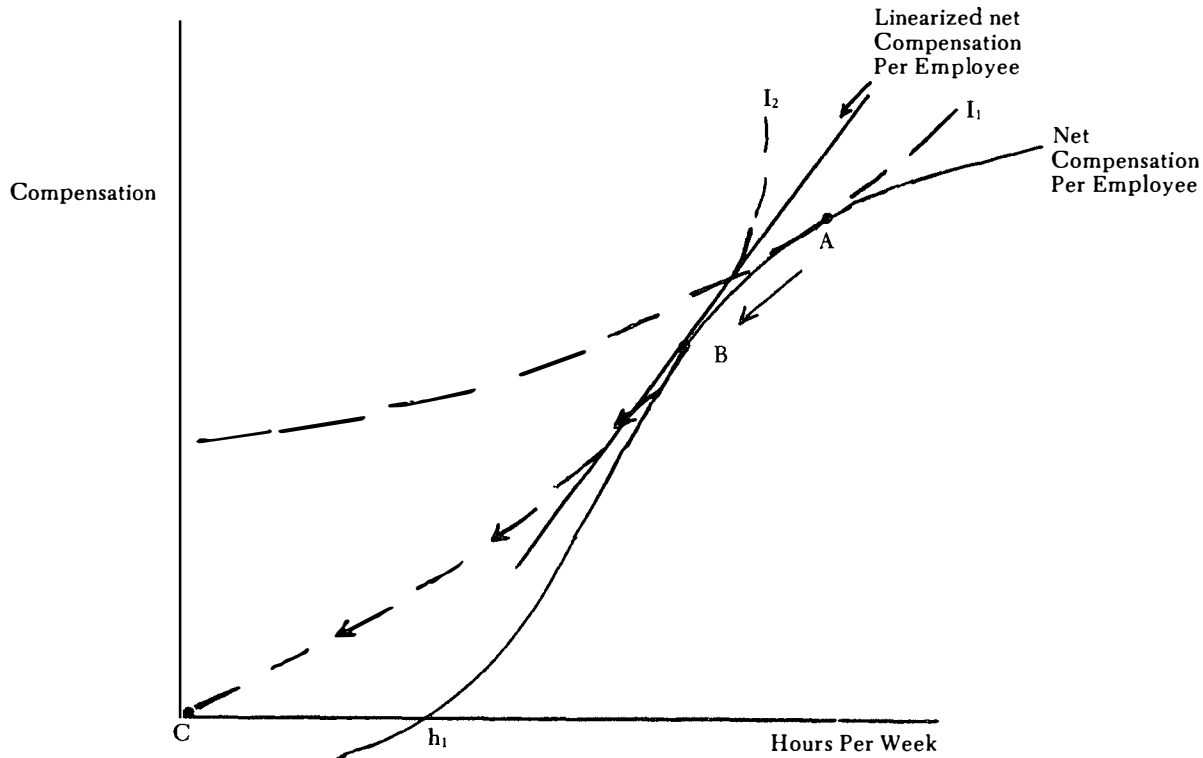


FIGURE 1
The Retirement Decision.

specific policies: (1) a decrease in social insurance costs, (2) the Social Security earnings limit, and (3) a subsidy on hiring older workers. The same techniques can be applied to other policies as well.

The calculations are based on a mathematical version of Figure 1. In the mathematical version of the theory, used for the policy analysis, the production function is approximated by the straight (solid) line shown in the figure. An important determinant of whether an older worker chooses full-time work, part-time work, or retires completely is the shape of indifference curves like I_i , which shows his tradeoff between income and leisure. One reason that I_i has an upward slope is that the worker has the option of working at other times of his life. In the mathematical model we represent this option with an explicit life-cycle theory.

The linearized production is chosen so that total compensation at 40 hours equals \$320. This is approximately equal to median weekly earnings. The slope and intercept parameters are then varied, to allow for different levels of fixed cost (represented by a negative intercept), creating a penalty, in terms of average hourly earnings, for work less than 40 hours. In the tables that follow, the level of the part-time penalty is represented by the ratio of average earnings at 20 hours to average earnings at 40.²

Given this earnings-hours locus, we assume a life-cycle utility model and allow individuals to choose the number of hours worked. We construct a three-period model of the form,

$$(1) \quad U = A_0 L_1^\alpha L_2^\beta L_3^\gamma \gamma^\delta$$

subject to

$$(2a) \quad L_i + H_i = TA$$

$$(2b) \quad Y = \sum_i (wH_i - T)$$

where TA = total time available, w = hourly wage, T = fixed cost, L = leisure, H = hours worked, and the model is normalized by

$$\alpha + \beta + \gamma + \delta = 1$$

Additionally, the model is constructed so that period 1 is 3.5 times as long as each of the succeeding periods. Assuming that each of the last periods is equal to 10 years, this model can be viewed as representing

² Due to the linearity of the model, this ratio equals the ratio of fixed costs to total compensation at 40 hours.

three periods: the first from age 21 to 55, the second from 56 to 65, and the third from 66 to 75. The model is designed so that, absent any fixed costs, the typical individual would gradually reduce his hours in each period.

Table 1 presents simulation results. Parameter values were chosen

TABLE 1
Hours Supplied Per Period and Average Annual Earnings

1 - Part-Time Penalty	Status Quo (1)	Federally Mandated Expenditures Eliminated (2)	Elderly Bonus Program (3)
1.0	40, 30, 20 14,371	39.6, 29.6, 19.5 15,815	39.7, 29.7, 19.6 14,429
.95	41.2, 31.4, 21.6 14,833	40.8, 31.0, 21.1 16,317	40.9, 31.1, 21.2 14,891
.90	44.7, 35.3, — 14,779	44.6, 35.3, — 16,178	42.1, 32.4, 22.6 15,353
.85	45.7, 36.5, — 15,224	45.6, 36.4, — 16,662	43.1, 33.5, 24.0 15,815
.80	46.6, 37.5, — 15,668	46.5, 37.4, — 17,145	46.6, 37.5, — 15,668
.75	47.4, 38.4, — 16,112	47.4, 38.4, — 17,629	47.4, 38.4, — 16,112
.70	48.2, 39.3, — 16,557	48.1, 39.3, — 18,113	48.2, 39.3, — 16,557
.65	54.1, —, — 15,613	53.8, —, — 17,147	54.1, —, — 15,613

Note: $TA = 112$; $H_1^* = 40$, $H_2^* = 30$, $H_3^* = 20$.

such that, in the case of no part-time penalty, an individual would work 40 hours per week in the first period, 30 hours in the second period, and 20 hours in the last. The table displays the optimal hours in each period and the average annual earnings per year (inclusive of retirement years). The results presented assume a fixed requirement of 8 hours of sleep per day, i.e., $TA = 7 \times (24 - 8)$. If TA is set equal to 168 (7×24), retirement becomes more likely.

Column 1 indicates the effects of different part-time penalties on labor supply over the lifetime. In this model, any part-time penalty over 5 percent will lead to retirement at age 65 rather than reduced hours. A part-time penalty of more than 30 percent will lead to retirement at the end of the first period. As noted before, the ratio of

part-time to full-time pay is equivalent to the ratio of fixed costs to total compensation. In earlier work we found that fixed nonremunerative costs are between 10 and 20 percent of total compensation. It is interesting to note that, within this range, we find retirement at age 65 and quite reasonable values for weekly hours.

It is often argued that federally mandated costs can explain the lack of part-time work for older workers. The findings in column 2 suggest that this is not the case. In the simulation displayed there, all federally mandated costs were eliminated. While this does significantly increase earnings, it has virtually no effect on the retirement decision. Most of the costs that are eliminated are variable rather than fixed.

If it is a policy objective to increase the amount of work by older workers, then policies other than changing social insurance taxes must be explored. Column 3 illustrates a hypothetical program. In this simulation, workers over 65 are paid \$20 a week if they work. As can be seen, over some range of values of the part-time penalty,³ this

TABLE 2
Hours Supplied Per Period in the Presence of a
Social Security Earnings Limit

1 — Part-Time Penalty	No Earnings Cap (1)	\$6,600 Earnings Cap (2)	\$10,000 Earnings Cap (3)
1.0	40, 30, 20 14,749	41.9, 32.2, 15.9 ^a 14,727	40.8, 30.9, 24.0 ^a 14,959
.95	41.2, 31.4, 31.4 15,614	43.2, 33.6, 17.0 ^a 15,186	42.1, 32.4, 24.8 ^a 15,417
.90	42.3, 32.7, 32.7 16,100	44.3, 34.9, 18.1 ^a 15,644	43.3, 33.8, 25.5 ^a 15,876
.85	43.3, 33.8, 33.8 16,586	47.2, 38.2, — 15,654	44.4, 35.0, 26.1 ^a 16,335
.80	44.3, 34.9, 34.9 17,072	48.1, 39.2, — 16,113	48.1, 39.2, — 16,113
.75	48.9, 40.1, — 16,572	48.9, 40.1, — 16,572	48.9, 40.1, — 16,572
.70	49.6, 41.0, — 17,031	49.6, 41.0, — 17,031	49.6, 41.0, — 17,031
.65	55.3, —, — 16,070	55.3, —, — 16,070	55.3, —, — 16,070

Note:

^a Indicates that earnings equal the earnings limit.

TA = 112; $H_1^* = 40$, $H_2^* = 30$, $H_3^* = 20$.

³ Again, we note that it is this range, .8 to .9, in which the values from earlier work suggest we are.

program would induce older workers to remain in the labor force rather than retire. This program affects retirement because it concentrates on fixed rather than variable costs. We do not propose that the government adopt an early worker bonus program, but this hypothetical program illustrates the powerful effect of fixed costs on the retirement decision.

An often cited reason for not observing more older workers in the labor force is the earnings test imposed on Social Security recipients. For Social Security recipients, earnings above a certain limit reduce Social Security benefits at a rate of 50 cents for each additional dollar earned. A spike in the earnings distribution, at the earnings limit, is observed empirically for older workers. The following simulations examine the effects of this earnings test on the hours of older workers.

In the present simulation, it was the case that, for reasonable values of the part-time penalty, retirement occurred before age 65 and, therefore, the earnings test is irrelevant. We know that, although most workers retire by age 65, many continue in the labor force. We chose alternative parameter values (specifically, we set desired hours, in the absence of fixed costs, at 30 in the third period) that make retirement less likely. Column 1 in Table 2 shows that workers remain in the labor force until age 75 for most of the range of fixed-cost values.

The effect of an earnings limit of \$6600 (after which a 50 percent tax is imposed) is illustrated in column 2.⁴ When the part-time penalty is small, older workers remain in the labor force, but work only until they reach the earnings limit. For those values of the part-time penalty that seem most reasonable (15 to 20 percent), the earnings limit results in complete retirement. At higher levels, as in the previous simulations, retirement occurs before the earnings test comes into play. These findings suggest that although Social Security taxes do not appear to be a significant reason for sudden retirement, the imposition of an earnings test on benefits may have a dramatic effect. The earnings test will cause older workers to significantly reduce hours or retire completely when they might have gradually reduced hours while continuing to work.

The impact of an earnings limit depends on the level at which it is met. Column 3 displays the impact of an increase in the limit to \$10,000. As the limit is raised, its impact is lessened. For example, when the part-time penalty is 15 percent, our typical worker remains working rather than retire. One can see that the effect will be greater

⁴ We make the heroic assumption that employees work an even number of hours each week rather than working the desired number of weekly hours, but reducing weeks worked per year.

for higher income individuals or for those with a greater taste for work. As these results indicate, the effect of the earnings limit depends on several factors, but at a set of parameter values that seem to be reasonable, the effect is significant.

From a policy evaluation perspective, the impact of federally mandated expenditures on retirement seems quite small because such expenditures are largely variable. We should note, however, that some of them—e.g., costs imposed by OSHA, EPA, etc.—are not considered. On the other hand, the earnings test for Social Security benefits may have a large impact.

The simulation results provided in this paper are intended as a general guide to the empirical importance of the theoretical findings in our paper. The model is a very simplified construct. It assumes that wages are constant over the lifetime, ignores progressive taxes and overtime premiums, and does not consider the general equilibrium effects of the policies tested. Nevertheless, the results seem reasonable and, in fact, are much more dramatic than we anticipated. These findings indicate that fixed, nonremunerative costs are not only theoretically interesting, but also empirically important as an explanation for sudden retirement.

Part-Time Work and Wages Among Adult Women

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While much labor market analysis focuses on full-time workers, part-time workers do comprise a significant fraction of the workforce in the United States. Particularly among women, part-time work is not an uncommon phenomenon. In 1983, 27.5 percent of adult women in the labor market reported themselves as working part time. Of this group, 9.3 percent usually worked fewer than 20 hours per week, while the remaining 18.2 percent worked between 20 and 34 hours per week.¹ While the percentage of women working part time has not changed greatly over the past 20 years,² the number of part-time jobs has greatly increased, as the number of women in the labor force has risen.

Thus, any discussion of the wage and earning opportunities for women must recognize the importance of part-time work for this population. This paper is an analysis of the extent to which wage differentials exist between part-time and full-time work, including some simple explorations of the determinants of these differentials.

The data set utilized for this analysis is the March 1984 Current Population Survey. I have selected all women between the ages of 18 and 65 who had earnings during the year 1983 and were not in school, retired, or disabled. All the data presented here refer to women's responses to questions asking about their 1983 earnings and labor market involvement.³ The primary reason for using this particular data set is that it contains a special set of questions on pension and health insurance coverage available from employers, an indication of the nonwage attributes of a job, which will be used below.

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¹ Data from the March 1984 CPS, as described below. Part-time work is officially defined as less than 35 hours per week.

² See Ehrenberg et al. (1986) and Ichniowski and Preston (1985) for discussions of time trends in part-time employment.

³ Wages are defined as annual earned income divided by the product of hours per week times weeks per year.

