INTRODUCTION

Compensating workers displaced by technological change has been the subject of increasing attention. In Canada this has been attested to by three widely quoted Reports commissioned by the Federal Government within the space of two years. In addition the entire body of labour legislation at the federal level in Canada is presently under review and it is almost certain that some legislative action will be taken with respect to technological displacement assistance. Strictly as a speculative suggestion there may be good reason why the Federal Government is becoming more interested in adjusting workers to technological change. This speculation is based on the fact that much worker displacement may unwittingly be fostered by public policy in the first place. This assertion is not documented extensively here, but reference is made to the possibilities that collective public action may unwittingly lead to displacement.

Is it not reasonable to expect that government assistance to private research and development will lead to technological changes that displace labour? Governments provide tax breaks for research and development, directly underwrite private research and development, and...

ROSS, D. P., Assistant Professor, Department of Economics, University of Windsor.

* I would like to acknowledge the generous amount of time that Alton Craig, University of Ottawa, has given me in discussion, comment, criticism in the preparation of this study. I am also indebted to Félix Quinet and Georges Saunders of the Federal Government for much friendly discussion. Much of the research was carried out while the author was engaged with the Canada Department of Labour during the summer of 1969. However, the Department is in no way implicated with the results.

operate institutions such as the National Research Council that work with private enterprise to apply basic knowledge to stimulate technological innovation.\(^2\)

However, probably a more important stimulant to technological change is produced by the whole thrust or tone of a government's economic policy, with its emphasis on economic growth. Below are two illustrative passages from a speech delivered recently by the Minister of Labour in Canada:

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\ldots I \text{ have the responsibility, within Federal Jurisdiction, to maintain labour peace and to help increase the productivity of our working force. I mean real productivity, greater output per man per hour.}
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\[
\ldots \text{Technological change is, and must be a basic factor in the life of any developing industrial society. Economic growth can only occur when innovation makes it possible to employ a smaller proportion of the labour force in producing the goods and services... (emphasis added).}
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Similar passages can frequently be found in the speeches of most other Cabinet Ministers as well and Government commitment to economic growth is too obvious to require further documentation here. But just as surely as a collective commitment to growth fosters technological change, it indirectly fosters displacement and hence society may feel a responsibility for compensating those who are indirectly harmed, ostensibly by collective decisions aimed directly at stimulating economic growth.

Because public policy encourages productivity advances and technological innovation, the government assures economic progress as measured in the size of G.N.P.; but, what is its role with respect to social progress, perhaps more closely approximately by the distribution of G.N.P.? If government is committed to stimulating the gains from technological change should it not then be partially responsible for the losses?

Providing Assistance to Displaced Workers

The Private Sector's Role

Of course aiding displaced workers need not, and is not left entirely up to the public sector. According to a survey carried out by the author in 1967, 32 percent of the workers, or 28 percent of the 477 agreements surveyed contained an explicit reference to a technological change adjustment provision.\(^3\) In a study of manufacturing workers, another study concluded that 68 percent of the workers, or 31 percent of the 1,078

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\(^2\) For example in fiscal year 1967-68, the Federal Government itself spent $394.5 million on research and development; and the rate of growth of this expenditure has been averaging around 25 percent annually. Canada, Dominion Bureau of Statistics, Canada Year Book, 1969 (Ottawa : Queen's Printer), p. 386.

\(^3\) Canada Department of Labour, Response To Technological Change, 1967.
agreements surveyed clearly expressed a technological change clause\textsuperscript{4}. Finally, a smaller study of 120 collective agreements revealed that about 17 percent of the total contracts surveyed made some explicit reference to technological change\textsuperscript{5}. It should be emphasized that all three studies required an explicit, or clearly expressed reference to the problem of technological change before a provision qualified for the survey. Therefore, because of the existence of implicit provisions that would in fact give workers some assistance in the event of technological change, the above figures understate the true amount of protection existing in privately negotiated collective agreements.

