A Bargaining Analysis of American Labor Law and the Search for Bargaining Equity and Industrial Peace

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A BARGAINING ANALYSIS OF AMERICAN LABOR LAW AND THE SEARCH FOR BARGAINING EQUITY AND INDUSTRIAL PEACE

Kenneth G. Dau-Schmidt*

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INTRODUCTION

Since the 1930s, the fundamental tenet of American labor law has been that the government should foster employee organization and regulate industrial relations to promote equity in bargaining between employers and employees and to promote industrial peace.1 Those

1. The findings and policies set forth in § 1 of the original Wagner Act stated in part:
The denial by employers of the right of employees to organize and the refusal by employers to accept the procedure of collective bargaining lead to strikes and other forms of industrial strife or unrest, which have the intent or the necessary effect of burdening or obstructing commerce . . . .
The inequality of bargaining power between employees who do not possess full freedom
who enacted our basic labor laws, as well as the majority of legal scholars who have since commented on those laws, believed unions necessary for workers to achieve the benefits of industrial democracy and a larger share of industry's profits.\(^2\) Thus, they believed, the government should remove barriers to employee organization such as injunctions,\(^3\) yellow-dog contracts,\(^4\) and employer discrimination against

of association or actual liberty of contract, and employers who are organized in the corporate or other forms of ownership association substantially burdens and affects the flow of commerce, and tends to aggravate recurrent business depressions, by depressing wage rates and the purchasing power of wage earners in industry and by preventing the stabilization of competitive wage rates and working conditions within and between industries.

Experience has proved that protection by law of the right of employees to organize and bargain collectively safeguards commerce from injury, impairment, or interruption, and promotes the flow of commerce by removing certain recognized sources of industrial strife and unrest, by encouraging practices fundamental to the friendly adjustment of industrial disputes arising out of differences as to wages, hours, or other working conditions, and by restoring equality of bargaining power between employers and employees.

It is hereby declared to be the policy of the United States to eliminate the causes of certain substantial obstructions to the free flow of commerce and to mitigate and eliminate these obstructions when they have occurred by encouraging the practice and procedure of collective bargaining and by protecting the exercise by workers of full freedom of association, self-organization, and designation of representatives of their own choosing, for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection.


3. 29 U.S.C. § 104 (1988). This section withdraws from the jurisdiction of federal courts the authority to issue injunctions in nonviolent labor disputes.

4. 29 U.S.C. § 103 (1988). A yellow-dog contract is an agreement between an employer and
employees on the basis of union affiliation. Moreover, these same legislators and scholars believed that the government stewardship of labor relations should go beyond the mere removal of barriers to organization, to the active regulation of industrial relations conflicts with respect to organizing, collective bargaining, and enforcing collective agreements. Elections, the requirement of bargaining in good faith, and arbitration were advanced to replace the parties' cruder methods of resolving such conflicts. Without this extensive tutelage of labor-management relations, the legislators and legal scholars believed that conflicts in labor relations would escalate into strife and economic warfare and that many workers would be denied the benefits of dealing with their employers on equal terms.

The traditional economic analysis of unions and collective bargaining calls into question this fundamental tenet and thus the basis for much of American labor law. Proponents of this analysis argue that individual bargaining will secure for each worker all of the benefits to which she is entitled in accordance with her productivity. Unions achieve higher wages and benefits for employees by establishing a labor cartel, to which the employer responds by raising prices, cutting output, substituting capital for labor, and laying off workers. Although the union may gain benefits for some workers, these benefits come only at the expense of consumers, other workers, and economic efficiency. Thus, the traditional economic analysis suggests that,
rather than fostering unions and collective bargaining, the government should undertake measures to extirpate them.\textsuperscript{11} Far from promoting equity in bargaining between employers and employees, unions promote workers to a superior bargaining position — that of a labor cartel — and cause inefficiency and inequitable redistributions of income among similarly situated workers. Moreover, under this analysis, no sound basis exists for the government's efforts to regulate industrial relations to promote industrial peace.\textsuperscript{12}

This traditional economic analysis of unions and collective bargaining is deficient for several reasons. First, it focuses on only one of several possible sources of union wage increases. Logical arguments and recent empirical evidence suggest that, as sources of union wage increases, employer rents, quasi-rents, and productivity increases associated with unionization are at least as important as labor cartelization.\textsuperscript{13} Second, the analysis assumes that the employer responds to a union wage demand by moving up her labor demand curve to substitute capital for labor.\textsuperscript{14} However, it can be shown that such a response is not Pareto optimal\textsuperscript{15} for the union and employer and that both can make themselves better off by bargaining in a Coasean fashion\textsuperscript{16} to achieve a contract off the demand curve with a lower wage and more employment. Again, recent empirical evidence suggests that the bargaining solution is the better model and that unionization causes only small capital and labor misallocations.\textsuperscript{17} Finally, despite the fact that collective bargaining is commonly cited as an activity involving strategic behavior,\textsuperscript{18} the traditional economic analysis of the union as a cartel and the employer as a price taker in collective bargaining precludes any rigorous consideration of employer and union strategic behavior. As a result, the monopoly model implicitly assumes that all of the costs of collective bargaining are ordinary time and information trans-

\textsuperscript{11} See Simons, supra note 8, at 25.