Causes of Part-Time/Full-Time Wage Differentials

Most simple models of labor market involvement assume that individuals choose their hours of work relative to an exogenously determined wage rate that does not vary with hours. Yet, previous research indicates that part-time work pays less per hour than full-time work. There are a variety of explanations for this fact.

Most obviously, it may be expected that women who choose to work part time have different human capital characteristics than women who choose to work full time.⁴ If wages reflect the human capital attributes of the worker, it is not surprising to find that less skilled women devote less time to labor market involvement. One wants to investigate the part-time differential *after* controlling for human capital differences.

A second explanation focuses on differences in nonwage aspects of part-time vs. full-time jobs. The theory of compensating differentials says that if the nonwage aspects of a job—such as the flexibility which part-time work allows for women who have home responsibilities—are attractive enough, women will accept lower wages in exchange for part-time work. In this case, employers who offer part-time work are able to pay less because that work provides other desired attributes.⁵ Alternatively, an institutional approach would claim that the same conditions that lead to higher wages also lead to better nonwage conditions of employment. In this case the presence of fringe benefits would signal higher wages. I will investigate the extent of the part-time differential, controlling for pension and health insurance coverage.

A third explanation looks at the structure of the labor market. There are a variety of theories which explain why certain jobs involve greater training and investment or are more protected from business cycle fluctuations, either through worker organizations (unions) or through various implicit contracting schemes. Employers may view part-time jobs as less productive and thus provide less training and lower wages to part-time workers. This makes part-time jobs less stable, implying that aggregate labor demand may affect part-time wages more than full-time wages. One wants to control for macroeconomic conditions (unemployment rates) as well as for the attributes of the work environment (extent of unionization, extent of “feminization”) to see how these institutional factors affect the part-time wage differential.

⁴ See Leon and Bednarzik (1978).

⁵ King (1978) attempts to measure job flexibility in part-time work. Ehrenberg et al. (1986) study the availability of fringe benefits.

In this paper I first investigate the extent to which negative part-time wage differentials are still present once differences in human capital characteristics, nonwage job benefits, aggregate labor demand, and the job environment are taken into consideration. This will indicate how much of the observed part-time differential is due to differences in the characteristics of the workers or the jobs, exclusive of hours of work. Given that part-time/full-time wage differences still exist, I will then investigate whether these differences can be explained by the fact that the above variables may have differential effects on part-time workers than they do on full-time workers.

An Empirical Analysis of Part-Time Wage Differentials

Table 1 presents mean wage differences between part-time and

TABLE 1
Mean Wages for Adult Women Workers
(Standard deviations in parentheses)

	Female Heads		Wives	
	Full-Time Workers	Part-Time Workers	Full-Time Workers	Part-Time Workers
Wages	\$7.39 (4.74)	\$5.79 (6.44)	\$6.88 (4.09)	\$6.65 (9.52)
Percent part-time		18.2%		31.5%
No. of observations		7411		16,983

full-time adult working women in 1983. While there is a clear part-time/full-time wage difference for female heads, the difference for wives is much less, indicating that women who are married either work in a different set of jobs or that there is a different selectivity process among married women for part-time work than there is among female heads.⁶ Wives are much more likely to work part time than are female heads, consistent with models that indicate secondary earners have more reasons to devote time to nonmarket activities.

If the mean part-time/full-time differential is disaggregated by occupation, it is clear that the wage structure of full-time vs. part-time jobs varies across occupations. On average, there are small negative or even positive differentials in administrative and personnel jobs; there are larger negative differences in clerical and machine-operator jobs.

⁶ For an empirical discussion of the selection into full-time and part-time work, see Jones and Long (1981) or Nakamura and Nakamura (1983).

TABLE 2
Coefficients on Dummy Variable for Part-Time Work
Dependent Variable: $\ln(\text{wage})$

Specification 1 ^a		Specification 2 ^b	
Female Heads	Wives	Female Heads	Wives
-.285 (.017)	-.169 (.009)	-.033 (.017)	-.032 (.010)

Note: All coefficients are significant at the 1 percent level. Standard errors are in parentheses. Number of observations can be seen in Table 1.

^a Includes age, age squared, years of education, race, and a constant.

^b Specification 1 plus dummy variables indicating whether job includes a pension or health insurance, state unemployment rates, industry unemployment rates, industry percent unionized, and industry percent female.

Wives show consistently smaller differentials in all occupations than do female heads.

Table 1 shows only aggregate data averages, making no attempt to control for differences in human capital or job characteristics. The typical way to do this is with a regression model such as

$$(1) \quad \ln(\text{wage}) = X\beta + D\delta + e$$

where X is a vector of control variables and D is a dummy variable equal to 1 if that worker is in a part-time job and 0 otherwise; e is a random error term assumed to be normally distributed. Columns 1 and 2 of Table 2 present the coefficients for δ from two equations (estimated on female heads and wives) in which the X vector includes only human capital characteristics. For both groups a very strong and negative coefficient on part-time work is estimated, which indicates that the part-time wage differential is due to more than differences in human capital characteristics among each set of workers.

Columns 3 and 4 of Table 2 expand the simple human capital framework to control for a variety of additional job environmental and institutional issues. Specification 2 includes dummy variables which indicate whether a job includes pension coverage and health insurance coverage, measures of the attractiveness of the job beyond the wage it pays. Also included are industry-specific unemployment rates, state-specific unemployment rates, industry-specific unionization rates, and industry-specific information on the percent of the workforce which is female.

With these additional variables included in the equation, the effect of a part-time dummy variable is much smaller, still significantly negative for female heads, but significantly positive for wives. If separate regressions are estimated on workers in each occupation, only clerical and machine operators still show significant negative effects to part-time work (and only for female heads). Significant positive effects appear for professional and technical workers, and for wives there are significant positive effects for sales, clerical, and service workers as well as for machine operators and laborers.

These results create serious doubts about the general conclusion that part-time work involves a negative wage differential per se. In fact, once one controls for nonwage aspects of the job and for industry traits and the macroeconomic environment, many occupations show positive part-time differentials. This indicates that the negative coefficients which result when a part-time dummy variable is included in a human capital wage regression largely reflect the fact that part-time workers are more likely to be employed in low-wage jobs, where the low wages appear to be caused by a variety of factors that affect full-time workers in similar jobs as well. In particular, part-time workers are more likely to be in low-wage occupations, more likely to be in jobs which do not offer pension or health insurance, more likely to be in areas of slack labor market demand, less likely to be in unionized jobs, and more likely to be in female-dominated occupations. All of these attributes are generally associated with lower wages across the board. Once they are controlled for, the negative part-time differential is less striking.

Yet, part-time wage differentials still clearly exist in Table 2, although they may be positive rather than negative. To further explain the cause of these differentials, I ran a set of regressions based on the model

$$(2) \quad \ln(\text{wage}) = X\beta + DX\alpha + e$$

where all of the variables included in the X vector are interacted with the dummy variable for part-time work, to see if there are different coefficients for part-time workers ($\beta + \alpha$) on each of these variables than there are for full-time workers (β)—a test of whether α equals 0. Thus, a negative and significant coefficient on any estimated element in the vector α indicates that the actual effect of the associated X variable is smaller for part-time workers than it is for full-time workers. Essentially, equation (2) attempts to disaggregate the coefficient on a single part-time dummy variable (δ in equation (1))

TABLE 3
 Regression Coefficients, Including Interactive Terms for
 Part-Time Workers^a
 Dependent Variable: $\ln(\text{wage})$

	Female Heads		Wives	
	Coefficient	Standard Error	Coefficient	Standard Error
Constant (β)	.422**	.098	.525**	.076
× PT (α)	-.211	.225	.167	.140
Race	-.045**	.018	-.022	.020
× PT	-.035	.042	.038	.042
Age	.027**	.004	.025**	.003
× PT	.008	.008	-.008*	.006
Age Squared	-.0003**	.00005	-.0003**	.00004
× PT	-.0001	.0001	.00007	.00007
Education	.055**	.003	.059**	.002
× PT	-.010*	.006	-.007*	.004
Pension	.224**	.015	.206**	.012
× PT	.016	.047	-.020	.025
Health Insurance	.316**	.018	.233**	.012
× PT	-.103**	.040	-.003	.023
Unemp. Rate (State)	.001	.003	.005**	.002
× PT	-.003	.007	-.006*	.004
Unemp. Rate (Industry)	-.013**	.002	-.020**	.002
× PT	.007	.006	.006*	.003
% Unionized (Industry)	.002**	.0005	.001**	.0004
× PT	.002*	.001	.0003	.0007
% Female (Industry)	-.004**	.0004	-.004**	.0003
× PT	.003**	.001	.003**	.0006
Works PT for Economic Reasons	-.071**	.030	-.072**	.020
# of Observations	7411		16,983	

** Significant at the 1 percent level. * Significant at the 10 percent level.

^a See equation (2) in text. × PT represents the coefficient on the variable interacted with part-time work status.

into a whole vector of coefficients, α , estimated from a set of variables interacted with part-time work.

The results of these regressions are shown in Table 3. For each variable I first report the coefficient β , and below it the coefficient α . While the β coefficients are significant for all the variables, the α coefficients are significant for only a few, indicating that many of these variables do not have differential effects on part-time workers. Note that I have been successful in fully explaining the significant

part-time differential estimated in Table 2, since the additional part-time effect on the constant is insignificant for both female heads and wives, once the entire vector α is estimated.

Among the human capital variables, the part-time coefficient on education is significantly smaller than the full-time coefficient (although still clearly positive), indicating that the returns to education are smaller in part-time jobs. This is consistent with earlier work which indicated that the returns to human capital are smaller in part-time work.⁷

While the presence of nonwage attributes has a strong positive correlation with wages (implying that good jobs with respect to fringe benefits are also good jobs with respect to wages, a denial of the compensating differential hypothesis), there is some indication that, at least for female heads, that positive effect is smaller among part-time workers.

Surprisingly enough, industry unemployment rates (which have a significant negative effect on overall wages) have a less negative effect on part-time workers. This implies that part-time workers' wages are *less* affected by slack labor demand than are wages of their full-time counterparts. Similarly, working in a predominantly female industry has generally significant negative effects on the wages of full-time workers, but has almost no effect on the wages of part-time workers. Highly unionized industries have generally higher wages overall, and even higher wages for part-time workers. This implies that part-time workers gain more than full-time workers from unionization.

Finally, the last variable in Table 3 controls for whether the worker was working part time by choice or because she could not find full-time work.⁸ Being involuntarily employed part time has a significant negative effect on wages. Workers who choose part-time work earn higher wages than those who are working part time involuntarily.

Summary

The above analysis has indicated that there are clear differences between full-time and part-time wages among women, but that these differences are not what is typically expected. On average, part-time workers do earn less than full-time workers in many cases. Part of this difference is due to lower education and experience levels, but it is also due to the fact that part-time workers are more likely to be

⁷ See Jones and Long (1981). The returns to part-time work over time are estimated by Corcoran et al. (1983).

⁸ See Ichniowski and Preston (1985) for a discussion of the trends in voluntary and involuntary part-time work.

employed in jobs where overall wages are lower. They are more likely to be in lower wage occupations, lower wage industries, or in less desirable jobs (as measured by the availability of fringe benefits). Once these variables are controlled for, part-time jobs may exhibit zero or positive wage differences. The part-time difference that does occur can be largely explained by differential returns to education in part-time jobs, in the responsiveness of part-time wages to fringe benefits and to industry characteristics, and in the involuntary nature of some part-time work.

This paper has been primarily descriptive and has raised a host of questions for future research. First, it would be interesting to explore further the nature of the differences in wage determination between wives and female heads as well as to compare these results to those for male adult workers. Second, the selectivity of occupations and the heavier use of part-time labor within certain occupations merits further research. Third, it is important to better understand the relationship between voluntary and involuntary part-time work and to investigate why involuntary part-time work is associated with lower wages.

References

- Corcoran, Mary, Greg J. Duncan, and Michael Ponza. "Interrupted Work Careers: Depreciation and Restoration of Human Capital." *Journal of Human Resources* 18 (Fall 1983), pp. 497-520.
- Ehrenberg, Ronald G., Pamela Rosenberg, and Jeanne Li. "Part-Time Employment in the United States." Unpublished paper, April 1986.
- Ichniowski, Bernard E., and Anne E. Preston. "New Trends in Part-Time Employment." Working paper, November 1985.
- King, Allan G. "Industrial Structure, the Flexibility of Working Hours, and Women's Labor Force Participation." *Review of Economics and Statistics* 60 (August 1978), pp. 399-407.
- Leon, Carol, and Robert W. Bednarzik. "A Profile of Women on Part-Time Schedules." *Monthly Labor Review* 101 (February 1978), pp. 3-12.
- Long, James E., and Ethel B. Jones. "Married Women in Part-Time Employment." *Industrial and Labor Relations Review* 34 (April 1981), pp. 413-25.
- Nakamura, Alice, and Masao Nakamura. "Part-time and Full-time Work Behavior of Married Women." *Canadian Journal of Economics* 16 (May 1983), pp. 229-57.

Part-Time Workers: Unionization and Collective Bargaining in Canada

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Part-time workers are becoming an important segment of the labour force in many advanced market-economy countries (Neubourg, 1985; Ichniowski and Preston, 1985). In the last decade, part-time employment grew faster than full-time employment in Canada as well as in other developed countries of the world. Between 1973 and 1983, the number of part-time workers increased by 52 percent, while full-time employment increased by 18 percent in Canada (Neubourg, 1985; Labour Canada, 1983).

In comparison to its increase in the labour force, until recently part-time workers were neglected by the employers, unions, and governments in terms of legislative protection, wages, benefits, and promotion (Wallace, 1986). While a majority of the employers, unions, and governments, and even their full-time co-workers ignored the contributions made by part-time workers in their organizations, some unions in public and quasi-public sectors in Canada undertook to achieve equality for part-time workers by organizing them in the same unions with full-timers.