The Public Sector's Role

Generally, while western governments are willing to permit the private sector to work out its own distribution of income and terms of work occasionally it feels that the parties are not fulfilling their roles adequately and consequently it intervenes in the market. In the past, governments have intervened to impose minimum standard applying to such areas as hours, wages, vacations, and safety conditions.

On the other hand, governments need not intervene directly in the private sector by setting standards but rather can let the results of private bargaining and the income distribution that this implies stand; but then it can alter this pattern, for example through the progressive tax system, through unemployment insurance, or through family allowance cheques. Finally, on other occasions governments may change the rules of the private bargaining game to increase the likelihood that the parties will reach a desirable outcome, i.e. compulsory conciliation, extension of picketing, right to strike, and contract reopeners. Of course all three government approaches can be, and are, applied simultaneously.

In summary, the three board approaches are:

1. Change relevant government statutes (for federal industries in Canada this is the Industrial Relations Disputes Investigation Act) in the hope that the results of a changed bargaining process may approach the expectations held by the public. Adoption of this approach implies faith in the present private party system and indicates that only a little «fine tuning» is necessary to obtain acceptable displacement assistance. Justice Freedman has recommended postponing major changes until the open period of the agreement\textsuperscript{6}. The Task Force recommends that the parties to collective bargaining be allowed, if they choose, to open the agreement, but only on the displacement assistance issue whenever technological change is imminent\textsuperscript{7}.


\textsuperscript{5} Nova Scotia, Department of Labour, \textit{Technological Change Provisions in the Manufacturing Industry in Nova Scotia}, No date.

\textsuperscript{6} Freedman Report, \textit{op. cit.}, Chap. 9.

\textsuperscript{7} Task Force Report, \textit{op. cit.}, pp. 193-196.
2. Authorities may feel that the collective bargaining approach is sufficient for those workers covered, but because it does not encompass the active work force it becomes desirable to intervene directly in the market and establish standard and minimum assistance provisions for all. Along these lines, the Task Force has recommended a legislated minimum standard of six months advance notice of change. Legislation of minimum severance pay or private manpower programs would be other possibilities.

3. Authorities may decide that the collective bargaining process is neither extensive enough, nor sufficient enough to protect even those workers covered by agreements. Therefore, governments may choose to provide assistance themselves, not by directly intervening in the private market and setting minimum conditions of work, but rather by offering compensation after the private sector has made all its decisions. In these cases, compensation can be provided either through cash payments such as additional unemployment benefits or through services such as retraining and relocation. The Task Force has recommended the manpower services approach.

**ASSISTANCE THROUGH CHANGING THE RULES OF THE GAME**

This section deals primarily with the Task Force recommendation to permit reopening of the collective agreement to allow only for negotiation and strike over technological change; but deference to the Freedman proposal of postponing change is also made. The Comments are centered around nine points.

(i) There is nothing at present to prohibit unions from including in agreement, programs for adjusting workers to technological displacement; a union need not wait for a change to occur before it becomes concerned about adjusting its workers to it. For example, unions clearly look ahead when they are negotiating pension plans. A pension plan does not necessarily or likely come into effect the year or even the year following its negotiation; but the frequency of pension plans seems to indicate that unions do not necessarily have great difficulty in obtaining worker support for negotiating provisions that apply only in the future.

Can we not partially apply this analogy with respect to the needed foresight for displacement provisions? Perhaps no change is planned, but if change does not subsequently occur, the negotiated provisions lie dormant in the agreement at little or no cost to either party. Furthermore, in the absence of explicit prior knowledge of a company’s plans, I suspect a union by proposing and pushing for adjustment provisions would soon know whether a firm is planning technological changes just by the strength of its opposition to such proposals.

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8 Ibid.
9 Ibid.
However, one must recognize the counter-argument often raised that seemingly jeopardizes the success of prior negotiation of adjustment provisions during the open contract period. This argument states that workers aren’t overly concerned about something that is not imminent, and hence regardless of how far-sighted the union is it will be unable to rally much support for displacement assistance. This appears to be a fairly substantial argument; but the above analogy with pension plans, plus the fact about 30 percent of current agreements do contain adjustment provisions places the validity of this counter-argument in some doubt. In a later section it is questioned whether adjustment to change is amenable to collective bargaining under any circumstances.