\textsuperscript{13} BARRY T. HIRSCH & JOHN T. ADDISON, THE ECONOMIC ANALYSIS OF UNIONS 211-14 (1986); see also infra notes 202-25 and accompanying text.

\textsuperscript{14} See infra notes 226-37 and accompanying text.

\textsuperscript{15} Under the Pareto criterion, a resolution of a conflict or problem is said to be "Pareto optimal" if under that resolution no one can be made better off without making someone else worse off. HAL R. VARIAN, MICROECONOMIC ANALYSIS 269 (2d ed. 1984).

\textsuperscript{16} To assume that two parties bargain in a Coasean fashion is to assume that they effectively negotiate to exhaust all benefits of trade. See generally R.H. Coase, The Problem of Social Cost, 3 J.L. & ECON. 1 (1960).

\textsuperscript{17} See infra notes 232-37 and accompanying text.

action costs, with no tendency to escalate as each side seeks to gain the upper hand. Thus, it is not very surprising that the traditional economic analysis admits no comprehension of the purpose in American labor law of promoting industrial peace.

In this article, I present an alternative economic analysis of unions and collective bargaining that utilizes recent advances in labor economics and some simple applications of game theory to address the deficiencies of the traditional monopoly model. First, I assume that the primary sources of union benefits are employer rents, quasi-rents, and productivity increases associated with unionism. These rents and productivity increases constitute the cooperative surplus that the parties divide through collective bargaining. Individual bargaining will not secure for employees a share of this surplus. The workers must organize and bargain collectively to raise themselves to a position of rough equality relative to the employer and gain a share of the surplus.

Second, in examining the problem of dividing the cooperative surplus, I assume that the parties bargain in a Coasean fashion to achieve a Pareto optimal solution that maximizes the value of the cooperative surplus to the parties. If one assumes such optimal bargaining, then one can show that the parties will agree to a contract that specifies a level of employment exceeding that given by the employer's labor demand curve. Indeed, if one assumes that the parties bargain to maximize the monetary value of the cooperative surplus and that the surplus consists of employer rents, one can demonstrate that the employer will set the same product market price and that the parties will agree to the same level of employment that would have prevailed in the absence of a union.19 This follows because, assuming the employer was optimally pricing and mixing capital and labor to maximize his rent before the advent of the union, any adjustment of these parameters will only decrease that rent. Combining this assumption of optimal bargaining with my previous assumption concerning the primary sources of union wage increases, I argue that employees' gains from organization come largely at the expense of their employers, rather than other employees or consumers, and that the productivity gains associated with unionism may outweigh any attendant inefficiencies. It is therefore equitable, and perhaps wealth maximizing, for the government to encourage employee organization.

Finally, I argue that in conflicts over the division of the cooperative surplus, including organizing, collective negotiations, and enforcement of the collective agreement, both sides have incentives to act

19. See infra notes 65-67 and accompanying text.
strategically, wasting a portion of the cooperative surplus in hopes of capturing a larger share of the surplus for themselves. Such strategic activities include discriminatory discharges, recognition strikes, intransigence in bargaining, and strikes or lockouts to enforce a given interpretation of the collective agreement. Moreover, because parties are often rewarded in these activities based on their recalcitrance relative to the other party, the costs of these conflicts are positional externalities that tend to escalate in the absence of government regulation. To illustrate these arguments, I present a simple game representing collective negotiations, which demonstrates that strategic behavior may be individually rational for each party to undertake, but collectively irrational, because it results in strikes that waste the cooperative surplus. Thus, it makes sense for the government to structure the conduct of organizing, collective negotiations, and enforcement of the collective agreement to prohibit or discourage strategic behavior and minimize waste of the cooperative surplus.

The article proceeds in four parts. In Part I, I provide a brief primer on the economic analysis of unions and collective bargaining. I discuss the various possible sources of union wage increases, possible employer responses to union wage demands, and alternative models of the costs of collective bargaining. In Part II, I outline the traditional monopoly theory of unions by combining the appropriate elements of the model discussed in the primer on economic analysis. I present both the theoretical implications of the traditional economic analysis for American labor law and a critique of this analysis from an economic perspective. In Part III, I describe my alternative bargaining analysis by combining the alternate elements of a model of unions and collective bargaining presented in the primer on economic analysis. Once again I examine the implications of economic analysis for American labor law, although this time with very different results. Finally, I present my conclusions about American labor law based on my analysis.

I. A PRIMER ON THE ECONOMIC ANALYSIS OF UNIONS AND COLLECTIVE BARGAINING

In this Part, I present alternate economic assumptions with respect to three issues that must be addressed to construct an economic model of unions and collective bargaining. First, I examine the source of union wage and benefit increases and present three possible alternatives. Next, I examine the employer's response to union wage and benefit demands and present both a demand curve and a bargaining analysis. Finally, I examine the costs of collective bargaining and
present alternative treatments of these costs, first as simple transaction costs, then as positional externalities. As I show in Parts II and III, which of the alternate economic assumptions one uses to construct a model of unions and collective bargaining greatly affects the model's implications for public policy.

