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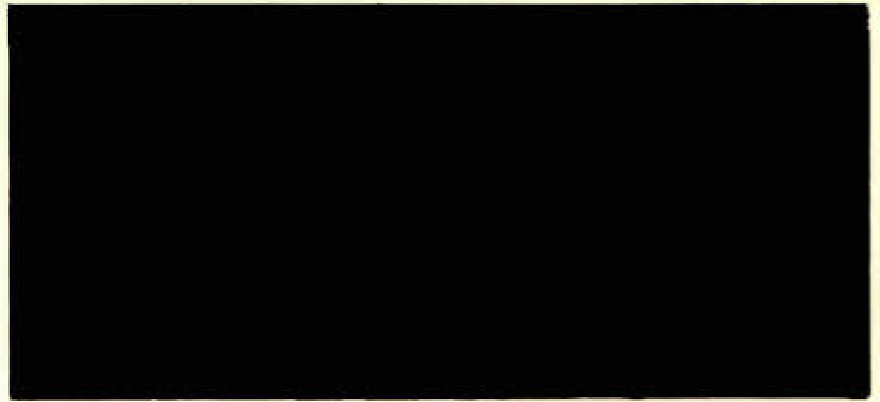

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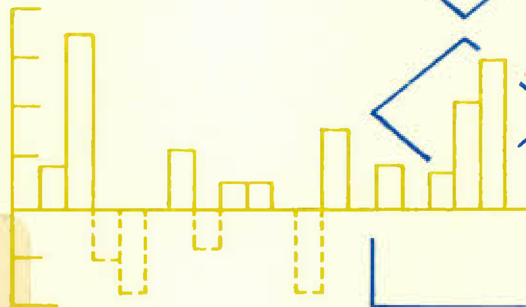

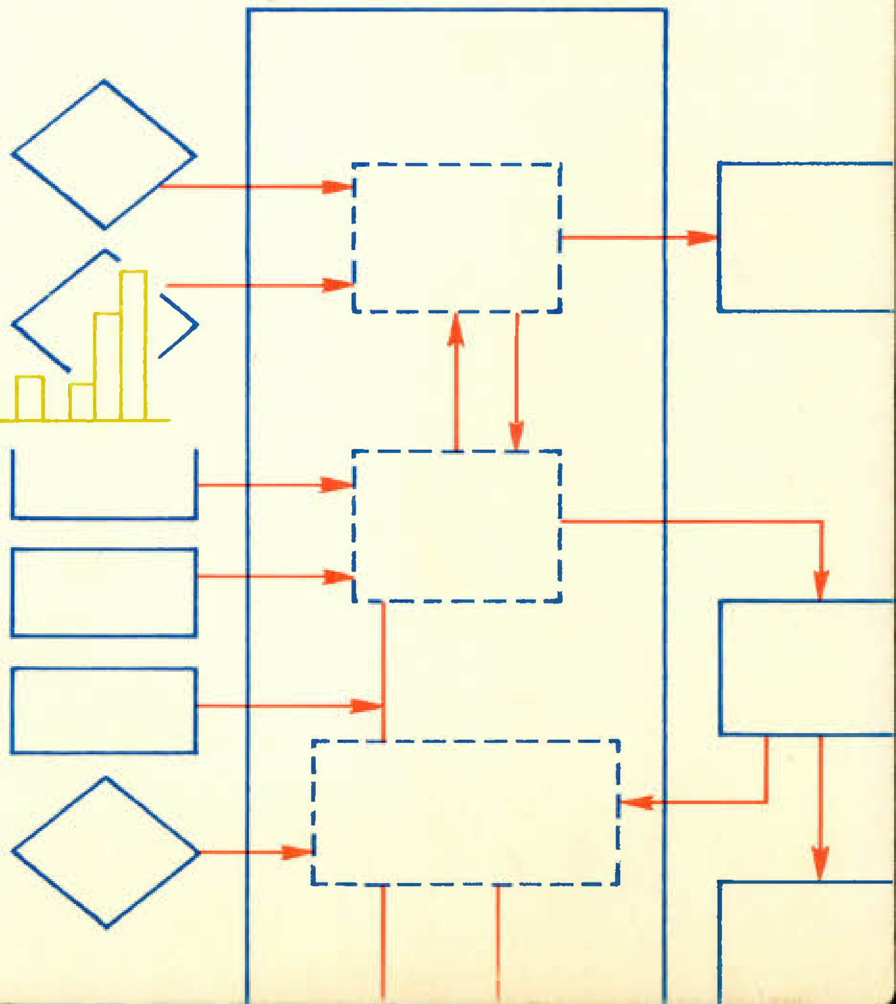

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DISCUSSION PAPER NO. 147

The Behavioural, Economic and Institutional Effects of Compulsory Interest Arbitration

by

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prepared for

The Centre for the Study of Inflation and Productivity

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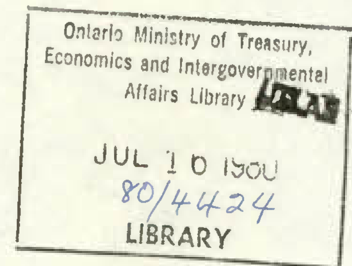
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RÉSUMÉ

On se demande souvent s'il est sage d'accorder le droit de grève aux employés du secteur public, et certains citoyens vont même jusqu'à proposer qu'il soit tout simplement révoqué ou qu'on en restreigne du moins l'usage. La légitimité du droit de grève dans certains services du secteur parapublic dits "essentiels" (les liaisons ferroviaires et aériennes, par exemple) a également été remise en question à maintes reprises. Or, il existe très peu de solutions de rechange au droit de grève. S'il était aboli, il faudrait sans aucun doute trouver une procédure acceptable pour régler les conflits de travail. A l'heure actuelle, l'arbitrage obligatoire est le seul instrument viable que l'on connaisse à cet égard, mais on constate sans peine que ni les responsables des politiques ni le grand public n'ont examiné de façon attentive les conséquences que pourrait avoir le recours généralisé à cette solution. Celle-ci peut d'ailleurs prendre diverses formes, dont les effets peuvent différer considérablement entre eux. Ce sont ces différents aspects de la question que l'auteur examine ici en profondeur et, en même temps, dans une perspective assez éclectique.

Il importe de comprendre pourquoi seul l'arbitrage obligatoire peut se substituer au droit de grève, et cette dimension du problème est donc abordée en premier lieu. Vient ensuite une présentation de certaines variantes de l'arbitrage obligatoire, soit l'arbitrage traditionnel et l'arbitrage portant sur les offres finales, les deux auxquelles on fait appel le plus souvent. L'auteur regroupe en trois catégories les répercussions

éventuelles d'une application généralisée de cette solution comminatoire : les effets qu'elle peut avoir sur le comportement des parties, sur l'économie et sur les aspects institutionnels. Les premiers comprennent le réflexe quasi automatique du recours à l'intervention d'un arbitre en cas de conflit et ce qu'on pourrait appeler l'extrémisme des positions, de même que l'alternance des compromis en faveur de l'une et l'autre des parties, dans le cas de l'arbitrage portant sur les propositions finales. Parmi les répercussions économiques, on englobe l'influence de l'arbitrage sur les hausses salariales obtenues, sur les écarts entre les salaires, sur la surenchère et sur la productivité. Enfin, l'étude des effets institutionnels traite du comportement des parties du point de vue du maintien de leur prestige et de la prise de décisions, de l'influence que l'arbitrage obligatoire exerce sur le pouvoir et la structure des syndicats, ainsi que de l'acceptation des décisions de l'arbitre par les parties en présence.

L'auteur examine de façon très détaillée toutes les études descriptives et empiriques se rapportant à chacune des catégories susmentionnées. Il présente, à la fin de chacune des parties de son analyse, des conclusions provisoires. De toute évidence, l'absence de travaux bien structurés et d'études longitudinales sur cette question s'oppose à la formulation de toute conclusion définitive. Il n'en reste pas moins que de grands progrès ont été accomplis du point de vue de la connaissance de ce domaine depuis une dizaine d'années, grâce aux interventions des autorités publiques nord-américaines, qui se sont vues dans l'obligation d'imposer l'arbitrage obligatoire afin de résoudre l'impasse où s'étaient souvent engagées les négociations collectives.

La dernière section de l'étude rassemble les principales constatations de l'auteur quant aux applications de l'arbitrage obligatoire et aux résultats qu'il a donnés; l'auteur y indique aussi dans quels domaines les recherches pourraient se poursuivre. La conclusion peut-être la plus étonnante de ses travaux, c'est que, du point de vue des effets qu'il peut avoir, l'arbitrage obligatoire a, jusqu'à maintenant, donné des résultats un peu plus positifs qu'on ne l'avait escompté il y a une dizaine d'années.

SUMMARY

Numerous concerns have been expressed regarding the wisdom of granting the right to strike to public sector employees. Indeed, serious proposals have been set forth to rescind or limit the right to strike. Similar concerns have also been articulated, at various times, with regard to the right to strike in "essential" industries in the quasi-public sector (e.g., the railroad and airline industries). There is a very limited set of options to replace the strike weapon; yet, if this sanction is abrogated, a viable dispute settlement procedure must be found as a replacement. Compulsory interest arbitration is the only known viable substitute at this point in time. At the same time, it is clear that the consequences which would flow from a broader application of compulsory arbitration have not been thoroughly examined or thought through by policy makers and the public at large. Moreover, there are a number of variants with respect to arbitration, the consequences of which might vary quite substantially. This monograph examines, in eclectic fashion, the above dimensions in considerable depth.

It is important to understand why compulsory arbitration is the only viable alternative to the right to strike. Therefore, that particular aspect is discussed first. A number of variants on the compulsory arbitration theme are set forth including the two most frequently used types - conventional arbitration and final offer arbitration. Attention is then turned to the potential effects of a broader application of compulsory arbitration. These effects are broken into three broad categories -- behavioural, economic and institutional. Behavioural effects include the frequently hypothesized narcotic and chilling effects, and the notion of an intertemporal compromise in the case of final-offer arbitration. Economic effects include the impact of arbitration on the size of settlements, on wage

dispersion, and on whipsawing and productivity. Institutional effects include facesaving and decisionmaking behaviour under compulsory arbitration, the impact of arbitration on union power and union structure, and the question of whether there will be compliance by the parties with arbitrators' awards.

The monograph explores in considerable detail all of the descriptive and empirical literature germane to each of the above categories. Tentative conclusions are posited at the end of each section. It is clear that definitive conclusions cannot be formulated because of the lack of well-designed, and especially longitudinal, research on the topic. Nevertheless, much more is known today than a decade ago due to the many jurisdictions in North America which have imposed compulsory arbitration as the final step in public sector bargaining. The last section of the monograph pulls together all of the material and includes a discussion of the experiences with, and findings on, compulsory arbitration to date and suggests some future research needs on the subject. Perhaps the most surprising finding is that, thus far, the experience with compulsory arbitration has been somewhat more encouraging than many would have believed a decade ago in terms of the potential effects outlined above.

PREFACE

The related areas of collective bargaining and dispute resolution have been, for me, intriguing ones. In this context, compulsory interest arbitration has greatly interested me during my years as a teacher of industrial relations. This fascination has intensified in light of current developments in Canada's industrial relations scene. Today there are numerous and frequent comments, on the public record, suggesting that the strike be abolished in public and quasi-public sector disputes. Compulsory arbitration is the method of dispute resolution most frequently proposed as a cure-all for the ills in our industrial relations system. At the same time, many experts and non-experts at various points have summarily dismissed compulsory arbitration as an unworkable and dangerous intervention in union-management affairs. In response to an obvious need to intensively examine arbitration, I have tried in this monograph to codify and highlight the critical issues and information now available on the subject.

An author in this area owes it to his readers to make his biases known. I, like many others in the industrial relations field, have believed, and remain convinced, that our industrial relations system is an expression of healthy pluralism and that collective bargaining with the right to strike is an integral part of that system. My predilection is that we are best served, for a variety of reasons which need not be expressed, by an industrial relations system with the right to strike for all but the most essential employees in our society (e.g., police and firefighters). However, I, like many others, believe that we should be looking for new and innovative solutions to our industrial relations problems, especially in the public sector. This may or may not include, in some cases, the use of compulsory interest arbitration.

The intent of this monograph, therefore, should not be misunderstood. It is not intended as a treatise in praise or in condemnation of compulsory interest

arbitration. Rather, it seeks to clarify the important issues relevant to the topic. I hope, if nothing else, that it presents a comprehensive picture of current research on arbitration and provides a template for future research on the subject. Second, I hope that it contributes to, and stimulates, discussion on this very significant area of industrial relations.

To my surprise, I found that others in the field were coming to a point of view similar to my own, i.e., that compulsory arbitration should be subject to comprehensive and open examination. One request that I made when approached with respect to this monograph was the opportunity to discuss my ideas and a draft of my paper with leading practitioners in industrial relations. This seemed especially important to me and was graciously granted. In my opinion, there is a considerable discrepancy between practice in industrial relations as the academic perceives it, and the "real world" of industrial relations. Some academics have tried to bridge the gap through active third party work, and work with labour and management. While I have the virtue or the vice of so doing, I felt it was essential that the ideas contained in this monograph be discussed with active practitioners and third parties in labour relations. I, and I believe the monograph, have benefited greatly by that opportunity.

Of course, none of the people whose names are mentioned below share the blame for the shortcomings in the manuscript and they do not necessarily share the views contained in it. I should also report that many of them are clearly skeptical about the feasibility and wisdom of utilizing compulsory interest arbitration as a dispute resolution method. In addition, I would like to make it clear that, without exception, their comments were stimulating, insightful and helpful. I would, therefore, like to repay the following individuals for their thoughtful responses and assistance by publicly expressing my gratitude to them:

Mr. George Adams, Chairman of the Ontario Labour Relations Board; Professor Don Carter, Faculty of Law, Queen's University, and past chairman of the Ontario Labour Relations Board; Mr. Stew Cooke, Assistant Vice President of Labour Relations, Canadian National Railways; Mr. Tony Clement, Director of Labour Relations, Canadian National Railways; Mr. Brian Noble, Manager of Labour Relations, Canadian National Railways; Mr. Tom Crossman, Crossman Associates, International; His Honour, Judge George Ferguson, first permanent arbitrator of the Ontario Police Arbitration Commission; Mr. Jeff Sack, Mr. Howard Goldblatt and Mr. Michael Mitchell of Sack, Charney and Goldblatt; Professor Gordon Simmons, Faculty of Law, Queen's University and past chairman of the Ontario Police Arbitration Commission; Mr. George Smith, Manager, Corporate Labour Relations and Personnel, Canada Steamship Lines; Mr. Bruce Stewart, Q.C. of Hicks, Morley, Hamilton, Stewart and Storie; and Professor Ken Swan, Faculty of Law, Queen's University.

I am also indebted to two colleagues, Professor John Anderson and Professor Richard Jackson, School of Business, Queen's University, for many helpful suggestions and to my research assistant, Mr. John Woon, for his dedication and assistance. I would like to thank, as well, three external referees selected by the Economic Council of Canada to review the monograph. The changes made in the manuscript in response to their comments and criticisms have substantially improved it.

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Bryan M. Downie

Kingston, Ontario

November 1979

INTRODUCTION

Over the past decade there has been a concern in Canada with the state of industrial relations and the level of strike activity. Some have questioned the wisdom of granting the right to strike to federal public sector employees. Indeed, serious legislative proposals (Bills C-22 and C-28) have been put forth to change federal public sector bargaining. In the last round of postal negotiations, the Government found it could not tolerate the exercise of the strike weapon and ended the postal strike through special legislation. Similar interest exists at the provincial and municipal levels where the right to strike has been exercised by teachers, nurses, police, transit workers and other "essential" employees. Concerns have also been articulated, at various times, with regard to the right to strike in "essential" industries in the private and quasi-public sectors (e.g., the railroad and airline industries).

Public concern is high and many urge that strikes in such sectors should not be permitted. In a report released in December 1978 the Commission on Wider-Based Collective Bargaining, while in no sense suggesting that strikes be made illegal, noted the seriousness of public concern:

> The paramountcy of the public interest and the legislatively enshrined commitment to the process of free collective bargaining do not exist in isolation. Recent and continued conflict between these principles can no longer be ignored or denigrated by the parties. There is no question that unresolved bargaining disputes in the key industries under review are injurious to the public and the economy. So too are the uncertainties of operating productively a public or private enterprise while the potential for perpetual bargaining disputes clouds rational planning. Canadian citizens have the inviolable right to be protected, not only with respect of their health, safety and general welfare,

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Note: Bryan M. Downie is a Professor at the School of Business and Faculty Associate of the Industrial Relations Centre, Queen's University. The author was appointed Chairman of the Education Relations Commission and of the College Relations Commission in Ontario shortly after completing this study. The views contained in this monograph are solely those of the author.

but as well against inconvenience and disadvantages of an economic and social nature.

There is, nevertheless, a very limited range of options available to replace the strike and lockout weapons. Yet, if economic sanctions are abrogated, a viable dispute settlement procedure would have to be found as a replacement in order to ensure finality in the bargaining process. Compulsory arbitration is the only known substitute at this point. At the same time, the consequences which would flow from a system of compulsory arbitration, applied on a much broader scale than today, have not been thoroughly examined or thought through by policy makers and the public, and it is clear that many (though by no means all) labour and management representatives strongly oppose the notion of legislated arbitration. Moreover, there are a great number of options with respect to arbitration, the consequences of which might differ quite substantially. The predicted consequences are many, and this paper will focus on the probable impact of a broader application of compulsory arbitration on the collective bargaining process, its outcomes and institutions.

In this paper, unless otherwise noted, "arbitration" means compulsory binding arbitration of interest disputes. Reference is often made in the literature to legislated rather than compulsory arbitration and these terms are interchangeable. "Interest disputes" refer to differences between labour and management in negotiations over the *terms* of the collective agreement. This stands in contrast to "contract observance" or "rights" disputes which deal with the *interpretation* of an existing collective agreement. Under *compulsory* binding arbitration, the parties covered by legislation are required *prior to the start of negotiations* to submit their differences to arbitration, rather than resorting to strike or lockout action if an agreement cannot be reached, and the arbitrator's award is binding on the parties rather than advisory. This is in contrast to a

system of *voluntary* arbitration whereby the two sides must agree to submit their dispute to arbitration.

The ultimate concern of the monograph is with the impact of arbitration on the outcomes of bargaining and, in particular, with the consequences of compulsory arbitration for inflation and productivity. But, at the same time, it must be noted at the outset that the procedural, economic and institutional effects of compulsory arbitration are closely interrelated and, therefore, equally important. For example, compulsory arbitration might, at one and the same time, reduce the level of strike activity (an institutional effect) but abnormally raise wages (an economic effect). Both effects have implications, albeit very different ones, for the economic climate. Hence, the ultimate impact on the Canadian economy is extremely difficult to decipher, and it is clear that a comprehensive treatment of the subject is necessary. Obviously, the findings of this monograph cannot be definitive, but the paper can focus the debate concerning compulsory arbitration on the most germane issues and at least some tentative conclusions can be drawn.

In the past, there has been little concrete information regarding the probable impact of arbitration. Over the past decade, however, there has been a great deal of experimentation with arbitration in various jurisdictions in North America. There is now available a considerable body of literature and empirical information with respect to that experience and the experience with arbitration in other countries. All of the available literature has been explored for this monograph in order to speculate, from a more informed basis, on the probable impact of various types of compulsory arbitration.

The paper does not explore the pros and cons of compulsory arbitration, and the approach is not normative or prescriptive. Instead, the paper sets forth the facts, as they exist at this time, on compulsory arbitration. Whether or not compulsory arbitration should be more widely utilized as a dispute settlement

method, in what industries, and whether strikes and lockouts should be restricted are matters for others to decide. In the meantime, compulsory arbitration is being utilized to a greater extent than ever before. In addition to the increasing use of binding arbitration in the public sector, some provinces have introduced, and others are contemplating, legislation permitting the imposition of arbitration by a labour relations board in situations where labour and management are negotiating their first agreement. Nevertheless, it is unlikely that in the foreseeable future arbitration will be widely applied to the Canadian private sector. Therefore, for the purposes of this paper, a broader application of arbitration means coverage of the public and quasi-public sectors plus limited coverage of "essential" industries (such as transportation) in the private sector.

Alternatives To The Right To Strike

Some system of impasse resolution would obviously have to be imposed if strikes in some of the above sectors were made illegal. That is, if the right to strike were taken away from unions, a substitute would have to be found. As Chamberlain and Kuhn have pointed out, "In a democracy that wishes to preserve free collective bargaining, simple prohibition of strikes is hardly feasible or desirable."[1] Also, it is important to understand that arbitration appears to be the only viable alternative if the right to strike is rescinded or withheld. Numerous alternatives to the strike have been suggested and debated. Thus far, however, policy makers have been unable to come up with an effective substitute other than binding third party resolution. This is not because of a scarcity of

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[1] N. W. Chamberlain and J. W. Kuhn, *Collective Bargaining* (New York: McGraw-Hill Book Company, 1965), p. 411. In a more recent article, Horton has stressed that if strikes are banned in the public sector some "fair" and "impartial" alternative has to be put in its place. He goes on to note that interest arbitration is generally considered to be the logical alternative. See Raymond Horton, "Arbitration, Arbitrators, and the Public Interest," *Industrial and Labor Relations Review*, Vol. 28, No. 4, July 1975, pp. 497-507.

proposals but, as indicated below, because they all have severe limitations.

There has always been in Canada a preoccupation with proposals to prevent, or limit, economic sanctions.[2] The predominant proposal with respect to strikes (although not generally from experts in the field) has been the imposition of binding arbitration on certain Canadian sectors or, alternatively, in specific instances the introduction of back-to-work legislation (with the inclusion of settlement terms, or the provision for arbitration, in the legislation). But the list of esoteric dispute settlement solutions is every bit as long as the list of questions pertaining to such solutions. Statutory strikes, partial strikes, fact finding approaches, an arsenal of weapons approach (in which the government has every conceivable dispute resolution option at its disposal), a disputes commission with public representation to put pressure on the parties, the use of injunctions to end strikes, government seizure of struck facilities, various types of procedures to "cool off" negotiations are some of the proposals that have been put forward.[3]

Most of the proposals are not mutually exclusive but, regardless of the combination of techniques, there are severe shortcomings or fundamental limitations. Some suggestions, such as seizure, are incompatible with Canadian law. Others would be only partial solutions, would dramatically and perhaps unfairly shift the balance of bargaining power, would be ineffective, or inoperable. Actual strike substitutes can be reduced to the following five: injunctions, seizure, assignment of disputes to the legislature, the statutory strike, and compulsory arbitration. Some of these, such as injunctions against strikes, call for harsh penalties imposed

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[2] Stuart Jamieson, *Industrial Relations in Canada* (Toronto: The Macmillan Company of Canada, Limited, 1975), pp. 116-142.

[3] A discussion of most of these is contained in Benjamin Aaron, "National Emergency Disputes," *Labor Law Journal*, Vol. 22, No. 8, August 1971, pp. 461-474.

by a court if a court order were not obeyed.

A recent labour dispute in Quebec suggests the limitations of injunctions in labour disputes. In 1974, the Union of Transport Workers of Montreal had allegedly violated the terms of its collective agreement with the Montreal Transit Commission by staging an illegal strike. The Commission asked the Court to issue an injunction. An injunction was granted prohibiting the strike and ordering the union members to return to work. The union, its officials, and many of its members defied the back to work order. The Commission returned to court with a motion for contempt of court against the union. The union was subsequently found guilty of contempt and was fined $50,000. Theoretically, the Commission could return to court each day, as long as the injunction stood in effect, bringing motions for contempt against the union, its officials, and members, resulting in fines or imprisonment for those found in violation of the court's order. This was the situation facing the Quebec Superior Court when the strike had been going on for more than a month. Chief Justice Deschenes dismissed the contempt of court proceedings.[4] In 1977, the case finally was heard by the Quebec Court of Appeal which overturned Chief Justice Deschenes' decision and sent the case back to the Quebec Superior Court to enforce the higher court's judgment.[5] The strike, of course, had ended several years earlier.

Injunctions, then, are clearly not a useful tool for the long-run control of strikes and are inequitable in the sense of assisting the party (generally management) which is in favor of maintaining the status quo. Government seizure, too, would favor the party with the most to gain from maintaining current conditions

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[4] *Commission de Transport de la Communaute Urbaine de Montreal v Syndicat du Transport de Montreal* [1974] C.S. 227.

