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ABSTRACT

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This paper offers a critical evaluation of the notion of collective voice, advanced by Freeman and Medoff (1984) in their pioneering contribution *What Do Unions Do?* It takes note of theoretical and empirical work supportive of/consistent with the *collective voice/institutional response* model, and tracks some development of the model. Equally, although much criticism of *What Do Unions Do?* has been wide of the mark, there are critical areas in which the model is deficient. These lacunae include, but are not restricted to, the lingering imprecision of collective voice; the problem of bargaining power which calls into question the distinction between collective voice/institutional response and the monopoly face of unionism; the over-emphasis upon worker dissatisfaction; and, relatedly, the neglect of individual voice. The bottom line is that the notion of union voice is urgently in need of restatement if it is to continue to shape research into the economic consequences of unions.

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I. Introduction

It is hard to exaggerate the immediate impact of the collective voice model on research into the economic consequences of unions. At the price of some imprecision, it might be claimed that up to that point much of the economics profession viewed unions as combinations in restraint of trade, as monopolies (almost) pure and simple.[1] To be sure organization theory had long suggested that positive union impacts on firm performance might result from shock effects (Leibenstein, 1966) – that is, having to pay a union premium shocks management into looking for cost savings elsewhere, in the process eliminating or reducing slack within the organization – but neoclassical economists were not only leery of shock effects but also prone to emphasize union restrictive practices as the source of X-inefficiency. In this accessible, monopoly view of the world (and abstracting from the costs of the union rule book), unions were viewed as having adverse effects on efficiency by distorting factor prices and usage, redirecting higher quality workers and capital from higher to lower marginal product uses. Further, to the welfare triangle loss(es) had to be added some portion of the transfer effect, as unions engaged the polity to protect their monopoly powers. To be sure, the costs of strikes were no longer uncritically laid at the door of unions,[2] but there were already sufficient distortions associated with the union entity to render this advance of marginal interest only.

Into this staid and rather comfortable world intruded the new view of unionism presented by Freeman (1976, 1978, 1980) and Freeman and Medoff (1979, 1983, 1984), building on Hirschman's (1970) exit-voice (and loyalty) paradigm. Largely reflecting the public goods aspects of the workplace, but also containing governance elements consistent with a number of other developments in economics (such as contract theory), these authors argued that the substitution of an average for a marginal calculus could yield improved performance outcomes. Unwilling to jettison the monopoly model, however, the architects of the new view still spoke of the "two faces" of unionism. No less important, the potential gains pointed to by the model could be thwarted by an unfavorable management response to collective bargaining and also by an adverse union response to reorganization of the work process. For this reason, Freeman and Medoff label the new view of unionism label as a *collective voice/institutional response* model.

Even with these qualifications the immediate challenge to the monopoly view was no less important for all that.

The decade following publication of *What Do Unions Do?* – was marked by a scramble to fit production and cost functions to data from the union and nonunion sectors.[3] In addition, union effects on firm profitability and investments in physical and intangible capital were also rigorously scrutinized. (Some of this material is surveyed in section III below; see also the careful review by Barry Hirsch in Chapter 6 of this volume). And then it seems there was a petering out of U.S. research, across all outcome indicators. In large part this was the result of an emerging empirical consensus. Aspects of this agreement included the findings that union effects on productivity were small on average (i.e. nowhere near as large in absolute magnitude as reported by Brown and Medoff, 1978, in their pioneering unions-in-the-production-function test); that union impact on profitability was consistently negative; and that, more damagingly, unions were associated with reduced investment in physical and intangible capital. Also contributing to this hiatus was the continuing black box nature of the mechanisms through which unions were supposed to improve workplace outcomes. And perhaps the steady hemorrhaging of union membership and decline in collective bargaining coverage also played a part by further limiting the attractiveness of research in this area.

But this is not the end of the story. In the first place, there was no parallel hiatus in European research. Second, there has been some development of the union voice model since then; for example, Freeman and Lazear (1995) have addressed the problem of rent seeking issues in their application of the collective voice model to works councils. Third, the finding that unions have small productivity effects on average has refocused attention on the factors that might produce swings about the average in either direction and here a new literature has examined environments that appear more propitious to positive union effects. Nevertheless, we shall argue that the union voice model remains seriously deficient in under-emphasizing the bargaining problem, in over-emphasizing worker dissatisfaction, in neglecting individual voice, and in uncritically equating collective voice with autonomous unionism. Yet if critics are thinking of erecting a headstone, it is still premature to complete the legend: "Union Voice, 1976 – ."

The plan of our discussion is as follows. First, we offer a critical statement of the collective voice model while identifying some linking themes from contract theory and property rights. Second, we provide an eclectic review of the empirical literature. We first review findings from an older literature examining the net effects of unions on a variety of firm performance indicators, next chart some more direct evidence on union voice, and then examine an emerging literature focusing on the interaction between unionism and employee involvement mechanisms/human resource management systems. In discussing net effects – *cet. par.* associations between unions and performance indicators – we are looking for broad consistencies with either the union voice or the monopoly models, without expecting evidence of a knockout blow. In looking at more direct evidence on union influence, we seek to identify the routes through which voice might find expression. The final theme of this section is the identification of workplace environments that appear more propitious for the exercise of union voice, the topic of the most recent literature. Our analysis concludes with a detailed interpretative summary.

II. The Collective Voice Model and Related Themes

It would be a mistake to view the collective voice model as a single unified approach; rather, it has a number of dimensions ranging from narrow (information exchange) to broad (influence/pressure) while also embracing the governance structure of the firm. Moreover, union voice is only one part of this new model of unionism. The other is what is termed "institutional response," namely management's response to collective bargaining (and the union's response to management). In effect, voice cannot succeed without an appropriate institutional response. Thus, Freeman and Medoff (1984, p. 165) write: "Some managements will adjust to the union and turn unionism into a positive force and the workplace; others will not. Over the long run, those that respond positively will prosper while those that do not will suffer in the market place." Finally, there is the vexed question of the integrity of collective voice/institutional response model in the sense of its being distinct from the monopoly face.

Before attempting to set down the various strands of the collective voice/institutional response model it is instructive to address the notion of voice. In the model, *voice* is to be contrasted with *exit*. The latter is a market mechanism: faced with a

divergence between desired and actual conditions at the workplace, the worker quits the firm to search for better employment. But there is an alternative to exit. The worker may instead engage in voice, discussing with his or her employer the conditions that need changing without quitting the job. By providing the worker with a voice mechanism, the union lowers quits. In the parent model of Hirschman (1970), the context is the product market rather than the labor market. Here exit corresponds to switching goods and voice to complaining about the product. In Hirschman's model, the key variable signifying whether or not the individual will engage in voice or exit behavior is *loyalty*. The more loyal the consumer, the less likely exit behavior and the greater the probability that redress will be sought through voice. There is no mention of loyalty in the collective voice/institutional response model, but it is a similar stimulus that drives behavior in both cases, namely, a deterioration in conditions in the Hirschman model (see Boroff and Lewin, 1997) and dissatisfaction in the collective voice model. That being said, and as we shall first see in discussing information exchange, the latter model implicitly recognizes more positive elements. This in turn raises the first of several key questions that arise in seeking to understand collective voice. Might not the major advantage of voice stem from satisfaction rather than dissatisfaction?[4]

Returning to the various dimensions of union voice, we begin with perhaps the best-known element, namely, the union role in the provision of information. The labor market context is important here: it is one of continuity rather than spot market contracting because of on-the-job skills specific to the firm and the costs attaching to worker mobility and labor turnover.[5] Given the information problem in such complex and multidimensional continuity markets, what mechanisms are available for eliciting information on worker preferences or discontent? Quit behavior can provide such information either inferentially or directly (via exit interviews). However, the collective voice model contends that information obtained in this way is likely to suffer from selection biases, from problems of motivating the worker to disclose information when there is no benefit to him or her from doing so (and the certainty of some positive cost), and finally from the sheer cost of the process of trail and error involved in determining the efficacy of contract innovations.

Collective voice through the agency of a union may outperform individual activity for a variety of reasons. One such reason is the public goods problem of preference revelation.[6] Nonrival consumption of shared working conditions (e.g. safety conditions, line speeds, grievance procedures) and common workplace rules create a public goods problem of preference revelation. Without some collective form of organization there will be too little incentive for the individual to reveal his or her preferences since the actions of others may produce the public good at no cost to that individual. Unions are in business to collect information about the preferences of all workers and 'aggregate' them to determine the social demand for such public goods. The substitution of average preferences for marginal preferences and the arbitraging of worker preferences may be efficient in such circumstances.[7] There are two issues here, neither of which is really addressed in the collective voice model. The first is whether or not the union is a pure agent of the member principal since this will affect the quality of the information that is passed on to management. The second is whether or not autonomous unions are the only form of collective voice, recognizing that labor law may make that case by default.