A. Sources of Union Wage and Benefit Increases

The primary objective of unions is to negotiate the employment of workers at wages and benefits superior to those that the employees would have received individually. Indeed, workers will desire to organize into unions only if such organization provides benefits in excess of the costs of organization. Empirical studies estimate that organized employees receive wages that are generally about ten to fifteen percent higher than similarly situated unorganized employees. Organized employees also enjoy other benefits from collective bargaining, such as pensions, medical benefits, protection from discharge without just cause, and a grievance and arbitration system to enforce the collective agreement. The value that these benefits confer on organized employees can also be represented as a wage increase in simple models of unions and collective bargaining.

However, if unions simply raised the wages of their members in a perfectly competitive economy, all they would achieve would be the unemployment of their members, through either their replacement with lower-paid unorganized workers or the bankruptcy of their employers. Such a wage increase would raise the production costs of organized firms, putting them at a competitive disadvantage. If the organized firms failed to replace the organized workers with lower-paid unorganized workers, they would either have to raise their prices or accept lower profits to cover the wage increase. If the organized employers raised their prices to cover the increase in production costs, unorganized firms would sell their products at lower prices, expanding


22. For previous presentations of this argument, see Freeman & Medoff, supra note 20, at 6-7; Hirsch & Addison, supra note 13, at 21-22, 208-10; compare Paul C. Weiler, Governing the Workplace: The Future of Labor and Employment Law 132 (1990) ("[A] union is not and cannot be a cartel that exercises true monopoly power in an otherwise competitive market.").
their production in the affected markets and driving the organized firms out of the market. Similarly, if the organized employers accepted lower profits, the organized employers would not be able to pay a competitive rate of return to borrow capital and would go out of business. In time, only unorganized workers and firms would exist. To survive for any appreciable period of time in an economy, unions must derive their members' benefits from a source that is insulated from the machinations of the competitive market. At least three such sources exist.

1. Labor Cartel Rents

The first possible source of union wage increases, although by no means the most likely, is the formation of an effective labor cartel by the employees. In order for this source to bear fruit, both the organized employees' labor market and the organized employers' product market must have barriers to entry — cost advantages enjoyed by the incumbents of a market but not by new entrants. Examples of barriers to entry in the labor market include licensure, location, firm-specific training, and expensive general training; examples of barriers to entry in the product market include patents, tariffs, transportation costs, and large start-up investments in capital, advertising, or learning how to produce the product. If the employees can establish a labor cartel in a market with the requisite barriers to entry, they can raise their wages without fear that their employers will replace them, and their employers can raise prices to cover the increased production costs without fear that unorganized firms will drive them out of the market. The size of the barriers to entry in the relevant labor and product markets will limit the size of the union wage increase.

23. See HIRSCH & ADDISON, supra note 13, at 21-22.

24. F.M. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 236 (2d ed. 1980).

25. See GARY S. BECKER, HUMAN CAPITAL (2d ed. 1975). Firm-specific training is training that has value only to one firm; general training is training valuable to more than one firm. See id. at 26.

26. RICHARD A. POSNER & FRANK H. EASTERBROOK, ANTITRUST: CASES, ECONOMIC NOTES, AND OTHER MATERIALS 513-16 (2d ed. 1981). There is some disagreement over whether large initial investments such as expensive general training for employees or start-up costs for firms are really a barrier to entry, because the incumbents in the market also once had to undertake those costs. See id. at 514. However, at least in an economy with imperfect capital markets that make borrowing large sums of money impossible or costly, the necessity of such borrowing for start-up costs may effectively limit the number of potential entrants.

27. The employees cannot raise their wages above the value of the barriers to entry to the labor market; if they do, the employer will replace them. Similarly, if they raise their wages so high that their employer must price above her product market barriers to entry, unorganized employers and employees will enter the market and replace them.
To establish an effective cartel, the employees probably need not organize all of the members of an occupation of a given employer, or all of the employers in the product market. Unions may be able to establish effective bargaining power with an employer by organizing only a significant subset of the firm's employees. Moreover, although the short-run individual interests of unorganized employers will be to cut prices and expand their market share, a small number of unorganized employers may be able to see their long-run collective interest in declining to cut prices, earning excess profits, and using part of those profits to raise their workers' wages to stave off employee organization. To the extent the employees' cartel is imperfect, however, its wage-setting ability will be undermined, and organized employers will have greater ability and incentive to replace organized with unorganized workers.

2. Employer Rents

The second possible source of union wage increases is employer rents on capital. In economics a *rent* is any payment for a resource in excess of what would be necessary to entice the owner of the resource to bring it into employment in a perfectly competitive market. In other words, a rent is any payment for a resource that exceeds the competitive price for that resource. At least two forms of such rents may serve as sources for union wage increases for an indefinite period of time, and an additional form of "quasi-rent" could serve as a source of union wage increases in the short run.