[5] *Commission de Transport de la Communaute Urbaine de Montreal v Syndicat du Transport de Montreal* [1977] CLLC 14, 763.

unless government authorities, involved in the seizure, were expected under the seizure order to act rather than wait for the two sides to work out their own settlement.

> It [seizure] could degenerate into a cumbersome and awkward form of compulsory arbitration. Since special boards would be needed to determine just compensation for the owners and workers during the period of government operations, then proceedings and court appeals could snarl the whole procedure into an unworkable political and legal tangle. Another danger is that the government inadvertently (or out of political favoritism) might establish terms and conditions quite satisfactory to one party or the other. If that were to happen there would be little pressure upon that party to compromise its stand, and settlement of the dispute would be frustrated. Finally, if seizure were made the only instrument available to the government for dealing with strikes, it would not help in most strike situations. Seizure is so drastic a step that it is a "last resort" means of handling a strike and in any case would be used but rarely.[6]

Indeed, all of the options except arbitration are exceedingly blunt instruments to deal with labour-management conflict. This is true of the third option, namely disposition of disputes by legislative bodies. Such bodies, of course, are ill-suited for such a task and politicians as a rule do not wish to become embroiled in union-management disputes. Moreover, just from the standpoint of work load this method could be used, at best, rarely. The statutory or mock strike is a fourth option. Here, rather than actually striking, employees would stay on the job at the direction of the government but lose a proportion of their wages; the company or government unit (if the public sector were involved) would continue operations but lose a proportion of its revenues or, if it were not a revenue generating unit, would suffer monetary penalties imposed by government. The advantage of the statutory strike is that the pressures to settle, or make concessions, generated by a strike are maintained; once a settlement is negotiated by the parties the government would lift the penalties. The disadvantage is that the penalties may have a differential impact on the parties and, therefore,

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6 N. W. Chamberlain and J. W. Kuhn, *Collective Bargaining*, p. 418.

on bargaining power. It would be extremely difficult, if not impossible for government officials to determine an appropriate and equitable penalty structure and one which is neutral with respect to power. Also, the concept itself can be subverted by outsiders. It has been used very rarely and, in the most publicized case, a voluntarily worked out statutory strike by bus drivers against the Miami Transit Company in 1960, the penalty structure broke down when the public began tipping the drivers. Finally, the statutory strike is less likely to be practical in segments of the public sector where the unit's service is essential and its continued existence is assured. In such circumstances, managerial representatives may not feel the pressure to settle to the degree that their private sector counterparts would.

On the other hand, binding arbitration, it is claimed, offers the advantage of providing finality to negotiations and, at the same time, is administratively simple. Unlike other possibilities, compulsory arbitration is considered to be an option with broad applicability in a variety of settings and one which could be required on an ex ante basis. Nevertheless, in North American industrial relations, it was once a dictum that interest arbitration, for a variety of reasons, would not work.[7] But opinion with respect to compulsory arbitration is beginning to change. One of the first to question the conventional wisdom was Carl Stevens who, in 1966, wrote:[8]

> In addition to these indications of a need for a thaw in heretofore frozen attitudes about compulsory arbitration, the

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[7] The difficulties with interest arbitration are presented in Tim Bornstein, "Interest Arbitration in Public Employment: An Arbitrator Views the Process," *Labor Law Journal*, Vol. 29, No. 2, February 1978, pp. 77-86.

[8] Carl Stevens, "Is Compulsory Arbitration Compatible With Bargaining," *Industrial Relations*, Vol. 5, No. 2, February 1966, p. 39. An earlier defense of compulsory arbitration was offered by Orme Phelps, "Compulsory Arbitration: Some Perspectives," *Industrial and Labor Relations Review*, Vol. 18, No. 1, October 1964, pp. 89-91.

> increasing frequency of professional discussion of the issue suggests that the "law of the propagation of heretical doctrines" may be at work. If the initial proponents of such a doctrine (e.g., that resort to compulsory arbitration is not a prima facie death knell for the free enterprise system) are not forthwith struck down by Jovian bolts, then other investigators may be inclined to give the matter serious attention.

To an even greater extent today, the notion that compulsory arbitration and collective bargaining are incompatible is being seriously questioned.[9] Nevertheless, opinion among industrial relations neutrals, practitioners and academics remains divided. Robert Howlett, a leading U.S. authority and Chairman of the Michigan Employment Relations Commission, has asserted that the experience with binding arbitration has demonstrated that it works successfully.[10] Another U.S. authority, Theodore Kheel, who is a leading third party neutral, has declared that any comprehensive system of compulsory arbitration must ultimately break down.[11] And, as noted, the majority of labour and management practitioners in North America seem to oppose the idea of compulsory arbitration.

In future sections of the monograph a variety of topics related to the

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[9] See, for example, J. Joseph Loewenberg, "The Effect of Compulsory Arbitration on Collective Negotiations," *The Journal of Collective Negotiations*, Vol. 1, No. 2, May 1972, pp. 177-190; Thomas Gilroy and Anthony V. Sinicropi, "Impasse Resolution in Public Employment: A Current Assessment," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 496-511; Jean McAvoy, "Binding Arbitration of Contract Terms: A New Approach to the Resolution of Disputes in the Public Sector," *Columbia Law Review*, Vol. 72, No. 7, November 1972, pp. 1192-1213; Arvid Anderson, "Lessons For Interest Arbitration in the Public Sector: The Experience of Four Jurisdictions," *Proceedings of the 27th Annual Meeting of the National Academy of Arbitrators*, April 1974 (Washington, D.C.: Bureau of National Affairs, 1975), pp. 59-69; J. R. Grodin, "Either-Or Arbitration for Public Employee Disputes," *Industrial Relations*, Vol. 11, No. 2, May 1972, pp. 260-266; A. J. Geare, "Final Offer Arbitration: A Critical Examination of the Theory," *The Journal of Industrial Relations*, Vol. 20, No. 4, December 1978, pp. 373-385.

[10] Robert G. Howlett, "Ohio Conference on Labor Relations Law," *Labor Relations Yearbook* (Washington, D.C.: Bureau of National Affairs, 1972), p. 117.

[11] Theodore W. Kheel, "Kheel and Union Leaders Object to Curbs in Public Worker Strikes," *Government Relations Report*, Report No. 444 (Washington, D.C.: Bureau of National Affairs, 1972), p. 14.

subject at hand are examined. First, in the next section alternatives to the right to strike are discussed. This is followed by an elaboration of the types of arbitration that might be viable as a sanction substitute. There are, of course, a number of species available and there may be considerable variation in the effect of each type. Next, attention is turned to an identification of potential effects. Then, in ensuing pages, the various studies of relevance with respect to each effect are set forth in considerable detail. In the final section, a brief overview is presented and some conclusions with respect to compulsory arbitration are drawn.

Variations on the Arbitration Theme

There is considerable diversity with respect to the interest arbitration theme. *Conventional arbitration* refers to a system in which the arbitration award may be anywhere between (or, theoretically at least, even outside) the positions submitted to the arbitrator by union and management negotiators. This is in contrast to *final-offer arbitration* (FOA) in which the arbitrator must select either management's or the union's proposal -- the third party is not given the opportunity to split-the-difference. There are two types of final-offer arbitration -- *total package* and *issue-by-issue*. In the first type, the arbitrator must select either the total package of the union or the total package of the employer. Final-offer-by-issue, on the other hand, allows the third party to select the union's or employer's position on each issue separately. Under this system, therefore, a compromise package can be fashioned by the third party. A third type integrates mediation with conventional or final-offer arbitration and is known as *med-arb*. Here a third party is appointed as mediator with the authority to issue an arbitration award if unsuccessful in mediation; or an arbitrator is appointed who has the authority to attempt mediation before issuing an award.

In addition to these three basic species, there are numerous actual and possible permutations in terms of the employees covered, the timing of the process

and award, the composition of the panel, provision for dissenting opinions, the specification of criteria for the award, the issues subject to arbitration, the costs of arbitration, the methods of selecting the neutral, and a number of other parameters.[12] Nevertheless, for the purposes of this paper it is only necessary to consider the two basic types, conventional and final-offer arbitration. Both, although susceptible to modification, are the fundamental alternatives to the strike.

One of the reasons for the current interest in compulsory arbitration has been the considerable growth in its use since the mid-1960s in the public sector in North America. In the United States, seventeen states have statutes which provide for arbitration to resolve public sector bargaining impasses.[13] As well, there has been a rapid increase at all levels of government in Canada over the same period. While growth in arbitration is a common denominator, there is a great diversity in procedures and experiences. The Public Service Staff Relations Act which was enacted in 1967 introduced collective bargaining for federal public servants. The Act includes a two-choice system under which a bargaining agent may elect binding arbitration and in so doing forfeit its right to strike. Or, the bargaining agent may select the conciliation-strike route which leaves employees

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[12] For a discussion of these see Joan McAvoy, "Binding Arbitration of Contract Terms: A New Approach to the Resolution of Disputes in the Public Sector," *Columbia Law Review*, Vol. 72, No. 7, November 1972, pp. 1192-1213.

[13] See David Lewin, Peter Feuille and Thomas Kochan, *Public Sector Labor Relations: Analysis and Readings* (Glen Ridge, N.J.: Thomas Horton and Daughters, 1977), pp. 228, 236 and Peter Feuille, "Selected Benefits and Costs of Compulsory Arbitration," (mimeographed, forthcoming, 1979), p. 20. Both list the following states -- Alaska, Connecticut, Iowa, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New York, Oregon, Pennsylvania, Rhode Island, South Dakota, Texas, Washington, Wisconsin and Wyoming. For the most part, rather than covering the entire public sector, the statutes cover police and firefighters. Five states -- Connecticut, Iowa, Massachusetts, Michigan and Wisconsin provide for various types of final-offer arbitration.

free to strike (unless they have been designated as essential) if they are unable to reach agreement through negotiations. Whatever choice is made, it is binding upon the employees for the immediate round and must be made prior to the start of negotiations. A new choice is made at the beginning of each negotiating round. This, therefore, is not a pure form of compulsory arbitration, but once the arbitration route is selected it has all the trappings of compulsory conventional arbitration. In other cases, the procedures are quite straightforward. Since the mid-1960s, dispute resolution in Ontario hospitals has entailed appointment of a conciliation officer but, if agreement is not reached, the matter is resolved by a single arbitrator or by a three-person arbitration board. Also, in a number of provinces, compulsory conventional arbitration is used to resolve disputes between police in a municipality and the municipal board of commissioners. But in other cases, dramatic innovations in third party intervention have been introduced. Final-offer arbitration was introduced by the parties in professional baseball in 1973 to deal with salary disputes between the owners and *individual* players.[14] Various types of final-offer arbitration have also been introduced in a number of jurisdictions in the U.S. As well, there are experiences with distinct types of arbitration in other countries. These, too, will be discussed in the paper.

The Potential Impact of Arbitration

The increased interest in legislated arbitration has been reflected in a fairly large set of empirical studies on the subject. Much more is known now about the efficacy and impact of arbitration than was ten years ago. Despite this, an assessment of arbitration is clearly subjective and value laden in that

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[14] For a description of the complexities for the arbitrator in this sector see Peter Seitz, "Footnotes to Baseball Salary Arbitration," *The Arbitration Journal*, Vol. 29, No. 2, June 1974, pp. 98-103.

conclusions with respect to performance under a system of arbitration depend not only on objective data but also on prior expectations and personal preferences with respect to third party intervention. For example, one concern is that arbitration awards will play too large a role in collective bargaining, but such an assertion raises the question, "how much is too much"? The answer will clearly vary by individual.

In any case, an examination of the literature on compulsory arbitration, and impasse resolution in general, suggests a variety of possible effects. Such effects can be broadly classified as behavioural economic and institutional. Each of these is examined in future sections of the paper, although there is more information on some aspects than on others.

For the purposes of this monograph, it is not necessary to go into elaborate detail on the perceived disadvantages of compulsory arbitration.[15] Instead, the most important questions raised by the compulsory and binding nature of interest arbitration which are briefly set forth below give the flavour of the case against it. In addition to those questions, there are, as well, more philosophical issues. For example, some question whether arbitration in the public sector, because of delegation of governmental authority to a third party, is compatible with respresentative government. Others have charged that compulsory arbitration in the private sector would constitute unnecessary and dangerous control by government over private enterprise. This paper does not attempt to deal with those types of issues. Rather, it is concerned with the more pragmatic concerns discussed below.

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[15] Compulsory arbitration has its proponents as well. For a fuller discussion of the pros and cons see N. J. Fox and L. B. McDonald, "The Need for Compulsory Arbitration," *The Journal of Collective Negotiations*, Vol. 3, No. 4, Fall 1974, pp. 327-337.

The most serious reservations concern the perceived incompatibility between the collective bargaining process and arbitration. There is the feeling that arbitration is suitable for contract observance differences but not for matters of interest. The Task Force on Canadian Industrial Relations presented this argument in 1968.

> It is more difficult to find a viable substitute for the right to resort to economic action over interest disputes. Superficially the most appealing answer would seem to lie in compulsory arbitration. If grievance disputes are by law to be arbitrated, why not interest disputes? In grievance disputes, the issue is the interpretation and application of already established rights. In interest disputes, the rights themselves are at stake. It is one thing to compel two parties to submit to arbitration on the terms of an agreement which they have negotiated and signed; it is another to impose a settlement in the absence of their mutual consent.[16]

At a more practical level, there is the strongly held opinion that arbitration influences *behaviour* at the bargaining table; that it reduces or eliminates the incentives for the parties to engage in give-and-take bargaining and reach their own agreement. The Task Force referred to this as the corrosive effect on the decision making process in collective bargaining. Practitioners, in particular, feel that the parties will withhold their final offers, or perhaps refuse to concede anything, in order to influence the arbitrator and give him room to manouever.[17] Some feel, too, that it leads both sides to make a larger number of demands. These opinions are premised on assumptions concerning third party behaviour, i.e., that arbitrators follow a "split-the-difference" philosophy. Initially, final-offer arbitration was suggested as a process which would attenuate that disadvantage. That is, a system of final-offer arbitration requires the

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[16] The Report of Task Force on Labour Relations, *Canadian Industrial Relations* (Ottawa: Privy Council Office, 1968), para. 395.

[17] See Malcolm L. Denise, "The Effect of Arbitration on Labour-Management Relations," *The Arbitration Journal*, Vol. 7, No. 2, 1952, p. 110.

arbitrator to select one party's offer; the third party cannot split the difference. Under FOA, however, it is now alleged that arbitrators compromise over time ("intertemporal compromise") by selecting the position of the party who had lost in the previous round, and under FOA-by-issue an arbitrator can fashion a compromise settlement. Some feel that this possible compromise behaviour by the third party under conventional and final-offer arbitration results in so many *disputes* being resolved by arbitration awards (the so-called "narcotic effect"), with so many *unresolved issues* going to arbitration (the "chilling effect"), that the solution itself may lead to frustration and ultimately illegal strikes. The definition of the narcotic effect often varies by author. Sometimes, as evidence of a narcotic effect, reference is made to the proportion of negotiations in a sector resolved by arbitration but, in other cases, to the repeated use of arbitration by two parties in a relationship ("habitual use"). In this paper, both the proportion of negotiations resolved by arbitration and the repeated use of arbitration by the same parties are used as indicators of the narcotic effect. There is no consensus in the literature on the appropriate measure of this effect. Some researchers have used the proportion of negotiations resolved by arbitration, and in particular the trend in this ratio as an indicator of the narcotic effect. Others have emphasized the repeated or habitual use of arbitration through time. The number of issues which are sent to arbitration and the distance between the position of the parties at arbitration are used as measures of the chilling effect.

Second, there is the opinion and certainly the possibility that arbitration influences bargaining *outcomes*, i.e., that it will have an economic effect. There is a feeling that arbitration leads to higher settlements than would result from direct negotiations. A group of industrial relations academics have noted, "A popular theory about compulsory arbitration is that employees who utilize the arbitration mechanism receive higher wages than their counterparts who do not."[18]

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[18] James L. Stern et al., *Final Offer Arbitration: The Effects on Public Safety Employee Bargaining* (Lexington, Mass.: D.C. Heath and Company, 1975), p. 30.

Congruent with this is the possibility that arbitration, if more widely introduced, could lead to a higher rate of wage and labour cost increase through two other possible effects. It has been suggested that arbitration amplifies "whipsawing" in bargaining so that agreements reached in arbitration could spill over to other sectors and have a "ripple effect" throughout the economy. In addition, some feel that arbitrators, insensitive or ignorant concerning the operational realities facing employers, may impose conditions on management that would reduce or restrict productivity and that this would lead to unacceptable and/or unnecessary labour cost increases. A final influence suggested with respect to bargaining outcomes is that arbitration could reduce the variance in wage outcomes and hence independently modify wage differentials in a sector. This, in turn, could affect resource allocation.

A third set of concerns can be termed institutional effects. Some of these overlap or have a bearing on the economic and behaviour effects. For example, there is a feeling by some that arbitration shifts the balance of bargaining power between the parties. Also, it has been asserted that negotiators use arbitration to save face with their constituents. That is, they will take disputes to arbitration to force the arbitrator to make the tough decisions that they would prefer, for political reasons, to avoid. This face saving function, if true, would reinforce the narcotic effect. Next, it is possible that the imposition of arbitration could lead to a change in the organization structure of unions in particular and to a greater utilization and influence of lawyers and professional staff in the union movement. Finally, it has long been argued that strikes cannot be effectively outlawed; the arbitration process, it is alleged, leads to frustration and illegal strikes so that there are major problems in gaining compliance with arbitration awards by the parties. There is the very fundamental question of whether arbitration really reduces labour-management conflict.

Compulsory arbitration, of course, has its defenders[19] but, overall, in North America the opinion has been that allowing an outside party to determine the terms of a collective agreement will distort outcomes, destroy collective bargaining, harm labour-management relations, and force unions to exert political pressure and undertake illegal activity. The subject of compulsory arbitration and its effects, however, is extremely complex and, therefore, it is inaccurate to suggest that there are black and white answers. Despite an ever increasing body of literature on the subject, there is still a fundamental lack of data, particularly in certain categories. In Figure 1 the types of effects discussed above are listed along with the research setting and type of arbitration considered. The figure specifies the predominant forms of information available with respect to each effect. Because the labour market institutions and general environment are very similar in Canada and the United States, studies of North American systems are listed as domestic. Most of the research has been done on the narcotic and chilling effects and the "hardest" data exists in those areas. In addition to field studies, a limited amount of work has been done in the laboratory on the chilling and narcotic effects under both conventional and final-offer arbitration. Less work has been done on the economic effects but, nevertheless, there is some research, some of which includes quantitative estimates. Most of the studies are North American and all are field, as opposed to laboratory, studies. Very little information about the institutional effects is available, and this is perhaps the most difficult aspect to quantify. Most of the information with respect to the institutional side is qualitative and anecdotal. The next section examines in depth the evidence available to date on the impact of compulsory arbitration on bargaining behaviour.

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[19] See, for example, H. J. Glasbeek, "Compulsory Arbitration in Canada," in J. Joseph Loewenberg, et al., *Compulsory Arbitration: An International Comparison* (Lexington, Mass.: D. C. Heath and Company, 1976), pp. 45-81.

Figure 1

PREDOMINANT FORMS OF EVIDENCE ON COMPULSORY ARBITRATION

Type of Effect \ Research setting and type of Arbitration	DOMESTIC		FOREIGN		LABORATORY	
	Conventional	FOA	Conventional	FOA	Conventional	FOA
BEHAVIORAL:						
•Narcotic Effect						
•General	HD; QI	HD; QI	HD; QI	-	HD	HD
•Habitual Use	HD; QI	HD; QI	-	-	-	-
•Chilling Effect	HD; QI	HD; QI	QI	-	HD	HD
•Intertemporal Compromise	N.A.	HD	N.A.	-	N.A.	-
ECONOMIC:						
•Size of Settlements	HD	HD	QI	-	-	-
•Variance of Settlements	HD	HD	QI	-	-	-
•Whipsawing - spillover	HD: QI	QI	-	-	-	-
•Impact on Productivity	QI	QI	-	-	-	-
INSTITUTIONAL:						
•Face Saving and Decisionmaking	QI	QI	-	-	HD	HD
•Union Power	QI	QI	QI	-	N.A.	N.A.
•Union Structure and Staffing	QI	QI	QI	-	N.A.	N.A.
•Industrial Conflict and Compliance	QI	QI	QI	-	N.A.	N.A.

HD - Hard data

QI - Qualitative information

\- - No information

N.A. - Not applicable

IMPACT ON BARGAINING BEHAVIOR

The Narcotic Effect

The most serious reservations with respect to arbitration stem from the fear that the parties will overuse it, i.e., they will not resolve their own disputes but, instead, dump them in the lap of a third party. Once this decision making attitude is set in motion the parties, according to this argument, will be drawn again and again into arbitration. This was originally suggested by the U.S. Secretary of Labor in 1964:

> Experience, particularly the War Labor Board experience during the forties, confirms the statutory requirement that labor disputes be submitted to arbitration has a narcotic effect on private bargainers, that they turn to it as an easy and habit-forming release from the obligation of hard responsible bargaining.... The record is that if arbitration is assured, the collective bargaining processes are never really used at all.[20]

Because of the centrality of this argument to the subject at hand, the narcotic effect has received a great deal of attention in academic research. Notwithstanding this fact, it remains difficult to reach firm conclusions about the narcotic effect. As noted, both personal perceptions and values plus objective data are involved. Some might conclude that referring 50 percent of the cases to third party resolution is too much; others might conclude otherwise.

Two benchmarks are useful here. First, until recently, the assumption has been that under a system of compulsory arbitration the majority of the cases would be resolved by arbitration. Indeed, this is implied in the above statement by Wirtz. Second, on the other side, where the right to strike prevails not all disputes are resolved without strike action. The argument has generally been that a very small number (2 to 5 percent) wind up in an economic sanction situation.

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[20] W. W. Wirtz, *Labor and the Public Interest* (New York: Harper and Row, 1964), pp. 52-53.

Apparently, however, the collective bargaining record is not that conflict free. In a study, covering the period 1970 to 1973, of the methods by which settlements were reached in a sample of 1400 Ontario collective agreements, Kelly found that in 11.3 percent of the cases the method of settlement was work stoppage.[21] This, of course, understates the incidence of economic sanctions in that some of the units did not have the right to strike (5 percent of the agreements were reached through arbitration). The percentage of agreements reached after work stoppage was particularly high (17.0 percent) in manufacturing. Within that sector the figure was over 20 percent in four industries (wood furnitute 20.5 percent; metal fabricating 21.1 percent; machinery 22.7 percent; and transportation equipment 34.8 percent).

In a recent U.S. study on the propensity to strike, the results are equally surprising.[22] Kaufman defines the propensity to strike as the number of strikes over economic issues in units of 1,000 or more workers in manufacturing as a fraction of all major (1,000 or more workers) contract settlements in manufacturing. Using unpublished BLS data for the period 1954 through 1975, he found that the propensity ranged from 5.3 percent (1963) up to 29.7 percent (1974). In 15 of the 22 years the propensity was above 10 percent and in the last ten years it ranged from 13.6 percent to 29.7 percent. That is, during the last ten years strikes took place in 14 to 30 percent of the eligible cases.

Before examining data on the narcotic effect it is necessary to define the

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[21] The analysis covered settlements involving more than 250 employees in industries other than construction. See Lawrence A. Kelly, *Settlement Methods in Ontario Collective Bargaining, 1970-73* (Kingston, Ont.: Queen's University Industrial Relations Centre).

[22] Bruce E. Kaufman, "The Propensity to Strike in American Manufacturing," *Industrial Relations Research Association* Proceedings of the 30th Annual Meeting, 1977 (Madison, Wisconsin: The Association, 1978), pp. 419-26.

term somewhat more precisely. To date, the terminology and definitions used by different researchers have varied. Some use the *incidence* of arbitration as a measure of the chilling effect, while others use the same definition (i.e., incidence) as a measure of the narcotic effect. In this paper, the narcotic effect is assessed from two perspectives. In the first, it is defined as the frequency of arbitration usage (measured as a percent of total negotiations); the second uses a narrower interpretation by examining *habitual use* of arbitration. Therefore, the first considers the frequent use of arbitration by *different units*; the second considers repeated use by the *same units*. On the other hand, when discussing the chilling effect in this paper, emphasis is placed on the magnitude of the differences between the parties when they go to arbitration, i.e., the distance between the parties' bargaining positions and the number of items submitted to the arbitrator for award. In some studies, the usage rate of arbitration by different units often has been used as a proxy for the chilling effect. The original meaning of the chilling effect, however, referred to the impact of compulsory arbitration on the parties' *bargaining positions*. Therefore, the focus is on that aspect when the chilling effect is discussed in a later section.