This paper aims to analyze union policies in organizing part-time workers, the extent of unionization among part-timers, and monetary gains achieved by part-time workers when they are covered by collective agreements.

Union Policies Towards Part-Time Workers

Many unions traditionally opposed part-time work, demanded its elimination, and declined to organize them because they considered part-time work as a new union avoidance method on the part of employers. If part-timers were organized, it was only because they were within a bargaining unit which consisted mainly of full-time

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workers. Unions were also skeptical of the interest part-time workers may have in unionization (White, 1983). Since the 1970s, many unions in Canada, especially those organized in public and quasi-public sectors, are changing their policies from opposition to acceptance of part-timers. The largest labour federation, the Canadian Labour Congress (CLC) policy on part-time work summarizes the opinion of many unions in Canada. The CLC recognizes part-time work as an accepted form of work if it is the worker's preferred employment option, but it has some concerns about the expansion of part-time jobs. The CLC opposes part-time work if it replaces full-time jobs. The CLC also points to the fact that many workers work part time involuntarily while seeking a permanent full-time job (CLC, 1982).

The unions' changing attitude towards part-time work can be attributed to two major factors: the stronger participation of women in the union movement in Canada in the 1970s and the continuous increase in part-time jobs in comparison to full-time jobs. Interviews with some of the unions representing the majority of the organized part-time workers revealed that unions with a high ratio of female/male members and a high ratio of part-time/full-time jobs within their jurisdiction are the ones that have a special interest in organizing part-timers. For example, nurses' unions, whose membership is 98 percent female and 40 percent part-time workers, the Canadian Union of Public Employees' (CUPE) whose membership consists of 50 percent female and 20 percent part-time workers, and the United Food and Commercial Workers Union which has 39 percent female and 29 percent part-time workers, have the most progressive policies towards organizing and obtaining benefits for part-timers. Although teachers' associations do not have many part-time members (approximately 13 percent), their goal in negotiations is to achieve equal treatment for their full-time and part-time members. One of the unions interviewed, the Retail Wholesale and Department Stores Union (RWDSU) indicated that the tremendous increase in the number of part-time jobs within its jurisdiction and the persistence of those jobs were the major factors influencing their organizing activity. Now in many places where the RWDSU is organized, the number of part-time workers exceeds the number of full-timers.

The Canadian Nurses' Association (CNA), which represents both the professional association of nurses as well as nurses' unions, considers part-time work to be an accepted type of work by nurses and employers, although not without significant costs and benefits to

both parties. According to the CNA, since 1975, part-time nurses' jobs increased 42 percent in comparison to 3 percent for full-time nurses. This is mainly because the employers are increasing part-time jobs in order to have flexibility and low labour costs. While some nurses choose to work part time voluntarily because they cannot cope with home responsibilities and full-time employment at the same time, many others work part time while waiting for a full-time position to open. Since job creation for full-timers is low, many never get the chance to work full time.

In their negotiations, the nurses' associations demand the same benefits for their members working full time and part time.¹ Employers' opposition to any increase in labour costs, however, limits the negotiated benefits for part-timers. Furthermore, problems in the application of some of the benefits to part-timers result in their exclusion from the coverage of some benefits. In collective agreements regular part-time nurses are partially covered and are paid on a pro-rated basis for salaries, vacation, sick leave, and statutory holidays. They are not covered by benefit plans such as dental, extended health care, life insurance, long-term disability, or sick leave. Casual part-time nurses, on the other hand, have no job security and are not eligible for benefits. They are paid the basic rate of pay and an additional amount for holidays. In layoffs, casual part-timers are the first to be laid off, followed by regular part-time nurses (CNA, 1982).

Although the Canadian Union of Public Employees (CUPE) has a long history of bargaining for part-timers, the increase in the number of part-time workers within their jurisdiction, especially in the past 15 years, revived the union's interest in part-timers and resulted in the adoption of its first policy on part-timers in 1971. At its 1985 Convention, the union reaffirmed its previous policy on part-time workers and stated that it has a dual responsibility of protecting and advancing the interests of full-time members and at the same time extending the benefits of unionization to all part-time workers in its jurisdiction (CUPE, 1985).

The Canadian Teachers' Federation (CTF) represents the teachers' associations in Canada. On part-time employment, the CTF points to the fact that part-time teachers are mostly women with multiple responsibilities that currently can be resolved only by working part time. The CTF affiliates' negotiation goal is to ensure that part-time teachers are treated fairly in their workplaces and within their associations. In collective bargaining, the member associations of the

¹ Although unions may have a policy to bargain equally for all, what they achieve in their agreements is quite different from what they demand.

CTF are determined to achieve the same protection for part-time and full-time teachers in all collective agreement provisions, including certification, workload, scheduling, benefits, and responsibilities. The associations also negotiate pro-rated benefits and some measures of job security for part-time teachers (CTF, 1982).

While generally accepting part-time work, unions in Canada oppose expansion of part-time work at the expense of full-time employment (CLC, 1982; Benimahdju, 1986; PSAC, 1983; CNA, 1982). CUPE, for example, negotiates to limit the number of part-time workers if it results in the layoff of full-time members. In the last set of negotiations between 68 locals of CUPE and participating hospitals in Ontario, the union tried to protect full-time jobs by maintaining the existing ratios between the full- and part-time positions in all bargaining units. In settling the dispute, the arbitration board decided that "a full-time employee cannot be laid off because his/her duties are assigned to one or more part-time employees" (CUPE, 1986, p. 17).

Overall, unions in Canada, particularly those in the public and quasi-public sectors, have a positive attitude towards voluntary part-time work and an interest in organizing part-timers within their jurisdictions, but they oppose involuntary part-time work which provides cheap and flexible labour for the employers. Data in the following paragraphs document union organizing activity and wage gains through collective agreements.

Data and the Definition of Part-Time Work

The definition of part-time worker used in this study is the one adopted by Statistics Canada which considers those who work for less than 30 hours per week to be part-time workers. While this definition has the limitation of excluding those who work more than 30 hours whether or not they consider themselves part-time workers, it includes all those who work part time on a regular basis as well as those who are casual, temporary, or seasonal workers.

Data were compiled from unpublished special surveys conducted by Statistics Canada in 1981 and 1984. The Survey of Union Membership (SUM) was appended to the December 1984 Labour Force Survey and contains data for three groups—those employed in the December 1984 reference week, those who had a job in the reference week but were not at work because of a layoff, and all others who worked at a paid job sometime in 1984. The Survey of 1981 Work History (SWH) presents data for three slightly different

groups²—those employed in the month of December 1981, those not working in December 1981 because they were laid off or “lost” their job, and all others not working in December 1981 but who worked at a paid job sometime in 1981. These two surveys are designed to allow estimation of union memberships and hourly wage for unionized and nonunionized workers.³

Unionization of Part-Time Workers

Part-time work has always been an accepted form of work, but unionization of part-timers is a recent phenomenon. Only a minority of part-timers are organized in a union, and full-time unionization exceeds part-time unionization in all occupational groups with the exception of the managerial and professional workers (see Table 1).

TABLE 1
Union Membership in Canada for the Years 1981 and 1984

Occupation	1981		1984	
	Unionized Full-Time Workers	Unionized Part-Time Workers	Unionized Full-Time Workers	Unionized Part-Time Workers
Managerial and Professional	40	38	38	39
Clerical	31	13	32	15
Sales	10	5	10	5
Service	31	9	31	11
Primary	24	6	24	3
Processing	51	17	49	14
Construction	48	14	52	1
Transportation	50	21	46	17
Materials Handling	52	18	52	15

Sources: Statistics Canada, *Survey of Union Membership, 1984* and Statistics Canada, *Survey of 1981 Work History*.

The unionization rate ranges between 38 and 40 percent for both full-time and part-time managerial and professional workers. This group includes government administrators, public-sector employees, teachers, nurses, and workers in other health related occupations. The unionization rate of part-timers is lowest in sales (5 percent) and primary occupations (6 percent in 1981 and 3 percent in 1984) which also have the lowest unionization rate among full-time workers.

² Occupation variables used in each survey vary little from one to another. The SWH variable is based on the 1971 classification scheme and the SUM on the 1980 scheme.

³ A limitation in the comparison of part-timers based on these survey results is that the 1981 Survey (SWH) covers 100 percent of the labour force, but the 1984 Survey (SUM) covers 80 percent of the labour force.

The table shows that occupations which have a high rate of unionization for full-time workers also have a substantial rate of unionization among part-timers. Full-time workers in the male-dominated occupations of manufacturing, processing, transportation, and construction are heavily unionized (approximately 50 percent). Unionization among part-timers in those occupations ranges between 14 and 21 percent, with the exception of a very low (1 percent) unionization rate in part-time construction occupations in 1984. Workers in these occupations are only a small fraction of the labour force; they are usually organized in the same union as full-timers and earn similar wages and benefits.

An analysis of union membership according to sex, based on the same data set, shows that there is a definite distinction between male and female part-time workers. A larger percentage of unionized female workers than of unionized male workers are employed on a part-time basis. In 1981 and 1984, 17 and 18 percent, respectively, of the female union members were part-time workers, while only 4 and 3 percent of male union members were part-timers. Since part-time work is predominantly female work (68 percent of all unionized and nonunion part-timers are women), one would expect more women among part-time unionists.

Collective Agreements and Part-Timers

One of the major bargaining objectives of the unions is to achieve the same basic rate of pay for both full-time and part-time worker/members. As seen in Table 2, in 1981 and 1984 unions were able to negotiate substantial increases in wages for both groups in comparison to those of nonunionized full-time and part-time workers. Although in every occupational category full-time workers earned higher wages than part-timers, there is only a small difference between the wages of unionized full-time and part-time workers. A unionized part-time worker earned, on the average, almost the same hourly wage as a unionized full-time worker in 1981, 15 percent more than a nonunionized full-time worker, and 54 percent more than a nonunionized part-time worker. In 1984, unionization again improved the wages of part-timers, and although a part-time worker earned 13 percent less than a unionized full-time worker, she/he earned on the average 16 percent more than a nonunionized full-timer and 83 percent more than a nonunion part-time worker.

In all occupational groups, part-time workers' average hourly wage is between 1 and 30 percent lower than that of full-time workers.

TABLE 2
Comparison of Wages
(Hourly Wages in \$)

Occupation	1981				1984			
	Unionized Full-Time Workers	Unionized Part-Time Workers	Nonunion Full-Time Workers	Nonunion Part-Time Workers	Unionized Full-Time Workers	Unionized Part-Time Workers	Nonunion Full-Time Workers	Nonunion Part-Time Workers
Managerial and Professional	11.18	11.11	11.13	9.65	14.05	12.79	11.71	8.57
Clerical	8.29	7.80	6.85	6.36	10.68	9.66	7.95	6.43
Sales	8.60	7.07	7.47	5.61	11.41	8.35	8.46	5.25
Service	8.09	7.68	5.94	4.55	10.00	7.60	5.75	4.68
Primary	9.88	7.06	6.66	5.23	12.36	8.00	7.34	4.80
Processing	8.33	7.84	7.40	6.19	11.55	9.74	8.54	5.71
Construction	10.60	10.59	8.66	7.42	13.85	10.07	9.06	5.96
Transportation	9.38	8.59	7.85	7.29	12.49	10.46	9.02	7.20
Materials Handling	8.94	8.16	7.28	5.58	11.64	10.82	8.35	5.43
Average Hourly Wage	9.65	9.51	8.23	6.16	12.27	10.68	9.17	5.84

Sources: Statistics Canada, *Survey of Union Membership, 1984*, and Statistics Canada, *Survey of 1981 Work History*.

Within managerial and professional, clerical, and materials-handling groups, unionized full-time and part-time workers earn almost the same average wage. In some cases a part-time worker's hourly wage is higher than that of the full-time worker because his/her collective agreement provides a percentage increase in basic pay in lieu of fringe benefits. As far as the fringe benefits are concerned, the preliminary results of work in progress reveal that unionized permanent part-timers receive benefits similar to those of full-time workers on a prorated basis.

Table 2 suggests that a part-time worker who wishes to improve his/her financial situation would join a union. Since unions deliver benefits other than wage increases to their members, the overall gains for the individual will be larger under a union contract in comparison to an unorganized part-time worker.

Concluding Remarks

In this paper union policies on part-timers are discussed and unionization and collective bargaining activity among part-time workers in Canada are documented. In the last decade many unions have changed their policies from opposition to acceptance of part-timers in their organizations, with some reservations. Unions try to achieve the conflicting goals of equality for their members who work part time and full time and to protect the jobs of full-time workers from erosion by part-time jobs. Although a small percentage of part-time workers are unionized, unionization among them is increasing, particularly within the managerial and professional occupations. Unions organized in public-sector, health care, and teaching occupations have the highest rate of unionization for part-time workers and have achieved substantial increases in wages for part-time professionals in comparison to nonunionized professionals in the same occupational groups. Data for 1981 and 1984 show that there is a small difference in wages between unionized full-time and part-time workers. Unionized part-timers, however, are a privileged group within the part-time labour force.

References

- Benimahdju, Prem. "Labour Resists Tide Toward Part-Time Work." *Canadian Business Review* 13 (Spring 1986), pp. 21-23.
- Canadian Labour Congress (CLC). *Brief to the Commission of Inquiry Into Part-Time Work*. 1982.
- Canadian Nurses Association (CNA). *Brief to the Commission of Inquiry Into Part-Time Work*. December 1982.