The first form of employer rent that can serve as a source of union wage increases is employer market power rents from the product market. Market power rents are those profits earned by the employer in

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28. POSNER & EASTERBROOK, supra note 26, at 334.
29. The strategy of offering wage and benefit increases to stave off unionization seems fairly benign, because by redistributing wealth from the employer to the employees it achieves one of the objectives of allowing unions. However, if society wants to encourage employee organization, such "bribes" are undesirable because they encourage free riding on union efforts and result in too little union organizing activity. See infra note 317 and accompanying text.
30. See HIRSCH & ADDISON, supra note 13, at 21.
32. See HIRSCH & ADDISON, supra note 13, at 21; BARRY T. HIRSCH, LABOR UNIONS AND THE ECONOMIC PERFORMANCE OF FIRMS 3 (1991). An additional employer "rent" that may serve as a source of union wage increases is employer profits due to monopsony power in the labor market. However, although employer monopsony power may be an important source of union wage increases in certain industries and professions, labor economists generally do not believe it to be a pervasive source of union wage increases in the economy as a whole. See EHRENBERG & SMITH, supra note 9, at 65-66. For further treatment of the monopsony employer case, see infra notes 112-17 and accompanying text.
33. See HIRSCH & ADDISON, supra note 13, at 21.
excess of the competitive rate of return because the employer is a monoploy or participates in an oligopoly or cartel in the product market. As in the case of the labor cartel, there must be barriers to entry in the labor and product markets for employer market power rents to yield union wage increases. If the employees in an occupation with barriers to entry can organize an employer who enjoys market power rents in a product market protected by barriers to entry, then the employees can raise their wages without fear of replacement, and the employer can raise her prices or cut her profits without fear of replacement or fear that she will not be able to borrow capital. As before, the relevant barriers to entry limit the size of the union wage increase. If the employer has already increased her product price to the full extent of the product market barriers to entry, then the wage increase will have to be paid entirely out of profits without any increase in price. Again, the employees need not organize all of the members of a given occupation employed by an employer or all of the employers in a given product market to succeed in obtaining union wages. In fact, if employer market power rents represent the source of the union wage increase, the workers can achieve a wage increase even if they organize only one employer.

The second form of employer rent that can serve as a source of union wage increases is Ricardian rents. Ricardian rents are profits earned on a resource that exceed the competitive rate of return because the resource is not generally available in the market and has some characteristic that makes it unusually productive. Examples of such resources include particularly fertile soil and a particularly rich vein of ore. There must be some limit on the availability of the resource in the market; otherwise, competing producers who owned the resource would have incentives to cut prices and vitiate the rent. If the employees in an occupation with barriers to entry can organize an employer who enjoys Ricardian rents, the employees can raise their wages without fear of replacement, and the employer can pay these higher wages out of his rent without raising prices or going out of business. Indeed, if the only source of the union benefits is Ricardian rents, then the competitive market will set the product price, and the

34. See Scherer, supra note 24, at 11.
35. See Hirsch & Addison, supra note 13, at 21.
37. Although both of these examples are capital resources, human or labor resources can also earn Ricardian rents. For example, a person may have an unusual talent that makes him very productive at a given activity. However, as long as there is more than one employer for this unusual talent, the employee will theoretically be compensated for this superior productivity.
employer will not be able to raise the product price without being driven out of business. The size of the possible union wage increase is limited to the size of the labor market barriers to entry or the Ricardian rent, whichever is smaller. As in the case of monopoly rents, the employees can gain a share of Ricardian rents even if they organize fewer than all the employees of only one employer in the relevant product market.

The final form of employer "rent" that merits discussion here is quasi-rents on capital investments. Quasi-rents are those profits earned on a resource in excess of what could be earned on that resource by transferring it to its next best use. As the name implies, quasi-rents are not true rents, because they are not payments in excess of the competitive rate of return. For resources that are readily transferrable to other uses through transport or sale, such as common machinery like an adding machine, quasi-rents will be very small or zero. However, for resources that are highly specialized and hard to transport, such as a unique steel smelter, quasi-rents may constitute nearly the entire competitive return on the resource. If the employees in an occupation with barriers to entry can organize an employer who earns significant quasi-rents on a specialized machine, then the employees can raise their wages to the limits of their barriers to entry, and the employer will be forced to pay the higher wages out of the competitive return she would have earned on the machine. The employer will not be able to recapture the value of the machine through resale or transfer and, assuming the employer is operating in a competitive market, will not be able to raise her product price. Moreover, as long as the employer earns some positive return on the machine that will minimize her losses, the employer will not shut down the machine. However, such a strategy for gaining wage increases can only be a short-run strategy because, if the employer earns less than the competitive rate of return on her investment, the employer will probably avoid future investments in the same plant or perhaps even the same industry. Accordingly, as soon as the useful life of the specialized machine is exhausted, the employer will close the plant, and the organized workers will find themselves unemployed. As with true employer rents, the employees can obtain a share of quasi-rents even if


39. HIRSCH, supra note 32, at 10.
they organize fewer than all of the employees of only one employer in a product market.

3. Productivity Increases Associated with Employee Organization

The final possible source of union wage increases is productivity increases associated with employee organization. Labor economists have advanced several theories explaining how unions may increase productivity.

The first theory is the union shock effect. Proponents of this theory argue that, as a result of lax management, some inefficiency exists in every firm, particularly firms insulated from competition by barriers to entry. Such laxity may occur because managers enjoy an easygoing management style and the owners of the firm cannot adequately monitor the managers to prevent waste. An increase in wages brought on by employee organization, the argument goes, "shocks" the management into curing the existing inefficiencies to preserve profitability. Others argue that, because employees have an interest in the profitability of their firm and are present in the workplace, they may sometimes be superior to absent owners as monitors of management efficiency. Of course, to play this monitoring role without fear of discharge, the employees must be organized in a union. Thus, unions may raise productivity by prompting greater effort on the part of management.