The Narcotic Effect - Conventional Arbitration

Those who criticize arbitration generally have the conventional variety in mind. Because the arbitrator has the discretion to make a compromise award, there is assumed to be little pressure on the parties to settle; indeed, there is assumed to be little or no incentive for the parties to make concessions. The results to date, however, suggest a more modest impact. In jurisdictions that provide for conventional arbitration, the usage rate is far lower than would have been predicted a decade ago. Here it should be noted that great care must be exercised in interpreting data on third party intervention. During negotiations, one party (generally the union) will request arbitration as a part of the normal

course of bargaining, primarily for strategic reasons. This is similar to strike or lockout threats which are often made in the heat of negotiations. Therefore, such a request is not prima facie evidence of dependency on arbitration. The germane event is the actual resolution of labour-management negotiations by an arbitration *award*. There is now a sizable number of studies examining sectors which have been covered by conventional arbitration for several years, and each of these contains data on the number of awards. Almost all of these report relatively modest use of arbitration and are summarized below.

In Canada, data is available on conventional arbitration applied to Ontario hospitals, British Columbia teachers and Federal public servants. Three-man arbitration boards are called for in the case of Ontario hospitals, and it has been reported that, from 1966 to 1972, award usage ranged between 15 and 25 percent.[23] The results are quite similar in the Federal public service where the election of the arbitration route by bargaining agents, while shrinking, continues to constitute a majority of all units. The parties negotiating under binding arbitration have, for the most part, been able to negotiate their own settlements short of arbitration. A number of studies have included information on this sector and generally conclude that about 18 percent of the units opting for arbitration wind up with awards.[24] Annual data contained in the yearly report of

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[23] The number of disputes settled by award were as follows -- 1966 - 15%; 1967 - 17%; 1968 - 18%; 1969 - 18%; 1970 - 25%; 1971 - 11%; 1972 - 19%. These figures are contained in H. J. Glasbeek, "Compulsory Arbitration in Canada," p. 79 and Robert J. Hines, "Mandatory Contract Arbitration: Is It A Viable Process?," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 533-44. The increase in usage in the late 1960s and early 1970s was partially attributable to the nature of the arbitration process which had become highly oriented to mediation prior to issuance of awards. See *The Report of Hospital Inquiry Commission, November 1974* (Ontario Ministry of Labour), p. 30.

[24] Joan McAvoy, "Binding Arbitration of Contract Terms," pp. 1211-1212; Leslie Barnes and Lawrence Kelly, *Interest Arbitration*, p. 13; and James Stern et al., *Final Offer Arbitration*, p. 293. All of these use the number of awards unweighted for the number of employees affected by the award. This is the most accurate measure of dependency.

the Public Service Staff Relations Board indicates considerable variation, but the highest annual rate has been 29 percent and the average rate over the period 1967-68 to 1977-78 is just 12 percent.

For a much longer period of time conventional arbitration has been used in British Columbia elementary and secondary education. Since 1937, B.C. teachers have been covered by a system which permits either party to demand binding arbitration of unresolved salary debates. Thompson and Cairnie discuss the experience up to 1973 and conclude that collective bargaining has not withered away under compulsory arbitration.[25] Although the overall rate of arbitration increased during the last period examined (1960-73), they found that there was no pattern of decreasing reliance on negotiable settlements. The usage rates varied considerably over the period 1960 to 1973 with an average of approximately 30 percent. They attribute the "success" of arbitration to the rigid time limits required under the system. These apparently put pressure on the parties to negotiate.

The usage rates in B.C. are higher than rates reported elsewhere. Therefore, it should be added that Thompson and Cairnie note the figures with respect to usage might be overstated. Under the reporting system they utilized, a settlement could be recorded as achieved through arbitration even though settlement came via negotiations *before* an award, albeit after arbitration had been requested. The fact that an arbitration board in B.C. education is limited to a determination of salary and bonuses may also lead to a greater incidence of arbitration. With the scope of arbitration limited, most of the teachers' concern and argumentation is likely to be channelled into the question of salary. Moreover,

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[25] Mark Thompson and James Cairnie, "Compulsory Arbitration: The Case of British Columbia Teachers," *Industrial and Labor Relations Review*, Vol. 27, No. 1, October 1973, pp. 3-17.

trade-offs are less likely to develop and items to fall off the table because the employer will be more reluctant to make a major move on the economic package. Therefore, negotiated settlements, it could be argued, are less likely under this system.[26]

While the results for B.C. teachers and the Federal public service are encouraging, they can be interpreted in different ways for both sectors. With respect to the former, Feuille argues that the data presented by Thompson and Cairnie appears to show that arbitration has had a deleterious impact on bargaining.[27] He divided the data for 1960 to 1973 into subperiods to demonstrate that the incidence of arbitration had increased. In a "Reply", Thompson and Cairnie further subdivide the data and argue that there is sharp period-to-period variation in the number of awards and no discernible trend away from negotiated settlements.[28] In the Federal public service, Anderson and Kochan analyze data for the period 1968 to 1975 by dividing the data into four rounds of bargaining.[29]. This is a valuable study because of their attempt to quantify variables but there are some shortcomings. They report indirect evidence of a narcotic effect based on their finding that a unit is more likely to go to *impasse* if it had been in impasse and had utilized the assistance of third parties in the past. However, the declaration of bargaining impasse is hardly evidence of a narcotic effect as originally

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[26] Feuille, in a comment on the Thompson and Cairnie research, argues that if the scope of bargaining were larger, there would have been a higher incidence of arbitration. See Peter Feuille, "Analyzing Compulsory Arbitration Experiences: The Role of Personal Preferences," *Industrial and Labor Relations Review*, Vol. 28, No. 3, April 1965, pp. 432-35.

[27] *Ibid.*

[28] Mark Thompson and James Cairnie, "Reply", *Industrial and Labor Relations Review*, Vol. 28, No. 3, April 1975, pp. 435-38.

[29] John C. Anderson and Thomas A. Kochan, "Impasse Procedures in the Canadian Federal Service: Effects on the Bargaining Process," *Industrial and Labor Relations Review*, Vol. 30, No. 3, April 1977, pp. 283-301.

envisioned by Wirtz and later articulated by others. The incidence of arbitration, and more particulary arbitration *awards*, rather than the incidence of various forms of third party intervention such as mediation, is the issue in question. Anderson and Kochan also discovered a rising and high incidence of arbitration over the four rounds. Here it should be noted, however, that if year to year results are used there is no discernible trend in the data and, as noted earlier, the average annual incidence appears to be approximately 18 percent.[30]

There is additional data on conventional arbitration from the experience in the United States. Pennsylvania introduced compulsory arbitration for police and firefighters in 1968, and the results up to 1974 have been intensively examined by Loewenberg.[31] There were difficulties, however. When Loewenberg was conducting his research, there was no central source of data on police and firefighter disputes in Pennsylvania, and as a consequence he was forced to rely on data collected from questionnaires. For police, the proportion of awards to negotiations, where the method of dispute resolution was known, varied from 28 to 34 percent over the period 1969 to 1974. The comparable figures for firefighters

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[30] In a similar study, Kochan and Baderschneider explore the question of the narcotic effect in police and firefighter disputes in New York State and the impact on the bargaining process flowing from a change in New York legislation in 1974 which called for compulsory arbitration rather than fact finding. The authors conclude that the change to arbitration increased the probability of going to impasse and to the final step of the procedure by about 16 percent. At the same time, they suggest the increase could be the result of a long term trend rather than due to the change in legislation. See Thomas A. Kochan and Jean Baderschneider, "Dependence on Impasse Procedures: Police and Firefighters in New York State," *Industrial and Labor Relations Review*, Vol. 31, No. 4, July 1978, pp. 431-49.

[31] See James Stern et al., *Final Offer Arbitration*, pp. 5-35. Earlier assessments of the Pennsylvania experience are contained in J. Joseph Loewenberg, "Compulsory Arbitration for Police and Fire Fighters in Pennsylvania in 1968," *Industrial and Labor Relations Review*, Vol. 23, No. 3, April 1970, pp. 367-79; J. Joseph Loewenberg, "Compulsory Arbitration and the Arbitrator," *The Arbitration Journal*, Vol. 25, No. 4, 1970, pp. 248-60; and J. Joseph Loewenberg, "What the Private Sector Can Learn from the Public Sector in Interest Arbitration: The Pennsylvania Experience," *Arbitration 1974*, Proceedings of the 27th Annual Meeting of National Academy of Arbitrators (Washington, D.C.: BNA Books, 1975), pp. 69-77.

were slightly higher. Loewenberg noted that, over the period, prearbitration mediation was not used and that a tripartite board of arbitration was called for with the employer required to pay the fees of its representative plus those of the neutral chairman. He suggests usage could be reduced by changing both of those aspects and, overall, evaluated the Pennsylvania experience positively.[32]

> What is perhaps more surprising is that in any given year since the inception of Act 111, the majority of parties in Pennsylvania have successfully negotiated their own agreements. To be sure, it has not always been the same parties who conclude their own agreements, but the ability to be in arbitration one year and to negotiate an agreement the following year *decries the contention that arbitration is addictive and forthwith destroys the incentive to bargain.* Approximately one-third of the parties who bargain under Act 111 have never received an arbitration award, and most of these parties have been bargaining since the law became effective.... What all this amounts to is that *arbitration in Pennsylvania has not stifled collective bargaining.*[33] (italics added)

There is less information on other systems, but some specific results are known. Hospitals in Minnesota have also been covered by conventional arbitration since the late 1940's under the Charitable Hospitals Act. Private and nonprofit hospital employees do not have the right to strike and instead are covered by compulsory arbitration. Stutz reports that in over 1300 contract negotiations approximately 26 percent were resolved by arbitration, while Loewenberg has indicated that 15 percent of the settlements have been determined in arbitration.[34]

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[32] On the other hand, a specific time frame is provided in the Pennsylvania legislation which should encourage serious bargaining. Negotiations must begin six months prior to the beginning of the fiscal year and, if settlement is not concluded within 30 days, either party may initiate arbitration.

[33] J. Joseph Loewenberg, *Arbitration 1974*, p. 75.

[34] Robert Stutz, "The Arbitrator's Role," in J. Lefkowitz, G. Nicolan and H. Schilit (eds.), *The Public Interest and the Role of the Neutral in Dispute Settlement* (Proceedings of the Inaugural Convention of the Society of Professionals in Dispute Resolution, 1973), p. 73; J. Joseph Loewenberg, "The Effect of Compulsory Arbitration on Collective Bargaining," *The Journal of Collective Negotiations*, Vol. 1, No. 2, May 1972, pp. 177-190.

The difference may be due to the former using requests for arbitration and the latter reporting on the proportion of actual awards. In either case, the award rate is modest.

Interest arbitration, again of the conventional type, has been available in the public sector in New York City since 1968. McCormick writes that from 1968 to 1975 bargaining impasses were declared in slightly less than 15 percent of the contract negotiations.[35] She notes that over the first four years the number of arbitration cases fluctuated, but after 1970 the percentage of settlements stabilized and, through 1975, between 10 and 12 percent of all negotiations concluded with a request for arbitration.

Conventional arbitration has been used extensively in some other countries as well and has been the subject of extensive research. The best known example is Australia which is discussed in a later section. However, worth noting here is a report that in 1,130 negotiations in the federal civil service over the decade 1960 to 1970, 90 percent were settled through negotiations.[36] New Zealand has a system of compulsory arbitration similar to Australia's including provision for an Arbitration Court. It has been in effect for over eighty years and includes a severe limitation on the right to strike in the private and public sectors. Interest disputes which cannot be resolved by negotiation or during conciliation go for resolution to the Arbitration Court. Recently, Geare examined the results over the period 1965 through 1977.[37] He concludes that, on average, 96 percent of

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[35] Mary McCormick, "A Functional Analysis of Interest Arbitration in New York City Municipal Government, 1968-1975," *Industrial Relations Research Association*, Proceedings of the 29th Annual Meeting, 1976 (Madison, Wisconsin: The Association, 1977), pp. 249-257.

[36] R. Beale, "The Australian Experience in Federal Sector Arbitration," *Industrial Relations*, Vol. 14, No. 3, October 1975, p. 318.

[37] A. J. Geare, "Final-Offer Arbitration: A Critical Examination of the Theory," *Journal of Industrial Relations*, Vol. 20, No. 4, December 1978, pp. 373-385.

negotiations are resolved without arbitration and, on the basis of the overall record in New Zealand, he rejects the notion that conventional arbitration is addictive.

Compulsory arbitration for all industrial disputes was legislated in Great Britain from 1940 to 1951 to cope with inflationary forces during the war and postwar years. New legislation was passed in 1951 which continued the wartime system, but it did not include a prohibition against strikes and other forms of industrial action. This legislation remained in force until early 1959. No formal statistics were maintained over the life of the legislation, but one researcher has estimated that from 1945 through 1957 more than two-thirds of the total wage increases resulted from negotiated settlements, one-sixth via decisions of minimum wage-fixing machinery (in the unorganized sector), and only one-twelfth by arbitration of all kinds, compulsory and voluntary.[38] He concluded that the experience for the remainder of the postwar period was similar.

A recent laboratory experiment also has a bearing on the impact of conventional arbitration on the bargaining process. Utilizing a simulated bargaining game with a sample of 160 undergraduate students, Bigoness evaluated the efficacy of four methods of dispute resolution ("bargaining," "mediation," "voluntary arbitration," and "compulsory arbitration").[39] The systems of voluntary and compulsory arbitration were only threatened and never actually put to use. All of the subjects were given an equal amount of time to reach a

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[38] B. A. Hepple, "Compulsory Arbitration in Great Britain," in J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison*, pp. 83-115, esp. p. 97. This book also includes an evaluation of the experience with compulsory arbitration in Jamaica from 1952 to 1972. The author presents data on the total number of cases going to arbitration in the Jamaican public sector but does not provide information on the total number of negotiations.

[39] William J. Bigoness, "The Impact of Initial Bargaining Positions and Alternative Modes of Third Party Intervention in Resolving Bargaining Impasses," *Organizational Behavior and Human Performance*, Vol. 17, No. 2, 1976, pp. 185-198.

settlement. More of the parties were able to settle under bargaining and compulsory arbitration than under mediation and voluntary arbitration. More importantly, the difference in the rates of settlement under bargaining and compulsory arbitration was *not* significant. In 20 sets of negotiations the parties in 11 cases attained agreement under bargaining and in 9 cases they remained unsettled, whereas in the case of compulsory arbitration 10 settled and 10 failed to settle. Therefore, Bigoness felt that subjects anticipating compulsory arbitration were almost as successful in reaching agreement. Bigoness also found the fewest number of unresolved issues remained under bargaining and compulsory arbitration; the most under mediation and voluntary arbitration. He concluded that the results fail to support the contention that compulsory arbitration seriously undermines collective bargaining.[40]

The Narcotic Effect - Final-Offer Arbitration

Final-offer arbitration was proposed as a form of third party intervention which would diminish the narcotic and chilling effects but, as pointed out, there are two varieties of final-offer arbitration -- total package and issue-by-issue. These were discussed earlier, but it is important to point out that final-offer-by-issue allows the arbitrator to shape a compromise settlement by refusing to decide for one party on all items. For this reason the impact of final-offer-by-issue may be similar to conventional arbitration.[41] The results

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[40] *Ibid.*, p. 195.

[41] In a laboratory experiment using a collective bargaining simulation which includes various types of dispute settlement methods including last-offer-by-issue, Subbarao found that the impact of issue-by-issue arbitration on the negotiation process was "more or less like that of conventional binding arbitration." See A. V. Subbarao, "Final-Offer Selection Vs. Last-Offer-By-Issue Systems of Arbitration," *Relations Industrielles*, Vol. 33, No. 1, 1978, p. 54; see also A. V. Subbarao, "The Impact of Binding Interest Arbitration on Negotiation and Process Outcome," *Journal of Conflict Resolution*, Vol. 22, No. 1, March 1978, pp. 79-103.

for final-offer-by-issue in Michigan, therefore, will be examined first.

In the late 1960's, Michigan introduced legislated conventional arbitration covering public safety employees (police and firefighters) but then, through amendments to the legislation, switched to final-offer arbitration by issue. The results for the first four years (1970 to 1974) have been assessed.[42] While the parties petitioned for arbitration 30 percent of the time, awards were required in only 16 percent of the cases. The authors assert that the availability of this type of arbitration does not substantially erode the parties' incentives to negotiate their own settlements.[43] A second significant conclusion was that the low award rate was due to the intensive use of mediation prior to arbitration.

A second state with lengthy final-offer arbitration experience is Wisconsin which, in 1972, replaced non-binding fact finding for its public safety employees with compulsory FOA on a total package basis.[44] In a paper on Wisconsin, Olson found that from 1973 to 1977 an award was issued in only 14 percent of the negotiations, although in 35 percent of the negotiations some third party assistance was required. There was considerable experience in this case; in total there were more than 850 sets of negotiations over the period. In

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[42] James Stern et al., *Final Offer Arbitration*, pp. 37-75.

[43] *Ibid.*, p. 54.

[44] The Wisconsin experiment has been extensively researched. The most recent study is Craig Olson, "Final-Offer Arbitration in Wisconsin After Five Years," *Industrial Relations Research Association*, Proceedings of the 31st Annual Meeting, Chicago, 1978 (Madison, Wisconsin: The Association), pp. 111-119; also James Stern et al., *Final Offer Arbitration*, pp. 77-115; Peter Feuille, "Final-Offer Arbitration and Negotiating Incentives," *The Arbitration Journal*, Vol. 32, No. 3, 1977, pp. 210-211; James Stern, "Private Sector Implications of the Initial Wisconsin Final-Offer Arbitration Experience," *Arbitration 1974* Proceedings of the 27th Annual Meeting of National Academy of Arbitrators (Washington, D.C.: BNA Books, 1975), pp. 82-92; and James Stern, "Final Offer Arbitration: Initial Experience in Wisconsin," *Monthly Labor Review*, Vol. 97, No. 9, September 1974, pp. 39-43.

an earlier study Feuille had found similar rates of usage, and in another study on Wisconsin it was concluded that for the period analyzed (two years) "the 'narcotic effect' had not yet appeared."[45] Feuille had noted that the number of cases going to award had increased over the period he examined (from 11 percent to 14 percent) and that a larger proportion were settled by mediation at the end of the period; however, the data presented by Olson indicates that after an increase in the award rate to 18 percent in 1976 there was a decline in 1977 to 14 percent.[46] Because of the greater experience of the parties with the procedure, Olson suggests that the experience in 1977 may represent a turning point or levelling off.

The city with the longest experience with FOA is Eugene, Oregon which by city ordinance provided FOA for all negotiations with its public employees. The city (i.e., the employer) pays for all the costs of arbitration. In a review paper of final-offer arbitration Feuille and Dworkin report that 25 percent of the time (four cases) the parties have invoked FOA and an award has been issued.[47] They stress that three of the cases occurred in the first two rounds. In the last four rounds (up to 1978) just one set of negotiations wound up in an award. In an earlier and more detailed study, Long and Feuille analyzed the first six sets of negotiations. They determined that FOA had been moderately successful and felt that it had preserved the parties' incentives to negotiate.

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[45] James Stern et al., *Final Offer Arbitration*, p. 91.

[46] Peter Feuille, "Final-Offer Arbitration and Negotiating Incentives," pp. 210-211.

[47] Peter Feuille and James Dworkin, "Final-Offer Arbitration and Intertemporal Compromise, or It's My Turn to Win," *Industrial Relations Research Association*, Proceedings of the 31st Annual Meeting, August 1978, Chicago (Madison, Wisconsin: The Association, 1979), pp. 87-95. See also Gary Long and Peter Feuille, "Final-Offer Arbitration: 'Sudden Death' in Eugene," *Industrial and Labor Relations Review*, Vol. 27, No. 2, January 1974, pp. 186-203. Eugene, Oregon was the first jurisdiction to adopt final-offer arbitration.

Data is available for two other states that provide for final-offer arbitration. Both Massachusetts and Iowa have interesting variations on the basic FOA theme. In Massachusetts, total package FOA is utilized; in Iowa an issue-by-issue approach has been legislated. A common "wrinkle" in both states is provision for fact finding before arbitration and, importantly, the discretion for the arbitrator to select the fact finder's recommendations instead of either side's final offer. Police and firefighters are covered by the legislation in Massachusetts, while in Iowa most public sector employees are covered.

A 1965 statute which gave Massachusetts' municipal employees the statutory right to bargain was amended in 1973 to provide FOA by package for police and firefighers effective July 1, 1974 for a three year trial period. The period was extended for another two years in June 1977 but included the following revisions -- the parties could waive fact finding; if fact finding were not waived, the arbitrator could select from either side's final offer or the fact finder's recommendations; the parties could choose a single arbitrator rather than a tribunal; and the scope of arbitral issues was reduced.

Lipsky and Barocci analyzed the Massachusetts experience over the period 1975 to 1977.[48] They found that slightly less than 7 percent of negotiations (6.6 percent) ended with an award. Both mediation and fact finding were extensively utilized by the parties prior to arbitration. They ascertained that the fact finder's recommendations heavily influenced the awards and they concluded

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[48] David B. Lipsky and Thomas A. Barocci, "Final-Offer Arbitration and Public Safety Employees: The Massachusetts Experience," *Industrial Relations Research Association* Proceedings of the 30th Annual Meeting, December 1977, New York City (Madison, Wisconsin: The Association, 1978), pp. 67-75. Two other studies are worth noting -- Lawrence Holden, "Final-Offer Arbitration in Massachusetts," *The Arbitration Journal*, Vol. 37, No. 1, March 1976, pp. 26-35; Paul C. Somers, "An Evaluation of Final-Offer Arbitration in Massachusetts," *Journal of Collective Negotiations*, Vol. 6, No. 3, 1977, pp. 193-225.

that, while FOA may have resulted in reliance on impasse procedures, it did not result in a large number of cases being resolved through an award.[49]

The Iowa legislature passed a comprehensive statute in 1974 which provided the right to organize and bargain collectively for most public sector employees (including teachers) across the state and made provision for issue-by-issue FOA. The arbitrator cannot mediate but can select between the parties' final positions or the recommendations of the fact finder. The legislation calls for mediation followed by fact finding followed by arbitration. The latter may be by single arbitrator or by a three-man board. The results for the first two years (1975-76 and 1976-77) have been reviewed by Gallagher and Pegnetter.[50] They found, first, a strong "filtering effect," i.e., the proportion of disputes taken to each successive step decreased substantially. Very few cases went to award -- 3.6 percent of negotiations in the first year and 3.9 percent in the second year. Therefore, the Massachusetts and Iowa results are encouraging with respect to the efficacy of FOA, particularly in comparison to other forms of dispute resolution.

Perhaps the best known system of final-offer arbitration is that used in

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[49] Since 1977, Massachusetts has followed a new direction in police and firefighter bargaining. Late in that year a special thirteen member panel -- The Joint Labor Management Committee (JLMC) -- was formed. It included six municipal officials, six officials from the police and firefighter union ranks and was headed by labour relations expert John Dunlop. The panel decides whether deadlocked negotiations will go to binding arbitration. The major emphasis of the panel has been on mediation, and of approximately eighty collective negotiations over the past sixteen months only two have gone beyond the JLMC to arbitration for resolution.