However, should one accept the above counter-argument to prior negotiation then he quite logically concludes that workers should have the right to strike at the time the technological change is announced, since at this time the workers are most “up” for a strike. The real purpose of the reopener of course is simply to give the union an increase in bargaining power. In effect it is believed that without this reopener provision unions are unlikely to obtain displacement assistance, through the collective bargaining process, that measures up to certain expected social standards; but this belief is only implied and not openly admitted, and in fact may not even be consciously recognized.

By attempting to influence the outcome of private bargaining it is being admitted by the officials concerned that adjustment to technological change is an important term of work that merits special consideration. Therefore, it is too important to leave entirely to the regular open collective bargaining period such as happens with other issues; consequently, we should change the rules for negotiating displacement assistance. However, we can legitimately raise the question that if it is such an important issue why not openly legislate minimum standards, so that all members of the work force receive displacement assistance? Would it not truly have been strange if minimum wage legislation had applied only to those workers covered by collective agreements? If it is with a concern for minimum social standards that we wish to change the bargaining process by applying technological change and/or postponement clauses, then social responsibility and conscience should dictate that these standards be applied to all; not just those favoured with the rights of collective bargaining. On the other hand, if it is only intended to help those covered by collective agreements then the above argument cannot be employed to reject reopener and postponement clauses.

(ii) A general argument is presented now that is intended to at least call into question the justification and value of a reopener for achieving results even when it is considered as an approach for only assisting those covered by collective agreements.

The commonly accepted of collective bargaining is that during the open period both parties have to forecast future conditions and trade-off issues until they are satisfied; but once having achieved this, what we may call “stable equilibrium”, the agreement must be adhered to.
To allow either party to alter one of the items of agreement at a future that, when its bargaining power has been allowed to increase, seems to permit an element of instability and extreme uncertainty to enter into the bargaining process. Let me illustrate through a hypothetical situation.

Assume that a firm and union are negotiating during the regular open period and that the union does not propose displacement assistance but demands a wage of $ (x) per hour. On this basis let us assume that the firm concedes the $ (x) per hour after reviewing its economic position, including any possible technological changes, and the probability and success of a union strike.

Now let us assume a slightly different negotiation path between these same two parties. The union opens negotiations requesting $ (x) per hour plus a displacement assistance provision. The firm on the basis of the same calculation as before, decides it cannot offer both; it counters with $ (x — y) per hour and an assistance provision. In this case the firm has calculated the likely cost of the assistance provision $ (y) based on the likelihood of a technological change, and then offered a residual wage rate.

Obviously, the wage in the second example will be lower than in the first if (y) does involve any expected real cost. If we introduce many more items into the bargaining package the trading-off process becomes more complex, but the underlying principle remains the same, and in either example what finally emerges is a "stable equilibrium" agreed to by both parties. Under collective bargaining and the right to strike both parties have been pushed to their limits.

But now let us change the initial rules of the bargaining game. What would happen in the circumstances of the first example if the union could at some later date open negotiations on displacement assistance only. In effect, the company may be trapped. If it is now forced into granting an assistance provision equal to $ (y) then shouldn't it also be able to adjust the wage package and/or other benefits down to the total $ (x — y) per hour level also, as in the case of the second example? If not, the firm may be placed in an awkward position: it has offered wages and benefits with the understanding that there is no assistance provision; but now such a provision is introduced which if granted may act a hardship of the firm. Whether it does or not depends on how well management calculated the future costs and benefits of technological change during negotiations in the open period.