A second public goods dimension of the workplace stems from the nature of the input of effort. Without some form of collective organization, so this argument runs, the incentive of the individual to take into account the effects of his actions on others may be too small, just as with preference revelation. This problem will only arise where there are significant complementarities in worker effort inputs in which circumstances output may depend on the lowest level of input by any one worker. In short, collective organization may potentially increase output through a joint determination of effort inputs. In some sense, the union may even be construed as the agent of the employer principal in monitoring worker effort. In any event, we note that this recherché argument has recently been used to present a case for 'strong' unionism in Britain (see Bryson, 2001).

For the public goods argument to have force, two further conditions have to be met – both of which are recognized in the union voice model (see Freeman, 1976, p. 362). First, there must be costs attaching to the use of external markets: if quitting were costless, the individual worker could simply choose the employer whose working conditions most closely approximated his or her own preferences. Second, the workplace

must continue to be buffeted by unforeseen shocks that change the nature of the workplace in an informational context; otherwise, there would be no need for the union's demand revealing function after the formative match between employer and worker.

The expression of collective voice is expected to reduce quits, absenteeism, malingering, and even 'quiet sabotage.' The reduction in quits is expected to lower hiring and training costs and increase firm-specific investments in human capital. Lower quits may of course also occasion less disruption in the functioning of work groups. Interestingly, apart from the reduction in quits as a result of the union providing direct information about worker preferences in the manner described earlier, the transmission mechanism between voice and performance is opaque in the voice model. And even in this case there is no formalization of optimal quit behavior. The upshot of this imprecision is that any observed reduction in quits/increase in training may be excessive. Moreover, in discussing the reduction in quits the emphasis in the union voice model appears to be upon dissatisfaction. At the applied level as well, Freeman and Medoff (1984, Chapter 12) report that expressed worker dissatisfaction is higher in union regimes. They interpret the difference in expressed complaints between union and nonunion labor as an expression of democracy rather than as indicating a true shortfall in satisfaction, noting that: "The difference between 'true' and 'voiced' dissatisfaction reflects the nature of the voice institution." (p. 139). Nevertheless, the particular politicization of the workforce that is alluded to here might also carry implications for the quality of the type of information that is passed on by unions.

This, then, is the information aspect of union voice.[8] The two other aspects are influence and governance. At least as initially presented, the union influence aspect is not only difficult to disentangle from the shock effect but also morphs into governance. Thus, Freeman and Medoff (1984, p. 15) argue that: "Unions can also improve efficiency by putting pressure on management to tighten job-production standards and accountability in order to preserve profits in the face of higher wages. Because unionized management can be challenged by the union, moreover, it will tend to discard vague paternalistic, authoritarian personnel policies in favor of practices in which explicit rules govern behavior." For these reasons, it is somewhat more tractable to focus on the governance issue.

The context is again the continuity of the employment relation. Governance refers to the policing or monitoring of incomplete employment contracts, and thus includes the use of grievance and arbitration procedures and other mechanisms to mitigate what are seen as problems stemming from the authority relation. Such procedures should also help improve the flow of information between the two sides. The problem is of course that the specialized procedural arrangements typically associated with union regimes are not unique to those settings. Expressed rather differently, there is an extensive (contract theory) literature in economics documenting why employers would see fit to introduce procedural safeguards for the settlement of disputes in union-free continuity markets with uncertainty. Thus, in the idiosyncratic exchange variant of contract theory (see Williamson, Wachter, and Harris, 1975), there emerges a distinct governance apparatus geared to maximizing the joint surplus of the firm by suppressing the hazards of unconstrained idiosyncratic trading. The key elements of this apparatus are the use of promotion ladders, formal grievance procedures, and the application of the seniority principle – all components of a structured internal labor market. There is no explicit mention of unions in this particular model – since it is the bargaining power possessed by idiosyncratically-trained job incumbents that produces the governance apparatus. (That said, subsequent developments of idiosyncratic exchange discuss monitoring and auditing procedures and do reserve a specific role for unions; see Riordan and Wachter, 1983.)

Freeman (1976, p. 364) and Freeman and Medoff (1984, p. 11) claim the union governance aspect of the voice model is quite consistent with the modern contracts literature, the argument being that the presence of a union can make it easier to engage in long-term efficient contracting of this nature.[9] They argue that the presence of a union specializing in information about the contract and in the representation of workers can prevent employers from engaging in opportunistic behavior. Workers may withhold effort and cooperation when the employer cannot credibly commit to take their interests into account. Thus, fearing dismissal, workers may be unwilling to invest in firm-specific skills or disclose information facilitating pro-productive innovations at the workplace. The formation of a union and the introduction of a system of industrial jurisprudence is one way of protecting the interests of employees. In this way, unions may generate worker cooperation, including the introduction of efficiency enhancing work practices.

This argument presupposes that the commitment problem cannot be solved by reputation effects, inducing the employer to live up to his contractual commitments and to behave honestly rather than opportunistically. However, reputation effects may be strong enough to make contracts self enforcing after all.

But if we assume that there is a commitment problem in regular markets, an interesting issue is whether the divorce of ownership and control in the modern corporation could make self-enforcing contracts more feasible in the sense that management might be less interested in reneging on an implicit contract in the interest of short-term profit maximization than the owner principal; and conversely where the interests of managers and shareholders are more closely aligned by, say, profit sharing schemes for managers. In this case much might hinge on whether unions and self-enforcing contracts are substitutes or complements in establishing cooperation at the workplace. If they are substitutes, any positive impact of unions on performance will be stronger in firms with less severe agency problems. If they are complements, unions will be more effective in firms where agency stimulates self-enforcing contracts. This argument is of course based on a very narrow view of the agency problem in corporations and has to be widened to incorporate rent-seeking behavior on the part of managers. Such behavior may detract from trustful and cooperative industrial relations and can decrease the range of feasible self-enforcing contracts. Jirjahn (2002) has recently examined the relationships between unions (actually works councils) and self-enforcing contracts and also those between agency and trustful, cooperative industrial relations using information on management profit sharing schemes. We shall report on some of his findings in section III.

We have yet to mention rent seeking by unions. In contract theory models in which the union can make credible the employers' *ex ante* promises (e.g. Malcolmson, 1983), there has to be some threat of credible punishment on the part of the union. This punishment strategy hinges on the union having bargaining power. In other words, the governance argument depends for its traction on union monopoly power. The criticism would then be that voice can be kept distinct from power only by making voice so narrow – by which is meant information exchange – that it loses much of its explanatory punch, while if it is broadened to make it meaningful it becomes simply another facet of the

exercise of power. Thus, for example, if voice includes a grievance system it is only through the exercise of a union's monopoly power that it wins such a system and keeps it functioning. This is no mean critique because it calls into question the notion that voice is a putative good that it is represented to be in *What Do Unions Do?*

Subsequent development of the union voice model seems to recognize the problem. We refer to Freeman and Lazear's (1995) purpose-built analysis of the *works council* with codetermination power. In this treatment, there is explicit recognition of the bargaining/hold up problem hitherto skirted in union voice and which dogs the voice solution to the information problem in continuity markets. Freeman and Lazear argue that codetermination will be underprovided by the market because institutions that give power to workers will affect the distribution as well as the size of the joint surplus. The content of collective voice is also spelled out in more detail in this treatment in terms of a continuum bounded by information provision at one extreme and participation/codetermination at the other, with consultation occupying the broad middle ground. Thus, the joint surplus of the firm is said to increase with the progression from information exchange through consultation to participation. Among other things, information rights can help verify management claims about the state of nature, rendering them credible to the workforce and avoiding costly disputes that can threaten the very survival of the enterprise. Consultation for its part allows new solutions to production and other problems by reason of the non-overlapping information sets of the two sides and the creativity of discussion. Finally, participation or codetermination rights increase the joint surplus by providing workers with more job security and encouraging them to take a longer-run view of the firm and its prospects. (This latter notion is not uncontroversial because the median voter model might produce exactly the opposite result by virtue of the preponderance of older workers in union councils, or it might otherwise pay workers to be rationally myopic).