- Canadian Union of Public Employees (CUPE). "Part-Time Work: More Part-Timers Means More Problems, Challenges." *The Facts* (November-December 1985), pp.18-19.
- Canadian Union of Public Employees and 68 Local Unions and Participating Hospitals. *Interest Arbitration Award*, March 20, 1986, p. 17.
- Canadian Teachers' Federation (CTF). *Brief to the Commission of Inquiry Into Part-Time Work*. September 30, 1982.
- Ichniowski, Bernard E., and Anne E. Preston. "New Trends in Part-Time Work." *Proceedings of the 38th Annual Meeting*, Industrial Relations Research Association, New York, 1985. Madison, WI: IRRA, 1986. Pp. 60-67.
- Labour Canada. *Part-Time Work in Canada. Report of the Commission of Inquiry Into Part-Time Work*. Ottawa: Ministry of Labour, 1983.
- Neubourg, Chris de "Part-Time Work: An International Quantitative Comparison." *International Labour Review* 124 (September-October 1985), pp. 559-76.
- Public Service Alliance of Canada (PSAC). *Submission to the Commission of Inquiry Into Part-Time Work*. 1983.
- Statistics Canada. *Survey of Union Membership, 1984*. Unpublished Special Surveys.
- _____. *Survey of 1981 Work History*. Unpublished Special Surveys.
- Wallace, Joan. "The Changing World of Part-Time Work: Implications for Human Resource Managers." *Human Resource Management in Canada* (May 1986), pp. 15519-24.
- White, Julie. *Women and Part-Time Work*. Ottawa: Canadian Government Publishing Centre, 1983.

DISCUSSION

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The funny thing about part-time work is that it has a different configuration depending on which part of the elephant you touch. The fact that during the 1970s and 1980s the number of persons who usually worked part time grew faster than the number in full-time employment (Nardone, 1986) would seem to confirm its usefulness as a work schedule option. But despite the welcome of part time by some groups as a gift of time in work schedule flexibility, others criticize it as exploiting workers by paying them wages at less than the full-time-equivalent rate and few, if any, fringe benefits. Unions support part-time work as a long-term goal, but worry that it will subvert the primary need for a full employment policy and fear, often with justification, its competition with full-time work. They prefer to emphasize reduction of the standard workweek length as a short-run priority. Contradictory social policies, both constraining and buttressing the possibility of part-time work, exist side by side. Legislation enacted in earlier periods of limited job opportunities provide inducement for withdrawal from the labor market (for example, the Social Security earnings test and ERISA provisions applicable to private pensions), while that of recent years facilitates the development of reduced-hour work schedules (Federal Short-Term Compensation Law, 1982), or provide a part-time model of its own in public employment (Federal Employees Part-Time Career Act, 1978). Some large employers, expecting an increased demand for reduced-hour work, have been quietly surveying the extent of and conditions surrounding part-time work in corporations, but they remain skeptical of its potential benefits for them. At the same time, the number of contingent, temporary workers, a major segment of whom work part time, has been rapidly growing, and by some accounts now comprises at least 27 percent of the total American workforce. Although there is a split image about the value of part-time work, the number of part-time workers continues to increase. It is

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imperative, therefore, that we separate myth from fact and learn whether, where, and how reduced-hour employment can contribute to improved work efficiency.

The 1983 Jondrow, Brechling, Marcus study makes a contribution to this issue by bringing part-time work into the arena of economic research. However, I do not agree with the major thrust of the argument that is made as to why part-time work in later years is both rare and little selected as an alternative to sudden retirement. The authors posit that older workers choose full and sudden retirement rather than part-time work partly because part-time jobs are scarce and partly because part-time wages are low. Wages are low, they claim, because part-time work is less productive and noncompensation fixed costs (for example, training) are higher than for full-time work. These conclusions, based on inference and untested assumptions, are not convincing to me. For example, no data are offered to support the claim of the lower productivity of older workers; rather, it seems to be inferred from the low wages older, part-time workers receive. More important, the authors ignore in their analysis a number of reports from employers about the positive cost-saving benefits that part-time work has brought in relation to productivity, absenteeism, turnover, and overtime costs (Kahne, 1985). These employers frequently state that cost-savings due to these factors more than compensate for the additional administrative and supervisory costs involved.

It seems to me that economic research needs to look more closely at two questions. First, what are the actual costs and cost-savings of part-time work in specific occupations and work settings where wages are prorated at full-time rates and fringe benefits are adjusted so that there is no employer penalty due to the part-timeness of the employment? Second, can part-time structures applicable to particular firms be mutually developed by management and labor in ways that would further the twin goals of providing increased flexibility for today's workforce with its changing composition and worktime requirements, and increased efficiency for firms through greater flexibility in scheduling and organization of work?

I want to comment about two social programs—short-time compensation in the U.S. and the National Partial Pension System in Sweden—to illustrate the kinds of information a more specific research focus on the experience of part-time work in a firm could yield.

Short-time compensation, now enacted in 12 states, seeks to extend the employment relationship in periods of temporary work retrenchment. Although such programs are not part time in name, they are so in fact, because they provide for temporary reduction in work hours below those of a normal full-time workweek in order to maintain worker attachment to the firm. Partial unemployment benefits are payable according to the proportion of reduced worktime. In California, for example, participating employers have customarily reduced worktime by about one day a week for an average duration of 13 weeks. Compensation has amounted to one-fifth of the weekly unemployment insurance benefit and this, plus earnings, has provided the average worker with about 90 percent of prior full-time earnings. The program has been favorably received by both employers and employees, including senior workers who, in the absence of such a program, might not have been affected by the work retrenchment at all.

One lesson for part-time work provided by short-time compensation programs is that they demonstrate that reduced-hour work scheduling is possible in a broad variety of occupations, including assembly-line work of skilled and semiskilled workers. In California, for the fiscal year ending June 30, 1980, for example, 45 percent of short-time compensation employers and 80 percent of claimants were in manufacturing, indicating that discrete or repetitive tasks, commonly thought of as a prerequisite of part-time work, are not essential for its scheduling. In fact, the interrelatedness of skills enhances the value of retaining a work team and sharing a part-time work schedule in order to permit continuation of the production schedule. Other studies reinforce this finding that reduced-hour schedules are possible in a broad range of occupations, in public- and private-sector work, and in positions with and without managerial functions.

A second lesson relates to the saving in turnover costs that results when the employment attachment can be preserved—both intangible costs relating to disruption and disorientation in the production process (potentially affecting productivity, absenteeism, and accident rates, for example) and tangible severance pay and new hire costs (recruitment, selection, training). Turnover costs are not often quantified, though they are known to be high, especially in occupations where skills are firm-specific. They show considerable variation by occupation and industry. Since in this situation the alternative to work-sharing is layoff, the lower turnover costs

associated with work-sharing constitute a particularly important benefit of the short-time compensation programs. Phased retirement that extends the expertise and worklife of a valued long-time worker could result in the same kind of cost-saving.

The Partial Pension Program of Sweden introduces us to phased or tapered retirement, a concept that is rare in the U.S., even in the private sector. In a recent survey of 363 companies in a variety of industries, only 1 percent reported that they had a formal phased retirement program and another 2 percent said that such a program could be arranged informally, with the approval of management (Rhine, 1984, pp. 3-4).

We do have experience with partial retirement in the U.S., but it represents a different concept in which full retirement takes place from one job and a new part-time job is found, frequently in a different industry from that of the customary employment, requiring different skills—often at lower status and pay—and providing no fringe benefits. This experience of partial retirement is thus quite different from that of phased retirement from a customary job. Cost-saving in the former case often comes, not from preservation of experience, but from a reduction in pay, in relation to both skills and the full-time-equivalent compensation for the work being done.

The Swedish Partial Pension system, initiated in 1976, is a phased retirement program largely in the customary place of work, which provides some perspective on this form of part-time experience. Under its provisions, a reduction of working hours, combined with partial pensions, is offered to persons aged 60-64 who have worked for 10 years after age 45 and for 5 of the preceding 12 months. To qualify for benefits, work must be reduced by at least 5 hours weekly, while averaging at least 17 hours a week. Benefits, fully taxable, are 50 percent of forgone gross earnings (65 percent prior to 1981). Disposable income from combined pension and part-time income for many workers amounts to 80-85 percent of prior net earnings. Benefits are partly adjusted for changes in living costs (excluding energy costs and indirect taxes). Most workers reduce their work by half, working fewer days per week or alternating weeks on and off the job. At age 65, the partial pension ceases and workers enter the regular pension program with no actuarial reduction in retirement benefits. The program is financed by a .5 percent payroll tax supplemented by government funds (Kahne, 1985; Sweden, 1985).

In Sweden, 57 percent of Swedes aged 60–64 were in the labor force (roughly 45 percent in the U.S.). Because a high proportion of women in Sweden work part time and fail to meet the labor force attachment requirement, about three-fifths of partial pension beneficiaries are males. The proportion of those eligible who became beneficiaries was about 30 percent in 1980, but since the decline in the benefit rate, it has dropped precipitously—to 13 percent in 1985 (Sweden, 1985, 1986). At the same time, the proportion of beneficiaries who work 20 hours or more a week has increased considerably. Even though the pension benefit at age 65 is unaffected by participation in the phased retirement program, the 1981 reduction in partial pension benefits has had an effect on work in later years, including the choice and degree of phased retirement (Ginsburg, 1985).¹ Receipt of an “adequate” proportion of preretirement earnings as benefits appears to be an important criterion for electing to phase into retirement before age 65.

Several observations about the experience of Swedish firms under the program are worthy of note. For one thing, although there have often been only a few partial pensioners in a company workforce, those who choose to be beneficiaries perceive advantages arising both from income maintenance and from a healthier, less stressful, work rhythm during the transition to retirement. Also, worker absenteeism has declined. Third, except for senior staff positions, there appears to be very little trouble in adapting the work schedule of a full-time job to a part-time position. In one study of 28 workplaces, fewer than 1 percent of requests for part-time work were denied. The program, originally appealing largely to blue-collar workers, has gradually spread to white-collar workers as well. Fourth, contrary to the view sometimes expressed in the U.S. that part-time work has a negative effect on productivity, many Swedish employers report a greater output per work hour of part-time employees (Packard, 1982).

Lastly, although the partial pension system was initially conceived as a program to increase flexibility and freedom of choice about retirement rather than to be a link in an overall employment policy, it has had some overall employment effect. Its introduction coincided with a period of growing concern about joblessness, including that of older workers, their lack of participation in training programs, and their frequent withdrawal from the labor market as a consequence of their long-term unemployment. Phased retirement partial pensions in

¹ Data on Sweden not otherwise referenced are from this source.

some instances have provided a form of work-sharing. They have helped to prevent dismissals in firms where employment was contracting. And in a number of cases, partial pensions have taken the place of an early full retirement choice (Laczko and Walker, 1985).

The point of this review of programmatic experience in the U.S. and in Sweden is to highlight the kinds of information that we could gain from examining enterprise experience of reduced-hour work, whether it be provided by individual company studies or gleaned from analysis of social program operation. It could be that investigation will show that in a number of work settings and occupations, as yet untested, cost-savings of part-time work, resulting from enhanced productivity related to a higher quality of recruited worker, improved work environment, or better organization of work tasks, will outweigh the costs of transforming and administering the part-time schedules. In any case, both research and experimental programs are needed to separate fact from myth about part-time work. The insights gained will be important for individuals, managers, and social policy proponents. As we move into an era in which the normal retirement age will gradually increase to age 67, and the constraint of mandatory retirement will disappear, it is both important and comforting to realize that a growth in the number of part-time jobs at prorated full-time wages and some fringe benefits which permit an extension of labor market attachment, need not create a problem for work organization. It is helpful to know that the effect of part-time work can be beneficial not only for employees, but also for employers, who may find that it not only provides worktime flexibility, but enhances the productivity and efficiency of the enterprise as well.

References

- Ginsburg, Helen. "Flexible and Partial Retirement for Norwegian and Swedish Workers." *Monthly Labor Review* 108 (October 1985), pp. 33-43.
- Kahne, Hilda. *Reconceiving Part-Time Work: New Perspectives for Older Workers and Women*. Totowa, NJ: Rowman and Allanheld, 1985. Pp. 134-44.
- Laczko, Frank, and Alan Walker. "Excluding Older Workers from the Labour Market: Early Retirement Programs in Britain, France, and Sweden." In *The Book of Social Policy in Great Britain 1984-85*, eds. Catherine Jones and Maria Brenton. London: Routledge and Kegan Paul, 1985.
- Nardone, Thomas J. "Part-time Workers: Who Are They?" *Monthly Labor Review* 109 (February 1986), p. 15.
- Packard, Michael D. "Retirement Options Under the Swedish National Pension System." *Social Security Bulletin* 45 (November 1982), pp. 12-21.
- Sweden, National Social Insurance Board. 1984, 1985, 1986.
- Rhine, Shirley H. *Managing Older Workers: Company Policies and Attitudes*. New York: The Conference Board, 1984.

DISCUSSION

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Professor Blank's paper is a hard one to comment on because there is not much to disagree with. She has dug up a number of new and very interesting facts about the differences in compensation between part-time and full-time workers. Consequently, I want to talk mostly about the interpretation of the results.

Before I get to interpretation, I do have one small complaint with the analysis. According to the text, dummy variables for the presence of health insurance and a pension are included to control for possible compensating differentials. The idea is that wages may be low on part-time jobs, but benefits may compensate for that. However, in these data (as in most) the relationship goes the other way. More highly paid workers also receive more benefits. So I don't understand the sense in including dummies in specification (2).

As for interpretation, if we were considering the relation between wages and part-time work at another session at these meetings, we might have the part-time work variable on the left-hand side of the equation and wages on the right-hand side. As such we would think we were looking at a labor supply equation. Here we have the relationship reversed, but the basic result is what we would expect if we were trying to interpret it in the labor supply framework—people who earn more work more. There is, however, one very big surprise when these results are looked at from this perspective. We generally think of female heads of households as having less elastic labor supply than wives. If this were the case, we would expect that the coefficient on part-time work in the wage equation would be larger for the wives. Instead Professor Blank finds exactly the opposite. This should worry us a little since estimating labor supply models using this type of data has been one of the major enterprises in labor economics in the last decade. The maintained assumption in nearly all this work is that workers would get the same wage at any number of hours worked.

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Policy conclusions about the likely effects of changes in the tax policy are drawn from such studies. These results are more consistent with the view that wages are dependent on the hours worked and suggest yet another reason why we should be cautious in interpreting standard labor supply studies.