The second theory asserts that unions allow for the enforcement of efficient, long-term implicit labor contracts. To prevent shirking and

40. See Freeman & Medoff, supra note 20, at 7-11, 14-16; Hirsch & Addison, supra note 13, at 22.
41. See Hirsch & Addison, supra note 13, at 188.
42. Even where the owner runs the firm, unproductive practices can continue if the owner enjoys the practice. For example, it has been argued that discrimination persists in the economy, despite the fact that discriminatory firms are at a competitive disadvantage, because owners of businesses enjoy the practice and are willing to accept a lower rate of return on capital to indulge in it. See Matthew S. Goldberg, Discrimination, Nepotism, and Long-Run Wage Differentials, 97 Q.J. Econ. 307 (1982).
43. See id. at 308-14.
to compensate workers for investments in firm-specific training, it is efficient for employees and employers to enter into long-term contracts in which some of the employees' compensation is deferred until later in their careers. These contracts remain implicit because of the costs of negotiation and enforcement. Unfortunately, such deferred compensation creates incentives for employers to act opportunistically and fire employees before they receive their deferred wages. Unions facilitate the enforcement of such long-term implicit contracts by protecting employees from employers' opportunist behavior with collective action, seniority rules, just-cause provisions, and arbitration provisions. Accordingly, unions promote efficient measures to prevent shirking and encourage efficient investment in firm-specific training.

The third theory contends that unions raise productivity by promoting the efficient consumption of public goods in the workplace. Many conditions of employment, including the level of safety, lighting, heating, and speed of the production line, are uniform and shared among all workers in a given workplace. Such uniform and shared conditions of employment are public goods, in that other workers cannot be excluded from improvements negotiated by one worker. As a result, in individual bargaining, workers tend to let others negotiate improvements in such conditions and enjoy the benefits at no cost.


46. The employer can defer a portion of an employee's compensation by paying the employee less than her marginal product early in the employee's career and more than her marginal product later in the employee's career. This creates disincentives for shirking because, if the employee is caught shirking and fired, the employee loses the deferred wages. Wachter & Cohen, supra note 45, at 1360-61. Deferred wages can also represent employee investments in, and payments for, firm-specific training. When the employee is young, she invests in firm-specific training by taking a wage below her marginal product; when the employee is older, she is paid returns on that investment in the form of wages in excess of her marginal product. Id.

47. To be complete, such contracts would have to specify appropriate conduct by the parties in a wide variety of situations, such as how much diligence the employee was required to undertake in all circumstances and the required severity of economic hardship before the employer could lay off the employee. Completely specifying such a contract would be very costly. Leslie, supra note 45, at 368. Also, such a complete explicit contract would probably be of little use because proving in court whether one side had failed to comply with the complex terms of the agreement would be very costly. For example, it would be difficult to determine whether the employer laid off employees due to a legitimate reason, such as a decrease in demand for the employer's product, or to avoid paying deferred wages.

48. See Wachter & Cohen, supra note 45, at 1359, 1364.


50. FREEMAN & MEDOFF, supra note 20, at 7-11, 14-16; Richard B. Freeman & James L. Medoff, The Two Faces of Unionism, 57 PUB. INTEREST 69 (1979). For some interesting applications of this argument to labor law, see Keith N. Hylton & Maria O. Hylton, Rational Decisions and Regulation of Union Entry, 34 VILL. L. REV. 145 (1989); Leslie, supra note 45, at 377.
Such "free riding" results in an inefficiently low level of consumption of these public goods. Unions help to solve this problem by giving the workers a collective voice through which they can more accurately represent their preferences on such matters.

Finally, some argue that unions raise productivity by promoting the adjustment of working conditions through the efficient expression of a collective voice rather than costly exit. In a competitive labor market, a worker's primary mechanism for expressing dissatisfaction with working conditions is to take another job or exit. Individual bargaining over conditions of employment is difficult due to the free-rider effect previously discussed and because workers do not want to be identified by their employer as "troublemakers." However, exit is an inefficient mechanism by which to encourage changes in working conditions. The mere fact that an employee leaves a job does not communicate much about what that worker felt was wrong with the conditions of employment. Exit also imposes search and retraining costs on both the employee who leaves and the employer who must replace the employee. Unions help solve this problem by giving workers a collective voice through which they can express dissatisfaction with working conditions without the problems of free riding or employer retaliation. Besides being a more effective method of expressing dissatisfaction with working conditions, the collective voice also saves money by reducing the number of workers who leave jobs and thus the amount of search and retraining costs.

If unions increase productivity, then, to the extent of the productivity increase, unionized employees can raise their wages without forcing their employer to raise output prices or putting their employer at a competitive disadvantage in obtaining capital. Indeed, to the extent that the unionized employer shares in the benefits of the productivity increase, the employer will be at a competitive advantage in the industry and will be able to lower product price and increase output.

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51. Freeman & Medoff, supra note 20, at 7-11, 14-16; Freeman & Medoff, supra note 50, at 70-78.