However, Freeman and Lazear recognize that unless the rights of the works council are constrained in some way, they will give rise to a bargaining problem. They argue that the workers' share in the joint surplus grows with the surplus while that of capital declines both relatively and absolutely. The workers' share rises because knowledge and involvement are power, so that the same factors that cause the surplus to

rise also cause profitability to fall. It follows that workers will demand too much power/involvement because their share will continue to rise after the joint surplus has peaked. Similarly, employers will either oppose works councils or vest them with too little power because profits decline even as the surplus is increasing. Some means of third-party regulation limiting bargaining power has thus to be found if the societal benefits of worker voice are to be realized. It is in this context that Freeman and Lazear see the *German* institution as attractive. First, German works councils cannot strike (under the so-called "peace obligation"). Second, neither can they formally engage in bargaining over wages and other conditions of employment unless authorized to do so under the relevant industry-level or regional collective bargaining agreement. In this respect, the authors speak of a potential decoupling of the factors that determine the size of the surplus from those that determine its distribution made possible by labor law and the dual system of industrial relations. Left open is whether or not there is a *sufficient* decoupling in practice. A considerable literature has been devoted to this very question and will also be addressed in the next section.

This concludes our discussion of the theory of union voice. As seen by its proponents, the basic advantages of union voice are threefold: it offers a direct communication channel between workers and the firm; an alternative mode of expressing discontent other than quitting with attendant benefits in the firm of reduced turnover costs and greater training; and a necessary modification of the social relations of production (see Freeman, 1976, p. 364). To these advantages are added those of contract innovation, interpretation, and enforcement. At issue (in terms of the model) is whether these advantages dominate the monopoly effects or would do so if management were prepared to "stand up" to unions (Freeman and Medoff, 1984, p. 12), or indeed whether the market can reasonably be expected to provide its own solutions to the information and contractual problems that to a greater or lesser extent motivate the union voice model. Opponents of the model can rightly claim that its separation of voice from power is artificial, and that if voice is in fact another exercise of power there can be no assurance that working conditions, training investments and so on will not be pushed up beyond competitive levels any less so than wages. Such opponents can also with some justification then question whether a lack of a 'suitable' managerial/institutional response

is other than a rational resistance to union-inflated (other) terms and conditions of the employment contract. All of this pertains to the basic model. Subsequent amendments to the model would probably be viewed by opponents as too little, too late: the scope for improvements in the joint surplus being inherently limited by bargaining and the different time horizons of capital and labor.

The architects of collective voice argue that, in recognition of the opposing influences of unions on workplace efficiency, recourse to the facts assumes more importance than usual. By the same token, the imprecision of the collective voice/institutional response model means that interpretation of those facts is difficult even when strong union effects are observed.

III. The Evidence

We alluded earlier to there being a number of developments in the empirical analysis of union voice. We next consider that evidence, beginning with the large literature documenting the *net effects* of unions on various performance outcomes. Next we note some rather more direct evidence on union voice before turning to some recent work examining the link between unionism, employee involvement, and other potentially pro-productive workplace practices.

Conventional, Indirect Tests

There is an extensive literature documenting the net effects of unions on productivity, productivity growth, profitability, investments in tangible and intangible capital.[10] Beginning with productivity and productivity growth, the U.S. evidence has been surveyed by Addison and Hirsch (1989) and by Hirsch in Chapter 6 of this volume, the British evidence by Addison and Belfield (2003), and the German evidence (largely pertaining to works councils since they rather than unions are the agencies of workplace representation) by Addison, Schnabel and Wagner (2004). Although the paths taken by the various studies differ, there is ultimately some measure of agreement in the cross-country evidence. For its part, the U.S. evidence indicates that the optimistic conclusions from Brown and Medoff's (1978) aggregative analysis – a logarithmic (total factor) productivity differential of .22 to .24 in favor of unionized plants – cannot be sustained. In interpreting the evidence, Addison and Hirsch (1989, p. 79) conclude: "the average

union productivity effect is probably quite small and, indeed, is just as likely to be negative as positive." Similarly, there is no indication of a *direct* union effect on productivity growth, once one allows for the fact that unions are located in industries or sectors with low growth (see Hirsch, Chapter 6 in this volume, p. 21).

However, the British evidence tends to point to lower productivity in unionized plants in the 1980s and earlier (e.g. Metcalf, 1990; Fernie and Metcalf, 1995). Having said that, unionized plants increased their productivity most at the end of the 1980s (e.g. Gregg, Machin, and Metcalf, 1993). (We note that no such differential movement in productivity growth is observed in the United States.) As a result, some have concluded that there is no longer evidence of a union productivity shortfall in the United Kingdom. This interpretation, as well as the more attenuated conclusion that there has been a marked reduction in the 'disadvantages of unionism,' is conventionally attributed in large measure to legislation passed by Mrs. Thatcher and her successor that considerably weakened union bargaining power largely by removing union immunities under the law (as documented in Addison and Siebert, 2003).

As far as the German evidence on works councils and productivity is concerned, this has run the gamut from strongly negative results in the early literature based on small firm samples to strongly positive estimates (reminiscent of those obtained by Brown and Medoff) in very recent work using nationally representative establishment data (see the review in Addison, Schnabel, and Wagner, 2003). However, the latter results are something of a chimera because it emerges that these average effects are (a) unstable in individual years, (b) not robust to disaggregation (by establishment size, broad sector, and region), and (c) do not survive re-estimation in first differences (Addison, Schank, Schnabel, and Wagner, 2003). A correct reading of the latest German evidence, therefore, would be an absence of negative works council effects on average rather than clear pro-productive effects.

There is also a real measure of international agreement on the facts – if not the implications – of the association between unions and profitability. The U.S. evidence is again the most developed, using measures not only of accounting profits but also of company market value and abnormal stock returns in events studies of union representation elections. The U.S. evidence is robust across firms, lines of businesses,

and industries, and suggests that unions are associated with 10 to 15 percent lower profitability (see Addison and Hirsch, 1989; see also Hirsch in Chapter 6 of this volume). There is no real evidence of a material change in the magnitude of this effect through time (e.g. Hirsch, 1991; Hirsch and Morgan, 1994).

The British evidence points in the same direction, with most studies finding to lower profitability in unionized establishments and firms. However, there are two main caveats to this statement. The first of these is that, in line with the productivity results noted earlier, the negative impact of unions appears to have weakened through time (Addison and Belfield, 2003; Metcalf, 2003). The mitigation of the negative union effect through time is again commonly attributed to weakened union bargaining power in the wake of the Thatcher reforms (and deregulation as well as heightened international competition). The second caveat is that, unlike the U.S. case, there has always been some indication that the union profitability effect is strongest where the firm has product market power (see Machin and Stewart, 1996). In other words, the implications of profits capture by unions in the British case has been regarded as more ambiguous (for efficiency) or, equivalently, less of a source of concern than in the United States where there is little obvious indication of any association between wages and concentration-related profits (see Hirsch in Chapter 6 of this volume).

The German evidence also points to reduced profitability under works councils (e.g. Addison, Schnabel, and Wagner, 2001). The only real exception appears to be a study by Hübler and Jirjahn (2001) in which the effect of councils on establishment 'quasi rents' (defined as [sales - raw materials – wages]/number of employees) is positive but statistically insignificant throughout.

This brings us to the related issue of investments in physical and intangible capital. Here there is something of a divide in the research literatures. Research in the United States has uncovered a strong negative association between unionism and investment in physical and innovation capital (Hirsch, 1991; Bronars and Deere, 1993; Bronars, Deere, and Tracy, 1994; Cavanaugh, 1998; Fallick and Hassett, 1999). The fullest analysis is by Hirsch (1991) who presents cross section-time series results for both types of investment in a sample of more than 500 firms. For capital investment he reports that the average union firm has annual capital investment that is 13 percent lower than its

nonunion counterpart. The *union tax* on the returns to long-lived capital – further discussed by Hirsch in Chapter 6 of this volume – is found to contribute a little under one-half of this effect, the balance reflecting a reduced profit rate (profits being an important determinant of capital investment). For R&D expenditures, it is found that unionized companies invest some 15 percent less than comparable nonunion forms. Well over three-quarters of this effect is direct, that is, resulting from the union tax. Hirsch also finds that union coverage is negatively associated with the ratio of advertising expenditures to sales (and positively related to the propensity to patent which should reduce the liability of the firm to hold up, ceteris paribus).