[50] D. G. Gallagher and R. Pegnetter, "Impasse Resolution Under the Iowa Multistep Procedure," *Industrial and Labor Relations Review*, Vol. 32, No. 3, April 1979, pp. 327-338. See also D. G. Gallagher, "Interest Arbitration Under the Iowa Public Employment Relations Act," *The Arbitration Journal*, Vol. 33, No. 3, 1978, p. 30; and T. P. Gilroy and J. P. Lipovac, "Impasse Procedure Utilization: Year One Under the Iowa Statute," *The Journal of Collective Negotiations*, Vol. 6, No. 3, 1977, pp. 181-191.

professional baseball. That system, too, has received attention from academic researchers.[51] The results are of interest to those evaluating FOA, but they should be interpreted with care because final-offer is used for salaries only and was set up to resolve disputes between individual players and individual club owners rather than to break collective bargaining impasses. Dworkin has reviewed the results over the first two years (1974 and 1975). A total of forty-three players used FOA in those years. This encompassed just 9 percent of the players eligible to use FOA, and an arbitration award was necessary in about one-half of the cases resulting in an award rate of just 4 percent.

While FOA to this point has resulted in very low usage rates, one of the alleged problems with final-offer of whatever variety is the possibility of an "intertemporal compromise". This possible flaw was first posited by Swimmer in 1975.

> ....Without the possibility of compromise, it is presumed that neither side will take extreme positions because they want their side to be selected. Unlike regular arbitration which leads to erosion of collective bargaining, the risk of final-offer arbitration should encourage both sides to bargain in good faith, in order to avoid the final step.
>
> We believe, however, that in many situations final-offer arbitration merely substitutes an intertemporal compromise for a static (one period) compromise. If the final step in the procedure is reached in one wage round, there is a strong probability that negotiations will go to the final step in subsequent wage rounds, with the arbitrator's selection flopping from one side to the other between wage rounds. The benefit of final-offer arbitration may be illusory.[52]

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[51] James Dworkin, "The Impact of Final-Offer Interest Arbitration on Bargaining: The Case of Major League Baseball," *Industrial Relations Research Association* Proceedings of the 29th Annual Meeting, September 1976, Atlantic City (Madison, Wisconsin: The Association, 1977), pp. 161-169; Gerald W. Scully, "Binding Salary Arbitration in Major League Baseball," *American Behavioral Scientist*, Vol. 21, No. 3, Jan/Feb 1978, pp. 431-450.

[52] Gene Swimmer, "Final Position Arbitration and Intertemporal Compromise: The University of Alberta Compromise," *Relations Industrielles*, Vol. 30, No. 3, July 1975, p. 534.

Dworkin challenged this idea in an article utilizing data from the experience in professional baseball.[53] Of the twenty-eight players who used arbitration in 1974 only six returned to arbitration in 1975. The other twenty-two players were able to settle in 1975 through negotiations. Of the six players who re-used FOA in 1975, five had been winners the first year (i.e., their position had been selected in 1974 by the arbitrator), rather than losing in the first year as the intertemporal compromise hypothesis specifies.

There are two testable propositions involved in the intertemporal compromise hypothesis. First, there should be a higher probability of going to arbitration in year t, if the party went to arbitration in year t-1. Second, awards should "flip-flop" between the parties with the loser in t-1 being the winner in t. This is a type of narcotic effect, according to Swimmer, because the losers in t-1 perceive that third parties under FOA *compromise* on an intertemporal or longitudinal basis. In short, it will pay to go to arbitration the next wage round if you have just lost in final-offer arbitration.

The most recent paper on the subject of intertemporal compromise rejects the hypothesis. Feuille and Dworkin review awards in four jurisdictions with FOA.[54] They found very little evidence of longitudinal compromising by arbitrators. Moreover, even if "flip-flopping" exists, they suggest it may still be that third parties are selecting the most reasonable offer when measured against statutory or their own criteria for selection. Feuille and Dworkin

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[53] James B. Dworkin, "Final Position Arbitration and Intertemporal Compromise," *Relations Industrielles*, Vol. 32, No. 2, 1977, pp. 250-260; see also Gene Swimmer, "Final Offer Arbitration and Intertemporal Compromise: A Comment," *Relations Industrielles*, Vol. 33, No. 2, 1978, pp. 290-292 and James B. Dworkin, *Relations Industrielles*, Vol. 33, No. 2, 1978, pp. 292-295.

[54] Peter Feuille and James Dworkin, "Final-Offer Arbitration and Intertemporal Compromise, Or It's My Turn to Win," *Industrial Relations Research Association*, Proceedings of the 31st Annual Meeting, August 1978, Chicago (Madison, Wisconsin: The Association), pp. 87-95.

conclude that, as long as arbitrators make their selections based on the most reasonable position put before them, "flip-flopping", in itself, should not lead to a narcotic effect; i.e., it should not encourage the party that lost in one round to use arbitration in the next round because of the expectation of an automatic win.

The Narcotic Effect - Habitual Use

Rather than simply considering the total number of cases that wind up in arbitration as an indicator of the narcotic effect, a narrower definition of the effect emphasizes the habitual use of arbitration by a *single unit*. This has been referred to as dependency or the "catnip effect". The evidence with respect to this is mixed but, to date, there is no strong evidence of habitual use and certainly no evidence of such an effect on a broad scale. It is clear that resort to arbitration more than once is higher under conventional versus final-offer arbitration, but dependency has not been identified as a serious problem in any of the studies of jurisdictions that have been examined for this paper.

Thompson and Cairnie stress that, in B.C. education (conventional arbitration), "not a single district habitually avoids negotiated settlements."[55] In their "Reply" to Feuille's critique of their study, they present the frequency and pattern of arbitration for ten large school boards and ten small boards over fourteen consecutive negotiation rounds (1960-1973) and in so doing illustrate the checkered and uneven pattern of usage. Over the fourteen rounds, arbitration was used 5.7 times in large boards and just 2.9 times in small boards.

In Pennsylvania (conventional arbitration for public safety employees), it was reported "only a very few communities" have an unbroken dependency on

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[55] Mark Thompson and James Cairnie, "Compulsory Arbitration: The Case of British Columbia Teachers," p. 2.

arbitration.[56] Moreover, the two largest cities (Philadelphia and Pittsburgh) have a reputation for dependency but have managed to negotiate settlements in some years. The authors emphasize that of twenty municipalities *that have utilized arbitration* to resolve impasses in police negotiations, only two reported that arbitration was used in every set of negotiations; six indicated that the majority of their negotiations ended in arbitration; the other twelve answered that less than half of their disputes were resolved by an award.

A research report by the Ontario Ministry of Labour on bargaining in Ontario hospitals (conventional arbitration) observed that there were eighty opportunities for the parties to have more than one contract settled by arbitration. They found that in only 30 percent of these cases was arbitration used in the next round.[57]

Two studies have reported larger dependency effects when conventional arbitration is involved. In both instances, however, the effect is inflated because, in one case, the author uses arbitration *requests* to measure dependency and, in the other, use of *mediation* was used to signify impasse.[58] There unquestionably are specific instances in which the parties utilize arbitration very frequently. Fisher and Starek, for example, report on the experience of police bargaining in Vancouver. There, while the parties have not utilized arbitration in every round, over a period of twenty-five years the parties have settled the

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[56] James Stern et al., *Final Offer Arbitration*, p. 15.

[57] *The Impact of the Ontario Hospital Labour Disputes Arbitration Act, 1965 - A Statistical Analysis*, Research Branch, Ontario Department of Labour, November 1970.

[58] Mary McCormick, "A Functional Analysis of Interest Arbitration," p. 251 reported in New York City 88 percent of arbitration requests came from unions that had resorted to arbitration at least twice. Kochan et al., found that 63 percent of those units in New York State's protective services that went to impasse (i.e., mediation) in round one went to impasse in round two. Thomas Kochan et al., *An Evaluation of Impasse Procedures for Police and Fire Fighters in New York State* (Ithaca, N.Y.: New York State School of Industrial and Labor Relations, Cornell University, 1977), pp. 38-40.

majority of their disputes through arbitration awards rather than through negotiations.[59] To this point, nevertheless, the evidence indicates the habit forming nature of conventional arbitration has been exaggerated.

Turning to final-offer arbitration, for Michigan (FOA by issue) in about 55 percent of the relationships the parties (over a four-year period, 1970-74) never utilized arbitration. Of those who used it, about 25 percent had gone to award just once while 25 percent had resorted to arbitration an average of less than once.[60] The most impressive record to date has been in Iowa (FOA total package with a three-choice option). Gallagher and Pegnetter examined two aspects regarding dependency -- the number of parties that resorted to arbitration after a first experience with it; and the behavior of parties that used all three impasse resolution steps (mediation, fact finding, and arbitration) in the first round.[61] They discovered that none of the parties that used arbitration in round one used it in round two and that seven of the nine units that went through all three stages in round one settled without any third party assistance in round two. These results are encouraging, but it should be emphasized that Gallagher and Pegnetter were reporting the experience for just the first two years under the Iowa legislation.

In professional baseball (FOA - salary only), Dworkin presents evidence with respect to dependency and rejects the concept. If final-offer is habit forming, one would expect the number of cases going to award to increase. Dworkin notes that just the opposite has occurred: the number of cases going to award

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[59] E. G. Fisher and H. Starek, "Police Bargaining in Canada: Private Sector Bargaining, Compulsory Arbitration, and Mediation-Arbitration in Vancouver," *Canadian Police College Journal*, Vol. 2, No. 1, 1978, pp. 133-161.

[60] James Stern et al., *Final Offer Arbitration*, p. 52.

[61] D. G. Gallagher and R. Pegnetter, "Impasse Resolution," p. 332.

declined in 1975 relative to 1974 (the first year of FOA).[62] Moreover, as noted earlier, in a different article he observed that only six players (out of twenty-eight) who used the process in 1974 re-used it in 1975.[63]

The Chilling Effect

Under compulsory arbitration, do the parties take and maintain extreme positions in the anticipation of third party involvement? In part this has been answered by data on the narcotic effect; collective bargaining, contrary to the conventional wisdom, does not appear to atrophy, at least in the public sector, under either conventional or final-offer arbitration. In numerous cases, the parties bargain to settlement rather than relying on third party resolution. However, the most appropriate indicator with respect to the chilling effect is the concessionary behavior of the parties, and measures for this are the number of issues remaining on the table and the distance between the parties' final positions when they have submitted their dispute to arbitration. The reason for this alleged effect again resides with the assumed behavior of third parties under conventional arbitration. Feuille puts forth the argument:

> ....the conventional arbitrator will issue an award which is a compromise or a split-of-the-difference between the parties' positions, and hence each party has an incentive to maintain an extreme position in the hope of getting a more favorable split. There is no strike, and the parties can avoid the hard bargaining necessary to reach agreement.[64]

There is only a limited amount of data available on the concessionary behaviour of the parties in the presence or absence of third party resolution.

[62] James Dworkin, "The Impact of Final-Offer Arbitration on Bargaining," *Industrial Relations Research Association*, p. 164.

[63] James Dworkin, "Final Position Arbitration and Intertemporal Compromise," *Relations Industrielles*, p. 258.

[64] Peter Feuille, "Final-Offer Arbitration and Negotiating Incentives," *The Arbitration Journal*, Vol. 32, No. 3, 1977, p. 204.

Feuille examined the number of issues that went to arbitration in Michigan (conventional arbitration; 1969-71), Michigan (FOA by issue; 1973-74), Pennsylvania (conventional arbitration), and Wisconsin (FOA total package).[65] The data suggests that the parties come much closer to negotiating a settlement under FOA total package than under either FOA by issue or conventional arbitration. Nevertheless, it also is apparently possible to design conventional arbitration procedures that encourage the parties to undertake meaningful negotiations. The median number of issues sent to arbitration was just 6.5 in Pennsylvania, for example. For some jurisdictions using conventional arbitration, however, the number of issues prior to award is considerably higher. In New York State, for instance, the median number of issues proceeding to arbitration was eleven.[66]

Additional information on the chilling effect is available for Wisconsin. In Stern et al., twenty-three awards under FOA were published by April 1974 and examined by the researchers. Of these, seven awards involved only one issue; four involved just two issues; seven, only three to five issues; four, six to eight issues; and one, twelve issues. They concluded that FOA by total package induces compromise because of the realization by the parties that, if they hold out for a particular issue, they may jeopardize their entire proposal. Olson offers more up-to-date information on the Wisconsin record.[67] Up to and including the 1976 negotiations, 32 percent of the awards involved only one issue, and 76 percent of the total number of arbitrations involved three or fewer issues.

There are other pieces of information on the issue of the incentive to bargain available from the studies already cited. All of it involves final-offer

[65] Peter Feuille, "Final-Offer Arbitration and the Chilling Effect," *Industrial Relations*, Vol. 14, No. 3, October 1975, pp. 302-310.

[66] Thomas Kochan et al., *An Evaluation of Impasse Procedures*, p. 239.

[67] Craig Olson, "Final-Offer Arbitration," p. 114.

arbitration. Somers, for example, reports that in police and firefighter disputes in Massachusetts (between July 1974 and January 1976), the average number of issues on the table at award was just 4.8.[68] The record is impressive in Iowa, as well, for the first two years under the legislation. For those parties not using fact finding prior to arbitration, an average of 6.2 issues went to arbitration; this compared with an average of 3.9 issues for those parties who went to arbitration preceded by fact finding.[69] The finding by Gallagher and Pegnetter of a filtering effect, i.e., that a smaller and smaller number of disputes are carried to each successive third party step, also substantiates a tentative finding that FOA does not chill negotiations.

While FOA total package, in particular, appears to be effective in reducing the number of issues going to award, Long and Feuille have presented a possible shortcoming:

> The Eugene experience suggests that the final-offer procedure is effective in narrowing the area of disagreement around many monetary and nonmonetary issues but may be less effective in bringing the parties together on certain issues requiring "yes" or "no" positions....[70]

This is a matter which clearly warrants further research.

In addition to the above findings from field research, there is some

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[68] Paul Somers, "An Evaluation of Final-Offer Arbitration," p. 227.

[69] D. Gallagher and R. Pegnetter, "Impasse Resolution," pp. 335-336. Gallagher and Chaubey also evaluate the Iowa statute but from the perspective of the ability of fact finding, rather than FOA, to stimulate concessionmaking behavior. See D. Gallagher and M. Chaubey, "A Statistical Analysis of Wage Position Modification and Item Reduction Under the Iowa Statutory Impasse Procedure," The University of Iowa, College of Business Administration, Working Paper Series 79-2, February 1979 (Mimeographed).

[70] Gary Long and Peter Feuille, "Final-Offer Arbitration," p. 203. A selector under final-offer arbitration in a recent dispute in Ontario education has commented on this shortcoming. *Re Haldimand Board of Education and the Branch Affiliate of the Ontario Secondary School Teachers' Federation*, January 1977 (Swan).

laboratory research which also sheds light on the question of compromise activity under arbitration. Before examining that information, however, it is worth noting some anecdotal evidence on the experience with conventional arbitration in Great Britain which relates to the question of a possible chilling effect.

> A fourth conclusion is that during the period 1940-1959 compulsory arbitration in Britain had little impact on collective bargaining. It was often asserted by employers that compulsory arbitration encouraged irresponsibility on the part of union leaders. No doubt some unions made public claims in excess of what might otherwise have been the case because of the prospect of well-publicized arbitration hearings. But *in most disputes, there was also a private "without prejudice" offer*, and the parties were well aware of their real positions. It may also be argued that *the very existence of arbitration at the end of the line encouraged parties to reach their own solutions*. The high proportion of withdrawals and settlements before arbitration would appear to confirm this. There is no evidence in the British experience to validate the claims of irresponsibility.[71] (italics added)

Laboratory research has confirmed the efficacy of final-offer arbitration in inducing compromise behavior. Notz and Starke, in a carefully designed piece of research, tested for the impact of anticipated final-offer arbitration, conventional arbitration and no intervention (strike).[72] Using 180 male undergraduate students in a bargaining simulation, they found that FOA had an impact on the negotiators' aspiration level and bargaining behaviour. Those who bargained under final-offer conditions had lower aspiration levels and were closer to agreement than those negotiating under either conventional arbitration or no intervention. Only three out of ninety dyads bargained to settlement and these had negotiated under the FOA condition. However, the results for conventional arbitration were less positive than under no intervention. In another lab experiment,

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[71] B. Hepple, "Compulsory Arbitration in Great Britain," in J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison* (Lexington, Mass.: D. C. Heath and Company, 1976), p. 107.

[72] William W. Notz and Frederick A. Starke, "Final-Offer Versus Conventional Arbitration as a Means of Conflict Management," *Administrative Science Quarterly*, Vol. 23, July 1978, pp. 190-203.

Subbarao found a significant difference in the parties' concessionary behavior between those negotiating under anticipated total package FOA and those negotiating under final offer by issue.[73] Those negotiating under the total package condition conceded more than those under the issue-by-issue condition. On the other hand, he did not find a significant difference between those negotiating under anticipated conventional arbitration and those under total package FOA.

The latter, of course, is a somewhat surprising finding, i.e., one would expect FOA to lead to greater concessions than conventional arbitration. However, Johnson and Pruitt,[74] in an experiment designed to observe the effect of threatened conventional arbitration and mediation on concession-making by subjects (50 male graduate students), discovered that negotiators faced with binding arbitration made larger and more frequent concessions than those in the non-binding intervention condition. This was clearly the case for union negotiators and marginally so for management negotiators. They concluded that negotiators who anticipated arbitration, in this case the conventional type, conceded more rapidly than those who anticipated no intervention. This tends to suggest even conventional arbitration has strike-like properties to the extent, at least, that the parties wish to avoid it.

Finally, Wheeler recently attempted to measure compromise behavior through a questionnaire sent to a sample of negotiators involved in firefighters disputes in the United States.[75] Via the questionnaires he gathered data on the parties'

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[73] A. V. Subbarao, "The Impact of Binding Interest Arbitration on Negotiation and Process Outcome," *Journal of Conflict Resolution*, Vol. 22, No. 1, March 1979, pp. 98-99.

[74] Douglas Johnson and Dean Pruitt, "Preintervention Effects of Mediation Versus Arbitration," *Journal of Applied Psychology*, Vol. 56, No. 1, 1972, pp. 1-10.

[75] Hoyt N. Wheeler, "How Compulsory Arbitration Affects Compromise Activity," *Industrial Relations*, Vol. 17, No. 1, February 1978, pp. 80-84.

offers and demands at the start of negotiations and at impasses. The data was cross classified according to whether or not the parties were negotiating under a compulsory arbitration law in order to assess the influence of arbitration on concessions. Wheeler found some evidence that negotiators hold back concessions under arbitration but, because of problems and shortcomings with the data collected and the overall response rate, his results were inconclusive.

Data on the chilling effect is obviously fragmentary and the results for conventional arbitration mixed. Nevertheless, all the data on FOA total package suggests that it provides definite incentives to bargain. Conventional arbitration, too, would appear to embody some strike-like properties in producing movement in negotiations. In the vast majority of cases under conventional arbitration, and certainly under FOA, such movement is likely to lead to a negotiated settlement. When the parties do not negotiate to settlement, the issues separating them in most cases will have been significantly narrowed. These conclusions must be considered tentative, however, because in most cases it is too early to make definitive judgments and they are temporized by the fact that arbitration in North America has been utilized in a fairly narrow band of sectors.

THE ECONOMIC IMPACT OF COMPULSORY ARBITRATION

The Size of Settlements

Fears have often been expressed that arbitration leads to inordinately high salary increases. Some have suggested, for example, that the allegation of high salary increases under arbitration contributed to the demise of arbitration in Great Britain.[76] Little has been written or expressed concerning awards exerting a downward pressure on wages. This may be due to the feeling that, if

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[76] J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison*, p. 199.

wages were held artificially low through the poor judgment or bias of an arbitrator, "wage drift" would occur in response to economic pressures. This would force earnings, though not negotiated wages, to a higher level. At any rate, it has been asserted that (1) units which utilize arbitration receive higher salaries than units in the same sector which negotiate to settlement and/or (2) units, regardless of industry, that utilize arbitration receive higher settlements than those which use other means to resolve their disputes and/or (3) those units covered by a system of compulsory arbitration receive higher settlements than those which negotiate under a right to strike system.

These assertions rest on several premises. First, some assume that employee units which force a dispute to arbitration shift the dispute into an arena where market forces are ignored. Others have argued that, in the public sector, by the shifting of responsibility for decision making to outside third parties, employee units will receive more than the employer can afford to pay and/or more than they would have agreed to pay because of the political constraints and concerns that public officials face. Third parties, so the argument runs, can ignore these concerns. In any case, if arbitration leads to excessive salary increases, it could, of course, contribute to inflation and/or unemployment.

Unfortunately, it is impossible for a variety of reasons to disentangle in a definitive way the independent effect of arbitration from other wage determinants. On some occasions an arbitration award may set the pattern for ensuing awards and negotiated settlements. But, at other times, a negotiated settlement may set the pattern, and arbitration awards become parasitic with respect to it. Frequently, then, coercive comparisons are made in arbitration hearings with reference to negotiated settlements, but the flow of coercive comparisons often runs the other way from awards into negotiations. Without intimate knowledge of negotiations and the timing of settlements, it is impossible

to identify the pace-setting settlements and other important interrelationships. In short, it is very difficult to determine the "cross-over" or "spill-over" effect of arbitration awards. To further complicate matters, an employer who has negotiated a settlement outside arbitration may pay *higher* wages in order to avoid arbitration, yet this outcome, on the face of it, would lead to the rejection of the hypothesis that arbitration has an independent influence on outcomes. Labour market pressures also may force an employer outside arbitration to match what other units are paying in order to avoid difficulties in recruiting qualified applicants. Added to these problems are the lack of reliable data in many instances for research purposes and the fact that a research focus solely on base wages is likely to miss important economic phenomena.

Nevertheless, the questions alluded to above must be addressed. First, does an employee unit going to arbitration gain more than one in the same sector which negotiates to settlement? Second, in this connection, does FOA yield different results than conventional arbitration? Third, do arbitration awards yield higher settlements *in general* than those that have been negotiated regardless of sector? Fourth, are settlements negotiated under a system which provides for compulsory arbitration higher than those which are derived under systems in which units have the right to strike? Despite the above problems, a number of scholars have attempted to research these questions. One of the most detailed and sophisticated studies was conducted by Stern et al.[77] Using data for Wisconsin, they ran regression equations on the monthly maximum base salary of police patrolmen, firefighters, and deputy sheriffs as the dependent variable. They hypothesized that these wages would be positively related to a number of economic and demographic variables such as the income of community members, the wealth of

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[77] J. Stern et al., *Final Offer Arbitration*, pp. 77-115.

the community as measured by median family income, city size, and so on. In addition, it was hypothesized that the *use of arbitration* would not be positively related to wages, i.e., that groups that utilized it would not have their wages raised by such a strategy. The regression coefficients for the arbitration variable in the equations indicated that going to arbitration, in this case final-offer arbitration, did *not* pay off. That is, there was no net additional salary increase attributable to the use of arbitration.

A distinctly different but important question is the *differential impact* of final-offer versus conventional arbitration. Stern et al., also examined this question using the 1973 Pennsylvania experience as a base. They assumed that the underlying economic and political forces had been similar in Pennsylvania (conventional arbitration), Michigan (final-offer by issue) and Wisconsin (final-offer total package). Again, introducing controls for various economic and demographic variables, they developed regression equations to allow comparisons between cities in Wisconsin, Michigan and Pennsylvania. A number of important independent variables such as city density, family income and urbanization were specified as controls for important economic variables. Throughout the period under review, Pennsylvania continued with a conventional arbitration procedure. Thus, wage changes in Wisconsin and Michigan over the period 1972-1974 relative to changes in Pennsylvania during those years were compared to estimate the impact of final-offer procedures.

The relative effect of final-offer arbitration on wage changes was very small. In 1973, the Wisconsin final-offer procedure raised police salaries by slightly more than 1 percent above what would otherwise have been expected. The Michigan issue-by-issue procedure raised 1973 police salaries by less than 1 percent, again relative to the experience in Pennsylvania. The estimated coefficients also indicated that in neither state were there further increases in

1974 solely attributable to FOA. Their conclusion, therefore, is that if final-offer arbitration has an effect, it is small and may be a "one-shot" phenomenon. This was congruent with a second study which they undertook regarding the same issue. Using as a base Wisconsin's 1972 fact finding system and comparing this with the experience for police in Wisconsin in 1973 and 1974 under final-offer arbitration, they discovered a 5 percent impact in 1973. However, the model specified suggested that the independent impact of final-offer again was "one-shot" in that arbitration yielded nothing additional in 1974.[78]

There are a number of other studies that tend to confirm the analysis by Stern et al. with respect to arbitrated versus negotiated settlements in the same sector. Bezdek and Ripley have also examined the experience with arbitration for public safety employees in Michigan.[79] The study investigates whether settlements awarded under compulsory arbitration between 1969 and 1972 were significantly higher than those resulting from negotiations. Up to 1972, it will be recalled, conventional rather than final-offer arbitration was used in Michigan. Bezdek and Ripley found no significant difference between the size of salary *increases* under conventional arbitration and those flowing from negotiation.