Of course under the reopening provision the firm need not grant any displacement assistance since the union only has the right to strike and it may not be successful in achieving its demands. Assuming the firm was offering as much as it could initially when it granted $ (x) per hour, the firm will now resist any assistance provision; but, is this an acceptable result as far as adjusting to technological change goes, i.e.,
is the higher wage and benefit level previously negotiated for those remaining in the firm of any value to the displaced workers? Obviously not, and hence the value (effectiveness) of reopeners may be questioned in general.

The fallacy of reopening for one item is found in a basic principle of collective bargaining; this is that the union and company not only have to calculate the given total sum that they are limited to gaining and giving respectively, but they must also break down this total among the many issues presented at the bargaining table. It is apparent that this trading-off of issues has to be done simultaneously. If bargaining is not done simultaneously on all issues then while both sides know the acceptable total sum, they will be at a loss to know what proportion of the total to allot to any one issue. For example, how can management settle on the hourly wage issue in January when it does not know what the union will demand in severance pay in December? Consequently, this type of behaviour could lead to management holding back on other issues in order to provide itself with a “buffer zone” against the increased uncertainty. As a result, management may be willing to concede less on the other issues in bargaining, thus rendering bargaining less useful to the workers even for traditional issues.

One can appreciate how this uncertainty will be increased, and the reluctance to concede on all issues even greater, when the possibility exists that unions can block change altogether. Under these circumstances, and as the pace of technological change increases, the company because it lacks control over its future production plans will find it increasingly difficult to enter into binding agreements at any time.

Of course mature and co-operating parties will adapt to the changed bargaining process by agreeing during regular negotiations on the total amount to be set aside for displacement assistance when it occurs. In mature bargaining relationship managements will be frank enough to admit any changes they plan during the proposed contract period. The right to strike under the reopener provision then acts only as a guarantee that a management will in fact provide the sum it has agreed to; although perhaps there may be some disagreement as to the methods of distributing the sum.

In fact one of the major advantages of the reopener clause may come about indirectly since the uncertainty it creates may force a more honest and co-operative approach to the problem, so that increasingly the parties will agree to substantive assistance provisions being explicitly written into the agreement.

With respect to this overall issue of negotiating the introduction of technological change, or adjustment assistance, I think the Task Force proposal criticized above is probably less sound than the Freedman proposal for postponing major technological changes until the open period. At least the Freedman proposal has the merit of providing simultaneous bargaining on all issues.
(iii) As I understand the Task Force Report the union will have to obtain in prior negotiation the right to reopen and strike over technological change! This seems like a serious lapse in logic. If the union is unable to obtain substantive assistance provisions written into the agreement during the open period — because change is not imminent and the workers are not "up" for this issue — how can we expect the union to mobilize the workers' support to achieve the right to reopen or strike at a future date? If it is difficult to mobilize support for substantive assistance provisions will it not be equally difficult to mobilize support for a reopener provision?

Consequently, if the right to reopen and strike over displacement assistance is to become useful public policy then the method employed by the United States would seem to be superior: give this right through legislation but then let the parties opt out, rather than the Task Force proposal of opting in.

(iv) At present, explicit technological change provisions probably cover less than 50 percent of the Canadian unionized labour force. Even if all agreements were to contain technological change provisions of some kind, only about one-third of the non-agricultural work force would be covered11. This is not an indictment of collective bargaining but rather the reality of the extent of unionization in Canada. If it is desired to extend protection to the other two-thirds of the labour force by changing the rules of collective bargaining, unionization has to be increased first.

(v) There is no guarantee that reopener, and negotiated provisions will provide any minimum protection nor is there any guarantee that all workers in the bargaining unit will be protected. Technological change adjustment provisions often exclude workers, usually on the basis of lack of seniority; but is this to say that low seniority workers are not harmed by technological change? Therefore, there is no guarantee that provisions will be effective, i.e. that adjustment assistance will be somewhat commensurate with the worker's actual losses.

(vi) There is no guarantee that the negotiated technological change provisions will strive to be efficient. Often retraining may be the most efficient adjustment procedure available for many of the workers, but the union may prefer feather-bedding while the company may prefer severance pay. Therefore, the cost to the economy of displacement assistance may be much greater than it would be if the Government regulated displacement assistance.