The early British research also provides evidence of some negative effects of unions on capital investment (e.g. Denny and Nickell, 1992).[11] The main source of difference therefore resides in the R&D effect. While confirming Hirsch's (1991) results for the United States, Menezes-Filho, Ulph and van Reenen (1998) cannot replicate them for the United Kingdom. Indeed, in their recent review, Menezes-Filho and van Reenen (2003) report that the results are not robust for continental Europe either. That is to say, although the association between unionism and R&D is negative in this bloc as well, it is seemingly driven by unions being concentrated in older, low-tech industries. And in interpreting these results, the authors critique the notion that unions will necessarily hold up firms by expropriating sunk R&D investments through demanding higher wages while also observing that the hold-up problem may be mitigated by strategic incentives to compete in R&D races. The latter such considerations imply that the union effect on R&D might exhibit nonlinearities – being positive at lower levels of union density. The latter point is used to justify some German results on R&D, namely, Schnabel and Wagner's (1994) finding that works councils have a positive impact on R&D intensity (R&D expenditures divided by sales) provided that union density is not too high. The only other German study reporting a statistically significant association between works councils and innovation – here the proportion of sales consisting of new products introduced in the preceding five years – simply interacts works council presence with union density *ab initio* and reports that this composite measure of "labor organization" is associated with a statistically significant reduction in innovative activity (see FitzRoy and Kraft, 1990).

This, then, is the basic tenor of the evidence on unionism's net effect on firm performance. It scarcely provides a ringing endorsement of collective voice. But as was noted earlier the failure to observe positive productivity effects can simply mean that that the voice and monopoly effects are a wash or indicate an insufficiently affirmatively response from management. That said, the interlocking nature of the productivity, profitability, and investment evidence *for the United States* does not encourage a sanguine view of collective bargaining in that country and thence the model. Even so, the finding of an average productivity effect near zero does redirect our attention to factors that mediate this result in both the United States and other countries where the dynamic effects of unionism seem less unfavorable. Prior to that, however, we have to consider evidence with a more direct bearing on union voice.

More Direct Approaches

According to the union voice model, the expression of voice should reduce quits and increase tenure – effects that will be amplified because of the union wage premium. In an attempt to identify one source of the roughly 20 percent higher productivity they report for unionized establishments, Brown and Medoff (1978, Table 4) introduce a quits variable into their production function. The coefficient estimate for the union measure (fraction unionized) is reduced from 0.204 to 0.160, that is, by around one-fifth. Brown and Medoff (1978, p. 374) conclude that four-fifths of the union effect are presumably the result of factors such as the "better management, morale, motivation, communication, etc." of unionized establishments. In other words, the conceptually cleaner direct effect of union voice amounts to one-fifth of the productivity differential of unionized plants in this study (and here the cautionary remarks of Barry Hirsch in Chapter 6 concerning the magnitude of this average estimate are particularly relevant).

Freeman and Medoff (1984, Tables 6-1 and 6-2) seek to gauge the relative strength of union voice and wage effects in influencing quits and tenure. They find that the voice effect of unions dominates any effect from wage increases. For example, using data on all workers from the Panel Study of Income Dynamics, 1971-79, they report that whereas a 20 percent wage increase reduces quits by 8 percent, the union voice effect (controlling for wages) reduces quits by no less than 31 percent. Corresponding results for tenure (in 1979) are 9 percent and 32 percent, respectively. The result appears robust across a range

of datasets and time periods for the United States. We will examine some evidence for the United Kingdom below, after considering a sharp German critique of the emphasis on *collective* voice.

In an early criticism of the collective voice model, Kraft (1986) argued that it was not the collective representation of workers' rights per se that caused turnover to be lower but rather the individual rights of workers. Using data on 62 German manufacturing firms, 1977/79, Kraft regresses a subjective measure of unskilled worker quits (high quits = 1, 0 otherwise) on a vector of covariates including in addition to wages and training expenditures, etc., two voice arguments: individual voice and collective voice. Individual voice is measured on the basis of questions on the decision possibilities of blue collar workers on investment and rationalization, coordination of work groups and other personnel decisions, and the determination of the (individual) job design. The responses were ordered by 'no decision possibilities,' 'informed in advance' and 'active participation.' A voice index was fashioned from the weighted responses (viz. the percentage deviations of the individual observations from the mean of the whole sample). For its part, collective voice was simply proxied by the presence or otherwise of a works council.

Kraft reports that individual voice is inversely related to the excessive quits measure. The association is statistically significant at the .01 level. On the other hand, the coefficient estimate for collective voice is positive and poorly determined, while the two human capital variables mentioned earlier have the expected effect in lowering quits. In recognition that voice maybe endogenously determined – with high tenure workers being granted more decision rights – Kraft also estimates a simultaneous equations (probit) model. Again individual voice has a statistically significant negative effect on quits, and there is no feedback effect from quits to individual voice. Also as before, the collective voice measure has no discernible impact on quits.

So one bottom line from this study is that worker representation through a works council has no impact on the quit rates of unskilled workers in this sample of German firms. As a practical matter, subsequent German research has consistently reported a negative association between works council presence and quits, using objective turnover data (e.g. Addison, Schnabel, and Wagner, 2001). That being said, the qualitative data

supplied by management in the Kraft study may address the vexed question of the optimality of quits in a way that objective turnover data cannot. The other bottom line result – that individual voice significantly reduces excessive quits – has not further been tested for Germany. We shall return to this topic and the type of information conveyed by individual voice in section IV, drawing on a Canadian study by Luchak (2003).

We now examine union voice effects and wage effects on tenure and quits for the United Kingdom, estimating both the relative strength of each effect and accounting for other forms of voice. The empirical investigation uses the 1998 Workplace Employment Relations Survey (WERS98), a national sample of interviews with managers from 2,191 British establishments with at least 10 workers (Department of Trade and Industry, 1999). The survey contains detailed information on the organization of the workplace and the deployment of workers. In addition, 25 employees at each workplace were randomly selected for survey to elicit information on their work status, earnings, and job conditions. In sum, the WERS98 has both individual- and workplace-level information, including numerous measures of employee voice. The material provided here is for the private sector – that is, excluding the health, education, and government sectors – and survey weights are applied throughout.

(Tables 1 and 2 near here)

Table 1 shows the incidence of a range of voice mechanisms in union and nonunion establishments. The results are clear: regardless of the form of voice, union workplaces report significantly more voice and collective participation than do nonunion workplaces. Next, Table 2 describes voice as perceived by workers rather than the management respondent, allowing us to see whether workers recognize greater voice in union regimes – and, indeed, whether it is appreciated. Although the questions differ, the results contrast sharply with those in Table 1, and are somewhat disappointing for union voice. Thus, the top panel of Table 2 shows that workers in nonunion workplaces do not seemingly report weaker voice; that is, discussions with managers occur with the same frequency, and there is little difference regarding workers' needs (e.g. to develop their skills) or managerial requests for workers' views. Seen from a worker perspective, then, there is equivalent voice in union and nonunion settings. Union voice may of course take more confrontational forms than are identifiable using WERS98.

Perhaps unsurprisingly, therefore, there is no evidence that union voice is appreciated by workers. Instead, as the middle panel of Table 2 shows, workers in nonunion workplaces are more likely to report that their managers are (very) good at 'keeping everyone up to date about proposed changes,' at 'providing everyone with a chance to comment,' and 'responding to suggestions.' Consistent with other evidence (e.g. Bender and Sloane, 1998), workers' perceptions and attitudes are considerably more positive in nonunion workplaces (so that individual voice may have a stronger impact than collective voice, as will be commented on below). Note also that whereas 19.1 percent of workers in nonunion workplaces rate relations as (very good) good, the respective figure in union workplaces is 8.3 percent.

The bottom panel of Table 2 offers some insight into why union voice does not permeate. One reason may be that voice itself – as expressed in meetings between managers and employers – is not always regarded as helpful. But union influence may also be deficient: only 55 percent of workers are frequently or occasionally in contact with a union representative; less than 50 percent agree that the union takes notice of members' complaints; and only one-third agree that unions are either taken seriously or make a difference. Thus, union presence – and action in promoting voice – might not guarantee union effectiveness in promoting voice, perhaps because more formalized union voice practices may separate workers from direct contact with managers, implying greater distance between the two.

(Table 3 near here)

Table 3 reports on worker-level satisfaction in union and nonunion workplaces. Workers in union plants report considerably lower satisfaction with their influence over their job, their sense of achievement, or the amount of respect they get from managers. Similarly, workers in nonunion workplaces are more likely to share the values of, feel loyal to, and be proud of their organization. The only measure on which there is parity between union and nonunion workplaces is for satisfaction regarding the amount of pay received. Such results are not unfamiliar, with similar findings being reported in *What Do Unions Do?* by Freeman and Medoff. But taken in conjunction with the previous results, they may well imply that the quality of union voice is just as important a consideration as its quantity.