They then analyzed arbitration awards covering twenty-eight Michigan cities and selected as a comparison group eighteen cities that had settled similar contract disputes through negotiation during the same period. Minimum and maximum

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[78] The authors note that the 1 percent and 5 percent effects reflect different bases of comparison and so are not necessarily inconsistent. They note a second difference rests with the variables assumed to determine salaries in the two studies. In the model yielding a 1 percent final-offer effect, it was assumed that public safety salaries are determined by wages in the private sector. In the model implying an effect of 5 percent, the wages of other public employees were specified as the relevant determinant of public safety salaries.

[79] Robert H. Bezdek and David Ripley, "Compulsory Arbitration versus Negotiations For Public Safety Employees: The Michigan Experience," *Journal of Collective Negotiations*, Vol. 3, No. 2, Spring 1974, pp. 167-176.

salaries were used for comparison purposes. Analysis of variance was used to test the null hypothesis that mean minimum and maximum salaries for police and firefighters under compulsory arbitration were equal to mean minimum and maximum salaries under negotiations. (The independent variables were compulsory arbitration - negotiations; geographical area, i.e., metropolitan - northern - southern; and police - firefighters.) Their results show no statistically significant difference in police or firefighter salaries flowing from arbitration.

Their findings are congruent with another study of the Michigan experience. Morilanen and Mudie found that the *rates of increase* of salaries for police and firefighters determined under arbitration and negotiations were roughly similar.[80] Also, their data comparing minimum and maximum salaries revealed that, with the exception of the maximum salary in the Detroit metropolitan area, *police* salaries determined under arbitration were all lower than those determined through negotiations. For firefighters in Detroit, minimum and maximum salaries under arbitration were also lower. In other regions, minimum and maximum salaries under arbitration awards were higher. The traditional link between police and firefighter salaries was apparently important in this regard. Arbitrators awarded relatively high salaries to firefighters in those regions in order to achieve the salary parity that already existed between police and firefighters in other regions. Across the board, however, salaries established under arbitration were generally *lower* than those determined by negotiations.

A study by the Ontario Ministry of Labour regarding wages in the Ontario hospital sector includes data which is useful in the area of inter-sector comparisons.[81] The

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[80] Philip M. Morilanen and Kent N. Mudie, *Compulsory Arbitration in Michigan* (Ann Arbor, Michigan: University of Michigan, 1972), p. 9.

[81] Ontario Department of Labour, Research Branch, *The Impact of the Ontario Hospital Labour Disputes Arbitration Act, 1965: A Statistical Analysis*, 1970.

purpose of the analysis was to determine whether arbitration affected geographical wage structure in that sector. However, external differentials were also developed to ascertain whether hospital rates had kept pace in relation to comparable rates in other industries. A careful analysis over the years 1963 to 1969 of twenty-three Ontario cities led the investigators to assert that arbitration did not have a pronounced effect on inter-sector differentials. Where differentials varied significantly from the experience in a previous year, the researchers examined whether specific arbitration awards were responsible for the fluctuation. They concluded that most large changes in differentials were the result of developments outside the hospital sector and not the result of arbitration. Over the period, most hospital employees kept pace with the average increases won by workers in comparable occupations in other industries. In a later examination of Ontario hospitals (taking the analysis up to 1973), the Johnston Commission declared that, while hospital wage increases had kept pace with increases in general industry, the increases were not substantial enough to close or narrow the original differential between hospital workers and their cohorts in other sectors.[82] These studies, then, tend to view arbitration as a rather neutral economic force.

A somewhat similar finding is reported by Cousineau and Lacroix in a study using Canadian data and, in this case, the study is inter-sector in scope.[83] Their study examined wage increases in individual settlements in the Canadian public and private sectors over the period 1967 to 1975. It was a carefully designed study with controls for such variables as price developments, labour market conditions, and the existence of a COLA clause in the agreement. One of the areas they explore through the use of regression analysis is the independent impact of third party

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[82] *Report of Hospital Inquiry Commission*, November 1972, p. 22.

[83] J. M. Cousineau and R. Lacroix, *Wage Determination In Major Collective Agreements* (Ottawa: Economic Council of Canada, 1977).

intervention (including arbitration) on wage settlements. In assessing the impact Cousineau and Lacroix decided that it was necessary to limit their analysis to the private sector because of their feeling that the collective bargaining process in the public sector is quite different from that in the private sector. They had made a similar decision when analyzing the impact of the strike weapon on wage determination. Because of this decision their sample consisted of 1,576 contract renewals signed in the private sector; of these 48 had been settled by arbitration. Their initial equation contained a positive and statistically significant result for the arbitration variable. That is, there was a difference between wage agreements concluded after an arbitration award and those signed outside of arbitration. They mute this finding, however, by excluding from the sample base the data for the transportation, communications and public utilities sector. They had done this previously when examining the impact of strikes on the grounds that this sector was really part of the public sector. When the data was removed in the case of third party intervention, the variable for arbitration was no longer significant. They conclude that there is no independent impact due to arbitration in the *private* sector. Their conclusions regarding third party intervention are worth noting.

> It...seems possible to interpret third-party intervention as a step taken by the negotiators to get at the information simple bargaining does not generate. Accordingly, the various forms of intervention would be seen, in the same way as work stoppages, as tools placed at the disposal of the negotiators to enable them to develop within a universe of imperfect information. The only distinctions that could then be drawn between third-party intervention and a strike would be the cost of the information, which would vary with the route followed, and the ability to uncover the information required to ratify an agreement, which might vary from one bargaining tool to another.[84]

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[84] J. Cousineau and R. Lacroix, *Wage Determination in Major Collective Agreements*, p. 111.

Unfortunately, Cousineau and Lacroix did not undertake a similar examination using public sector data. This has been done in another Canadian study which will be discussed shortly.

Studies in other countries tend to corroborate the finding that the impact of arbitration on the size of wage increases, if any, has been minor or that the results have been mixed. Walker concludes in his study of the Australian system that the effect has been minor.[85] In another study, Braun reports mixed results regarding the experience in Australia since World War II.[86] She speculates that arbitration had a moderating influence on wage increases between the end of the Korean War and the mid-1960's, but thereafter she feels that accelerating wage increases caused by other factors may have been magnified somewhat by arbitration.

The conclusion with respect to Great Britain's encounter with arbitration is somewhat stronger. Citing a number of studies, Hepple states with respect to the postwar period -- "Compulsory arbitration cannot be shown to have had any independent impact on wage rates....As for the period 1951-59...awards appeared to be at the 'going rate'...; indeed, if anything, awards were slightly below those reached by other methods."[87] McCarthy, in a research study for the Royal Commission on Trade Unions and Employers' Associations, declared that the awards of the Industrial Disputes Tribunal were "no more inflationary than other forms of wage settlements."[88]

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[85] Kenneth F. Walker, "Compulsory Arbitration in Australia," in J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison*, pp. 1-43.

[86] Anne R. Braun, "Compulsory Arbitration as a Form of Incomes Policy: The Australian Case," *International Monetary Fund*, Staff Papers, Vol. 21, No. 1, March 1974, pp. 170-213.

[87] B. A. Hepple, "Compulsory Arbitration in Great Britain," in J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison*, pp. 83-115.

[88] W. E. J. McCarthy, "Compulsory Arbitration in Britain: The Work of the Industrial Disputes Tribunal," *Royal Commission on Trade Unions and Employers' Associations*. Research Paper No. 8, *Three Studies in Collective Bargaining* (London: H. M. Stationary Office, 1968), p. 18.

For Jamaica, the conclusions are less definitive. Gershenfeld argues that arbitration may have exerted an upward push on wages due to large awards in important sectors.[89] A number of awards were cited which were sizable and which resulted in ensuring parity demands from other units. On the other hand, Gershenfeld was persuaded from his analysis that the arbitration tribunals had been responsible in their monetary awards. He cites as evidence the fact that the vast majority of awards had been unanimous which would not have been possible, over the broad variety of cases examined, without both parties accepting the economic validity of the decisions. His overall assessment was that most awards were reasonable but that a few exceeded the ability-to-pay of the public employer.

The findings in a recent study by Subbarao are a clear "outlier" with respect to the size of settlements under arbitration.[90] The findings suggest that arbitration has a strong *negative* impact on the size of wage settlements relative to settlements derived in the same sector under the right to strike. He examines wage outcomes in the Canadian public service under the two modes of dispute resolution discussed earlier between the period August 1974 and December 1975. He analyzed outcomes in five occupational categories -- Scientific and Professional, Administrative and Foreign Service, Technical, Administrative Support, and Operational -- and reports that in four of the five groups the average percentage increase was *higher* for those employers who chose the conciliation-

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[89] Walter J. Gershenfeld, "Compulsory Arbitration in Jamaica," in J. Joseph Loewenberg et al., *Compulsory Arbitration: An International Comparison*, pp. 117-140.

[90] A. B. Subbarao, "Impasse Choice and Wages in the Canadian Federal Service," *Industrial Relations*, Vol. 18, No. 2, Spring 1979, pp. 233-236. A recent study by Anderson of bargaining in the Federal public service over the period 1968 to 1975 stands in contrast to the study by Subbarao. Anderson found that in each bargaining round and within each occupational category, except operational, the majority of the units settled for similar wage increases. See John C. Anderson, "Determinants of Bargaining Outcomes in the Federal Government of Canada," *Industrial and Labor Relations Review*, Vol. 32, No. 2, January 1979, p. 23.

strike route versus those who chose the arbitration route. In three of the four cases, the difference was statistically significant (at the .001 level) and the absolute differences in mean increases were very sizable. For example, in the Scientific and Professional category the average annual wage increase for those units selecting the conciliation-strike route was 27.59 percent compared to 10.11 percent for units choosing the arbitration route.[91]

This study is similar to a number of others in that it confirms that arbitration is a conservative force in wage determination but, at the same time, the study appears to be somewhat misleading. The experience in the Federal public service through time has seemed to be one where a very tight cluster of settlements has been the rule. Subbarao's findings do not at all conform to that picture, albeit an informal one. The problem appears to be that the annual percentage increases on base rates have been weighted by the number of employees in each bargaining unit and, as well, it may be that lump-sum payments have been included in the percentages. There is no reason for doing the former in particular, given the purpose of the research but, as a consequence, the outcomes of a small number of large units could dramatically affect the findings.[92]

Nevertheless, there are a number of reasons, inductive in nature, which do suggest that, indeed, arbitration is unlikely to have a long run upward effect

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[91] *Ibid.*, p. 236.

[92] Subbarao's research is important in the field of industrial relations particularly given the paucity of evidence with respect to the relationship between strike activity and bargaining outcomes. Two U.S. studies on the subject and the Cousineau-Lacroix findings cited earlier for the Canadian private sector suggest there is no relationship between measures of strike activity and bargaining outcomes. See Thomas Kochan and Hoyt Wheeler, "Municipal Collective Bargaining: A Model and Analysis of Bargaining Outcomes," *Industrial and Labor Relations Review*, Vol. 29, No. 1, October 1975, pp. 46-66; Paul Gerhart, "Determinants of Bargaining Outcomes in Local Government Labor Relations," *Industrial and Labor Relations Review*, Vol. 29, No. 3, April 1976, pp. 331-351; and J. Cousineau and R. Lacroix, *Wage Determination in Major Collective Agreements*, pp. 95-106.

on wage settlements. First, in the literature on arbitration there is emphasis on the fact that arbitration awards do not favor one side or the other.[93] An award at either extreme is a rarity. This is reinforced by the fact that arbitrators almost invariably are conservative with respect to change. Bernstein, writing some twenty-five years ago on interest arbitration, offered the following quote from an arbitrator's award to support this contention:

> An arbitrator cannot often justify an award involving the imposition of an entirely novel relationship and responsibilities. These must come as the result of collective bargaining or through legislation. In rare cases, I concede it would be appropriate for an arbitrator to make an award entirely unique in an industry and area, as when conditions shock one's sense of equity and decency.[94]

Second, because the narcotic effect is apparently not as pervasive as expected, arbitration awards are by no means the primary method of wage determination under a system of compulsory arbitration. If, say, 80 percent of the units in a sector negotiate settlements, the effect of economic conditions in arbitration may be strong because arbitrators in their awards will be using negotiated settlements for comparison purposes. Moreover, even if the precedent cases in a bargaining round are a series of arbitration awards rather than negotiated settlements, it does not follow that arbitrators in the benchmark cases will ignore economic criteria or that the awards will be significantly different from those that would have been negotiated. The criteria that arbitrators subjectively or explicitly utilize are primarily economic in nature.

Arbitrators, furthermore, are concerned not only with equity, and therefore influenced by comparisons, but also with acceptability. They very much take cognizance of those factors which they feel would have moved the parties to

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[93] See, for example, Stern et al., *Final Offer Arbitration*, pp. 27-28.

[94] Irving Bernstein, *The Arbitration of Wages* (Berkeley and Los Angeles: The University of California Press, 1954), p. 114.

agreement, assuming arbitration had not been imposed. The amount the parties would have agreed to in the absence of third party intervention will obviously be strongly influenced by the economic circumstances surrounding the dispute. Arbitrators also consider ability to pay to some extent in their decision-making. Reporting on arbitration in the U.S. public sector, Loewenberg notes:

> In general, arbitration panels have chosen to interpret ability to pay as the employer's potential sources of revenue rather than currently available revenue. Employers have not been happy with this interpretation. Arbitrators have sometimes been willing to recognize limitations in ability to pay to reduce the economic portion of the award below what it would have been according to the remaining criteria. As the economic plight of government jurisdictions increases, arbitrators seem to be increasingly sympathetic to consider ability to pay, but not to the exclusion of other criteria.[95]

Finally, there is no reason to assume that a settlement resulting from the threat to go to arbitration will be significantly higher (or lower) than one resulting from the threat to take strike action. It has been argued elsewhere that, for final-offer arbitration at least, there is no reason to expect differential gains under these two conditions.

> The very expectations which would impart an upward bias to the outcome under arbitration would also tend to impart such a bias to the outcome under conventional bargaining. The consideration that the strike may be costly, whereas arbitration is not, is not decisive. Under conventional bargaining, the employer will grant gains which are less costly than a strike. There seems to be no way to conclude that, in general, these gains would be likely to be either smaller or larger than those which would be obtained under arbitration.[96]

The qualitative and anecdotal reasons suggest a neutral, or a mildly positive or negative, influence from arbitration. A Canadian study released by the Anti-Inflation Board, however, adds a different perspective to the issue and casts doubt on such a conclusion. Auld et al., in a very thorough study,

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[95] J. Joseph Loewenberg, "Compulsory Arbitration in the United States," in J. J. Loewenberg et al., *Compulsory Arbitration: An International Comparison*, p. 163.

[96] Carl Stevens, "Is Compulsory Arbitration Compatible," p. 51.

analyzed wage determination (from a Phillips curve perspective) using data on individual wage settlements.[97] The sample consisted of 3,578 union wage contracts negotiated over the period 1966 to 1975.[98] They analyze wage determination in the private and public sectors separately and, in the public sector, they examine the determinants of wages specifically under arbitration awards.

As the dependent variable they used the total percentage change in wage rates over the life of the contract. The Phillips curve proposition, of course, is that the rate of change in money wages can be explained by the level of unemployment. That is, money wages are responsive to labour market conditions which gives rise to a trade-off between unemployment and inflation (assuming prices are based on a 'pass through' of labour costs, prices will follow movements in wages). In addition to the labour vacancy rate as an independent variable to capture labour market conditions, the researchers also included independent variables on two price elements: (1) a provision for future expected inflation; and (2) a provision for 'uncompensated' past inflation (i.e., a catch-up factor).

The most important finding for the purposes of this monograph is that arbitration awards (i.e., arbitrators) respond to labour market conditions (defined as the value of a regionalized help wanted vacancy rate) in a perverse manner.

> ...binding arbitration has resulted in a totally perverse labour market effect on wages. From the estimates, it would appear that the arbitrator starts with a wage settlement of almost 8 percent

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[97] D. Auld, L. Christofides, R. Swidinsky, and D. Wilton, *The Determinants of Negotiated Wage Settlements in Canada (1966-1975): A Microeconometric Analysis* (Ottawa: Ministry of Supply and Services, 1979). The results are also discussed in some detail in D. Auld, *Wage Behavior and Wage Control in the Public Sector* (Ottawa: Economic Council of Canada, 1979). (mimeographed)

[98] The data set included wage settlements for units containing 200-499 employees and for 500 and more employees. Their analysis did not include cost-of-living allowances because of the great diversity of COLA provisions (15 percent of the sample of 644 agreements contained COLA clauses).

> (the constant), adds about an 80 percent inflation factor, and then further increases the total wage package if labour market conditions are slack (i.e., the vacancy rate is low)! *The binding authority exercised by the arbitrator is clearly different from prevailing economic realities, and the arbitrator's dictated wage settlement bears no resemblance to a freely bargained wage outcome.*[99] (italics added)

The results lead to an implied Phillips curve for *negotiated* settlements in the public sector which is the conventional shape (downward sloping to the right) and to an implied Phillips curve for *arbitration awards* which is upward sloping to the right. And, arbitrated wage settlements are lower than negotiated ones when the labour market is tight and are higher than negotiated ones when unemployment rates are high. This leads Auld et al., to conclude:

> In summary, the 191 public sector wage settlements reached through binding arbitration are radically different from all other wage results presented throughout this study.... The binding authority exercised by the arbitrator's dictated wage settlement bears no resemblance to a freely negotiated wage outcome. If binding arbitration is regarded as a solution to labour-management conflicts (either in the public or private sector), the consequences of such arbitration should be carefully weighed against any potential benefits in terms of the climate of labour relations or reduction in work stoppages.[100]

The conclusion is a strong one, and a caveat plus several observations should be made. First, it may be that Auld et al., captured a phenomenon that other students of arbitration and wage determination have detected, viz., that in the early years under arbitration, weaker groups go to arbitration and because of past shortfalls with respect to their wage adjustments are in a much better position to argue for one-time increases which help close the gap with comparable 'high wage' groups. Arbitrators, then, may have received a preponderance of such cases if they were involved in disputes in which the imposition of compulsory

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[99] *Ibid.*, p. 215.

[100] *Ibid.*, p. 242.

arbitration was relatively recent. In fact, public sector bargaining was gaining major impetus during the latter half of their study, and in this respect Auld et al., offer the following reservation:

> The most obvious feature of this data is the rapid growth of collective bargaining within the public sector during the 1970's, and the emerging importance of such parastatal areas as health and education in public sector wage negotiations. Since many of these public sector bargaining units are relatively new, the data, and consequently the analysis of public sector wage settlements is confined largely to the 1970's. This suggests that one important caveat may be in order. These public sector wage results may be less reliable than those estimates for the private sector if these new institutional arrangements with the public sector have not yet attained the same degree of structural stability as exists with the private sector.[101]

Moreover, a more appropriate test in the context of their study may be whether all wage settlements (negotiated and arbitrated) *under a system of compulsory arbitration* respond to labour market conditions. Here it is interesting to note that they found that wage determination of *negotiated* settlements in the public sector conformed to traditional Phillips curve analysis. Many of the public sector settlements, of course, would have been achieved under systems of compulsory arbitration. A distinct minority of settlements under such a system are actually resolved through award just as a minority of settlements in the private sector are resolved through strikes.

Congruent with their findings on *negotiated* public sector settlements Auld et al., found that, contrary to public opinion, public sector wage increases were not out of control.

> Thus wage changes in the public sector are not only determined by a similar set of variables, but a statistical test cannot detect any significant differences in the parameter estimates. In view of the conventional wisdom, this is a surprising result. At the very least,

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[101] *Ibid.*, pp. 187-188.

> this result suggests that just prior to the imposition of wage and price controls, public sector wages were no more "out of control" than wages in the private sector.[102]

Indeed, they found that average annual wage settlements over the entire period 1967 to 1975 had been lower in the public sector than in the private sector. Again a high proportion of the settlements in the public sector were resolved under a system of compulsory arbitration.

The argument is not that Auld et al., are incorrect in their analysis. Rather the research points to some positive aspects regarding public sector bargaining which soften somewhat their findings on arbitration awards. In fact, their research results are intriguing, particularly when joined with the Cousineau-Lacroix finding on arbitrated settlements in the *private* sector. It will be recalled that their results indicate that arbitration had a neutral effect on wage settlements only after they dropped data for the transportation, communications and public utilities sector from their sample. The issue regarding the impact of arbitration on the size of settlements clearly must be considered as unresolved. While most of the studies, as noted, suggest a modest influence if any, and one (Subbarao) suggests a negative influence, the essence of the argument by Auld et al., is that arbitrators not only do not respond to labour market conditions but also they respond in a perverse way. The conclusion, then, must be that much more research is required with regard to wage determination in the public sector. In addition to the orientation of existing research on arbitration, it would be helpful if future research (1) examined wage determination under a system of compulsory arbitration pooling both arbitrated and negotiated settlements, and (2) examined public sector wage determination over longer periods of time.

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[102] *Ibid.*, pp. 194-195.

Wage Dispersion Under Arbitration

Not only could arbitration independently increase the level of wages but also it could be responsible for wage compression. Stern et al., hypothesized that the enactment of final-offer arbitration in Wisconsin would lead to a reduction of wage dispersion among all units including those receiving awards. They felt that arbitration would have a levelling effect, for example by preventing strong management and union groups from exercising their power and by forcing the parties to make reasonable demands and offers in negotiations. Evidence was found to support the hypothesis in that wage dispersion (measured in percentage terms) was reduced for two of the three groups studied. The authors concluded that any levelling effect from arbitration may be strongest when it is first introduced as weak employers and weak bargaining units "catch up". They go on to speculate, however, that wage comparisons made by the parties and by arbitrators may reduce the variance in wages even further. Similar tests were not run on Pennsylvania and Michigan data, but more subjective and anecdotal methods were utilized to assess the impact on dispersion in those states. They concluded that arbitration was responsible for a catch-up period for weak groups in those states as well.

The research report conducted by the Ontario Ministry of Labour on arbitration in the hospital sector indicated that, since the advent of arbitration, wage differentials had not narrowed. There were year-to-year fluctuations in the differentials, but it was determined that arbitration awards were not responsible for the changes. Overall, there was no trend towards greater uniformity of wage *rates* or uniformity of year-to-year wage *increases* after arbitration was introduced. They found a surprising degree of variation of increases contained in awards and concluded that the trend in Ontario hospital wage rates was more the product of labour market conditions in the period analyzed rather than the

outcome of whipsawing among awards. It was assumed from this that arbitrators, in their search for criteria, matched *increases* at comparable hospitals rather than granting increases that would result in more uniform wage *levels*. By so doing, they maintained the goegraphical wage structure that prevailed prior to arbitration.

A key aspect with respect to this study, nevertheless, is that the authors examined absolute rather than relative differentials. Relative differentials appear to have declined to some extent. The above two studies are the only ones which specifically address the question of arbitration and wage dispersion. However, it seems likely that arbitration pushes in the direction of reducing relative differentials by increasing the strength of weak groups and reducing the power of the very strong. Most industrial relations experts agree that arbitration increases the power of weaker employee groups which suggests an initial compression of wages and some redistribution of income to lower paid workers. Almost all of the practitioners interviewed by the author, for example, agreed with this premise. It must be remembered, of course, that arbitration has been, and would be, superimposed on sectors with highly formalized wage determination procedures, procedures which utilize and emphasize the principles of fair comparison. Thus, it is difficult to parcel out the independent impact of arbitration regarding dispersion.[103] Notwithstanding this, it seems logical to assume that regression toward the mean is enhanced under arbitration because the very high and the very low stand out and the extremes in the labour market become more difficult to defend and maintain.

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[103] Fogel and Lewin, for example, argue that a government policy of "fair comparison" results in overpaying low paid workers (often the weakest bargaining units). Walter Fogel and David Lewin, "Wage Determination in the Public Sector," *Industrial and Labor Relations Review*, Vol. 27, No. 3, April 1974, pp. 410-431.