The results with respect to the different occupations are also very interesting and suggest the inappropriateness of another set of explanations for these results. When labor economists do take seriously the notion that workers may receive a lower wage for part-time work, the usual explanation is that there is some fixed cost to set-up and training and employers can afford to pay workers more if they work more hours. This is a judgment call, but it would seem to me that these arguments would be much more likely to apply to technical workers than to machine operators. Yet when Professor Blank estimates the part-time differential for these two broad occupational categories, she finds that the difference is much larger for the operatives. Again—an interesting finding worthy of additional consideration.

DISCUSSION

KATHARINE G. ABRAHAM
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It is hardly surprising that Canadian unions have been ambivalent about organizing part-time workers. On the one hand, increased part-time employment may translate into fewer job opportunities for union workers who need to work full time. Welcoming part-timers into the bargaining unit is apt to be particularly problematic in a slack labor market. On the other hand, it is unlikely that the growth in part-time employment can be reversed; if part-time employment is here to stay, surely part-time workers who want it deserve the same sort of representation as full-time workers. Moreover, raising part-time workers' wages and benefits to parity with full-time workers may slow the substitution of part-time for full-time positions. Professor Zeytinoglu reports that Canadian unions are becoming more positive towards organizing part-time workers, and there is some evidence of a similar evolution in the United States, but it would be premature to conclude that union ambivalence has disappeared.

While union attitudes towards organizing part-time workers certainly make a difference, union ambivalence is not the only factor contributing to the low rates of unionization among part-time workers in both Canada and the United States. The unique logistical difficulties associated with organizing part-time workers are another important factor. Consider the scheduling of organizational meetings; in a unit of part-time workers, there may well be no time during the week when everyone is at work! In addition, turnover among part-time workers tends to be higher than among full-time workers (I cite some evidence on this below); from a union organizer's point of view, this translates into a larger number of people who need to be contacted over the course of an organizing drive.

There are also good reasons to suspect that a substantial segment of the part-time workforce is relatively uninterested in unionization. In both Canada and the United States, part-time workers are

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disproportionately young people and married women; for many of these part-timers, employment is an activity that takes second place to responsibilities at school or at home. Many part-timers remain on their jobs for only a short period of time. Canadian data for 1980 cited by Reid and Swartz indicate that 44 percent of part-timers had been on their jobs less than a year, compared to only 23 percent of full-timers; only 22 percent of part-timers had been on their jobs more than five years, compared to 45 percent of full-timers.¹ It is admittedly hard to be sure that part-time workers' short tenures fundamentally reflect a lack of interest in stable employment rather than the dead-end nature of many part-time jobs. But insofar as exit is a viable option for part-time workers (who may quit to spend more time on other activities or to take another job), they are unlikely to be interested in making the investment required to obtain an effective voice in how their workplace is run (for example, organizing a union).

Professor Zeytinoglu cites the fact that the union/nonunion wage differential is larger for part-time workers than for full-time workers as a reason for part-time workers to be especially interested in unionization. But even a large per-hour wage differential may be worth relatively little to a worker who spends few hours per week on the job, particularly if he or she expects to quit the job after a short time. Moreover, the wage statistics Professor Zeytinoglu has available to work with make no allowance for differences in the personal characteristics of unionized part-timers versus nonunion part-timers. Given the costs of establishing and maintaining an effective union organization, I would expect the relatively small group of part-timers who are organized to be significantly more committed to their jobs than nonunion part-timers. Tabulations of the data for the United States from the May 1985 Current Population Survey reveal that unionized part-timers are older, better educated, and less likely to still be in school than nonunion part-timers. The differences between unionized and nonunion full-timers along these dimensions are much less pronounced. It seems clear that part of what Professor Zeytinoglu interprets as a large return to unionization among part-time workers in fact reflects differences in the characteristics of unionized and nonunion part-timers.

¹ Frank Reid and Gerald Swartz, "Prorating Fringe Benefits for Part-time Employees" (Toronto: Centre for Industrial Relations, University of Toronto, July 1982).

Higher wages are not, of course, the only benefit associated with unionization. Fringe benefit plans and access to a formal grievance system are among the most important of the other benefits unions can offer to their members. It seems likely, however, that the median part-time worker attaches less value to these benefits than the median full-time worker. Health insurance coverage is not worth much to workers who are already covered by their parents' or their spouses' policies; to take another example, the right to appeal a disciplinary action may be less important when a worker never intended to remain on the job for a long period of time.

All in all, even enthusiastic union interest may be slow in translating into a higher percent organized among part-time workers.

XX. INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGISTS AND INDUSTRIAL RELATIONS: A SYMPOSIUM

Summary of the Symposium

DAVID LEWIN, RAPPORTEUR
Columbia University

This symposium was co-sponsored by the Industrial Relations Research Association (IRRA) and Division #14 of the American Psychological Association (APA), and was held at the APA's August 1986 annual meeting in Washington, D.C. Following the charge of symposium chairman Randall Schuler, Professor of Organizational Behavior at New York University's Graduate School of Business, the symposium participants identified research issues and opportunities in industrial relations that appear to be of particular interest to industrial/organizational (I/O) psychologists.

In the initial symposium presentation, Paul Banas, Manager of Personnel Research at Ford Motor Company, outlined several areas of research that are or should be of common interest to members of the IRRA, the APA, and the Society of Industrial and Organizational Psychologists (SIOP). These include quality of working life (QWL) improvement experiments, worker participation in decision-making, and organizational climate.

To undergird this point, Banas reviewed several recent, critical employee relations developments at Ford Motor Company, notably apprenticeship training, job enrichment, and employee involvement initiatives. Each of these developments emerged out of collective bargaining between the management of Ford Motor Company and

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officials of the United Automobile Workers (UAW) union. Only after the agreements were struck did the professional I/O staff psychologists at Ford become involved in implementing and assessing these new ventures in worker participation.

This experience was critical to shaping Banas's views about the future role of I/O psychologists in industry. In brief, Banas argued that I/O psychologists should adopt more of a proactive, and less of a reactive, approach to the workplace problems they are called upon to deal with. More to the point, Banas observed that I/O psychologists traditionally have focused their energies on how certain workplace practices operate and why such practices operate in the ways they do; these constitute "analyzer" and "synthesizer" roles, respectively. In the future, contends Banas, I/O psychologists must think in larger strategic terms and begin systematically to consider which and how certain environmental forces shape the I/O psychologist's organizational and professional contexts.

This prescriptive agenda offered by a practicing I/O psychologist dovetailed closely (indeed, remarkably so) with the observations of the symposium's second presenter, Professor Thomas Kochan of the Sloan School of Management at the Massachusetts Institute of Technology. Kochan contended that "mere collective bargaining" is outdated as a notion of what contemporary industrial relations are all about. Modern industrial relations, he argued, are driven by fundamental strategic decisions of the firm—decisions involving, for example, acquisition and divestiture, plant relocation, workforce reductions, and employee involvement programs.

Consistent with this view, Kochan proposed that rather than treating industrial relations decisions of the firm (or collective bargaining decisions of the firm and union) as holistic, industrial relations researchers and I/O psychologists should analyze these decisions at the workplace level, the personnel/collective bargaining level, and, most important, the strategic level.¹ After all, decisions reached at the strategic or business planning level of the firm may be presumed strongly to influence decisions reached at the staff/policy and workplace levels.² Research into this causal sequence of decisions as well as the interaction effects among the three levels of decisions offers potentially exciting opportunities for both industrial relations specialists and I/O psychologists.

¹ For elaboration of this point, see Kochan, McKersie, and Cappelli (1984).

² For an assessment of the limitations of strategy frameworks of industrial relations, see Lewin (1987).

In his concluding remarks, Kochan identified two specific questions that could fruitfully be addressed by a multidisciplinary research approach. First, how can the attitudes of employees at the workplace, staff/policy, and strategy levels be aggregated and linked to firm performance? Put differently, are there systematic linkages between organizational climate and organizational performance? Second, how do we build new labor relations institutions? Put differently again, can I/O psychologists in collaboration with industrial relations scholars offer new forms of collective bargaining or other collaborative workplace arrangements to replace traditional adversarial labor-management relationships?

The next presentation at the symposium was by John Fossum, Professor at the Industrial Relations Center, University of Minnesota. Fossum reviewed the recent work of labor economists and industrial relations scholars concerning the decline of unionism in the United States,³ the effects of unions on labor costs and productivity,⁴ and the industrial relations performance of U.S. firms.⁵ He noted that most of these studies utilize industry or bargaining unit level data and are thus heavily "macro"-oriented.⁶

To leaven this research emphasis and level of analysis, Fossum posed three questions for consideration by I/O psychologists:

1. Can the provisions of labor agreements be measured in terms of the extent to which they reflect attainment of the instrumental goals and values of employers and employees?⁷
2. How do certain individual, organizational, and contractual characteristics affect employee ratification (or rejection) of negotiated labor agreements?
3. How is the success of union organizing activity affected by employees' commitment to the employer, employees' opportunities for internal job mobility, and employees' demographic characteristics?

³ See, for example, Dickens and Leonard (1985).

⁴ See, for example, Rees (1977) and Freeman and Medoff (1984).

⁵ See, for example, Becker and Olson (1987).

⁶ However, among the exceptions to this general conclusion are Ichniowski (1986) and Mefford (1986).

⁷ One "answer" to this question is provided in Giaccobe and Seeber (1986).

From the perspective of I/O psychology, observed Fossum, answers to each of these three questions should be derived from micro-level data obtained from individual employees and employers. Such psychological research would help to balance the work of labor economists and industrial relations specialists who are attempting to provide new perspectives on contemporary industrial relations and human resource management.⁸

Professor Richard Arvey, also of the University of Minnesota's Industrial Relations Center, made the final presentation in the symposium. Unlike the other presenters, Arvey focused his remarks on the question, "What is it like for an I/O psychologist to teach in a business school or industrial relations center?" Drawing on the structure and content of the Minnesota program, he identified five curricular specialties: (1) staffing, training, and development, (2) organizational behavior and theory, (3) compensation and benefits, (4) unions and collective bargaining, and (5) labor markets.

Arvey's point was not that I/O psychologists must be able to teach all of these specialties. Rather, it was that I/O psychologists who occupy faculty positions in business schools or in schools and centers of industrial relations must be flexible and be willing to become generalists if they expect to play central curricular roles in these institutions. Of course it is not just I/O psychologists who must contend with balancing relatively narrow research interests with broader teaching responsibilities; industrial relations scholars are confronted with similar balancing acts.

While aiming his remarks primarily at teaching, Arvey also identified several areas of research for I/O psychologists—areas for which business schools and industrial relations centers are positioned to provide particularly good research opportunities. These include comparable worth and wage discrimination, behavioral implications of benefit programs, processes of professional skill obsolescence and recovery, and utility analysis applied to employee testing, performance appraisal, and training and development. While unions and union-management relations are also suitable subjects of study for I/O psychologists, Arvey concluded his remarks by observing that I/O psychologists are more likely to be drawn to business schools and industrial relations centers where support for research is not limited to studies of unionism.

⁸ See, for example, Kochan and Barocci (1985).

Despite this, the questions posed by members of the symposium audience to the presenters dealt largely with unionism. For example, the question, "What is the future of unionism in the U.S.?" was raised by several attendees, and a lively discussion of union strategy, union structure, and corporate campaigns ensued. Several members of the audience and some of the presenters discussed the recent efforts of the AFL-CIO and certain affiliated unions to convene panels of I/O psychologists to assist workers in coping with job displacement and with work-related stress.⁹ One audience member posed the question, "Are some union officials 'out in front' of their members on the issue of labor-management cooperation?" While the presenters uniformly responded yes to this question and noted that unionists often must work hard to sell labor-management cooperation to their members, they also uniformly admitted that little empirical research on this question has been carried out.¹⁰ Following Fossum, here is a prime example of a research opportunity for I/O psychologists to study the instrumentalities and employee-employer characteristics associated with the adoption and implementation of programs of labor-management cooperation.

In sum, this jointly sponsored symposium constitutes additional evidence of the resurgence of research interest among psychologists in unionism, union-management relations, and human resource management.¹¹ Put differently, there appears to be a growing supply of I/O psychologists who are fundamentally interested in industrial relations issues and problems. As to the demand for their services, Professor Kochan observed that "the fundamental changes occurring in industrial relations practice raise a host of important questions that can best be addressed by applying the theories and methods of I/O psychology."

All of this may seem ironic to those who recall (or have read) that the entire 1949 annual meeting of the IRRA was co-sponsored with the APA.¹² Even the most ardent behavioral researchers would probably not advocate a replication of the 1949 model for future annual meetings of either association. Nevertheless, this history of

⁹ Interestingly, however, most members of the audience were unfamiliar with the labor movement's recent efforts to reappraise union strategies and internal organization. See, for example, AFL-CIO Committee on the Evolution of Work (1985).

¹⁰ However, see Kochan, Katz, and Mower (1984).

¹¹ Also see "Special Issue" (1981) and "Behaviorial Research in Industrial Relations" (1983).

¹² The IRRA's 1949 research volume was based solely on the joint meeting. See Kornhauser (1949).

collaboration strongly suggests that the IRRA and APA are well positioned to stimulate interactions and multidisciplinary research among industrial relations scholars and I/O psychologists. We may hope that the present symposium marks but one step in that direction.