(Table 4 near here)

The determinants of workplace quit rates and workplace tenure are investigated in Table 4, using OLS estimation. We control for workforce composition (e.g. percent female, unskilled, part-time, and professional), workplace characteristics (establishment age and type, and proxies for the capital-labor ratio), and sector. The union effects are strong: unions reduce the quit rate by 34 percent and raise average workplace tenure by 15 percent; higher wages also have a strong effect on quits. On this evidence, whether workers appreciate union voice or not, they are less likely to quit and more likely to have extended tenure. Of course this leaves aside the issue of whether these effects are pro-productive. Incorporating particular voice channels to the estimations on this occasion adds little to the explanatory power of the quits and tenure equations, but their introduction does reduce the impact of unions (while leaving the wage effect unchanged); and there is no longer a statistically significant effect of unions on tenure, controlling for other voice mechanisms. (Similar results are found for workplaces in the U.S. trucking industry by Delery et al., 2000: both unions and pay have strongly negative effects on quits, but specific voice mechanisms are not statistically significant). Similar conclusions obtain when using *worker-level* tenure equations, and when measures of job satisfaction are included in the estimations. Applying 2SLS to account for the simultaneous determination of tenure and wages produces inflated but same signed coefficient estimates for wages and union status.

(Table 5 near here)

Summary results of the component contributions of union voice and wage effects on labor turnover/stability are given in Table 5. The WERS98 findings for Britain largely mimic those of Freeman and Medoff (1984, Chapter 6) for the United States. As can be seen, the 'wage effect' on quits is -15 percent but is dominated by the 'union voice effect' which lowers quits by 34 percent Similar results are found for the tenure equation. Familiarly, unions are associated with reduced labor turnover and increased labor stability. But, to repeat, the relevance of this more direct evidence of union voice is qualified both by the theoretical imprecision of the quits argument and also by the seemingly modest empirical contribution of reduced quits to the union productivity effect, noted at the beginning of this discussion.

The Contribution of Unions, Employee Involvement, and Other Workplace Practices

The thrust of the much of the current literature on unions and economic performance examines the association between unions, employee involvement and high performance work practices and performance outcomes. This research is still in its infancy and, as we shall see, provides mixed results but it does offer a more positive, albeit qualified, view of union voice than is evident in either the net effects literature or more direct studies of voice. As before, we survey results from the United States, the United Kingdom and Germany.

Perhaps the best starting point is a somewhat neglected study by Cooke (1994), which examines whether unionism positively or negatively influenced the effectiveness of employee participation programs and group-based incentives on performance among a 1989 cross-section of 841 manufacturing firms in Michigan (but also see Levine and Tyson, 1990). Cooke's measure of performance is value added net of labor cost per employee. To calculate this he estimates three equations: value added per employee, wage rates, and labor cost/total cost. His measure of employee involvement is a dummy indicating the presence or otherwise of team working, and his group incentives variable is another dummy capturing the presence or otherwise of either profit sharing or gain sharing plans. These dichotomous variables are jointly interacted with the union status of the firm (the omitted category is absence of unionization, teamworking, and group incentive pay). The other covariates include firm size, depreciable assets per employee (at the firm's 2-digit primary industry), and proxies for workforce skill composition, technology, and market power, inter al. Using the estimated differentials associated with each combination of employee involvement, group incentive pay, and union status, Cooke estimates their performance impact by subtracting the estimated wage differential, adjusted by the labor cost share differential, from the estimated value added per employee differential.

Cooke's results suggest that firm performance is about 13 percent higher in unionized plants without either employee involvement or incentive pay than in comparable nonunion firms. The introduction of team working raises this differential to around 35 percent. By contrast, its introduction in the nonunion sector does not improve

the innovating (nonunion) firm's net performance. In the absence of teamwork, group incentive pay has a much larger effect on efficiency in nonunion firms (+18.5 percent) than in union firms (+6.5 percent). In combination, the two measures also have a much bigger performance payoff in nonunion (+21 percent) than union (-0.7 percent) firms. While suggesting that the payoff to employee involvement and incentive pay may sharply differ in union and nonunion regimes, this study clearly paints a much rosier picture of union operation than the generality of the U.S. productivity studies reviewed earlier.

An updated U.S. treatment is provided by Black and Lynch (2001) who have improved data in the form of the nationally representative EQW National Employers' Survey, matched to the Longitudinal Research Database. The authors first fit an augmented Cobb-Douglas production function to a 1993 cross section of the data. The sample comprises 638 firms. The regression includes in addition to capital, labor, and materials, a vector of technology variables, a detailed set of controls for worker characteristics, no less than seven proxies for *high performance work systems* (total quality management {TQM}, benchmarking, number of managerial levels, number of employees per supervisor, the proportion of workers in self-managed teams, and the {log} number of employees in training), two voice measures (unionization and the proportion of employees meeting regularly in groups), and two levels of profit sharing (management and supervisors, and production/clerical/technical). In recognition of a potential omitted variables problem stemming from unobserved plant heterogeneity, Black and Lynch also provide estimates using panel estimation methods. Specifically, they employ two-step method that involves first estimating a fixed time invariant firm effect for each establishment using data for the time-variant factors for 1988-93, and then regressing these fixed firm effects (i.e. firm-level efficiency parameters) on all the time invariant factors (that is, all variables other than labor, capital, and materials).[12]

The cross-section estimates indicate that, although most of the high performance work practices are positively associated with labor productivity, only one – namely, benchmarking – is statistically significant at conventional levels. For its part, the proportion of workers meeting regularly in groups is also positively and significantly related to labor productivity, although the unionization coefficient itself is poorly determined. The nonmanagerial profit sharing variable is positively and significantly

associated with labor productivity, albeit not in all specifications. Although the authors do not find evidence of synergistic bundling of workplace practices, the interaction between unionization and nonmanagerial profit sharing is positive and weakly statistically significant, but that between unionization and TQM is not significant. Interactions of the proportion of workers meeting regularly in groups and the same two variables while positive are also statistically insignificant. That said, the authors are able to reject the joint null that all four interaction terms is zero. Finally, the results for the panel data two-step estimation are broadly the same as the cross-section results, although selection may of course still be an issue here because of the lack of temporal variation in the voice and workplace practices.

Black and Lynch use their estimates to show how unionized establishments that embrace 'transformed' industrial relations practices can have higher productivity than a comparable nonunion plant while those that do not will have lower productivity. Specifically, a union plant practicing benchmarking and total quality management, with 50 percent of its workers meeting on a regular basis, and operating profit sharing for its nonmanagerial employees is reported to have 13.5 percent higher labor productivity than a nonunion plant with none of these practices. By contrast, the corresponding differential for a high performance nonunion establishment is just 4.5 percent. Comparing union and nonunion plants with none of these practices there is a 10 percent labor productivity differential in favor of the latter. Note that in this study there is no attempt to discover whether these practices are positively related to average costs per worker (for evidence of which, see Cappelli and Neumark, 2001; see also Black and Lynch, 2000).

These U.S. results are of course consistent with the full collective voice/institutional response model, which recognizes the importance of cooperative industrial relations. But one must be cautious in interpreting the above evidence for a number of reasons, even abstracting from issues of statistical significance of the variables assembled in benchmarking exercises of this type and the representativeness of the resulting synthetic workplaces. This is partly because the management literature is not agreed on the contribution of individual human resource management practices to performance outcomes (especially through time), on the synergies between particular

practices (see Milgrom and Roberts, 1995; Ichniowski, Shaw, and Prennushi, 1997), and on the very role of workplace representation.

Some of the issues are explored in an interesting paper by Wood and de Menezes (1998) using British data from the 1990 Workplace Industrial Relations Survey and the Employers' Manpower and Skills Practices Survey. The authors first attempt to test whether the range of employee involvement and participative mechanisms used in the literature form a unity and can be used as indicators of a high commitment orientation on the part of management. Wood and de Menezes use latent variable analysis to search for identifiable patterns in the use of twenty-three such practices.[13] They are unable to identify high commitment management as a well-defined continuous variable. But they are able to fit a latent class model to the data, that is, identify a progression of types of high commitment management. There are four such types: high HCM, medium-low HCM, low-medium HCM, and low HCM.