Whipsawing and Productivity Under Arbitration

Leapfrogging and whipsawing are alleged to take place in collective bargaining, particularly during a period of rising expectations. A relevant issue sometimes raised is whether arbitration will feed and expand wage expectations. Introducing more rationality into negotiations and putting less reliance on raw economic and political power arbitration, if anything, might reduce these effects. On the other hand, it could be argued that arbitrated settlements take on a certain sanctity because the process is one commissioned by the legislature. Once made public, an arbitrator's award may have more, not less, benchmark quality attached to it. Hence, it could present a stronger focal point and could feed existing trends more than a negotiated settlement attained through strike action.

Braun's findings, discussed earlier, tend to support the first proposition in Australia's World War II experience, but she finds support for the second proposition for the period between the Korean War and the mid-1960's. However, Thompson and Cairnie, reviewing the experience in B.C. education, suggest that the rigid schedule of negotiations called for in that sector prevented the use of arbitration awards as bargaining patterns. They assert that a rigid system of key awards has never developed and that no award has precedential value.[104] Auld et al., tested for a spillover of public sector settlements into the private sector in Canada. They found no evidence of a spillover effect.[105] They also reported that there was little evidence that arbitration awards in the public sector influence subsequent wage settlements.

There is also concern that arbitrators will make decisions that will reduce

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[104] Mark Thompson and James Cairnie, "Analyzing Compulsory Arbitration Experiences," p. 16.

[105] D. Auld et al., *The Determinants of Negotiated Wage Settlements in Canada*, p. 157.

managerial flexibility, stultify productivity, burden employers with unnecessary labour cost increases, and introduce other distorting effects. The issues of concern here typically involve management rights and matters of manning and scheduling. The proposition is dubious. The point has already been made that arbitrators tend to cling to the status quo. A leading U.S. industrial relations authority has stated:

> As for the fear that arbitrators will impose unique, innovative provisions that may prove unworkable, it is interesting to note that there has been reticence on the part of arbitrators to be innovative. It appears that most arbitrators prefer to follow, or perhaps it is fair to say that the parties expect the arbitrators to follow predictable patterns.[106]

To illustrate, he quotes from an award in a police arbitration in Michigan in which the arbitrator declined to impose a dental insurance plan he considered too innovative.

> The chairman of the panel, at least, would ordinarily prefer to leave most of the pioneering in labor agreements to voluntary collective bargaining rather than impose new provisions through the compulsory process or statutory arbitration.[107]

Loewenberg writes that few manning and related issues have been raised by public safety bargaining units in Pennsylvania and, in cases where they have been carried to arbitration, the arbitration panels tended to be conservative and not grant rights in these areas.[108] Another author bemoans the fact that arbitrators in Ontario hospital disputes have assigned themselves a static role. He attributes this to their decision criteria which result in few "break-through" awards for hospital employees.[109]

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[106] Arvid Anderson, "Lessons from Interest Arbitration," p. 64. This, too, is a proposition with which almost all the practitioners I talked to agreed.

[107] Arbitration decision in the Matter of the City of Dearborn, Michigan and Police Officers Association of Dearborn, Theodore J. St. Antoine, Arbitration Panel Chairman, 545 GERR, (1974), E-2. Cited in Arvid Anderson, "Lessons from Interest Arbitration," p. 65

[108] J. Joseph Loewenberg, *Arbitration 1974*, p. 76.

[109] H. J. Glasbeek, "Compulsory Arbitration in Canada."

It does not necessarily follow, however, that arbitration is therefore of little or negative value to employee groups. The Johnston Commission, for example, found that in the Ontario hospital sector, in the early 1970's, 66 percent of those who belonged to unions were satisfied with the awards. The degree of management satisfaction was also high (75 percent). One reason may be that arbitration allows collective bargaining without the necessity to strike or lockout. Another may be due to the fact that, in addition to few innovations, there are few setbacks under arbitration. Most interest arbitrators hold to the principle that, unless there are very strong reasons or forces for change, matters freely negotiated in the past (especially in areas such as manning) should not be changed by third parties. The author has expressed this proposition in a recent arbitration award:

> I have great sympathy for the Board's problems in coping with Article 16.02 [teacher allocation]. With all respect, however, I must disagree with the Board on this matter....The clause was freely negotiated into the collective agreement in the last round ....I have stated on a number of occasions elsewhere that when established in this manner, i.e., through negotiations, working conditions provisions should only be changed for very persuasive reasons. One of the reasons for so holding is that trade-offs are involved in bargaining. The Teachers put the point well in their brief -- "We have shown earlier that the Teachers achieved only a modest increase in grid salary last year but were satisfied that their major objective in terms of workload had been achieved. In that sense, they therefore 'bought' Article 16.02 with their grid dollars."[110]

This principle can work to the advantage of either party. The possible lack of innovation, however, may sow the seeds for the breakdown of a system of compulsory arbitration. In the Canadian federal public service there has been a shift by employee groups from the arbitration route to the conciliation/strike route. This is generally attributed to the inability and/or failure of the Arbitration Tribunal to deal with innovative and complex issues. Unless the

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[110] *Re Sault Ste. Marie Board of Education and Sault Ste. Marie Division of District 30 of the Ontario Secondary School Teachers' Federation*, October 19, 1978 (Downie).

legislated scope of arbitration is broad enough to allow for innovation and arbitrators are sufficiently open-minded and innovative, it may be that a system of arbitration either will not be effective and/or not viable in the long run.

INSTITUTIONAL EFFECTS

The primary concerns with respect to compulsory arbitration are the potential impacts on the bargaining process and outcomes. There are other effects worth considering, however, which are predominantly, but not exclusively, institutional in nature. The possible institutional effects discussed below would probably hold under conditions of either conventional or final-offer arbitration. That is, there is not likely to be a significant differential effect attributable to one form of arbitration or the other.

Face-Saving and Decisionmaking

It is alleged that union and management decisionmaking is quite different in collective bargaining under compulsory arbitration. One aspect which clearly relates back to the possibility of a narcotic effect is that, because of internal political problems, union negotiators, in particular, may be unwilling to settle for any of the possible outcomes and, as a consequence, would prefer to have the dispute resolved by a third party. For the negotiator faced with such pressures third party resolution becomes the easy way out of the dilemma. According to this view, then, arbitration serves a face-saving function and results in collective bargaining institutions avoiding decisionmaking responsibilities.

The role of the need to save face has been demonstrated experimentally. Johnson and Tullar found that under *low-need* to save face negotiators in a laboratory setting who were anticipating arbitration reached agreement prior to intervention.[111] Those in the same condition who were anticipating mediation were

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[111] D. F. Johnson and William Tullar, "Style of Third Party Intervention, Face-Saving and Bargaining Behavior," *Journal of Experimental Social Psychology*, Vol. 8, No. 4, 1972, pp. 328-329.

farthest away from settlement. Under conditions of *high-need* to save face, subjects who did not expect third party intervention were closest to agreement, while those anticipating arbitration were unlikely to be near an agreement. Therefore, when the need to save face is strong it would appear bargainers are more willing to let third parties resolve the conflict.

However, is the need to save face widespread in labour-management negotiations under arbitration and, more importantly, how intense is this need? To some extent, the importance of the face-saving role is answered by data on the narcotic effect. If face-saving is an extremely important element in union-management negotiations, this would lead to an inordinately large number of awards. As already noted, this has not occurred for the most part. There is no additional hard data on face-saving, but other information which does exist from the public sector suggests it takes place only on a moderate scale.

From interviews with management and union negotiators in Michigan, Stern et al., found only a few management negotiators who felt that they might have to go to arbitration because of the difficulties of selling a reasonable settlement to their superiors.[112] Offsetting this, moreover, was their finding that arbitration reduces or eliminates "end-runs" (i.e., multilateral bargaining) in municipal negotiations. That is, union negotiators often go around management negotiators, and through applying various forms of political pressure force bargaining with political officials (the mayor or city council members). Formal negotiations, therefore, are a charade with the actual negotiations taking place away from the table. In Michigan, under arbitration, this activity was almost non-existent.

Loewenberg has reported that, in Pennsylvania, arbitration was used as a 'face-saver' only infrequently.[113] McCormick offers anecdotal evidence from inter-

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[112] Stern et al., *Final Offer Arbitration*, p. 61.

[113] J. Joseph Loewenberg, "Compulsory Arbitration for Police and Firefighters in Pennsylvania in 1968," *Industrial and Labor Relations Review* (1970), p. 378.

views with several union and management negotiators in New York City that suggests that arbitration has played some face-saving role in their negotiations.[114] This was not identified as a major problem, however.

Union, and to some degree management, negotiators will use arbitration to resolve their own political problems. But the abdication of decisionmaking appears to be less serious than at first suggested. In addition, in private and public sector negotiations where the right to strike exists, the strike has been utilized, too, purely as a face-saving device by negotiators. There is no way of knowing whether there is more or less face-saving behavior under the two systems of dispute resolution.

Union Power

A widespread opinion in industrial relations, as noted, is that arbitration may help weak employee groups. There is some evidence to support this view. For instance, in the Canadian federal public sector, it is often asserted that, by and large, the bargaining units lacking economic and political muscle have opted over time for the arbitration route rather than the conciliation-strike route. Although there has been a trend to the conciliation-strike route since the initial experience with the Public Service Staff Relations Act, the very small employee groups continue to select arbitration.[115] It has been suggested by those who have researched the Wisconsin experience that "the availability of arbitration at the request of either party clearly helps weak unions."[116] A leading third party neutral in the U.S.

[114] Mary McCormick, "A Functional Analysis," p. 255.

[115] Subbarao reports that, in 1976, the average size of a bargaining unit selecting the conciliation/strike route was more than three times the average size of units selecting the arbitration route. Moreover, in four of the five occupational groups, the average size of units selecting the conciliation/strike route was larger than the average size of those selecting the arbitration route. See A. V. Subbarao, "The Impact of the Two Dispute Resolution Processes in Negotiations," *Relations Industrielles*, Vol. 32, No. 2, 1977, pp. 223, 224.

[116] James Stern et al., *Final Offer Arbitration*, p. 100.

has stated that arbitration balances bargaining power in the public sector. He went on to state, "Arbitration could be a balancing factor in the private sector as well, and that may be a very desirable goal in enterprises delivering monopoly services to the public."[117] In New York City, arbitration utilization was concentrated in a few unions, and these tended to be small bargaining unions of less "essential" employees.[118] In Great Britain, unions apparently utilized arbitration to assist them in the cases of less well organized groups.[119]

Finally, in Ontario education where teachers have the right to strike, the parties under statute also have the option, if mutually agreed to, of going to binding arbitration. As is the case in the public sector generally, employers (in this instance school boards) over the past few years have enjoyed a power advantage because of public expenditure restraint. Teacher bargaining units have suggested use of arbitration in numerous sets of negotiations. School boards, almost invariably, because of their power advantage have refused. This suggests that both conventional and final-offer arbitration have strike-like features. The threat of arbitration, if it is compulsory, may induce as high a final offer from an employer as the threat of a strike. A management negotiator recently referred to this threat from a management perspective.

> The "threat" of arbitration in this area is an even greater spur to management's settlement motivation than a strike. My fear of itinerant philosophers making judgments on policy determinations will likely keep my feet to the fire even longer than my fear of a walkout.[120]

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[117] Arvid Anderson, "Lessons From Interest Arbitration," p. 63.

[118] Mary McCormick, "A Functional Analysis," p. 251.

[119] B. Hepple, "Compulsory Arbitration in Great Britain," p. 100.

[120] Cited in Arvid Anderson, "Lessons From Interest Arbitration," p. 65.

One indirect benefit to unions is the possible contribution of arbitration to unionization. As an example, it was reported that arbitration in Ontario hospitals prompted an increase in union membership. Prior to the institution of compulsory arbitration in 1965, there were no nurses associations for collective bargaining in hospitals. By 1970 this had dramatically changed with the organization of twenty-five associations. At least part of this may be due to unfavorable employee attitudes toward strike activity. For some, compulsory arbitration may be more compatible with their values.

Union Structure and Staffing

A more centralized and bureaucratized union movement could result if compulsory arbitration were applied on a broad scale. There are several reasons for this assumption. First, arbitration could lead to a greater degree of uniformity in bargaining outcomes in a sector. This, in turn, could lead to a consolidation of units (e.g., from local to regional or to provincewide bargaining) in order to avoid unnecessary duplication of effort. Second, some initiative might be required to strengthen the organization's professional staff, i.e., legal and research expertise to meet the information and data requirements of third party involvement. Some unions in Michigan noted an increasing reliance on attorneys both to serve as counsel during negotiations and to represent them at arbitration hearings.[121]

The increased involvement of lawyers and other professional staff could be amplified because labour-management conflict under arbitration would likely be highly institutionalized, i.e., controlled by additional forms of third party intervention. In order to prevent the chilling and narcotic effects, more third party intervention such as mediation and fact finding would probably be provided

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[121] James Stern et al., *Final Offer Arbitration*, p. 58.

or be added at a later date.[122] This seems to be a characteristic of many jurisdictions that have experimented with arbitration. This, too, would push in the direction of a greater role for professional staff in order to deal effectively with third parties and could perhaps lead to more control from central headquarters in order to provide a unified position in negotiations.

Yet the imposition of arbitration could have a relatively minor effect on structure. In Australia, about 50 percent of all wage and salary earners are covered by federal awards and these set the pattern for the entire country. This has not led to a centralized labour movement, however; instead, it remains quite fragmented. As in Canada, there has always been a large number of small unions and they have been reluctant, and do not feel the need under arbitration, to surrender their autonomy to more central trade union authorities.[123] This could be the outcome in Canada where public policy (e.g., the requirement for certification and the ensuing determination of an appropriate bargaining unit) has resulted in decentralization of the union movement and of the industrial relations system. Because arbitration seems to equalize bargaining power and aids, in particular, weaker unions, its implementation on a broad scale could work against centralization. While it may seem that arbitration would necessitate a large research staff which, in turn would be within the capabilities of large units only, arbitration awards covering major units could set a pattern and the smaller units

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[122] One of the consequences of this is much longer negotiations under arbitration. Unless very rigid deadlines are established in legislation, bargaining is drawn out much more than under a system of negotiations with strike action a possibility. In Massachusetts, for example, the elapsed time between the petition for mediation to the arbitration award has been more than a year (52.7 weeks). See Paul Somers, "An Evaluation of Final Offer," p. 226.

[123] Russell D. Lansbury, "The Return to Arbitration: Recent Trends in Dispute Settlement and Wages Policy in Australia," *International Labor Review*, Vol. 117, No. 5, Sept.-Oct., 1978, p. 618.

could follow and by so doing escape the necessity of a large staff. Police bargaining in Ontario and teacher bargaining in B.C. are examples of jurisdictions which have maintained decentralized bargaining under compulsory arbitration.[124]

Also, negotiations under arbitration need not become more legalistic. Geare, for instance, challenges the theory that arbitration leads to more participation by lawyers in labour-management relations. The idea, according to Geare, was originated by those examining the Australian system in the 1950's and the assumption has since been made that this "defect" is universal.[125] He argues that, while a by-product of the Australian system has been a growth of legalism, this is not necessarily an indigenous characteristic of arbitration. The record in New Zealand is quite different.

> ...in New Zealand for some seventy years lawyers have been banned from conciliation proceedings and from all arbitration proceedings unless all parties consent. As a result, and in marked contrast to the situation in Australia, New Zealand's industrial relations scene is remarkably lawyer-free.[126]

In summary, arbitration would probably make unionization more acceptable to a larger number of workers and, therefore, would lead to a stronger union movement, though not necessarily a more centralized one. Negotiations under arbitration are likely to be longer and possibly more legalistic.

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[124] Here it is worth noting the comments of an external referee who noted that arbitration may actually contribute to fragmentation in the labour movement. He emphasized that expertise for arbitration can be purchased by relatively small unions from lawyers and consultants in contrast to the fact that only large unions can muster a large strike fund. Many groups in the public sector such as nurses and police bargain under compulsory arbitration and are independent of any other labour body. Because arbitration seems to help weak unions, pressures for amalgamation may be diminished, according to this view.

[125] A. J. Geare, "Final Offer Arbitration: A Critical Examination of the Theory," *The Journal of Industrial Relations*, Vol. 20, No. 4, December 1978, p. 380.

[126] A. J. Geare, "Final Offer Arbitration," p. 380.

Industrial Conflict and Compliance

Possibly the greatest failing of arbitration according to critics is that it does not prevent or even reduce strike activity. Some argue compulsory arbitration may actually encourage short-lived strikes which are protests against unacceptable arbitration awards.[127] Therefore, a fundamental question is whether strikes can be banned?

The answer to this question is unequivocal. Wayne Horvitz, the head of the Federal Mediation and Conciliation Service in the United States, in discussing recent negotiations in the coal mining industry, made the important point that if the miners decided to strike they would do so regardless of government action or anti-strike legislation.[128] This has proven to be the case for other workers on a number of occasions in a variety of countries. The Montreal police strike in 1969 was a classic case of such action. Under Quebec law police were prohibited from striking, but on October 17 of that year Montreal police struck for sixteen hours in defiance of an arbitration award which they felt was biased.

At the same time, such action is the rare exception. Another author has noted that in Canada the Montreal police strike was the first overt defiance of an award in twenty-five years.[129] The overwhelming response in North America has been one of compliance by the parties. According to Thompson and Cairnie, there was not one strike regarding salaries in B.C. education over the forty year period they examined. There has never been a strike in the Federal public service

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[127] J. E. Isaac, *Compulsory Arbitration in Australia*, Task Force on Labour Relations Study No. 4 (Ottawa: Queen's Printer, 1968), p. 27.

[128] Wayne Horvitz, "What's Happening in Collective Bargaining," *Industrial Relations Research Association*, Proceedings of the Spring Meeting, 1978 (Madison, Wisconsin: The Association, 1979), pp. 453-464.

[129] Mollie Bowers, "Legislated Arbitration: Legality, Enforceability and Face-Saving," *Public Personnel Management*, Vol. 3, No. 4, July-August, 1974, p. 278.

in defiance of an arbitration award.[130] In Ontario hospitals there have been threatened strikes but just one short walkout since arbitration was introduced in the mid-sixties. A similar experience apparently has been the case in Minnesota hospitals which have operated under compulsory arbitration for a much longer period of time.[131] In Massachusetts, there have been some challenges through the courts by employers over awards covering public safety employees, but these challenges have failed and municipalities have instituted the awards. It was reported that in Michigan during over thirty-nine months of conventional arbitration there were no strikes by firefighters and only a few by police.[132] All but one of the strikes were of short duration and only one was against an arbitration award. Bowers, in examining the experience with compliance, has noted the Michigan experience and concludes regarding the issue nationwide:

> Noncompliance is not a prevalent phenomenon.... There is [sic] also strong indications that defiance is not the typical manifestation of dissatisfaction with an award.[133]

This seems to be the case for either conventional or final-offer arbitration.

The problem of noncompliance did arise to a greater extent in Great Britain as "work groups did on occasion resort to strike action when they were disappointed with the tribunal's award."[134] Arbitration in Great Britain, however, was not truly compulsory but rested instead on agreement between the parties. There apparently was no legal obligation to report a dispute to the ministry of

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[130] The experience under the PSSRA is not a pure test with respect to compliance. A group dissatisfied with an award can instead simply choose the conciliation-strike route the next bargaining round.

[131] R. Stutz, "The Arbitrator's Role," p. 72.

[132] James Stern et al., *Final Offer Arbitration*, p. 71.

[133] M. Bowers, "Legislated Arbitration," p. 274.

[134] B. Hepple, "Compulsory Arbitration in Great Britain," p. 103.

labour and no duty for the latter to refer a dispute to arbitration. Great Britain seems to have been the only jurisdiction to have faced problems with compliance and implementation. Nevertheless, most industrial relations experts would insist that compulsory arbitration in any setting will only succeed if it has the consent of the parties and their constituents, especially the workers. Therefore, to repeat an earlier point, third parties must be perceived as neutral, the statutory scope of arbitration should be broad enough to allow important employee concerns to be heard and decided upon, and lengthy time delays should be avoided. Penalties against illegal strikes are not likely to be effective in the final analysis unless procedures and awards are perceived by the parties to be fair and reasonable. The recent experience in Ontario where provincial jail guards have conducted an illegal strike is perhaps evidence of this fact. It is important, therefore, that arbitrators be appointed by neutral agencies, independent of government, and that those appointed be competent and respected.

Obviously, employee dissatisfaction can lead to political action, wildcat strikes and other job actions. This has not been the experience to date, however, perhaps because an outlet or buffer for dissatisfaction by either side is that an appeal of an interest arbitration award to the courts, while rare, is possible. The courts in Canada are unlikely to rule on the substantive aspects of an award but may rule on the jurisdiction of the arbitral body and on matters of procedure. Such rulings may also contain certain directions which an arbitration board would likely follow when reviewing its award. It is worth noting at the same time that, in the long run, this might not be considered an outlet by much of the labour movement because of labour's traditinal distrust of the courts. Therefore, if employers were to appeal numerous awards to the courts and the courts, in turn, claimed jurisdiction and overturned awards, any system of arbitration could be jeopardized.

Nevertheless, thus far there seems to be little doubt that a system of compulsory arbitration can be applied and reduce various forms of work stoppages

at least in a narrow band of sectors. Others concur in this assessment with respect to the North American experience. Lewin, Feuille and Kochan have tentatively concluded, for example, that consistently applied strike penalties seem to reduce work stoppages.[135] New Zealand's historic low incidence of strikes is perhaps further testimony to the efficacy of arbitration along this dimension.[136] There may be dissatisfaction by both sides with bargaining under arbitration but, if so, this has not been translated into worker unrest and numerous appeals by employers to the courts to overturn awards.

Notwithstanding this experience, compulsory arbitration is often rejected perfunctorily because of the existence of industrial conflict in Australia despite that country's longstanding system of strike prohibition and arbitration. Perhaps with Australia in mind, the Commission on Wider-Based Bargaining stated in 1978:

> Finally, the Commission has dismissed as both impractical and simplistic the belief, widely held in some quarters of our society, that the right to strike or lockout, whether in the public or private sectors, should be banned. We hold such belief to be unworkable since evidence indicates that such Draconian attempts do not, in themselves, prevent strikes.[137]

The Australian experience must be specifically addressed because of its central position in any discussions regarding award compliance and industrial conflict.

Australia has had almost 80 years experience with their industrial relations system which has its own peculiar features, so much so that an expert

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[135] D. Lewin, P. Feuille, and J. Kochan, *Public Sector Labor Relations*, p. 224.

[136] It may also be due in part to the preponderance of small firms and weak unions in New Zealand. See J. M. Howells, "Causes and Frequency of Strikes in New Zealand," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 524-532.

[137] Report of the Inquiry Commission on Wider-Based Collective Bargaining (Ottawa: Labour Canada, 1978), p. vii.

on Australian industrial relations recently stated:

> Australia's long and varied experience with compulsory arbitration should not be regarded as providing a final verdict on the institution of compulsory arbitration.[138]

Carl Stevens, in his seminal article in 1966 on arbitration, made a similar observation. He noted that Australia does not have a system of bona fide compulsory arbitration. While it is not necessary to describe the system in detail here, the variations from the fundamental concept are significant.

Approximately 90 percent of employees in Australia work under awards or agreements made under government auspices. However, the parties in many cases negotiate "overawards" after the arbitration decision is handed down. In this sense, compulsory arbitration in Australia is much different from a system which calls for an award which is final and binding. It varies from a strong system of compulsory arbitration in another important respect, as well. There is not a blanket prohibition against strikes. Lansbury, in a recent article, captures the essence of the Australian system.

> For many years the Conciliation and Arbitration Act contained a provision making strike activity illegal and subject to penalties. Although this provision was removed in 1930 and it is now no longer illegal to strike, numerous amendments have been made to the Act in order to limit the right to strike. A common "sanction" used by the tribunals until the 1950's was to deregister a union which struck in defiance of an order of the tribunal to return to work. In practice, however, deregistration was not permanent and the union in question would usually be registered after it made a suitable apology to the tribunal. In 1951 the Act was amended to facilitate the operation of a system of penal sanctions by injunctions against strikes.... In practice, since the late 1960's the use of penal sanctions against unions for strike activity has been infrequent.[139]

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[138] K. Walker, "Compulsory Arbitration in Australia," in J. Loewenberg et al., *Compulsory Arbitration*, p. 1.