References

- AFL-CIO Committee on the Evolution of Work. *The Changing Situation of Workers and Their Unions*. Washington: AFL-CIO, February 1985.
- Becker, Brian E., and Craig A. Olson. "Role of Labor Relations in Firm Performance." In *Human Resources and Firm Performance*, eds. Morris Kleiner, Richard Block, Myron Roomkin, and Sidney Salsburg. Madison, WI: Industrial Relations Research Association, forthcoming 1987.
- "Behavioral Research in Industrial Relations: An Arden House Symposium." *Industrial and Labor Relations Review* 36 (April 1983), entire issue.
- Dickens, William T., and Jonathan S. Leonard. "Accounting for the Decline in Union Membership." *Industrial and Labor Relations Review* 38 (July 1985), pp. 323-34.
- Freeman, Richard B., and James L. Medoff. *What Do Unions Do?* New York: Basic Books, 1984.
- Giacobe, Jane, and Ronald L. Seeber. "The Intrinsic and Instrumental Value of Impasse Procedures." Paper submitted to the Second Columbia Conference on Behavioral Research in Industrial Relations, November 1986.
- Ichniowski, Casey. "The Effects of Grievance Activity on Productivity." *Industrial and Labor Relations Review* 40 (October 1986), pp. 75-89.
- Kochan, Thomas A., and Thomas A. Barocci. *Human Resource Management and Industrial Relations: Text, Readings, and Cases*. Boston: Little, Brown, 1985.
- Kochan, Thomas A., Harry C. Katz, and Nancy R. Mower. *Worker Participation and American Unions*. Kalamazoo, MI: Upjohn Institute, 1984.
- Kochan, Thomas A., Robert B. McKersie, and Peter Cappelli. "Strategic Choice and Industrial Relations Theory." *Industrial Relations* 23 (Winter 1984), pp. 16-39.
- Kornhauser, Arthur, ed. *Psychology of Labor-Management Relations*. Madison, WI: Industrial Relations Research Association, 1949.
- Lewin, David. "Industrial Relations as a Strategic Variable." In *Human Resources and Firm Performance*, eds. Morris Kleiner, Richard Block, Myron Roomkin, and Sidney Salsburg. Madison, WI: Industrial Relations Research Association, forthcoming 1987.
- Mefford, Robert N. "The Effects of Unions on Productivity in a Multinational Manufacturing Firm." *Industrial and Labor Relations Review* 40 (October 1986), pp. 105-14.
- Rees, Albert. *The Economics of Trade Unions*, rev. ed. Chicago: University of Chicago Press, 1977.
- "Special Issue: Psychologists and Unions." *International Review of Applied Psychology* 30 (April 1981), entire issue.

XXI. INSIGHTS FROM INDUSTRIAL RELATIONS INTO THE STUDY OF ATTAINMENT

Summary Notes on the Special Session

DAVID LEWIN, DISCUSSANT AND RAPPORTEUR
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This session was co-sponsored by the Industrial Relations Research Association (IRRA) and the American Sociological Association (ASA), and was held at the ASA's August/September 1986 annual meeting in New York City. Seymour Spilerman, Professor of Sociology at Columbia University, presided over the session.

James Baron, Professor of Organizational Behavior at Stanford University's Graduate School of Business, began the session by criticizing sociological studies of status attainment and inequality that employ one or another segmented model of the economy.¹ He noted that the institutional economics literature has long called attention to the diversity of labor market arrangements within organizations,² which is another way of saying that some students of status attainment overemphasize between-group differences and underemphasize (or ignore) within-group differences in their research. Further, said Baron, the industrial relations literature should remind sociologists that internal job structures, mobility, and labor markets are importantly affected by power considerations, such as collective bargaining, and these, too, have been overlooked by attainment researchers.

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¹ Examples of these studies include Piore (1975) and Stolzenberg (1978).

² For example, Kerr, Harbison, Dunlop, and Myers (1964).

Beyond this, Baron argued that segmented approaches to the study of attainment deal strictly with monetary variables, whereas his own research and that of other students of organizations strongly suggest that nonmonetary, particularly psychological, aspects of jobs are a major factor distinguishing job entry and status attainment for various worker groups.³ Noting the rise of two-tier pay arrangements and the growth of flexible employment practices (such as contracting and temporary jobs) in the U.S. economy, Baron concluded by recommending that new studies of these rapidly developing institutional practices be conducted by attainment researchers.

Aage Sorensen, Professor of Sociology at Harvard University, took a different tack from that of Baron. Sorensen began by posing the question, "What is the sociology of labor markets and what problems exist in the field?" His answer was that the field consists of numerous studies all of which specify an earnings variable and vectors of individual and structural variables. Despite the dominance of this regression format, said Sorensen, "the labor market processes underlying all of these specifications are not well understood or depicted." Consequently, he argued, status attainment researchers should direct their attention to the variety of internal labor market, compensation, and related arrangements in organizations, that is, they should conduct more microlevel studies and purposely seek to raise, not lower, the variance associated with these studies. Out of such efforts, suggested Sorensen, may well emerge more parsimonious midrange theories of status attainment than are presently offered by existing demand/supply or institutional frameworks of analysis.

What does the industrial relations literature have to offer in this regard? Probably little, said Sorensen, because "industrial relations has been too closely tied to economics and because industrial relations scholars are also wont to engage in mindless regression running." Moreover, added Sorensen, if industrial relations is confined to studies of unions and union-management relations, "it won't attract the interest of sociologists."⁴ While perhaps tending to overstatement, these views accord with those of some psychologists, industrial relations scholars, and human resource management specialists who contend that the horizons of industrial relations as a field of study

³ See Baron and Bielby (1980, 1984).

⁴ This point is similar to one made by Professor Richard Arvey in his discussion of industrial relations research opportunities for industrial/organizational psychologists. See Lewin (1987).

should be broadened beyond questions of unionism and collective bargaining.⁵ Nevertheless, Sorensen seemed to agree with Baron that the models and concepts of bargaining power that have emerged from studies of union-management relationships can usefully be applied to studies of status attainment, particularly at the organizational level of analysis.

This view was also shared by the session's third speaker, Professor James Rosenbaum of Northwestern University. He began by noting that the once dominant position expressed in the status attainment literature, namely, that individuals determine their own fate, is now out of fashion.⁶ Several studies, including Rosenbaum's, show that the availability of job vacancies in organizations is critical to career attainment.⁷ Moreover, while aggregate job vacancies are determined by economy-wide market forces, longitudinal research shows that relatively few jobs in organizations are stable over long periods. To the contrary, most jobs change shape (if they remain in place at all) over time,⁸ and the recent increases in competition in the U.S. economy appear to have further destabilized internal labor markets. These new developments, says Rosenbaum, particularly the widespread reductions in force (RIFs) among white-collar, professional, and managerial personnel, merit study by status attainment researchers.

Like his colleagues before him, Rosenbaum contended that organizational-level status attainment research has ignored power considerations. Thus new attainment studies should focus directly on the conceptualization and measurement of organizational power. Unlike Sorensen, however, Rosenbaum argued that industrial relations concepts and models may be especially useful in this regard, particularly because industrial relations research, much more than status attainment research, has emphasized the contextual forces that affect power relationships and bargaining outcomes.⁹ Finally, noted Rosenbaum, new organizational-level studies of status attainment should not go overboard in providing too strong a counter to the traditional individualistic status attainment model. That model, he noted, is not so much wrong as it is incomplete.

⁵ See, for example, Kochan, McKersie, and Katz (1985).

⁶ Perhaps the leading example of this literature is Blau and Duncan (1967).

⁷ See, for example, Rosenbaum (1979, 1980).

⁸ See Rosenbaum (1981).

⁹ As but one example, see Chamberlain and Kuhn (1986).

Professor Spilerman, whose integration of the literature on careers with the literature on attainment is regarded as particularly important by sociologists,¹⁰ offered some comments about notions of job vacancies in studies of status attainment. Drawing on his recent study of worker mobility in a large insurance company, Spilerman (1985) observed that

1. Job vacancies need to be properly defined; the turnover of certain senior executives does not necessarily create job vacancies.
2. Promotions along organizational and job hierarchies may occur without creating vacancies in the original positions, i.e., such positions may cease to exist.
3. Job rotation and job enlargement, including in executive ranks, may be consistent with the absence of job vacancies—largely because certain jobs have been eliminated.

A more direct industrial relations perspective on status attainment research was provided by Donna Sockell, Professor of Business at Columbia University's Graduate School of Business. She began by noting that just as the definition of industrial relations is open to question, so too is the definition of attainment, and she asked, "Does the concept of attainment incorporate both material gain and social advancement, and, if so, in what proportions?"

Sockell then proceeded to focus on the actual and potential treatment of unionism in status attainment research. She pointed out that unionism can be treated either as an antecedent of attainment or a consequence of attainment. When treating unionism as an antecedent variable, status attainment researchers should keep in mind that the effects of unionism are diverse, not being confined merely to wages, that they vary widely among employee groups, and that they are not unidirectional. Moreover, unions have significant monetary and nonmonetary effects on nonunion employers and workers, but these may be difficult for status attainment researchers to measure and to separate from the effects of other contributing variables. Finally, noted Sockell, union leaders (and perhaps some industrial relations and sociology researchers) are especially interested in the factors determining the status attainment of their members.

¹⁰ See Spilerman (1977).

The remarks of the panel members engendered several questions from the audience which, in turn, stimulated lively discussion and comment. For example, one attendee asked, "Is industrial relations as a field of study truly dominated by human-capital-type studies, as was suggested by Professor Sorensen?" Professor Sockell responded that human capital studies do dominate the labor market literature, but that robust literatures with very different orientations are to be found in the areas of collective bargaining and labor law. Professor Lewin added that the rapidly growing bodies of research on human resource management, public-sector labor relations, and comparative industrial relations clearly do not feature excessive reliance on a human capital framework. However, all of these areas of industrial relations inquiry are increasingly subjected to quantitative study, and this reflects the dominant orientation of younger scholars toward careful variable specification and empirical measurement.

A second audience question was posed as follows; "Haven't stratification researchers missed the boat in so far as the role of unions in the status attainment process is concerned?" The panel members largely responded "no" to this question. For example, Professor Spilerman observed that traditional stratification studies paid considerable attention to the union status of workers; however, more contemporary studies must necessarily deal with the very large and growing nonunion sector and with the distinguishing variables associated with workers in this sector. Professor Baron noted that the segmented economic and labor market theories which he earlier criticized could hardly be accused of ignoring the union status of workers, but these theories simply do not hold up well when empirical evidence is considered.

As a final observation about this special session, panel members and attendees all agreed that closer intellectual and research relationships among sociologists and industrial relations specialists are well warranted. The dissertation topics chosen by newly minted sociology Ph.D.s clearly reflect a renewed interest in industrial relations, and the recent listings of faculty job vacancies in industrial relations and human resource management clearly imply that there is room for sociologists in the groves of industrial relations academe.¹¹ What might be particularly fruitful in promoting multidisciplinary collaboration and academic labor market crossfertilization is a

¹¹ Indeed, as was pointed out by Professor Baron, it was almost 40 years ago that sociologist C. Wright Mills discussed how sociology could inform industrial relations research. See Mills (1948).

continuing series of jointly sponsored sessions at the annual meetings of the IRRA and the ASA. All hoped that the 1986 joint session was not a "one-shot deal."

References

- Baron, James N., and William T. Bielby. "Bringing the Firms Back In: Stratification, Segmentation, and the Organization of Work." *American Sociological Review* (June 1980), pp. 737-65.
- . "The Proliferation of Job Titles in Organizations." *Administrative Science Quarterly* 31 (December 1986).
- Blau, Peter M., and Otis Dudley Duncan. *The American Occupational Structure*. New York: Wiley, 1967.
- Chamberlain, Neil W., and James W. Kuhn. *Collective Bargaining*, 3d ed. New York: McGraw-Hill, 1986.
- Kerr, Clark, John T. Dunlop, Frederick H. Harbison, and Charles A. Myers. *Industrialism and Industrial Man*. New York: Oxford University Press, 1964.
- Kochan, Thomas A., Robert B. McKersie, and Harry C. Katz. "U.S. Industrial Relations in Transition: A Summary Report." *Proceedings of the 37th Annual Meeting*, Industrial Relations Research Association, 1984. Madison, WI: IRRA, 1985. Pp. 261-76.
- Lewin, David. "Industrial/Organizational Psychologists and Industrial Relations: Summary of the Symposium." *Proceedings of the 39th Annual Meeting*, Industrial Relations Research Association, 1986. Madison, WI: IRRA, 1987. Pp. 507-12.
- Mills, C. Wright. "The Contribution of Sociology to Studies of Industrial Relations." *Berkeley Journal of Sociology* 15 (December 1948), pp. 11-32.
- Piore, Michael J. "Notes for a Theory of Labor Market Stratification." In *Labor Market Segmentation*, eds. Richard Edwards, Michael Reich, and David Gordon. Lexington, MA: Heath, 1975. Pp. 125-50.
- Rosenbaum, James E. "Hierarchical and Individual Effects on Earnings." *Industrial Relations* 19 (Winter 1980), pp. 1-14.
- . *Organizational Career Tracking and Individuals' Careers: The Internal Stratification of a Corporation*. New York: Academic Press, 1981.
- . "Organizational Career Mobility: Promotion Changes in a Corporation During Periods of Growth and Contraction." *American Journal of Sociology* 85 (July 1979), pp. 21-48.
- Spilerman, Seymour. "Careers, Labor Market Structure, and Socioeconomic Achievement." *American Journal of Sociology* 83 (July 1977), pp. 551-93.
- . "Organizational Rules and the Features of Work Careers." Working paper, Department of Sociology, Columbia University, March 1985.
- Stolzenberg, Ross M. "Bringing the Boss Back In: Employer Size, Employee Schooling, and Socioeconomic Achievement." *American Sociological Review* 43 (October 1978), pp. 813-28.

XXII. ANNUAL REPORTS

IRRA EXECUTIVE BOARD SPRING MEETING April 16, 1986, Atlanta

President Lloyd Ulman called the meeting to order at 7:30 p.m. Present were President Ulman, President-Elect Michael H. Moskow, Past-President Everett M. Kassalow, and Board Members Edgar R. Czarnecki, Joyce D. Miller, Joyce M. Najita, Charles M. Rehmus, Lucretia D. Tanner, William M. Vaughn, and Donald F. Vosburgh. Also present were David R. Zimmerman, IRRA Secretary-Treasurer; Barbara D. Dennis, IRRA Editor; Paul Weinstein, Statistical Committee Chair; Beverly Schaffer, Atlanta Arrangements Chair; Michael J. Jedel, Atlanta Program Chair; Richard M. Reilly, 1987 Spring Meeting (Boston) Chair; and Marion and Larry Leifer, IRRA National Office Staff.