As far as unionism is concerned, Wood and de Menezes first examine the association between union recognition and high commitment management. Neither high HCM nor low HCM workplaces emerge as distinctive with respect to unionism. This suggests among other things that the tendency of some British industrial relations specialists to treat nonunion workplaces as 'bleak authoritarian houses' is erroneous.[14] Second, the authors include the establishment's HCM class as an argument in conventional performance equations alongside unionism and controls for workplace characteristics and industry affiliation. They examine seven such performance outcomes: labor productivity, change in labor productivity, financial performance, job creation, employee relations climate, quits, and absenteeism. High HCM establishments are not found to be more effective than others. That is, in no case do they perform better than all the others on any performance criteria. For example, although high HCM plants do have better employment growth and better financial performance that the two medium HCM categories, this does not carry over to the low HCM plants. Evidently different types of plants can perform differently according to the outcome measure. The plot only thickens when it comes to the effect of union recognition since five out of seven coefficient estimates are negative, of which four are statistically significant.

More recent British work has offered a more optimistic but restrictive view in investigating the impact of cooperative industrial relations. Metcalf (2003) advances two sets of findings from an analysis of the WERS98. First he defines a human resources management (HRM) workplace as one with a formal strategic plan on human resources, and an employee relations manager involved in its development; employing personality or performance tests in recruitment; having most of its employees in the largest occupational group trained in jobs other than their own; and practicing individual or group performance-related pay. His reports that a HRM workplace with no union recognition has superior labor productivity to a union workplace without these defining characteristics but that union recognition when accompanied by HRM is associated with a much improved relative performance – although for only one of the performance outcomes examined is this improvement sufficient to ensure that unionized plants are the best performing establishments. Second, Metcalf looks at the potential effects of 'partnership agreements' in the United Kingdom (see Trade Union Congresss, 1999). He defines a workplace as having a partnership where it negotiates with a union over pay, where management negotiates or consults with unions over recruitment, training, payment systems, handling grievances, staff planning, equal opportunities, and health and safety performance appraisals. He reports that such partnerships "significantly raise the probability of above average performance for financial performance and both the level of and change in productivity."

Finally, the German evidence is more mixed. We noted earlier that the early German research pointed to adverse effects of local workplace representation via works councils on firm performance. Yet, in a follow-up of one of the more negative such studies, FitzRoy and Kraft (1995) qualify their earlier harsh interpretation of works council impact on establishment performance (FitzRoy and Kraft, 1987). They now report that works councils in firms practicing profit-sharing are positively associated with productivity. Among their counterparts in non profit-sharing regimes, however, the works council effect on productivity is still negative and statistically significant.

More recent German research has tended to identify the circumstances where positive effects of works councils might be expected. One strand in the literature has looked at the wider industrial relations context, reporting for example that where the

works council plant is covered by an external collective agreement – although not otherwise – positive effects on productivity are found (Hübler and Jirjahn, 2001). This result suggests that rent-seeking behavior may indeed be circumscribed by the dual system as Freeman and Lazear (1995) have conjectured (see section II). The more general approach has followed the modern U.S. and U.K. literatures in examining – although somewhat more directly on this occasion – the association between works councils and various workplace practices. One early result suggested that works councils and teamwork might be substitutes (Addison, Schnabel, and Wagner, 1997). Hübler and Jirjahn (2001) also report a negative association between teamwork and works councils, although this might reflect the greater difficulty for a works council to represent the interests of the overall workforce when individual groups directly communicate with management.

More interesting, therefore, is the association between works councils and other workplace practices. We saw earlier that Jirjahn (2002) anticipated on agency and rent seeking (on the part of management) grounds that the association between works councils and productivity would be mediated by profit-sharing schemes for management. In fitting a productivity equation to pooled data for 438 German plants observed in 1994 and 1996, Jirjahn obtains a significantly positive coefficient estimates for the dummies capturing works council presence and the existence of profit sharing schemes for management. For its part, the coefficient estimate for the interaction term is negative, which the author interprets as consistent with two hypotheses: *either* profit-sharing management reduces the commitment value of agency in circumstances where the works council cannot foster trust and loyalty absent the cooperation of management, *or* management rent seeking is curbed by profit sharing and the works council is not so important for building cooperation in situations of reduced opportunism on the part of management. Although ultimately inconclusive, therefore, we would argue that the approach taken by Jirjahn is very much in the spirit of the collective voice model.

Less positive results are reported by Schedlitzki (2002) who examines the effect of works councils, employee involvement, and their interaction on establishment profitability using the same broad dataset as Jirjahn but data for 1996 alone. She finds that establishments where there is employee involvement but no works council have

higher profitability than their counterparts with workplace representation. Schedlitzki interprets her findings as consistent with the so-called management pressure/management competence hypothesis of FitzRoy and Kraft (1987, 1990) to the effect that efficient managers can institute adequate systems of communication and decision-making without the *impedimenta* of autonomous works councils.

It will be interesting to see whether these more pessimistic findings are reiterated using nationally representative establishment data from the IAB Establishment Panel. Thus far, it does seem from this new data set that works councils increase further training and that *predicted* further training as well as works council presence are pro-productive (Zwick, 2002). On the other hand, a recent study of high performance work practices by Wolf and Zwick (2002) that also controls for selection and unobserved plant heterogeneity is less clear cut, and nicely illustrates the difficulties confronting the analyst in this area. In the first place, the association between the works council and such practices is not always positive and well determined. Second, different practices seem to have different (and exactly reversed) effects on productivity once unobserved plant heterogeneity and selection are accounted for. Specifically, 'organizational change' bundles made up of practices that foster employee involvement – a shift in responsibility to lower levels of the hierarchy, the introduction of team work and self-responsible teams and work groups with independent budgets – now have a significantly positive impact on productivity, while the effect of 'incentive bundles' such as employee share ownership, profit sharing, and incentive training is now statistically insignificant in the preferred specification. And note that the association between works councils and employment practice bundle is much stronger in the case of incentives than organizational change. Also recall that the positive effect of works councils on productivity observed in this new data set is not robust.

IV. Interpretation

This review of union voice has traced some major shifts over the course of the past quarter century in the perception of what it is that unions do. The start of the period is demarcated by the influential empirical study of Brown and Medoff (1978). This careful and honest empirical study drew on notions of collective voice and did much to prepare

the ground for *What Do Unions Do?* Both works brought ideas current in the industrial relations literature before more skeptical economists, largely weaned on notions of union monopoly. It is unclear just how many minds were changed as a result of this exposure but they were broadened: the evidence is the slew of unions-in-the-production-function studies and subsequent estimates of union effects on profitability and investment. Yet the number of such studies had slowed to a trickle by the mid-1990s. If we were to stop the camera at this point, it might be concluded that the profession had examined the new theory of unionism and had found it wanting given the lack of a convincing evidence of a material increase in the joint surplus under unionism and every indication from profit and investment data that the dynamic implications of unionism were unfavorable.

This interpretation would be too strong. In the first place, there was no conspicuous fall off in British and German research interest in union voice. Second, the common finding of a near zero average 'effect' of unions on labor productivity is interesting in and of itself; for example, it addresses the concerns of those much exercised by the cost of the union rule book. Moreover, it really serves to shift our attention to the factors that might mediate this outcome. Third, research findings are less consistently negative for unions outside the United States, where admittedly the strongly interlocking nature of the research results does not provide particularly auspicious context for union voice. Fourth, there are enough ambiguities in our mainstream models to call into question the inevitability of the result that unions will have adverse effects. Thus, in terms of dynamic effects, sufficiently firm action on the part of the enterprise (having a discount factor sufficiently close to one) may discourage union opportunism in respect of the quasi-rents to long-lived relation specific capital (Addison and Chilton, 1998), while in other circumstances the hold-up mechanism may be dominated by strategic R&D behavior (Menezes-Filho and van Reenen, 2003). Fifth, the camera is still running and we have commented on an emerging literature on union presence, workplace practices, and firm performance. Finally, of course, the new theory does not argue that improvements in productivity are automatic, only that these may be observed given an appropriate concatenation of circumstances: the expression of effective voice, a constructive institutional response, and a cooperative industrial relations environment.

Although traditional labor theory may be more open-ended with respect to unionism than we might like, this characterization applies in spades to collective voice. Thus, the voice mechanisms producing increased workplace performance are disturbingly vague outside of reduced turnover/higher training investments, and even here in neglecting the issue of optimal quit behavior the model cannot address whether the induced reduction in quits and increase in training are excessive.[15] The bigger problem is that the collective voice model is sufficiently catholic to accommodate all sorts of finding, even the most negative. Frankly, 'institutional response' is something of a *deus ex machina*. More problematic still is the very integrity of collective voice/institutional response mechanism. Bargaining power is necessary if unions are to play a role in the enforcement of contracts but bargaining power is what defines the monopoly effect. *Vulgo*: if voice is wrapped up with the exercise of power, how can we be sure that it is the putative 'good' that the architects of collective voice take it to be. (Power also carries consequences for institutional response because management resistance to voice can then be placed on the same footing as resistance to higher wages.)