52. This point has led some to argue that unions cannot yield productivity increases because, if they did, employers would voluntarily organize and split the benefits with their employees. See, e.g., Thomas J. Campbell, Labor Law and Economics, 38 Stan. L. Rev. 991, 996-97 (1986); Richard A. Posner, Some Economics of Labor Law, 51 U. Chi. L. Rev. 988, 1000-01 (1984). I deal with this argument at length infra notes 209-12 and accompanying text. For now, suffice it to say that this argument misses the point that, in fact, employers in industries where employee organization yields productivity increases are anxious to organize employees in captive organizations or mimic union contracts in order to achieve a portion of the productivity increases that are possible through unionism. These employers just are not interested in independent employee organizations that may gain a share of employer rents or impinge on management prerogatives. As I will argue later, union wage increases generally exceed associated productivity increases, taking a share of employer rents and decreasing company profits. In addition, most American managers simply do not enjoy having their discretion compromised by negotiations with a union.
The nature of the problem of dividing productivity increases associated with employee organization between the employees and the employer depends on how widely such productivity increases are shared across the product market either through widespread unionization, growth of union firms, or free riding by unorganized employers who mimic union contracts. If such productivity increases are widely shared, then the benefits of the productivity increase will be divided according to the dictates of the market, with both the employees and the employer being paid according to their marginal product and consumers enjoying a somewhat lower product price. If such productivity increases are not widely enjoyed across the market, then, at least in the short run, they become Ricardian rents that the employees and employer split in an indeterminate bargaining problem. To the extent that employers do not like unions despite productivity increases, either due to union wages exceeding productivity increases associated with employee organization or because employers prefer to remain unorganized, employees will need barriers to entry in the labor market to protect them. As with employer rents, wage increases based on productivity increases associated with employee organization can probably be obtained by organizing only a substantial number of the employees of only one employer.

B. Employer Responses to Union Wage Demands

Even if the union wage increase is sheltered from the competitive market so that the employer will neither replace the organized employees nor go out of business, how the employer responds to a union wage demand may affect the analysis of unions and collective bargaining. Labor economists employ two basic models of the employer's response to union wage demands in their analyses.

1. The Employer Demand Curve Response

Under the first model, one simply assumes that, in response to a union wage demand, the employer moves up his labor demand curve
and employs less labor. This response is depicted in Figure 1, where the vertical axis measures the employees' wage, the horizontal axis measures the number of full-time employees, and the line marked $D$ represents the number of full-time employees demanded by the employer at each possible wage. The employer's labor demand curve slopes downward because of the declining marginal product of labor. As the union raises the employees' wage from the competitive wage, $W_c$, to the union wage, $W_u$, the employer decreases the number of employees he employs from $N_c$ to $N_u$. The employer reduces the number of employees he uses in the plant by producing less and by substituting capital, such as labor saving machines, for the now more expensive workers.

However, unless one wants to assume that unions are entirely indifferent to the unemployment of their members, or that transaction costs prevent the parties from bargaining in a Coasean fashion over the terms of employment, such a simple labor demand response by the employer will not be Pareto optimal for the parties. The employer's labor demand curve may give the appropriate employer response to a market increase in the wage. If, however, the wage increase results from the formation of a union that can bargain over wages and employment, the employer and union can negotiate a wage and employment agreement that specifies a higher level of employment and a lower wage that both the employer and union will prefer to the employer's labor demand response. Indeed, if one assumes that the parties bargain to maximize the monetary value of rents and productivity


55. EHRENBERG & SMITH, supra note 9, at 21-25. The marginal product of an input is the change in total output that results from the addition of the last unit of that input employed. To say that labor has a declining marginal product means that, as the employer adds additional workers to his plant, total production may go up, but production goes up by a smaller amount with each additional worker. Because the addition to total output is less with each additional worker, the employer will be willing to hire additional workers only if the wage of the workers is reduced. Accordingly, the employer is willing to employ more workers as the workers' wage declines, and the employer's labor demand curve slopes downward.

56. Id.

57. See supra note 16 for a definition of Coasean bargaining.

58. See supra note 15 for a definition of Pareto optimality.

increases due to unionization, one can demonstrate that the parties will seek to minimize the impact of the union on product price and firm employment levels. For example, if the union and employer seek to divide employer rents, then the parties will agree to the same level of employment that would have existed in the absence of the union, and no substitution of capital for labor will result from the union wage increase.  

2. The Employer Bargaining Response

To demonstrate the superior bargaining solution, in Figure 2 I have redrawn the labor demand analysis of Figure 1 and added some graphical representations concerning the employer’s profitmaking opportunities and the union’s preferences among different wage and employment contracts. Just as in Figure 1, the vertical axis measures

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60. See HIRSCH & ADDISON, supra note 13, at 14-18; John M. Abowd, The Effect of Wage Bargains on the Stock Market Value of the Firm, 79 AM. ECON. REV. 774, 777, 793 (1989); Clark, supra note 54, at 897-98. As I discuss below, productivity increases associated with employee organization may even increase the optimal level of employment over what prevailed in the absence of a union. See infra note 256 and accompanying text.