[139] R. Lansbury, "The Return to Arbitration," p. 615.

Numerous times, in response to proposals for compulsory arbitration, the retort has been along the lines of "in Australia there is compulsory arbitration but that country still experiences many strikes." This has become a popular cliché and myth that has surrounded the topic of interest arbitration for years and has made rational discussion of the subject extremely difficult. Compulsory arbitration may or may not make sense, but an evaluation of it should not rest with the experience in Australia. Indeed, that experience is almost meaningless to the subject at hand because the system is dramatically different from the conventional principles and meaning of the concept in North America.

The experience in North America to date is that compliance with third-party awards has been encouraging. The following was reported on Pennsylvania, Michigan and Wisconsin:

> Regardless of whether or not there is perfect compliance with the statute or an occasional example of noncompliance the basic point is that the arbitration procedure cannot be faulted on the grounds of noncompliance. Very few statutes achieve the degree of compliance associated with the arbitration statutes in the three states included in this study.[140]

A major question in this regard, nevertheless, is whether that type of record could be transferred to a broader range of jurisdictions in the public and quasi-public sectors.

A FINAL OVERVIEW AND CONCLUSIONS

The strike is sometimes viewed as the raison d'être of the union movement. In fact, an argument can be made that the strike weapon is necessary for the survival of trade unions. Yet, in the final analysis the sine qua non of a healthy labour movement is the right to organize and bargain collectively. The final weapon in collective bargaining would seem to be of less relevance than whether it ensures rough power equality at the bargaining table. Nevertheless, the needs and views of the parties are aspects that have not been considered in this paper

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[140] J. Stern et al., *Final-Offer Arbitration*, p. 190.

but should be in future research on the topic. In the meantime, compulsory arbitration is a concept which can be evaluated along the other important dimensions outlined in this monograph.

Table 1 in the Appendix lists the major studies and summarizes their main conclusions. The table highlights the rich variety of material now available on the subject of compulsory arbitration. To restate an earlier caveat, however, *any conclusions must be considered as tentative*. Several aspects in this regard are especially important. First, in many of the cases where arbitration has been introduced, studies with respect to it have covered only a relatively short period of time. An obvious need is for studies covering much longer periods of time. Second, there are numerous instances where arbitration has not replaced the right to strike but, instead, it has been superimposed on an existing dispute settlement system which had not previously included the right to strike. The effects might be quite different in a sector where the right to strike has been taken away and replaced by arbitration versus a situation in which the right to strike never existed and arbitration is then inserted as the route to finality in collective bargaining. Also, to reiterate, the conclusions in this paper are based on the premise that if arbitration were more broadly applied, its use, nevertheless, would be limited to the public and quasi-public sectors. Finally, the potential effects outlined in Figure 1 require much more intensive research before very firm conclusions can be drawn.[141] However, in the ensuing pages an attempt has been made to distill from the wealth of information which now exists some broad generalizations and research needs.

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[141] For one research agenda with respect to compulsory arbitration see P. Feuille, "Selected Benefits and Cost of Compulsory Arbitration," (mimeographed, forthcoming). Also, for a comment on the shortcomings of the research conducted to date on compulsory arbitration see John C. Anderson, "Evaluating the Impact of Compulsory Arbitration: What Can We Learn from Alternate Research Designs and Methodologies?" (A paper presented at the Thirty-ninth Annual Meeting of the Academy of Management, Atlanta, Georgia, August 7-11, 1979).

With respect to the narcotic effect, compulsory arbitration -- either conventional or final-offer -- in the jurisdictions researched to date has generally not destroyed or weakened collective bargaining. Collective bargaining may be somewhat different than in the industrial model in that raw economic and political power is suppressed and replaced by increased emphasis on data; threats to utilize arbitration replace strike threats but give-and-take bargaining seems to continue.

Arbitration usage rates, as do strikes rates, depend to a degree on the relationship between the parties and the environment within which they bargain. It is clear that in some relationships arbitration would be used frequently just as in some cases the strike weapon is used frequently. A distinct disadvantage with regard to arbitration is that negotiations with the strike threat removed tend to be drawn out. This problem is not indigenous to arbitration, however, and can be overcome by placing the parties, including third party neutrals, under a rigid time frame for negotiations. Indeed, there are many suggestions that could be made to ensure that bargaining under arbitration operates effectively.[142] Also, procedures are available now which would result in acceptably low usage rates across a sector. An effectively designed system of FOA, from the evidence available, would probably lead to all but 5 to 10 percent of all disputes in a sector being resolved by negotiations; an effectively designed system of conventional arbitration would probably lead to all but 10 to 25 percent being resolved short of an arbitration award. These rates are comparable to the frequency of strike usage.

The Iowa procedures bear very close scrutiny in this regard. A possible policy thrust in dispute resolution in the future may see a mix of fact finding and arbitration tied together more closely than in the past. Giving the third party (under final-offer or conventional arbitration) the explicit opportunity to select from the fact finder's recommendations would seem from the Iowa experience to put

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[142] A discussion of this is not within the scope of the paper. For a review of some of the issues to be considered in designing a system of interest arbitration see J. Loewenberg et al., *Compulsory Arbitration*, pp. 206-209.

maximum pressure on the parties to negotiate their own agreements.

Both conventional and final-offer arbitration seem to have strike-like properties and, therefore, the chilling effect does not seem to be as serious as original discussions of conventional arbitration seem to imply. In evaluating existing information of the chilling effect, consideration must be given to the fact that arbitration has been used almost exclusively in the public sector where the chilling effect is most likely to exist because of the multilateral nature of negotiations and the possibilities for end-runs around formal negotiations. The chilling effect is less likely to be as serious in the private sector. But we need much more information on concessionmaking behaviour under both forms of arbitration before definitive conclusions regarding the chilling effect can be drawn.

Also, more information is needed on the preferences of the parties. Employers, in particular, to the extent that they do have an opinion, seem to prefer conventional over final-offer arbitration. Indeed, because of the risk involved, both parties often express reservations with respect, and see disadvantages in, final-offer arbitration. Therefore, in this regard, FOA may be more strike-like than conventional arbitration in the eyes of the parties and, hence, may minimize the chilling effect. The studies examined certainly seem to confirm this. However, to the degree that arbitrators in the conventional process refuse to follow a strict split-the-difference philosophy, conventional arbitration, too, contains significant risk for both parties. Also, whatever advantages final-offer arbitration may have with respect to the chilling effect may be offset by the notion that FOA awards are inevitably worse than the awards flowing from conventional arbitration because of the opportunity on the part of the third party in the latter case to shape a compromise.

A major problem regarding the chilling and narcotic effects, nevertheless, remains unexamined. Anderson and Kochan have raised the possibility of a "half-life effect" of third party procedures.[143] If there is such an effect then, even

[143] J. Anderson and T. Kochan, "Impasse Procedures," pp. 285-286.

assuming arbitration procedures function well, procedural effectiveness will atrophy over time as a result of experience and learning by the parties. They may become disenchanted with the process and take steps to nullify it or render it ineffective. Anderson and Kochan postulate three schools of thought on the half-life effect -- the pessimists who feel that the efficacy of dispute resolution procedures deteriorates over time; the optimists who believe that collective bargaining can thrive permanently under a non-strike condition if appropriate dispute resolution techniques are made available; and, third, those who believe that there is no natural half-life effect but who feel that procedural efficacy moves up and down in response to environmental and institutional factors.[144]

Either the experience with arbitration has been too brief, or there is insufficient data to make judgments with respect to the half-life effect in most North American sectors where arbitration is used. Moreover, it may be that administrators of dispute settlement legislation now have the expertise to modify their interventions (e.g., by rotating mediators) in order to offset any natural half-life effect, if, in fact, one exists. Both of these matters warrant future research.

On the institutional side, the evidence with regard to strike prevention is also encouraging. True, by and large, groups covered by arbitration were not strike prone prior to the mid-1960's. Indeed, only certain categories of workers have lost, or have not had, the right to strike in North America, and it is always possible that they would not have struck very often even if they did have

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[144] They cite Cullen's examination of third party intervention under the Railway Labor Act over a fifty year period as an illustration of procedural efficacy varying through time. They interpret this as the strongest evidence available supporting the argument that there is no natural half-life effect. See D. Cullen, "Emergency Boards Under the Railway Labor Act," in C. Rehmus (ed.), *The Railway Labor Act At Fifty: Collective Bargaining in the Railroad and Airlines Industries* (Washington, D.C.: G.P.O., 1977).

the right to do so. Nevertheless, teachers, nurses, police, and other municipal and public sector employees when given the right to strike have utilized it. In that light it is impressive that, under systems of compulsory arbitration, arbitration awards have been fundamentally complied with, and strike action under arbitration in North America has been rare. There have been, and will be, strikes under arbitration, but the frequency of strike activity is exceedingly low and in many cases strikes have been totally eliminated. There is no way, of course, of eliminating strikes that involve power struggles, internal political matters and similar phenomena which will always be part of the industrial relations picture. Nor can it be assumed that worker dissatisfaction will not be manifested in work stoppages if the scope of arbitration is narrowly circumscribed, or if arbitrators consistently convey an unwillingness to innovate and resolve complex matters when they have the jurisdiction to do so. Similarly, on the employer side, frequent appeals to the courts might result if arbitrators exercise their power in a cavalier manner. However, the experience to date on the dimension of compliance has been positive.

The evidence is less clear on the effect of arbitration on union and management decisionmaking in collective bargaining, and on union structure and power arrangements. Overall, arbitration, if more widely applied, would perhaps lead to a somewhat stronger labour movement in the sense that perhaps more groups would be unionized. The information that does exist, then, suggests that arbitration could be used as an instrument of social policy to limit strikes in the public and quasi-public sectors, equalize bargaining power, and perhaps strengthen trade unionism to some extent. Such a policy initiative would constitute a major shift in the thrust of public policy in labour-management affairs in Canada. For example, historically there has been little concern shown in basic Canadian industrial relations policy for balancing bargaining power.

The probable economic effects of arbitration are much more complex and difficult to definitively specify than either the behavioral or institutional ones. In particular, the consequences with respect to inflation are, at the very best, speculative. However, a consideration of all of the available information allows one to be at least diagnostic with respect to the arbitration-inflation question, even though it does not lead to a conclusive analysis.

First, whether arbitration has an independent effect on inflation will depend to a large extent on the impact of compulsory arbitration on collective bargaining. Here, as already noted, the results are to the effect that the bargaining process would probably continue more or less intact. If procedures were appropriately designed, there would still be a very large number of *negotiated* settlements. From this perspective, concerns with respect to public sector awards must be tempered. If arbitration does not change the collective bargaining process, it is unlikely to be inflationary *unless* (1) a union gains more from going to arbitration than negotiating their own settlements; (2) the leapfrogging or whipsawing aspects of collective bargaining are amplified; or (3) if on balance, the provision for arbitration increases the net bargaining power of unions.

With respect to the first of these, it will be recalled that the results on wage effects were mixed. Much of the evidence does suggest that the influence of arbitration on wages has been modest. From information that does exist, if either type of arbitration has an impact on the general level of wages in a sector, it seems to be a relatively small one. It should be added that, while the findings of Auld et al., suggest that arbitrators ignore the labour market, the total number of arbitrated settlements to the total sample of settlements, even in the public sector, has been very small. This diminishes the likelihood of a major effect unless there is spillover of arbitration awards to other settlements. Finally, of the two basic types of arbitration, FOA may have a greater impact than

conventional arbitration but the findings of Stern et al., suggest that any differential impact is very small and is a one-time effect, if indeed it exists.

So far, the preponderance of information indicates that, in a sector, arbitrated settlements are not significantly different from negotiated ones, and sectors under a system of arbitration do not seem to gain relative to sectors without arbitration. However, we obviously need not only more information on the impact of arbitration on the size of settlements but also a more thorough examination of differences, if any, between conventional and final-offer arbitration with respect to this dimension.

The evidence with respect to whipsawing is sketchy, but there is not likely to be a strong independent influence on inflation from this source. A case can be made that arbitration *reduces* the social friction and competitive tendencies between groups. Moreover, the scenario of accelerating inflation followed by rising expectations which then become manifest at the bargaining table in the form of leapfrogging is a process which would seem to be independent of third-party influences. On net, much like wage controls, arbitration would seem to lessen the tendency of employee groups to outdo one another in the scale and timing of their wage increases. Also, the study by Auld et al., suggests that there is little spillover from arbitration awards to other sectors and from the public sector in general to the private sector. Nevertheless, in addition to quantitative studies on wage effects, case studies are required to intensively examine the arbitration *process*, its impact on outcomes and its impact on the dynamics of bargaining within and between sectors. Particular emphasis should be placed, as well, on the decisionmaking processes of arbitrators. For example, under final-offer and conventional arbitration, does the aspect of precedent have an overriding influence on third-party decisions? Are arbitrators in the public sector oblivious to labour market conditions? What role do statutory criteria and value judgments

play?[145] Are there distinct linkages between one arbitration award and another?

Compulsory arbitration applied to the public and quasi-public sectors might translate into inflation not because of an effect on the *general* wage level in a sector but because it aids weak employee groups. The imposition of arbitration does seem to result in a maintenance, or in some compression, of wage differentials within a sector. But arbitration could also, at the same time, exert a downward pull on the wage adjustments of very strong groups. That is, bargaining strength at the negotiation table is likely equalized under arbitration. Studies do suggest that a one-time catch-up may take place for weak units after which they receive similar increases to other units. The inflation effect from this influence, therefore, is also likely to be a one-time phenomenon and its magnitude will depend on the possible depressing effect on the wage increases of very strong groups. Therefore, the net influence on inflation would probably depend to a very great extent on the type of sectors selected for the imposition of arbitraton.

Finally, from anecdotal and qualitative evidence, arbitration does seem to be a neutral force. From this perspective, results under it are not likely to vary significantly from the outcomes the parties themselves would strike and, therefore, arbitration probably would not have an independent effect on productivity. The following position seems to be a credible one:

> A tripartite board of arbitration...might not arrive at precisely the same conclusions as the parties themselves but it would be unlikely to commit any major errors and might well come to an equitable and acceptable solution.[146]

In conclusion, from the very tentative evidence to date, if there is a

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[145] A discussion of criteria used in arbitration is contained in K. P. Swan, *The Search for Meaningful Criteria* (Kingston: Industrial Relations Centre, Queen's University, 1978).

[146] O. Phelps, "Compulsory Arbitration," p. 91.

potential influence on inflation flowing from the imposition of arbitration on many more sectors, it is likely to occur through a shift of bargaining power toward weaker groups.

The evidence overall must be considered as encouraging. But even if arbitration is a very viable substitute for the right to strike, taking into account all possible effects, it still does not follow that it should be used. There will always be the problem of determining which public and quasi-public sectors to select for arbitration as a terminal procedure, as well as how arbitration should be structured. As well, there are other innovative dispute settlement procedures which have been, or could be, implemented. There is a real question of whether arbitration is transferrable to many other sectors. And, as noted earlier, there are also philosophical arguments for and against arbitration which this paper did not consider. Nonetheless, from the evidence available at this time, the concept of compulsory arbitration as a strike substitute warrants much more openminded examination than the concept has enjoyed in the past.

TABLE 1

STUDY/OBSERVATION	JURISDICTION	FORM OF ARBITRATION	LONGITUDINAL DATA	NATURE OF THE STUDY	EFFECTS EXAMINED	RESULT
1. Anderson and Kochan (1977)	Canada: Federal Public Service	Conventional (choice)	1968-1975	Regression Analysis over four (4) rounds of bargaining	Narcotic, chilling, half-life	Positive, positive, positive
2. Auld (1979)	Canada: public sectors	Conventional	1966-1975	Regression Analysis	Size of settlement	Positive
3. Bezdek and Ripley (1974)	U.S.: Michigan police and firefighters	Conventional	1969-1972	Statistical analysis, analyses of variance	Size of settlement	No significant difference
4. Bigoness (1976)	Laboratory	Conventional	-	Experimental design, 2x2x4 factorial design	Narcotic	Negative
5. Bowers (1974)	General - North America	All compulsory arbitration	Late 1960's-1973	Survey of experience	Industrial conflict and compliance	There was compliance
6. Braun (1974)	Australia	Conventional	1950-1973	Economic analysis of the movement of wages	Size of settlement, whipsawing	Mixed, mixed
7. Cousineau and Lacroix (1977)	Canada: Private sector	Conventional	1967-1975	Regression analysis	Size of settlements	Positive
8. Dworkin (1976) and (1977)	Major League Baseball	FOA (salary only)	1974-1975	Statistical analysis	Intertemporal compromise	Negative
9. Feuille (1975)	Canada: British Columbia Teachers	Conventional	1960-1973	Statistical analysis, trends in arbitration rates	Narcotic	Positive
10. Feuille and Dworkin (1978)	Eugene, Oregon - city government; baseball; Wisc.; Mass.	FOA total package	1970-1975	Statistical analysis of existing studies	Intertemporal compromise	Negative
11. Feuille and Long (1974)	Eugene, Oregon	FOA total package	1970-1973	Case study	Narcotic	Negative
12. Feuille (1977)	Wisconsin, Eugene, Mass., Mich., Iowa, baseball	FOA - all types	1972-1974	Statistical analysis of existing studies	Narcotic, chilling	Inconclusive, inconclusive
13. Fisher and Starek (1978)	Canada: B.C. police	Conventional and Med-arb	1950-1975	Case	Narcotic	Positive
14. Gallagher (1978) Gallagher and Pegnetter (1979)	U.S.: Iowa public servants	FOA by issue	1975-1977	Statistical analysis	Narcotic, chilling	Negative, negative
15. Geare (1978)	New Zealand	Conventional	1965-1977	Review of experience through statistical methods	Narcotic, union structure	Negative, negative

STUDY/OBSERVATION	JURISDICTION	FORM OF ARBITRATION	LONGITUDINAL DATA	NATURE OF THE STUDY	EFFECTS EXAMINED	RESULT
16. Gerhart (1976)	U.S.: municipal employees	Conventional	1962-1968 (random sample)	Specifically deals with bargaining outcomes, examination of collective agreements, regression	Size of settlement	Negative
17. Gershenfeld (1976)	Jamaica	Conventional	1952-1972	Overview of Jamaican experience	Size of settlement	Mixed
18. Gilroy and Lipovac (1977)	U.S.: Iowa public servants	FOA by issue	1975-1976	Statistical analysis	Narcotic	Negative
19. Glasbeek (1976)	Canada	Conventional	Mid 1960-1974	Overview - Cdn. fed. public sector; Ont. hospitals; Ont. police	Narcotic	Mixed to generally negative
20. Grodin (1974) - not mentioned in paper	U.S.: Nevada public servants	Binding fact-finding	1972-1973	Case study, analysis of records and interviews	Narcotic, chilling	Negative, negative
21. Hepple (1976)	Great Britain	Conventional	1915-1959	Overview of British experience	Narcotic, size of settlement, industrial conflict and compliance, union power	Negative, negative, there was compliance, positive
22. Hines (1972)	Canada: Ontario hospitals	Conventional	1966-1970	Review of arbitration awards	Narcotic	Positive
23. Holden (1976)	U.S.: Massachusetts police and firefighters	FOA tp. w/fact finding	1974-1975	Case study	Narcotic	Negative
24. Howells (1972)	New Zealand	Conventional	1960-1970	National impact of arbitration on level of strike activity	Industrial conflict and compliance	There was compliance
25. Johnson and Pruitt (1972)	Laboratory	Conventional	-	Experimental, control groups, 2x2 design	Chilling	Negative
26. Johnson and Tullar (1972)	Laboratory	Conventional/ FOA	-	Experimental, control groups, 2x2 design	Face-saving	If high need to save face - positive; if low need to save face - negative
27. Kochan and Baderschneider (1978)	U.S.: New York Police and firefighters	Conventional	1968-1976	Regression and correlation analysis	Narcotic	Positive
28. Kochan and Wheeler (1975)	U.S.: municipal fire-fighters	Conventional	1972 C/A in effect	Cross sectional analysis, regression	Size of settlement	Negative

STUDY/OBSERVATION	JURISDICTION	FORM OF ARBITRATION	LONGITUDINAL DATA	NATURE OF THE STUDY	EFFECTS EXAMINED	RESULT
29. Kochan, et al (1977)	U.S.: New York Police and firefighters	Conventional	1968-1976	Regression and Correlation analysis	Chilling	Positive
30. Lansbury (1978)	Australia	Conventional	1971-1977	Review of historical experience, statistical analysis particularly last seven years	Simply descriptive	Simply descriptive
31. Lipsky and Barocci (1977)	U.S.: Massachusetts police and fire-fighters	FOA tp. w/fact finding	1974-1977	Statistical analysis	Narcotic	Negative
32. Loewenberg (1970) Loewenberg (1975) Loewenberg (1976)	U.S.: Pennsylvania police and fire-fighters	Conventional	1968-1974	Case study approach, some data generated through questionnaires	Narcotic, face-saving	Negative, negative
33. Loewenberg (1972)	U.S.: Minnesota hospitals	Conventional	1947-1971	Observation	Narcotic	Negative
34. McCarthy (1968)	Great Britain	Conventional	1951-1959	Review of historical experience	Size of settlement	Negative
35. McCormick (1976)	U.S.: New York City municipal employees	Conventional	1968-1975	Case study	Narcotic, face-saving	Negative, inconclusive
36. Morilanen and Mudie (1972)	U.S.: Michigan police and firefighters	Conventional	1970-1972	Statistical analysis	Size of settlement	Negative
37. Notz and Starke (1978)	Laboratory	Conventional/ FOA tp.	-	Experimental 2x3 design	Chilling	FOA - negative; Conventional - possible positive
38. Olson (1978)	U.S.: Wisconsin police and firefighters	FOA total package	1972-1977	Statistical analysis	Narcotic, chilling	Negative, negative
39. Ontario Department of Labour, Research Branch (1970)	Canada: Ontario hospitals	Conventional	1963-1970	Statistical review of the experience to date	Narcotic, habitual use, size of settlement, wage dispersion	Negative, negative, negative
40. Pruitt and Johnson (1970)	Laboratory	- (Mediation)	-	Experimental design	Face-saving	Positive
41. Johnston Report (1974)	Canada: Ontario hospitals	Conventional	1966-1973	Statistical analysis of wage level	Size of settlement	Inconclusive
42. Somers (1977)	U.S.: Massachusetts police and firefighters	FOA total package	1974-1976	Statistic analysis of two years experience	Chilling, narcotic	Inconclusive, inconclusive

STUDY/OBSERVATION	JURISDICTION	FORM OF ARBITRATION	LONGITUDINAL DATA	NATURE OF THE STUDY	EFFECTS EXAMINED	RESULT
43. Stern (1974) Stern (1975) Stern, et al (1975)	U.S.: Wisconsin police and firefighters U.S.: Wisc., Mich., Penn.	FOA total package FOA tp. and by issue	1968-1974	Indepth analysis including statistical methods, regression analysis	Narcotic, chilling, size of settlement, wage dispersion, face-saving, union power, union structure, industrial conflict and compliance	Negative, negative, negative, negative, negative, positive, positive, there was compliance
44. Stutz (1973)	U.S.: Minnesota hospitals	Conventional	1947-1972	Observation	Narcotic, industrial conflict and compliance	Negative, positive
45. Subbarao (1977) Subbarao (1979)	Canada: Federal Public Service	Conventional (choice)	1968-1975	Theoretical and empirical analysis of dispute resolution and negotiations	Size of settlement	Negative
46. Subbarao (1978) Subbarao (1979)	Laboratory	Conventional/ FOA (Four systems)	-	Experimental design, control groupings	Chilling	FOA total package - negative; FOA by issue - positive
47. Swimmer (1975) (1978)	Canada: University of Alberta Faculty	FOA by issue	1971-1974	Single case study over four wage rounds	Intertemporal compromise	Positive
48. Thompson and Cairnie (1973) Thompson and Cairnie (1975)	Canada: British Columbia teachers	Conventional	1960-1973	Statistical analysis of experience over 37 years	Narcotic, whipsawing industrial conflict and compliance	Negative, negative, there was compliance
49. Walker (1976)	Australia	Conventional	1901-1970	Overview of Australian experience	Size of settlement	Negative
50. Wheeler (1975) (1978)	U.S.: firefighters	Conventional and FOA	1972	Cross sectional; data by questionnaires	Chilling	Inconclusive
51. Whitney (1973) - not in paper	U.S.: Indianapolis municipal employees	FOA total package	1972	One set of negotiations as a case study	Industrial conflict and compliance	There was compliance

BIBLIOGRAPHY

Aaron, B., "National Emergency Disputes," *Labor Law Journal*, Vol. 22, No. 8, August 1971, pp. 461-474.