We consider it unlikely that Freeman and Medoff intend that the information function of unions is the sole – even the main – source of the potential benefits of union voice. But assuming for the moment that they do, very little attention is accorded the quality or effectiveness of collective voice. Thus, for example, there is no formal discussion of whether the union will be a faithful agent of the member principal? More important in this context is the model's reliance on worker dissatisfaction and the neglect of individual voice. We earlier provided some (controversial) German evidence suggesting that it was individual rather than collective voice that delivered the goods as it were and lowered excessive turnover among unskilled workers. However, a recent paper by Luchak (2003) probably makes the point better. Luchak distinguishes between *direct voice* and *representative voice*. By direct voice he means efforts by employees to effect change through two-way communication with another member of the organization, such as a team member. Representative voice is an indirect mechanism working through a third-party intermediary or process, such as a union steward filing a grievance. He argues that the former is a more flexible, integrative process whereas the latter is more structured, issue oriented and distributive.

Luchak further distinguishes between two types of worker attachment to their firms: *affective commitment* and *continuance commitment*. The former refers to an emotional bond between worker and firm that, among other things, leads that worker to contribute meaningfully to the organization while at the same time seeking dispute resolution that does not threaten the relationship with the firm. The latter is based on a calculation of the costs and benefits associated with staying with or leaving the organization, such as the sacrifice of material firm-specific training investments and non-portable benefits. Such employees may or may not experience feelings of helplessness and frustration but, on this model, they are motivated to do a minimum toward maintaining organizational membership.

While both types of worker are predicted to evince lower quits, Luchak hypothesizes that employees who have an affective bond to the organization will be more likely to use direct voice and less likely to use representative voice, and conversely for those with continuance committed employees. These hypotheses are tested using data on 429 employees in a Canadian electric utility in 1997. Controlling for perceived effectiveness of union voice, job satisfaction, demographics, salary, and education, it is reported that score on an affective commitment scale is positively associated with use of direct voice (an average over a 3-item scaled response) and negatively associated with grievance filing (or being a shop steward). For its part, score on a continuance commitment scale is not associated with any reduction in the use of direct voice, although it is at least positively associated with grievance filing (if not with being a steward). Both forms of commitment emerge as negatively related to an indicator of quit propensity. And not surprisingly the perceived effectiveness of union voice is associated with more direct voice and more grievance filing.

There are two interesting inferences that can be drawn from this treatment. First, to the extent that it is sourced from continuance committed individuals, collective voice may not be worth listening to. For his part, Luchak concludes that there is a need for some fundamental rethinking of the performance-enhancing features of unions in these circumstances. Second, if unionized employees are more dissatisfied than their nonunion counterparts, we might speculate along with Luchak that they have lower levels of affective commitment. Certainly there is a well determined positive association between

job satisfaction and affective commitment in this Canadian data set. Moreover, if dissatisfied workers tend to file grievances rather than engage in direct voice, the relief of disaffection may be but temporary.

The emphasis on dissatisfaction in the collective voice model is probably consistent with the functioning of traditional unionism. If so, the seeming desire among all workers for representation charted in Freeman and Rogers (1999, pp. 68-70) is undercut by a desire for representation that works *cooperatively* with employers, identified by the same authors (p. 5). The decline in union density in the United States may therefore have more to do with the type of unionism available to workers than the more popular explanations of antiquated labor laws and unfair tactics by employers (see Delaney, 2003). Evidence supplied in this chapter on the attitudes of *British* workers to union voice may also speak to the adversarial nature of collective bargaining.

By the same token, cooperation between management and organized labor is a central theme in *What Do Unions Do?* Cooperation, or a favorable set of institutional responses, is seen as the ultimate key to realizing improvements in workplace performance. This theme has been taken up in the most recent empirical literature linking unionism to employee involvement and various high performance work practices. We have seen that some progress has been made in identifying circumstances in which unionism can be associated with beneficial performance outcomes. But the impetus for much of this new research emanated from the management literature rather than developing organically from the collective voice model. And if the findings of the new studies can be construed as being 'in the spirit of the union voice model,' the fact remains that there is no agreement on the particular practices that gell with unionism, still less on the contribution of unionism to the development of high performance work practices (with the possible exception of further training in the German case). In other words, there has been an inadequate integration of the union voice and management approaches. The benchmarking exercises reviewed here are interesting in suggesting that unionized plants need not suffer from any, say, productivity shortfall or in fact enjoy higher productivity than nonunion plants but they do not establish that unions are pro-productive.

The problems in attributing causality identified by Hirsch in Chapter 6 of this volume are actually elevated in exercises of this kind. Causation continues to cast a long

shadow because of the essentially cross section nature of research involving new working practices. Here the German literature, although still in its infancy, contains the suggestion that some practices might appear successful because they are introduced in times/circumstances of prosperity while others might only appear unsuccessful because they were introduced to deal with major structural problems. Much the same discussion on causation attended investigation of union impact in the earlier net effects literature. Suffice it to say here that the analytical problem is only compounded when voice and working practices are being considered jointly.

Finally there are two important institutional considerations that have been raised by our discussion. First, there is the apparent sea change in the effect of British unions on economic outcomes (including macro outcomes). If the U.S. union voice literature was christened in optimism, the opposite is true of the corresponding British research. Over time, however, the disadvantages of British unionism have dissipated – some would say have even disappeared. It is conventional to attribute this favorable development in large part to legislative changes that attacked union immunities or legal privileges. These changes were accompanied by increased competition, both domestic and international. The suggestion is that institutional change/adversity and competition may be the handmaiden of innovations in union effects. Second, there is some evidence from Germany that it may be possible partly to decouple production from distribution issues at the workplace given an appropriate structure of collective bargaining, here the dual system of industrial relations. At issue of course is the portability of institutions if not economic forces.

Union voice is not dead: it has some theoretical conviction, it has witnessed some modest development, and it still manages to summon a modicum of empirical support. But after one-quarter of a century, it is in urgent need of restatement. In the process, it has to tackle the various lacunae identified above.

Endnotes

1. We would argue that this was certainly the view of mainstream economics and, more controversially, of labor economics. As far as the latter is concerned, a less controversial statement would be that with the neoclassical revival in labor economics, the nonpecuniary aspects of unions tended to get lost. We are indebted to Bruce Kaufman for this qualification.

2. This is not to dispute the *short-term* costs of strikes or their effects on product quality, but rather to contest the attribution of blame to one side alone; on which, see Siebert, Bertrand, and Addison (1985).

3. As a practical matter, 1984 does not mark the beginning of the new applied literature. Rather that literature is so delineated by Brown and Medoff's (1978) influential production function analysis of union impact, which cites (as forthcoming) *What Do Unions Do?*

4. This is another way of questioning the application of the Hirschman model to the workplace, although we also note that Boroff and Lewin (1977) find contrary to the prediction of Hirschman that loyal workers use voice less than do other workers in response to unfair treatment.

5. In such markets, allocation and remuneration decisions are not directly determined by the price mechanism. The labor contract will be complex and multidimensional because workers care about nonpecuniary terms of employment and workplace rules, and also because such conditions and methods of organization have different costs. Worker attitudes and morale are therefore potentially important inputs into production.

6. Individual voice is also less likely because of individual fears of retaliation. The traditional master-servant relationship makes it difficult for individuals to express discontent due to the danger of being fired. Collective voice changes the authority elation. As Freeman (1976, p. 364) writes: "it is clearly easier to retaliate against a single worker than the entire work force." The changed authority relation also implies an industrial jurisprudence system and from the perspective of the model the prospect of a better enforcement of workers' rights and contract execution (further commented on below).

7. Average preferences may also yield better outcomes than marginal preferences when desirable conditions or fringe benefits involve substantial fixed costs.

8. Freeman (1976, p. 365) also makes the interesting observation that in larger organizations union voice will also provide central management with information about local conditions and operations of a type that differs markedly from that passed up the organizational chain.

9. We are not referring to 'efficient bargains' on the contract curve, which in general will not be efficient in the sense used here. Even in the case of the vertical contract curve, the interesting question of union impact can only be sidestepped temporarily since capital is held constant.