Absent Board members were Thomas Balanoff, Clair Brown, Peter Feuille, Lois S. Gray, Eileen B. Hoffman, Mark L. Kahn, and Sidney W. Salsburg.

Speaking on behalf of Michael Borus, IRRA Newsletter Editor, who was unavoidably absent, David Zimmerman requested a review of the minutes in regard to comments concerning errors in the Newsletter. After discussion, William Vaughn moved that the third sentence in the paragraph, under "IRRA Newsletter" be changed to read "President Kassalow expressed concern regarding the existing arrangement with the Newsletter, particularly in terms of not meeting deadlines and the occurrence of typographical errors" and to correct the spelling of the word "computer" in another paragraph. The motion carried.

A two-page letter, dated March 31, 1986, from David Lewin to David Zimmerman, outlining existing plans for joint programs and concerns for the future, was discussed. Appreciation was expressed for Mr. Lewin's report and the work it represents. The contents of paragraphs 1, 2, and 3 were accepted and approved. Paragraph 4,

regarding publication of papers from the August American Psychological Association/IRRA joint session and the September American Sociological Association/IRRA joint session in the 1986 IRRA Proceedings elicited the following suggestions: (1) Joint session papers and/or summaries to be published in IRRA Proceedings should be subject to essentially the same rules, constraints, and restrictions as apply to IRRA contributors. (2) The table of contents of the Proceedings should show that these papers and/or summaries were from sessions other than national IRRA meetings.

A resolution proposed by David Zimmerman was moved, seconded, and passed approving reports of the August APA/IRRA and September ASA/IRRA joint sessions in the 1986 Proceedings, subject to suggestions (1) and (2) above. The Board further agreed that future joint programs with other academic associations should be encouraged and coordinated with the IRRA Program Committee; that David Lewin should be consulted in this regard; that Irving Bernstein should be asked to coordinate programs with the American Historical Association and that the IRRA Program Committee should maintain contacts with the APA and ASA; that publication of reports of future joint programs should be subject to suggestions (1) and (2) above; and that the IRRA Executive Board should review these arrangements within a period of three years.

Chairman Paul Weinstein, in his Statistical Committee report, referred to his written report to the Executive Board, dated March 26, 1986, and called attention to the following points: (1) An American Economic Association committee, headed by Alice Rivlin, is keeping abreast of developments in the labor statistics area. (2) The Bureau of Labor Statistics and other statistical agencies are facing even more budget restrictions and will be reducing the number of surveys and postponing some publications. (3) A copy of a "Statement" prepared by Katherine K. Wallman, Executive Director of COPAFS, indicating some of their concerns, was left with David Zimmerman and is available to those interested. Mr. Weinstein's query as to what actions, if any, the IRRA should take elicited considerable discussion. There was no specific resolution, but the general consensus was (1) to accept Weinstein's report and express appreciation for his efforts; (2) to authorize him and his committee to continue to keep abreast of developments, particularly with regard to the AEA committee and its actions; and (3) to keep the IRRA Board and/or membership informed of newsworthy developments. Members of the Statistical Committee

are Clair Brown, Harold Goldstein, Daniel J.B. Mitchell, Morris Weisz, and Paul Weinstein, Chairman.

Beverly Schaffer, Atlanta Meeting Arrangements Chair, noted the locations of the various sessions and events, calling particular attention to the Thursday night reception hosted by the local IRRA chapters and local sponsors. Michael J. Jedel, Atlanta Meeting Program Chair, announced the unavoidable absence of the luncheon speaker, Stephen Schlossberg, and his replacement by his assistant, John Stepp. Another last-minute change was that W. Gary Vause rather than Leslie Stein would chair the session "New Industrial Relations Developments in the South." A motion by Don Vosburgh was seconded and passed thanking the Atlanta and other sponsoring chapters, particularly Ms. Schaffer and Mr. Jedel, for their efforts in arranging the meeting and program.

Rick Reilly, representing the Boston IRRA chapter, listed a number of possible dates, hotels, and room rates for the 1987 Spring Meeting. A motion by William Vaughn was seconded and passed selecting the April 29–May 1 dates and the Sheraton-Boston Hotel with rates of \$90.00, single or double, free conference rooms, and one complimentary room for every 50 engaged by those attending the meeting. Program content, format, and local arrangements will be handled by a Boston Chapter committee. Rick Reilly and William Vaughn will coordinate the planning efforts, and the program committee will clear the proposed program with President-Elect Michael Moskow.

In his Secretary-Treasurer's report, David Zimmerman announced a continuing increase in membership despite the rigorous purging of delinquent members in recent years. Net operating income in 1985 was less than in 1984, due primarily to higher costs for all publications—Proceedings, research volume, Newsletters; publication costs were over \$28,000 more in 1985 than in 1984, but income was still sufficient to cover costs without using either investment income or surplus. Mr. Zimmerman reported that the Association had accumulated a surplus of more than \$75,000. It was recommended that \$75,000 be transferred from certificates of deposit and money market funds to an investment alternative with a higher yield, while maintaining a high level of security.

Following a review of the 1986 budget (which included a quarterly budget for the first time), Ed Czarnecki's motion to accept the Secretary-Treasurer's report was seconded and passed, with a request that financial and budget data, along with the meeting agenda and

minutes, be mailed to each Board member before future Board meetings.

Editor Barbara Dennis reported having received galley proofs of all but the last two sessions of the 1985 Proceedings; she expected a June distribution date. The Proceedings of the Atlanta meeting will again be in the August issue of *Labor Law Journal*. She also reported that she had received six chapters of the 1986 research volume, "Working Women: Past, Present, Future," and two are ready for publication. The prospective publisher, the Bureau of National Affairs, Inc., will make a decision about publishing the volume after reviewing all of the chapters. The 1987 volume, "Human Resources and the Performance of the Firm," is moving along on schedule, and, according to Michael Borus, the 1988 volume on Older Workers is still in the planning stage. A motion to accept the report, made by Don Vosburgh, was seconded and passed.

As Michael Borus, Newsletter editor, was unavoidably absent, there was only a brief discussion of a previous proposal to have the Newsletter printed in Madison and no action was taken. President Ulman urged Mr. Zimmerman to work with Mr. Borus and the National Office staff on a proposal, to be considered at the December meeting, for the most efficient and economical means of printing the Newsletter.

President Ulman briefly described the proposed program for the New Orleans Annual Meeting, explaining some changes that had been made since December. Considerable discussion of when to schedule the Executive Board meeting resulted in a motion by Michael Moskow to poll the Board by mail, giving them a choice of alternatives: (1) a dinner meeting on December 28, following the first day's sessions, or (2) a dinner meeting on December 27, with a brief follow-up meeting on the morning of December 29 to act on reports of the nominating and program committees. The motion was seconded and passed.

Everett Kassalow, referring to his letter of March 27, 1986, summarized the efforts and frustrations of the committee that attempted to organize a regional IIRA meeting for the Spring of 1988 in Washington, D.C. Due to the failure of the Organization of American States to provide facilities and the monumental task of raising the necessary funds (\$200,000 or more), most of the planners felt it wise to cancel the meeting. Mr. Kassalow's motion to cancel was seconded and passed.

Because the Nominating Committee's list of proposed candidates was incomplete, no action was taken. As soon as a complete slate of candidates is submitted, the Executive Board will be polled by mail.

A resolution proposing the establishment of a Comprehensive Review Committee to assess the current status and future direction of the IRRA was introduced by its authors, Lloyd Ulman, Michael Moskow, and Wayne Horvitz. After some discussion of possible membership and mandate for the Committee, the resolution was passed unanimously and President Ulman and President-Elect Moskow were directed to propose candidates for the Committee, for review and approval by the Board.

The meeting adjourned at 11:30 p.m.

IRRA EXECUTIVE BOARD ANNUAL MEETING December 28, 1986, New Orleans

President Lloyd Ulman called the meeting to order at 8 p.m. Present were President Ulman, President-Elect Michael H. Moskow, Past-President Everett M. Kassalow, and Board Members Thomas Balanoff, Edgar R. Czarnecki, Peter Feuille, Lois S. Gray, Eileen B. Hoffman, Mark L. Kahn, Joyce M. Najita, Charles M. Rehmus, Sidney W. Salsburg, Lucretia D. Tanner, and Donald F. Vosburgh. Also present were 1987 President-Elect Phyllis A. Wallace; 1987 Board Members-Elect Francine D. Blau, John F. Burton, Jr., Janet L. Norwood, Leslie E. Nulty, and Ernest J. Savoie; IRRA Secretary-Treasurer David R. Zimmerman; IRRA Editor Barbara D. Dennis; Newsletter Editor Michael E. Borus; and Marion and Larry Leifer of the IRRA National Office Staff.

Absent Board members were Clair Brown, Joyce D. Miller, and William M. Vaughn.

Guests at the meeting for the purpose of giving special reports were Boston IRRA Spring Program Co-Chair Robert McKersie; Boston General Arrangements Representative Allyson Every; Nominating Committee Chair Lois Rappaport; and Statistical Committee Member Daniel J.B. Mitchell.

President Ulman introduced the 1987 President-Elect and the Board Members-Elect and expressed the appreciation of the entire Association for the services of the Board members whose terms were expiring: Edgar R. Czarnecki, Lois S. Gray, Joyce M. Najita, Sidney W. Salsburg, and Lucretia D. Tanner.

Peter Feuille moved the approval of the minutes of the April 16 Executive Board Meeting as circulated; the motion was seconded and passed.

Robert McKersie, Program Co-Chair for the 1987 Spring Meeting in Boston, briefly reviewed the program and arrangements for that meeting which is being jointly sponsored by the Boston, Rhode Island (Providence) and Connecticut Valley (Hartford) chapters. The meeting will be held April 29-30 and May 1 at the Sheraton Boston Hotel. Allyson Every reported on the fee schedule for the meeting, which incorporates a higher fee for the late registrations (after April 10) and for nonmembers. As there were no comments, the fee schedule was adopted. The time of the Executive Board meeting will be determined following a poll of Board members.

President Lloyd Ulman reported on the selection and approval of nominees for membership on the Comprehensive Review Committee and announced that the Committee's first meeting would be January 13 in Washington, D.C. An agenda for the meeting will be prepared by President Ulman and President-Elect Michael Moskow, who will attend the first meeting and help the Committee get started.

Nominating Committee Chair Lois Rappaport reported that the Committee had nominated Joyce Miller, ACTWU, New York, as the candidate for President in 1989. The names of candidates for Board positions will be carried in the May *IRRA Newsletter*, and a copy of the Nominating Committee report is attached to the permanent minutes. The Board expressed appreciation of the Committee's work.

Everett Kassalow reported that the 1986 IIRA meeting in Hamburg was reasonably well attended except for U.S. representatives. The new IIRA President-Elect is John Niland, University of New South Wales, Australia. A number of regional meetings are being planned: the Swedish Association in 1988, a Nigerian meeting, a meeting of a Danish group in 1987, a meeting in Singapore in February 1987, and the second European Regional Conference in Tel Aviv in December 1987. The North American regional meeting, which was to be held in Washington, D.C., and which was cancelled because of funding problems, is being reconsidered by the Canadians and will probably be held in September 1988 in Montreal. David Zimmerman reported

that the IIRA Council has asked each association to indicate whether the last week in August or the first week in September would be preferred for the start of their meeting. The general consensus was for August and it was left to Secretary-Treasurer Zimmerman to communicate this preference.

Secretary-Treasurer Zimmerman reported a total IIRA membership of 5587 as of December 1, 1986, of which 441 were subscriptions. Extensive promotional efforts throughout the year resulted in an enrollment of almost 700 new members of which approximately one-third were from local chapters. Nearly 500 names were removed from the membership list, leaving a net membership increase of about 200.

The financial report, projected for the end of 1986, showed a small excess of income over expenses. Publication costs were lower than anticipated and book sales were higher. Some expenses, such as office staff salaries, were higher due to increased work loads and computer training time. In view of the facts that there is in excess of \$100,000 in a reserve fund and the Association is operating at a small surplus, it was recommended that the same dues structure be maintained for 1987.

Applications for national IIRA affiliation were received from two local chapters—Hudson Valley in New York State and Inland Empire in California. Their by-laws being in order and there being no problems of infringement on other chapters, a motion by Thomas Balanoff to accept them was seconded and passed.

A letter requesting consideration for admission of a chapter in Western Australia was read and discussed. The Association has no formal policy on admission of chapters outside North America, but in response to previous applications has indicated that it was more appropriate for them to affiliate with the IIRA. No action was taken, but it was suggested that the Secretary-Treasurer look into the Australia situation in more detail.

The invitations of the Orange County, California, and the Cincinnati Chapters to host the 1988 Spring Meeting were discussed. Eileen Hoffman indicated great enthusiasm of Cincinnati Chapter members to have the meeting as part of Cincinnati's Sesqui-Centennial Year Celebration. A motion by Thomas Balanoff to award the 1988 Spring Meeting to Cincinnati was seconded and carried. Don Vosburgh's motion that the site of the 1989 Spring Meeting be decided at the 1987 Spring Meeting in Boston and that all Chapters be so notified was seconded and passed. A motion by Eileen Hoffman that the Orange County Chapter be encouraged to submit an application to

host the 1989 Spring Meeting and that part of this application include letters of support from the executive boards of other Southern California chapters was also seconded and passed.

Dan Mitchell presented the Statistical Committee report for Paul Weinstein. Letters of September 9, 1986 from Weinstein to the Statistics Committee and of October 7, 1986 from COPAFS were discussed. No action was taken, but the consensus was that the Board reaffirm existing policies and that any specific issues can be brought to the Board, as in the past.