61. The labor economics literature reaches no consensus on the best model to represent the preferences or objectives of unions. Some have developed models assuming that unions seek to maximize the wage bill; others have employed public choice analysis and modeled union objectives according to the preferences of the median voter in union elections; still others have modeled union preferences in a manner analogous to an individual’s utility function with a trade-off between wages and employment for union members. See, e.g., HIRSCH & ADDISON, supra
The employees' wage, the horizontal axis measures the number of full-time employees employed, and the solid downward sloping curve labeled $D$ represents the employer's labor demand curve. However, this time I have added the employer's isoprofit curves $P_0$, $P_1$, and $P_2$ which descend on each side of the labor demand curve. Each isoprofit curve graphs wage and employment mixes that yield equivalent levels of profit. Isoprofit curves that are lower in the graph ($P_j$) specify a higher level of profits than those that are higher in the graph ($P_0$). For any given wage, profit is maximized on the labor demand curve; however, identical profits can be made with either more or less labor at a lower wage rate. Accordingly, the isoprofit curves slope down on either side of the labor demand curve. Also shown in Figure 2 are the union's indifference curves, $U_0$ and $U_j$. Each indifference curve graphs wage and employment mixes that yield equal utility to the union as a collective entity. Indifference curves that are further from the origin ($U_j$) yield higher utility than those that are closer to the origin ($U_0$). Assuming that the union's utility is an increasing function of both wages and employment, the union's indifference curves will be concave.

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note 13, at 9-10; Henry S. Farber, The Analysis of Union Behavior, in 2 HANDBOOK OF LABOR ECONOMICS, supra note 20, at 1039. I have chosen the third option because it is perhaps the most general and lends itself well to exposition of the arguments based on bargaining analysis that I want to make.
toward the origin as depicted in Figure 2. 62

Figure 2 allows easy demonstration of the superior bargaining solution. When the employees organize and demand a union wage, $W_u$, the employer's labor demand response will be to move to point $A$ and decrease the number of workers employed to $N_u$. However, by moving to the right along the firm's isoprofit curve $P_0$ which descends out of $A$, one sees that by agreeing to any point on $P_0$ between $A$ and $C'$ the firm achieves the same level of profits while allowing the union to achieve a higher level of utility. Similarly, by moving to the right from $A$ along the union's indiffERENCE curve $U_0$ which comes out of $A$, one sees that by agreeing to any point on $U_0$ between $A$ and $C''$ the union achieves the same level of utility while allowing the firm to achieve a higher level of profits. Thus, the employer's labor demand response is not Pareto optimal from the perspective of the employer and the union, and one or both of the parties can be made better off by moving off the demand curve to a point in the triangle $AC'C''$. The tangencies between the firm's isoprofit curves and the union's indifference curves describe the set of Pareto optimal solutions to the bargaining problem between the employer and the union. 63 To the right or left of these tangencies, including points on the employer's labor demand curve, benefits remain to be gained from bargaining in that one or both parties can be made better off without making the other worse off. The graph of these tangencies is called the contract curve between the two parties and is labeled $C$ in Figure 2. 64 Depending on the technology of

62. I also assume that the union's utility function is twice continuously differentiable and strictly concave.

63. To be precise, such solutions are Pareto optimal taking the firm and the union as the relevant parties for application of the Pareto criterion. The "optimal" solution applying the Pareto criterion to the firm and the union may differ from the "optimal" solution applying the Pareto criterion to the firm and the individual workers, because the aggregate representation of workers' preferences through union democracy may differ from their representation through the marketplace. In particular, average workers' preferences probably receive greater weight under union representation while marginal workers' preferences probably receive greater representation in the marketplace. See FREEMAN & MEDOFF, supra note 20, at 9-10. As a result, one might expect organized employees to negotiate contract terms more favorable to average workers than those negotiated by unorganized workers; examples might include pension provisions and just-cause clauses. Moreover, the invariance hypothesis of the Coase Theorem would probably not hold with respect to the entitlement to organize because the workers would probably value the entitlement differently collectively, when the entitlement was to organize, than they would individually, when the entitlement was not to organize.

This possible variance between the workers' collective and individual preferences creates some ambiguity in the meaning of efficiency in labor law because it is not immediately clear whether the Pareto criterion should be applied to the union or the workers in defining efficiency. A strong tendency certainly exists in economics to choose the individual as the baseline for all arguments; however, the Pareto criterion is commonly applied to collections of entrepreneurs in the form of firms or corporations. For purposes of this article, I will define efficiency based on application of the Pareto criterion to individual workers.

64. See HIRSCH & ADDISON, supra note 13, at 16.
the firm and the preferences of the union, the contract curve can slope to the left, be vertical, or slope to the right. However, barring complete union indifference to the employment of its members, the contract curve will lie to the right of the employer's labor demand curve. Assuming the parties bargain in a Coasean fashion to exhaust all benefits of trade, they will arrive at a wage and employment mix that is to the right of the demand curve on the portion of the contract curve between $C'$ and $C''$. Exactly where on this portion of the contract curve the parties will end up is an indeterminate bargaining problem. Under any of these possible solutions, however, the employer will continue to employ more labor after the union wage increase than the amount specified by the employer's labor demand curve.