10. We do not discuss the association between unionism and employment, partly because employment growth is a rather more ambiguous outcome indicator; for example, unionized plants shedding restrictive practices might grow employment less than nonunion establishments. But the bare facts are that, other things being equal, union plants grow around 3 percent less per year than their nonunion counterparts in both the United States (Leonard, 1992) and the United Kingdom (Addison and Belfield, 2004).

11. Only one German study has investigated works council impact on capital investment. For a 1990 cross section of c. 50 manufacturing, Addison, Kraft, and Wagner (1993) regress the gross investment-capital stock ratio on works council presence, firm size, product innovation, and proxies for the state of demand (capital utilization and hours of overtime per employee) and modernity (the capital to sales ratio). They find firms with a works council present have significantly lower gross investment ratios. Despite the strong showing of the worker representation variable, however, the overall performance of the equation is weak.

12. In addition to this within estimator, Black and Lynch also deploy a GMM estimator.

13. In addition to the familiar quality circles/problem-solving groups, teambriefing, top management briefing, profit sharing, employee share ownership, and financial disclosure, the measures include human relations skills as a selection criterion, internal recruitment, multiskilling, individual performance appraisal, welfare facilities, and monthly/cashless pay.

14. The Dickensian allusion is that of Sisson (1995).

15. While there are a few U.S. studies pointing to either lower training or no increase in training in union regimes (e.g. Duncan and Stafford, 1980; Lynch and Black, 1998), these are the exception.

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Table 1
Workplace-level Voice Measures by Workplace Union Status

	Nonunion workplace	Union workplace
At least 60% of employees in the largest occupational group at the workplace work in formally designated teams	48.9	84.3
Consultative committee of managers and employees that operates at a higher level than this establishment	21.5	53.7
Joint consultative committee	16.1	30.3
Briefing groups (for any section of the workforce)	76.0	83.1
Briefing groups (at least fortnightly)	38.9	41.9
Briefing groups (involving >10% of the workforce)	18.8	20.1
Quality circles	13.2	20.7
Consultation (management chain)	42.9	71.6
Consultation (regular meetings with entire workforce)	37.3	40.1
Consultation (at least three of: regular meetings, management chain, suggestion schemes, newsletters)	5.2	16.6
Information provision (about the finance of the organization)	38.4	64.1
Information provision (on internal investment plans, finance, finance of the organization, staffing plans)	15.1	36.2
Performance related pay (at least 60% of non-managerial employees received performance related pay in last six months)	11.8	16.8
Profit-related pay	27.4	38.3
Share ownership (at least 60% of non-managerial employees are eligible for employee share ownership schemes)	5.2	11.0
Formal procedure for dealing with individual grievances raised by any non-managerial employee	80.5	96.6
N (*workplaces*)	*768*	*636*

Notes: WERS98; Survey weights applied; private-sector workplaces only.

Table 2
Worker-level Voice Measures by Union Workplace Status

	Nonunion workplace	Union workplace
During the last 12 months, have you discussed any of these with your supervisor/line manager?		
How you are getting on with your job	57.9	55.1
Your chances of promotion	22.0	20.6
Your training needs	43.3	46.7
Your pay	41.5	26.7
None of these	26.0	29.6
N	*8550*	*8599*
Managers here are understanding about employees having to meet family responsibilities: Percent (strongly agree)	55.9	46.3
N	*8096*	*8297*
Managers here encourage workers to develop their skills: Percent (strongly agree)	50.4	48.2
N	*8298*	*8377*
Managers sometimes or frequently ask for the views of you and others working here on:		
Future plans for the workplace	46.0	41.6
Staffing issues, including redundancy	25.8	26.7
Changes to work practices	60.0	55.8
Pay issues	29.8	28.9
Health and safety at work	55.7	63.0
N	*8850*	*8599*
Percent responding managers are (very) good at:		
Keeping everyone up to date about proposed changes?	42.5	37.0
Responding to suggestions from employees?	34.0	25.7
Dealing with work problems that you or others may have?	49.8	40.3
Treating employees fairly?	53.0	43.2
Providing everyone with chance to comment on proposed changes?	29.9	24.2
N	*8550*	*8599*
In general, how would you describe relations between managers and employees here?		
Very good	19.1	8.3
Good	42.3	36.3
Neither good nor poor	25.6	30.7
Poor	10.3	16.3
Very poor	4.7	8.4
N	*8411*	*8462*
How helpful are find meetings of managers and employees?		
(Very) helpful	58.7	55.1
Not very or not at all helpful	15.2	20.9
Not used here	27.0	23.7
N	*8284*	*8384*
How much contact your do how have with trade union or other worker representatives about workplace matters?		
Frequently in contact	3.8	16.0
Occasionally in contact	10.1	39.9
Never in contact	20.8	24.1
Am a worker representative	1.2	1.8

Do not know any worker representatives	63.1	17.7
N	*8405*	*8538*
Unions / staff associations take notice of members' problems and complaints		
(Strongly) agree		47.1
(Strongly) disagree		35.3
Unions / staff associations are taken seriously by management		
(Strongly) agree		35.0
(Strongly) disagree		42.5
Unions / staff associations make a difference to what it is like to work here		
(Strongly) agree		30.7
(Strongly) disagree		33.8
N (*workers*)		*8599*

Notes: See Table 1.

Table 3
Worker-level Satisfaction Measures by Union Workplace Status

	Nonunion workplace	Union workplace
Percent satisfied or very satisfied with:		
Amount of influence you have over your job	62.2	54.5
Sense of achievement you get from your work	63.8	56.2
Amount of respect from supervisors/managers	56.9	50.1
Amount of pay you receive	32.5	33.2
Percent agree or strongly agree:		
I share the values of my organization	46.2	41.5
People working here are encouraged to develop their skills	48.9	44.2
I feel loyal to my organization	64.8	58.5
I am proud to tell people who I work for	56.4	49.9
N (*workers*)	*5597*	*8659*

Notes: See Table 1.

Table 4
Log Workplace Quit Rate and Tenure Rate (OLS Estimation)

	Log Workplace Quit Rate		Log Workplace Tenure Rate	
	[1] Union 'Voice'	[2] Union 'Voice' and Voice Channel	[1] Union 'Voice'	[2] Union 'Voice' and Voice Channel
Ln (average wage)	-0.8422**	-0.8417**	0.0591	0.0901
	(0.2017)	(0.2038)	(0.1034)	(0.1096)
Union workplace	-0.4120**	-0.2936**	0.1475**	0.1007
	(0.0785)	(0.1007)	(0.0545)	(0.0585)
Formal grievance procedure		-0.2024		0.0550
		(0.1083)		(0.0614)
Team working		0.0706		-0.0370
		(0.0871)		(0.0515)
JCC		-0.0591		0.0447
		(0.0803)		(0.0508)
Briefing groups		-0.0950		-0.0039
		(0.1137)		(0.0665)
Quality circles		-0.0350		0.0540
		(0.0874)		(0.0450)
Consultation		-0.0975		0.0604
		(0.1061)		(0.0531)
Information provision		-0.2232*		0.0535
		(0.0877)		(0.0486)
Performance pay		0.0328		-0.0532
		(0.1068)		(0.0553)
Profit-related pay		0.1864*		-0.0492
		(0.0854)		(0.0529)
Shareownership		0.0456		0.0122
		(0.0880)		(0.0527)
Good relations		-0.0944		-0.0634
		(0.0853)		(0.0504)
N	*1084*	*1084*	*517*	*517*
R-squared	0.34	0.36	0.54	0.55

Notes: See Table 1. *,** denote significance at the .01 and .05 levels, respectively. Control variables are: dummy variables for sector (manufacturing, utilities, wholesale, catering, transport, and finance); workforce composition (percent female, unskilled, part-time, professional, and minority); dummy variables for capital/labor ratio (3 proxies), log establishment age, and single establishment. Constant term also included.

Table 5
Estimates of the Effect of Unionism and a Twenty Percent Wage Increase

	Unionism, for Workers Paid Same Wage ('Voice Effect')	20 Percent Wage Increase ('Monopoly Effect')
Approximate percentage amount by which workplace quit rate is reduced:	34	15
Approximate percentage amount by which workplace tenure is increased:	16	1

Notes: Mean (s.d.) quit rate: 0.15 (0.21); mean (s.d.) worker tenure: 6.6 (5.5) years. Percentage amounts are taken from model [1] of Table 4: for voice effect anti-logs of coefficients are used; for wage effect anti-logs of coefficients*0.2 are used.

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