Editor Barbara Dennis reported that the Bureau of National Affairs, publisher of the 1986 research volume, "Working Women: Past, Present, Future," expects to have it ready in May 1987. BNA is also preparing an update of a previous IRRA volume, *Public-Sector Bargaining*, which is out of print; the IRRA will receive the usual royalties. Outlines of the 1987 research volume, "Human Resources and the Performance of the Firm," and the 1988 volume, "The Older Worker," were studied. Editors of these volumes would like to consider using a commercial publisher. The 1987 40th anniversary Directory is in process. Board members were asked to examine the 1984 Directory and submit any suggestions for changes in format or content before February 1. Any controversial ideas suggested are to be resolved by polling the Board by mail.

Two proposals for the 1989 research volume were presented. A number of Board members voiced objection to the necessity of having to make a hasty choice between two proposals. The following motion, presented by Michael Moskow, was seconded and passed: The President should appoint a Board subcommittee to accomplish two goals—(1) to report back to the Board at the 1987 Spring Meeting with a specific recommendation for a 1989 research volume after reviewing the proposals in hand, contacting the editors with suggested improvements, and taking appropriate steps to solicit other proposals; and (2) to review existing procedures for soliciting research volume topics and make recommendations to the Board as to how these procedures might be improved in the future.

Newsletter Editor Michael Borus reported that the Newsletter is proceeding smoothly; it is now being printed and mailed from Madison.

There was nothing specific to report on attendance at the New Orleans meeting until results are obtained from the ASSA. Estimated total attendance is just under 6000 and IRRA attendance is approximately 375.

Present plans are for the ASSA headquarters for the 1987 Annual Meeting in Chicago to be at the Hyatt Regency, with other meetings at the Marriott and the IRRA at the Palmer House, it being the closest suitable union hotel. The placement service is also to be at the Palmer House. A bus service is being planned.

The Program Committee did not complete deliberations at its first meeting and was scheduled to reconvene on December 29. They expected to select 12 topics, three contributed paper sessions and one dissertation session from among 34 proposals. Authority was requested for Michael Moskow, Phyllis Wallace, and Lloyd Ulman to act on behalf of the Board and approve the final program for the Chicago Annual Meeting. A motion by Don Vosburgh to grant this authority was seconded and passed. The Program Committee also announced a decision to increase the number of permissible dissertation pages in print from four to eight.

The Board then considered a proposal from the W.E. Upjohn Institute for Employment Research to sponsor a memorial session for Earl Wright at the IRRA annual meetings, on an ongoing basis. The Institute would provide a stipend (\$500) to each author to cover expenses in preparing and presenting his/her paper, and the session topic would be approved through normal IRRA program committee channels. Various suggestions for modifying the proposal were considered, but no formal action was taken. It was suggested that the President-Elect pursue arrangements with Upjohn officials for a session at next year's Annual Meeting.

A motion by Thomas Balanoff to table the last two items on the agenda and to consider them at the Spring Meeting was seconded and passed.

The meeting adjourned at 11:50 p.m.

IRRA GENERAL MEMBERSHIP MEETING

December 19, 1986, New Orleans

President Lloyd Ulman called the meeting to order at 4:45 p.m. He introduced President-Elect Michael Moskow and asked him to preside. Mr. Moskow thanked retiring President Ulman for his services to the IRRA through the years.

IRRA Secretary-Treasurer David Zimmerman reported on membership and finances. He announced that Phyllis A. Wallace was the incoming President-Elect, and he also announced that the 1987 Spring Meeting would be in Boston, the 1987 Annual Meeting in Chicago, the 1988 Spring Meeting in Cincinnati, the 1988 Annual Meeting in New York, and the 1989 Annual Meeting in Atlanta.

IRRA Editor Barbara Dennis reported that the 1986 research volume, "Working Women: Past, Present, Future," which is being published by the Bureau of National Affairs, as well as the Proceedings of the New Orleans Annual Meeting would be in the mail to members in May 1987. She also reported on the progress of the 1987 and 1988 research volumes.

Lloyd Ulman announced the appointment of a Comprehensive Review Committee to assess the current status of the IRRA and to help shape the future direction of the Association. The committee's first meeting will be January 13 in Washington, D.C.

The first annual Consortium of Doctoral Students appears to have been a great success. Thirty graduate students participated in excellent roundtable discussions. The poster session was well attended and will be on the program again.

The meeting adjourned at 5:10 p.m.

AUDITED FINANCIAL STATEMENTS
December 31, 1986 and 1985

We have examined the balance sheets of the Industrial Relations Research Association as of December 31, 1986 and 1985, 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, 1986 and 1985, 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.

February 27, 1987

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Balance Sheets
December 31,

	1986	1985
ASSETS		
Current assets:		
Petty cash	\$ 50	\$ 50
Cash—checking	5,206	282
Cash—money market	201,186	184,493
Accounts receivable (Less allowance for doubtful accounts of \$75 in 1986 and 1985)	7,283	9,590
Prepaid expenses	4,316	5,136
Inventory	<u>3,079</u>	<u>11,583</u>
Total current assets	<u>\$221,120</u>	<u>\$211,134</u>
Property, plant and equipment:		
Equipment	\$ 7,790	\$ 3,152
Accumulated depreciation	<u>2,052</u>	<u>952</u>
Net property, plant and equipment	5,738	2,200
Total Assets	<u>\$226,858</u>	<u>\$213,334</u>
LIABILITIES AND FUND BALANCE		
Current liabilities:		
Accounts payable	\$ 35,956	\$ 32,885
Payroll taxes payable	53	1,328
Dues collected in advance	99,736	83,874
Subscriptions collected in advance	<u>10,360</u>	<u>10,112</u>
Total liabilities	\$146,105	\$128,199
Restricted fund balance	\$ 5,000	\$ 6,000
Unrestricted fund balance	<u>75,753</u>	<u>79,135</u>
Total fund balance	80,753	85,135
Total Liabilities and Fund Balance	<u>\$226,858</u>	<u>\$213,334</u>

(The accompanying notes are an integral part of the statements)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION
Madison, Wisconsin

Income Statements
For the Years Ended December 31,

	1986	1985
Income		
Income from operations		
Membership dues	\$135,809	\$130,905
Subscriptions	13,796	18,416
Chapter fees	5,301	5,861
Book sales, net of refunds	13,464	6,234
Royalties	79	823
Newsletter advertising	1,865	1,720
Mailing list rental	8,393	7,422
Meetings	11,653	18,338
ASSA refunds	<u>3,860</u>	<u>1,668</u>
Total operating income	\$194,220	\$191,387
Expenses		
Compensation		
Salaries	\$ 51,969	\$ 44,002
Payroll taxes	4,051	3,191
Contract services	4,443	2,855
Officer honorariums	<u>11,600</u>	<u>11,000</u>
Total compensation expense	\$ 72,063	\$ 61,048
Publications		
Proceedings	\$ 34,126	\$ 32,604
Spring proceedings	6,301	14,092
Research volume	23,250	28,117
Newsletter	<u>11,043</u>	<u>11,993</u>
Total publication expense	\$ 74,720	\$ 84,806
Meetings		
General Expenses		
Meals	\$ 7,212	\$ 10,370
Officer/Staff travel expense	4,494	2,539
Miscellaneous	<u>2,890</u>	<u>13,290</u>
Total general expenses	\$ 14,596	\$ 26,199
National expenses		
National Association expense	\$ 2,540	
Hospitality	<u>4,530</u>	
Total national expenses	\$ 7,070	
Total meetings	\$ 21,666	\$ 26,199
Office and general expenses		
Membership promotions	\$ 16,313	\$ 3,561
Computer and label costs	948	807
Office supplies	3,206	3,842
Postage and freight	5,644	4,697
Telephone	1,087	1,175
Accounting and auditing	2,589	1,615
Bank charges	495	21
Insurance	303	302
Depreciation	1,100	630
Duplicating	1,873	1,375
Bad debts		<u>17</u>
Total office and general expense	\$ 33,518	\$ 18,242
Total expenses	\$201,987	\$190,205
Income (loss) from operations	\$ (7,747)	\$ 1,092
Other income and (expense)		
Interest income	\$ 10,872	\$ 13,275
Miscellaneous expense	<u>(1,659)</u>	<u>(1,098)</u>
Other income and (expense)	\$ 9,213	\$ 12,177
Net income	<u>\$ 1,466</u>	<u>\$ 13,269</u>

(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,

	1986	1985
Unrestricted fund balance, beginning balance	\$ 79,135	\$ 71,866
Prior Period adjustment	(5,848)	
Restriction for future meeting expenses	1,000	(6,000)
Net income	<u>1,466</u>	<u>13,269</u>
Unrestricted fund balance, ending balance	<u>\$ 75,753</u>	<u>\$ 79,135</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 Years Ended December 31,

	1986	1985
Financial resources provided by:		
Operations:		
Net income	\$ 1,466	\$ 13,269
Item not affecting cash and short term investments: Depreciation	1,100	630
Decrease in interest receivable		2,775
Decrease in inventory	8,504	9,657
Increase in accounts payable	1,796	14,861
Increase in dues paid in advance	15,862	
Decrease in prepaid expenses	820	
Increase in subscriptions collected in advance	248	10,112
Decrease in accounts receivable	<u>2,307</u>	<u> </u>
Total funds provided	\$ 32,103	\$ 51,304
Uses of Funds:		
Increase in interest receivable	\$	\$ 5,941
Purchase of equipment	4,638	
Increase in prepaid expenses		5,136
Decrease in dues paid in advance		2,351
Prior period adjustment	<u>5,848</u>	<u> </u>
Total uses of funds	\$ 10,486	\$ 13,428
Increase in cash and short term investments	\$ 21,617	\$ 37,876
Cash and short term investments		
Beginning of year	\$184,825	\$146,949
End of year	<u>\$206,442</u>	<u>\$184,825</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—money market represents the balance invested in money market accounts held at Randall Bank, Madison, Wisconsin and The Bank of Shorewood Hills, Madison, Wisconsin. Interest earned on the accounts has averaged 5-6% per annum during 1986 and 8% in 1985.

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 1987 and 1986 calendar years are reflected as deferred income on the balance sheet.

2—RESTRICTED GRANT FUNDS

During 1985, a \$4200 payment was received on a grant from the German Marshall Fund of the United States. These funds were to finance the attendance of four foreign participants at the Annual Meeting. Expenses incurred exceeded the payment by \$547.

3—RESTRICTED FUND

At the Association's Executive Board Meeting held on April 17, 1985, the Board approved restriction of \$6000 to be applied to expenses of the regional meeting of the International Industrial Relations Association expected to be held in March, 1986.

The above restriction was lifted in 1986. However, at the General Membership Meeting on December 19, 1986, \$5000 was restricted for use for a Comprehensive Review Committee meeting to be held January 13, 1987.

ALPHABETIC LIST OF AUTHORS

Abraham, Katharine G.	504	Kalwa, Richard.	313
Andrisani, Paul J.	422	Katz, Harry C.	112
Bain, Trevor	201	Kaufman, Bruce E.	296
Ball, David E.	412	Kelley, Maryellen R.	286
Barbash, Jack	141	Kleiner, Morris M.	41
Barrett, Jerome T.	404	Knight, Thomas R.	455
Bell, Linda A.	331	Koziara, Karen S.	386
Belous, Richard S.	101	Kruger, Daniel H.	152
Betcherman, Gordon.	218	Kuhn, James W.	327
Blackburn, McKinley L.	349	Lansbury, Russell D.	463
Blank, Rebecca M.	479	Lawler, John J.	293
Blau, Francine D.	70	Leonard, Jonathan S.	51
Block, Richard N.	268	Lewin, David	381, 507, 513
Bloom, David E.	349	Luzadis, Rebecca A.	222
Bluestone, Barry	338	McDonald, Charles J.	276
Borus, Michael E.	432	McPhillips, David C.	455
Bradley, Mary	386	Mahoney, Christine L.	268
Brechling, Frank.	471	Malveaux, Julianne	77
Broderick, Renae	159	Mangum, Stephen L.	412
Cappelli, Peter	191	Marcus, Alan J.	471
Cardinal, Laura B.	167	Minton, John W.	368
Collins, A. Michael.	213	Mitchell, Daniel J.B.	159
Corbitt, Leslie F.	268	Norwood, Janet L.	82
Cornfield, Daniel B.	358	Pearce, Thomas G.	232
Daymont, Thomas N.	422	Perry, Charles	191
Delaney, John Thomas	258	Peterson, Richard B.	244
Dickens, William T.	29, 444, 502	Ray, Phillip E.	209
Farber, Henry S.	229	Reskin, Barbara F.	58
Ferber, Marianne A.	70	Robinson, James C.	397
Feuille, Peter	226	Roomkin, Myron J.	48
Fischer, Ben	137	Schwarz, Joshua L.	386
Flanagan, Robert J.	21	Schwochau, Susan	320
Freeman, Richard B.	41, 260, 331	Sheppard, Blair W.	368
Freiberg, Beatrice J.	29	Soskice, David	93
Goodman, Paul S.	375	South, John C.	239
Harrison, Bennett.	338	Stephan, Paula E.	296
Hartman, Heidi I.	58	Tanner, Lucretia Dewey.	404
Hauck, Vern E.	239	Tilly, Chris	338
Helburn, I. B.	167	Ulman, Lloyd	1
Hendricks, Wallace	121	Verma, Anil.	306
Heneman, Herbert G. III	252	Way, Philip K.	108, 183, 323
Hodgson, James D.	14	Weitzman, Martin L.	144
Hunt, H. Allan	447	Wever, Kirsten Ruth	129
Jacoby, Sanford M.	283	Zalusky, John L.	174
Jondrow, James	471	Zeytinoglu, Isik U.	487
Kahn, Lawrence M.	440		
Kahne, Hilda	496		

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