Ackerman, J. A., "The Impact of the Coal Strike of 1977-78," *Industrial and Labor Relations Review*, Vol. 32, No. 2, January 1979, pp. 175-188.

Anderson, A., "Lessons from Interest Arbitration in the Public Sector: The Experience of Four Jurisdictions," in *Arbitration - 1974*, Proceedings of the Twenty-Seventh Annual Meeting, National Academy of Arbitrators, April 1974, Washington, D.C.: Bureau of National Affairs, 1975, pp. 59-81.

Anderson, J. C., "Determinants of Bargaining Outcomes in the Federal Government of Canada," *Industrial and Labor Relations Review*, Vol. 32, No. 2, January 1979, pp. 224-241.

Anderson, J. C., "Evaluating the Impact of Compulsory Arbitration: What Can We Learn From Alternate Research Designs and Methodologies?," (A paper presented at the Thirty-ninth Annual Meeting of the Academy of Management, Atlanta, Georgia, August 7-11, 1979).

Anderson, J. C. and Kochan, T. A., "Impasse Procedures in the Canadian Federal Service: Effects on the Bargaining Process," *Industrial and Labor Relations Review*, Vol. 30, No. 3, April 1977, pp. 283-301.

Auld, D., *Wage Behavior and Wage Control in the Public Sector*, Ottawa: Economic Council of Canada, 1979. (mimeographed)

Auld, D., Christofides, L., Swidinsky, R., and Wilton, D., *The Determinants of Negotiated Wage Settlements in Canada (1966-1975): A Microeconometric Analysis*, Ottawa: Anti-Inflation Board, 1979.

Baderschneider, J., "The Impact of Collective Bargaining Laws Covering Police and Firefighters on Municipal Expenditures and Fiscal Strain," in *Industrial Relations Association Thirty-First Annual Proceedings*, 1978, pp. 162-164.

Barnes, L. W. C. S., and Kelly, L. A., *Interest Arbitration in the Federal Public Service of Canada*, Kingston: Industrial Relations Centre, Queen's University, Research Series, No. 31, 1975.

Beale, R. D., "The Australian Experience in Federal Sector Arbitration," *Industrial Relations*, Vol. 14, No. 3, October 1975, pp. 318-326.

Bernstein, I., *The Arbitration of Wages*, Berkeley and Los Angeles: The University of California Press, 1954.

Bezdek, R. H. and Ripley, D. W., "Compulsory Arbitration Versus Negotiations for Public Safety Employees: The Michigan Experience," *Journal of Collective Negotiations in the Public Sector*, Vol. 3, No. 2, Spring 1974, pp. 167-175.

Bigoness, W. J., "The Impact of Initial Bargaining Position and Alternative Modes of Third Party Intervention in Resolving Bargaining Impasses," *Organizational Behavior and Human Performance*, Vol. 17, No. 2, 1976, pp. 185-198.

Bornstein, T., "Interest Arbitration in Public Employment: An Arbitrator Views the Process," *Labor Law Journal*, Vol. 29, No. 2, February 1978, pp. 77-86.

Bowers, M. H., "Legislated Arbitration: Legality, Enforceability and Face-Saving," *Public Personnel Management*, Vol. 3, No. 4, July-August 1974, pp. 270-278.

Braun, A. R., "Compulsory Arbitration as a Form of Incomes Policy: The Australian Case," *International Monetary Fund Staff Papers*, Vol. 21, No. 1, March 1974, pp. 170-213.

Brown, D. J. M., *Interest Arbitration*, Ottawa: Queen's Printer, Task Force on Labour Relations, Study No. 18, 1968.

Chamberlain, N. W., *Collective Bargaining*, New York: McGraw-Hill Book Company, 1965.

Cohen, S., "Does Public Employee Unionism Diminish Democracy?," *Industrial and Labor Relations Review*, Vol. 32, No. 2, January 1979, pp. 189-195.

Cousineau, J. M. and Lacroix, R., *Wage Determination in Major Collective Agreements in the Private and Public Sector*, Ottawa: Economic Council of Canada, 1977.

Cullen, D., "Emergency Boards Under the Railway Labor Act," in C. Rehmus (ed.), *The Railway Labor Act at Fifty: Collective Bargaining in the Railroad and Airlines Industries*, Washington, D.C.: G.P.O., 1977.

Denise, M. L., "The Effect of Arbitration on Labour-Management Relations," *Arbitration Journal*, Vol. 7, No. 2, 1952, p. 110.

Dunham, R. E., "Interest Arbitration in Non-Federal Public Employment," *Arbitration Journal*, Vol. 31, No. 1, March 1976, pp. 45-57.

Dunlap, K., "Mediation-Arbitration: Reactions from Rank and File," *Monthly Labor Review*, Vol. 96, No. 9, September 1973, pp. 65-66.

Dworkin, J. B., "The Impact of Final-Offer Interest Arbitration on Bargaining: The Case of Major League Baseball," in *Industrial Relations Research Association Twenty-Ninth Annual Proceedings*, 1976, pp. 161-169.

Dworkin, J. B., "Final Position Arbitration and Intertemporal Compromise," *Relations Industrielles*, Vol. 32, No. 2, 1977, pp. 250-260.

Dworkin, J. B., "Intertemporal Compromise Revisited: A Reply," *Relations Industrielles*, Vol. 33, No. 2, 1978, pp. 292-295.

Feuille, P., "Analyzing Compulsory Arbitration Experiences: The Role of Personal Preferences - Comment," *Industrial and Labor Relations Review*, Vol. 28, No. 3, April 1975, pp. 432-435.

Feuille, P., "Final Offer Arbitration and the Chilling Effect," *Industrial Relations*, Vol. 14, No. 3, October 1975, pp. 302-310.

Feuille, P., "Public Sector Impasses: Symposium Introduction," *Industrial Relations*, Vol. 16, No. 3, October 1977, pp. 264-272.

Feuille, P., "Final Offer Arbitration and Negotiating Incentives," *Arbitration Journal*, Vol. 32, No. 3, 1977, pp. 203-220.

Feuille, P., "Reply - Public Sector Impasses: Symposium Introduction," *Industrial Relations*, Vol. 17, No. 2, May 1978, pp. 255-257.

Feuille, P., *Selected Benefits and Costs of Compulsory Arbitration*, mimeographed, forthcoming, 1979.

Feuille, P. and Dworkin, J. B., "Final Offer Arbitration and Intertemporal Compromise, or It's My Turn to Win," in *Industrial Relations Research Association Thirty-First Annual Proceedings*, 1978, pp. 87-95.

Finkleman, J., *Employer-Employee Relations in the Public Service of Canada - Proposals for Legislative Change*, Vol. I, II, and III, Ottawa: Public Service Staff Relations Board, 1974.

Fisher, E. G. and Starek, H., "Police Bargaining in Canada: Private Sector Bargaining, Compulsory Arbitration, and Mediation-Arbitration in Vancouver," *Canadian Police College Journal*, Vol. 2, No. 1, 1978, pp. 133-161.

Flemming, R. W., "Public-Employee Bargaining: Problems and Prospects," *Industrial Relations Research Association Thirty-First Annual Proceedings*, 1978, pp. 14-21.

Fox, M. J. and McDonald, L. B., "The Need for Compulsory Arbitration," *Journal of Collective Negotiations in the Public Sector*, Vol. 3, No. 4, Fall 1974, pp. 327-337.

Gallagher, D. G., "Interest Arbitration Under the Iowa Public Employment Relations Act," *Arbitration Journal*, Vol. 33, No. 3, 1978, p. 30.

Gallagher, D. G. and Chaubey, M., "A Statistical Analysis of Wage Position, Modification and Item Reduction Under the Iowa Statutory Impasse Procedure," The University of Iowa, College of Business Administration, Working Paper Series No. 79-2, February 1979 (mimeographed).

Gallagher, D. G. and Pegnetter, R., "Impasse Resolution Under the Iowa Multistep Procedure," *Industrial and Labor Relations Review*, Vol. 32, No. 3, April 1979, pp. 327-338.

Geare, A. J., "Final Offer Arbitration: A Critical Examination of the Theory," *Journal of Industrial Relations*, Vol. 20, No. 4, December 1978, pp. 373-385.

Gerhart, P., "Determinants of Bargaining Outcomes in Local Government Labor Relations," *Industrial and Labor Relations Review*, Vol. 29, No. 3, April 1976, pp. 331-351.

Gershenfeld, W. J., "Compulsory Arbitration in Jamaica," in J. J. Loewenberg et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976, pp. 117-140.

Gilroy, T. P. and Lipovac, J. A., "Impasse Procedure Utilization: Year One Under the Iowa Statute," *Journal of Collective Negotiations in the Public Sector*, Vol. 6, No. 3, 1977, pp. 181-191.

Gilroy, T. P. and Sinicropi, A. V., "Impasse Resolution in Public Employment: A Current Assessment," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 496-511.

Glasbeek, H. J., "Compulsory Arbitration in Canada," in J. J. Loewenberg et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976, pp. 45-81.

Grodin, J. R., "Either-or Arbitration for Public Employee Disputes," *Industrial Relations*, Vol. 11, No. 2, May 1972, pp. 260-266.

Grodin, J. R., "Arbitration of Public Sector Labor Disputes: The Nevada Experiment," *Industrial and Labor Relations Review*, Vol. 28, No. 1, October 1974, pp. 89-102.

Grunfeld, C., "Australian Compulsory Arbitration: Appearance and Reality," *British Journal of Industrial Relations*, Vol. 9, No. 3, 1971, pp. 330-352.

Gunderson, M. (ed.), *Collective Bargaining in the Essential and Public Service Sectors*, Toronto: University of Toronto Press, 1975.

Haughton, R. W., "Some Successful Uses of 'Interest' Arbitration," *Monthly Labor Review*, Vol. 96, No. 9, September 1973, pp. 60-62.

Hepple, B. A., "Compulsory Arbitration in Great Britain," in J. J. Loewenberg et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976, pp. 83-115.

Hines, R. J., "Mandatory Contract Arbitration - Is It a Viable Process?," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 533-544.

Holden, L. T., Jr., "Final Offer Arbitration in Massachusetts: One Year Later," *Arbitration Journal*, Vol. 31, No. 1, March 1976, pp. 26-35.

Holly, J. F. and Hall, G. A., "Dispelling the Myths of Wage Arbitration," *Labor Law Journal*, Vol. 28, No. 6, June 1977, pp. 344-354.

Horton, R. D., "Arbitration, Arbitrators, and the Public Interest," *Industrial and Labor Relations Review*, Vol. 28, No. 4, July 1975, pp. 497-507.

Horton, R. D., "Arbitration, Arbitrators, and the Public Interest - Reply," *Industrial and Labor Relations Review*, Vol. 31, No. 1, October 1977, pp. 76-77.

Horvitz, W., "What's Happening in Collective Bargaining," *Industrial Relations Research Association Thirty-First Annual Proceedings*, 1978, pp. 453-464.

Howells, J. M., "Causes and Frequency of Strikes in New Zealand," *Industrial and Labor Relations Review*, Vol. 25, No. 4, July 1972, pp. 524-532.

Howlett, R. G., "Ohio Conference on Labor Relations Law," *Labor Relations Yearbook*, Washington, D.C.: Bureau of National Affairs, 1972, p. 117.

Isaac, J. E., *Compulsory Arbitration in Australia*, Ottawa: Queen's Printer, Task Force on Labour Relations, Study No. 4, 1968, 84 pp.

Jamieson, S., *Industrial Relations in Canada*, Toronto: The Macmillan Company of Canada Ltd., 1975.

Johnson, D. F. and Pruitt, D. G., "Pre-intervention Effects of Mediation vs. Arbitration," *Journal of Applied Psychology*, Vol. 56, No. 1, 1972, pp. 1-10.

Johnson, D. F. and Tullar, W. L., "Style of Third Party Intervention, Face Saving and Bargaining Behavior," *Journal of Experimental Social Psychology*, Vol. 8, No. 4, 1972, pp. 319-330.

Kagel, S., "Combining Mediation and Arbitration," *Monthly Labor Review*, Vol. 96, No. 9, September 1973, pp. 62-63.

Kaufman, B. E., "The Propensity to Strike in American Manufacturing," *Industrial Relations Research Association Thirtieth Annual Proceedings*, 1977, pp. 419-426.

Kelly, L. A., *Settlement Methods in Ontario Collective Bargaining 1970-73*, Kingston: Industrial Relations Centre, Queen's University, 1974, 12 pp.

Kheel, T. W., "Kheel and Union Leaders Object to Curbs on Public Worker Strikes," *Government Relations Report*, Report No. 444, Washington, D.C.: Bureau of National Affairs, 1972, p. 14.

Kochan, T.A. and Baderschneider, J., "Dependence on Impasse Procedures: Police and Firefighters in New York State," *Industrial and Labor Relations Review*, Vol. 31, No. 4, July 1978, pp. 431-449.

Kochan, T. A. and Wheeler, H., "Municipal Collective Bargaining: A Model and Analysis of Bargaining Outcomes," *Industrial and Labor Relations Review*, Vol. 29, No. 1, October 1975, pp. 46-66.

Kochan, T. A., et al., *An Evaluation of Impasse Procedures for Police and Firefighters in New York State*, Ithaca, N.Y.: New York State School of Industrial and Labor Relations, Cornell University, 1977.

Krislov, J., "Arbitration, Arbitrators, and the Public Interest - Comment," *Industrial and Labor Relations Review*, Vol. 31, No. 1, October 1977, pp. 71-75.

Lansbury, R. D., "The Return to Arbitration: Recent Trends in Dispute Settlement and Wages Policy in Australia," *International Labour Review*, Vol. 117, No. 5, September-October 1978, pp. 611-623.

LaTour, S., et al., "Some Determinants of Preferences for Modes of Conflict Resolution," *Journal of Conflict Resolution*, Vol. 20, No. 2, June 1976, pp. 319-351.

Lewin, D., Feuille, P., and Kochan, T., *Public Sector Labor Relations Analysis and Readings*, Glen Ridge, N.J.: Thomas Horton and Daughters, 1977.

Lipsky, D. B. and Barocci, T. A., "Final-Offer Arbitration and Public Safety Employees: The Massachusetts Experience," *Industrial Relations Research Association Proceedings of the Thirtieth Annual Meeting*, 1978, pp. 67-75.

Lipsky, D. G. and Drotning, J. E., "The Relation Between Teacher Salaries and the Use of Impasse Procedures Under New York's Taylor Law: 1968-72," *Journal of Collective Negotiation in the Public Sector*, Vol. 6, No. 3, 1977, pp. 229-244.

Loewenberg, J. J., "Compulsory Arbitration for Police and Firefighters in Pennsylvania for 1968," *Industrial and Labor Relations Review*, Vol. 23, No. 3, April 1970, pp. 367-379.

Loewenberg, J. J., "Compulsory Arbitration and the Arbitrator," *Arbitration Journal*, Vol. 25, No. 4, 1970, pp. 248-260.

Loewenberg, J. J., "What the Private Sector Can Learn From the Public Sector in Interest Arbitration: The Pennsylvania Experience," *Arbitration - 1974*, Proceedings of the Twenty-Seventh Annual Meeting, National Academy of Arbitrators, Washington, D.C.: B.N.A. Books, 1975, pp. 69-77.

Loewenberg, J. J., "The Effect of Compulsory Arbitration on Collective Negotiations," *Journal of Collective Negotiations in the Public Sector*, Vol. 1, No. 2, May 1972, pp. 177-190.

Loewenberg, J. J., et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976.

Loewenberg, J. J., "Compulsory Arbitration in the United States," in J. J. Loewenberg et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976, pp. 141-171.

Long, G. and Feuille, P., "Final-Offer Arbitration: Sudden Death in Eugene," *Industrial and Labor Relations Review*, Vol. 27, No. 2, January 1974, pp. 186-203.

McAvoy, J. Z., "Binding Arbitration of Contract Terms: A New Approach to the Resolution of Disputes in the Public Sector," *Columbia Law Review*, Vol. 72, No. 7, November 1972, pp. 1192-1213.

McCarthy, W. E. J., "Compulsory Arbitration in Britain: The Work of the Industrial Disputes Tribunal," *Three Studies in Collective Bargaining*, London: Royal Commission on Trade Unions and Employers' Association, Research Paper No. 8, 1968, pp. 31-44.

McCormick, M., "A Functional Analysis of Interest Arbitration in New York City Municipal Government 1968-1975," *Industrial Relations Research Association Twenty-Ninth Annual Proceedings*, 1976, pp. 249-257.

Morilanen, P. M. and Mudie, K. N., *Compulsory Arbitration in Michigan*, Ann Arbor, Michigan: University of Michigan, 1972.

Notz, W. W. and Starke, F. A., "Final-Offer versus Conventional Arbitration as Means of Conflict Management," *Administrative Science Quarterly*, Vol. 23, June 1978, pp. 189-203.

Olson, C. A., "Final-Offer Arbitration in Wisconsin After Five Years," *Industrial Relations Research Association Thirty-First Annual Proceedings*, 1978, pp. 111-124.

Ontario Department of Labour, Research Branch, *The Impact of the Ontario Hospital Labour Disputes Arbitration Act 1965: A Statistical Analysis*, November 1970, 62 pp.

Phelps, O. W., "Compulsory Arbitration: Some Perspectives," *Industrial and Labor Relations Review*, Vol. 18, No. 1, October 1964, pp. 81-91.

Polland, H., "Mediation-Arbitration: A Trade Union View," *Monthly Labor Review*, Vol. 96, No. 9, September 1973, pp. 63-65.

Ponak, A., "Public Sector Dispute Resolution: An American Twist to a Canadian Approach," *Relations Industrielles*, Vol. 31, No. 4, 1976, pp. 537-551.

Pruitt, D. G. and Johnson, D. F., "Mediation as an Aid to Face Saving in Negotiations," *Journal of Personality and Social Psychology*, Vol. 14, No. 3, 1970, pp. 239-246.

Rehmus, C. M., "Is a 'Final Offer' Ever Final?," *Arbitration - 1974*, Proceedings of the Twenty-Seventh Annual Meeting, National Academy of Arbitrators, pp. 77-81.

The Report of the Hospital Inquiry Commission (Johnston Report), *The Impact of the Ontario Hospital Labour Disputes Arbitration Act, 1965*, Toronto: Ontario Ministry of Labour, November 8, 1974, 61 pp.

The Report of the Inquiry Commission on Wider-Based Collective Bargaining (Bairstow Report), Ottawa: Labour Canada, December 1978.

The Report of the Task Force on Labour Relations (Woods Report), *Canadian Industrial Relations*, Ottawa: Privy Council Office, 1968.

Ross, D. B., "The Arbitration of Public Employee Wage Disputes," *Industrial and Labor Relations Review*, Vol. 23, No. 1, Ottawa 1969, pp. 3-14.

Schatter, A., "The Effects of Precedent in Arbitration," *Journal of Conflict Resolution*, Vol. 22, No. 4, 1978, pp. 659-678.

Scully, G. W., "Binding Salary Arbitration in Major League Baseball," *American Behavioral Scientist*, Vol. 21, No. 3, January-February 1978, pp. 431-450.

Seitz, P., "Footnotes to Baseball Salary Arbitration," *Arbitration Journal*, Vol. 29, No. 2, June 1974, pp. 98-103.

Somers, P. C., "An Evaluation of Final Offer Arbitration in Massachusetts," *Journal of Collective Negotiations in the Public Sector*, Vol. 6, No. 3, 1977, pp. 193-225.

Stern, J. L., "Final Offer Arbitration - Initial Experience in Wisconsin," *Monthly Labour Review*, Vol. 97, No. 9, September 1974, pp. 39-43.

Stern, J. L., "Private Sector Implications of the Initial Wisconsin Final Offer Arbitration Experience," *Arbitration - 1974*, Proceedings of the Twenty-Seventh Annual Meeting, National Academy of Arbitrators, Washington, D.C.: B.N.A. Books, 1975, pp. 82-92.

Stern, J. L., et al., *Final Offer Arbitration - The Effects on Public Safety Employee Bargaining*, Lexington, Mass.: D. C. Heath and Company, 1975.

Stevens, C. M., "Is Compulsory Arbitration Compatible With Bargaining?," *Industrial Relations*, Vol. 5, No. 2, February 1966, pp. 38-52.

Stutz, R., "The Arbitrator's Role," in J. Lefkowitz et al., (eds.), *The Public Interest and the Role of the Neutral in Dispute Settlement*, Proceedings of the Inaugural Convention of the Society of Professionals in Dispute Resolution, 1973.

Subbarao, A. V., "The Impact of the Two Dispute Resolution Processes in Negotiations," *Relations Industrielles*, Vol. 32, No. 2, 1977, pp. 216-233.

Subbarao, A. V., "Final-Offer-Selection vs. Last-Offer-By-Issue Systems of Arbitration," *Relations Industrielles*, Vol. 33, No. 1, 1978, pp. 38-56.

Subbarao, A. V., "The Impact of Binding Interest Arbitration on Negotiation and Process Outcome," *Journal of Conflict Resolution*, Vol. 22, No. 1, March 1979, pp. 79-103.

Subbarao, A. V., "Impasse Choice and Wages in the Canadian Federal Service," *Industrial Relations*, Vol. 18, No. 2, Spring 1979, pp. 233-236.

Swan, K. P., *The Search for Meaningful Criteria*, Kingston: Industrial Relations Centre, Queen's University, 1978.

Swimmer, G., "Final Position Arbitration and Intertemporal Compromise: The University of Alberta Compromise," *Relations Industrielles*, Vol. 30, No. 3, July 1975, pp. 533-536.

Swimmer, G., "Final Offer Arbitration and Intertemporal Compromise - A Comment," *Relations Industrielles*, Vol. 33, No. 2, 1978, pp. 290-292.

Thompson, M. and Cairnie, J., "Compulsory Arbitration: The Case of British Columbia Teachers," *Industrial and Labor Relations Review*, Vol. 27, No. 1, October 1973, pp. 3-17.

Thompson, M. and Cairnie, J., "Analyzing Compulsory Arbitration Experiences: The Role of Personal Preferences - Reply," *Industrial and Labor Relations Review*, Vol. 28, No. 3, April 1975, pp. 435-438.

Tsong, P. S. W., "Compulsory Arbitration in British Columbia," *Industrial Relations*, Vol. 11, No. 1, February 1972, pp. 115-117.

Usery, W. J., Jr., "A More Activist Approach by Mediators," *Monthly Review*, Vol. 96, No. 9, September 1973, p. 59.

Walker, K. F., "Compulsory Arbitration in Australia," in J. J. Loewenberg et al., *Compulsory Arbitration - An International Comparison*, Lexington, Mass.: D. C. Heath and Company, 1976, pp. 1-43.

Wheeler, H. N., "Compulsory Arbitration: A Narcotic Effect?," *Industrial Relations*, Vol. 14, No. 1, February 1975, pp. 117-120.

Wheeler, H. N., "Closed-Offer: Alternative to Final Offer Selection," *Industrial Relations*, Vol. 16, No. 3, October 1977, pp. 298-305.

Wheeler, H. N., "How Compulsory Arbitration Affects Compromise Activity," *Industrial Relations*, Vol. 17, No. 1, February 1978, pp. 80-84.

Wheeler, H. N., "Comment - Public Sector Impasses: Symposium Introduction," *Industrial Relations*, Vol. 17, No. 2, May 1978, pp. 252-254.

Wheeler, H. N. and Owen, F., "Impasse Resolution Preferences of Fire Fighters and Municipal Negotiations," *Journal of Collective Negotiations in the Public Sector*, Vol. 5, No. 3, 1976, pp. 215-223.

Whitney, F., "Final Offer Arbitration: The Indianapolis Experience," *Monthly Labor Review*, Vol. 96, No. 5, May 1973, pp. 20-25.

Wirtz, W. W., *Labor and the Public Interest*, New York: Harper and Row, 1964.

Woods, H. D., "Shadows Over Arbitration," *Relations Industrielles*, Vol. 33, No. 4, 1978, pp. 685-697.

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