(vii) It is quite conceivable that displacement assistance is not an issue well suited to the process of collective bargaining. The reason

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10 Ibid.

this may be is that adjustment provisions unlike other provisions such as wages, vacations, welfare plans, hours of work, are not likely or often to be applied to all of a firm's work force since they apply only to those displaced. The majority of workers not fearing personal displacement may be loathe to trade off hourly wages or other benefits for assistance to a fringe of displaced workers who they will likely never see again. Consequently, even if bargaining for adjustment assistance occurs simultaneously with the change itself as a result of a reopener provision, unless it affects the majority of the workers, or a large vocal minority there is not likely to be strong support for displacement assistance within the union.

(viii) The Task Force refers to experience in the United States with regard to contract reopeners. In that country there is nothing in the law to preclude the parties from adopting strike and lock-out procedures to settle any issue. But, in fact "well over 90 percent of collective agreements in that country contained negotiated no-strike, no lock-out and grievance arbitration clauses".

My observation on this is, therefore, why bother giving the right in law if in fact it is seldom going to be practised? Can't we perhaps infer from this experience in the United States that this particular change in the rules of the game is not that sought after and consequently may not be of much use in providing displacement assistance?

(ix) Finally, it should be observed that as the result of technological change not all firms receive excess profit which automatically becomes a fund available for assistance payments. Because of the competitive market process much of any cost saving due to technological change may be passed on to the consumer in lower real prices; unfortunately, in the present inflationary period this will not likely be observed as a reduction in the prevailing money price for the product but rather in a slower rate of increase, or stability, in the money price. But compared to other prices the real (relative) price of this good may drop. This is not to say that all change leads to lower prices; in some industries there is little competitive pressure in factor and product markets and prices may be "administered" rather than determined by competitive forces.

The purpose of this comment, however, is only to point out the possibility that many innovating firms may be fighting for their lives and undertaking technological change only because their competitors have forced them to. Consequently, one should not always assume that firms have vast profits out of which they can provide displacement assistance. In most instances it is the consumer and the remaining employed factors who are reaping the benefits from change, and consequently it is they, if anyone, who should pay for assistance through higher prices and/or taxation and subsequent government expenditures. Moreover, if one

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considers adverse shifts in final demand as a form of technological change then the firms experiencing this shift have no profits whatsoever for providing assistance, i.e. as in coal mining.

CONCLUSION

If nothing else, these comments on an altered collective bargaining process should raise serious questions as to what results the right to re-open and strike will have. It certainly is not evident that a change in the bargaining process is going to yield a pronounced increase in worker protection. But even granted that it does it is not clear cut that these gains will exceed the costs arising from the instability and uncertainty created. In effect we may be seriously impairing the collective bargaining process, which works well for other issues, in order to make questionable and marginal gains in the area of adjustment to change, an issue perhaps not suited to the collective bargaining process. If adjustment to technological change is truly a serious social issue it should not be attacked indirectly through some process that yields uncertain benefits and almost certainly some costs. Surely, David killed Goliath with a small slingshot but one cannot be confident that this outcome would always occur.

Some Comments on the Task Force on Labour Relations, Freedman, and Reopeners:
A Reply to David P. Ross

H. D. Woods

David P. Ross in his article published in this issue, is critical of the Report of the Task Force on Labour Relations with regard to its recommendations for dealing with the problem of technological change. This answering comment is the sole responsibility of the writer and in no way is it to be taken to express the views of other members of the Task Force. With much of what Ross says there can be no serious quarrel and indeed a large part of this article is not inconsistent with the Task Force Report. However, he seems to have misread or misunderstood the intention of the recommendations in the report dealing with industrial conversion, the term used in the report to encompass technological change.

Ross is at great pains to find some justification for public assumption of some responsibility for resolving the impact of technological displacement. He states: « If government is committed to stimulating the gains from technological change, should it not then be partially responsible for the losses? »