The argument can be made in a more simple and compelling manner if one assumes that the employer and the union bargain to maximize the monetary value of the rents and productivity increases to be divided between them. In such a case, beyond any initial disruption of the competitive market necessary to generate the rent to be divided, the parties have incentives to minimize any deviations in the allocation of resources from what would have occurred under the competitive market. Additional deviations, such as a mix of capital and labor that varies from what would have occurred in a competitive market, only increase the costs of production and decrease the total value of the rent and productivity increase to be divided between the parties. For example, if the parties negotiated to divide employer rents, one would expect the parties to agree to the employment of the same amount of labor that would have been used in the absence of a union and the employer to set the same product price that she would have set in the absence of a union. Assuming that, prior to the union, the employer mixed capital and labor and set the product price so as to maximize the value of her rent, adjustment of any of these parameters after the formation of the union only decreases the total value of the rent. In terms of Figure 2, assuming that the parties bargain to maximize the value of rents is analogous to assuming that union indifference curves

65. Macurdy & Pencavel, supra note 54, at S10-S12. For example, given a well-behaved technology for the firm, if the union is willing to trade employment for wages, perhaps because it is dominated by senior workers who do not care about the job prospects of younger workers who will be laid off, then the contract curve will lean to the left. On the other hand, if the union desires to trade wages for employment, effectively spending a portion of its share of the rents on employing unneeded workers, then the contract curve will lean to the right. See id. This second case is commonly referred to as featherbedding and seems most likely to occur in industries that have recently suffered a massive contraction in the number of available jobs. See id. at S17-18, S34 (studying the wage and employment bargains of the International Typographical Union and finding employment above the rent-maximizing level); see also Brown & Ashenfelter, supra note 54, at S43.

66. See HIRSCH & ADDISON, supra note 13, at 14-18; Clark, supra note 54, at 898.
and firm isoprofit curves sketch out a contract curve that is vertical at the competitive level of employment \( N_j \).\(^{67}\)

C. The Costs of Collective Bargaining

Any economic analysis of collective bargaining should consider the costs associated with the phenomenon. First, organizing campaigns impose costs in the form of the resources expended on publicity, litigation, discriminatory discharges, and, prior to the National Labor Relations Act, organizational strikes. Second, negotiation of the collective agreement imposes costs, the most dramatic of which is the lost production due to a strike or lockout. Finally, enforcing the collective agreement imposes costs, including the resources expended on arbitration, litigation, and possibly strikes or lockouts. Irrespective of the source of the union benefit increase or the model of employer response, these costs are relevant to any consideration of the efficiency or equity of unions and collective bargaining. Under any model, these costs must be subtracted from any benefits derived from collective bargaining, and under the bargaining model of the employer’s response to a union wage increase, the costs of collective negotiations may prevent the realization of benefits of trade.\(^{68}\)

1. The Costs of Collective Bargaining as Ordinary Transaction Costs

Traditionally economists have modeled these costs without explicitly taking into account the strategic nature of the underlying activities.\(^{69}\) Organizational activities are modeled in a market setting with a demand and supply for union services.\(^{70}\) It is assumed that the amount employees spend on organizational activities increases with

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67. HIRSCH & ADDISON, supra note 13, at 14-18; Clark, supra note 54, at 898.

68. A model of the costs of collective bargaining may complete the basic economic analysis for purposes of the principal features of the National Labor Relations Act and the Norris-La-Guardia Act. However, to examine the equity and efficiency of the duty of fair representation and the Labor-Management Reporting and Disclosure Act of 1959, 29 U.S.C. §§ 401-483 (1988), one would have to add a model of how unions divide the employees’ share of the rents and productivity increases among their members. On models of the internal workings of unions, see Farber, supra note 61.

69. Many authors have acknowledged the strategic nature of collective bargaining. See, e.g., Epstein, supra note 8, at 1384-85; Posner, supra note 52, at 997. However, few have explicitly taken account of it in their models.

the expected rents available in a given industry, while employers concede these high-rent industries, spending more to prevent unionism in competitive industries where organization would threaten the life of the firm. Similarly, economists commonly assume that parties undertake collective negotiations in a cooperative fashion. Under this assumption, strikes and lockouts become a very curious phenomenon. Why would two rational parties engage in such costly activity to arrive at a bargain that is necessarily inferior to the one they could have negotiated before the strike or lockout dissipated some of the mutual benefits of production? At the very least, one would expect two cooperative parties to forgo the strike or lockout, adopt the contract they would have obtained after the work stoppage, and split the benefits of production gained by continuing production. Traditionally, economists explain strikes as the result of imperfect information. Unions undertake strikes either to adjust unrealistic expectations among rank-and-file workers as to the wage increase that is possible or to allow the union to sort out low-wage from high-wage employers when less

71. HIRSCH & ADDISON, supra note 13, at 31. The amount the employees spend on organizing also depends on their taste for unionism. Id. at 30.

72. Id. at 34. The amount employers spend resisting organization also depends on the taste of the employer for an unorganized workplace. Id.

73. See John Kennan, The Economics of Strikes, in 2 HANDBOOK OF LABOR ECONOMICS, supra note 20, at 1091, 1104-12; Schwab, supra note 12, at 246.

74. This puzzle has given rise to some consideration among economists. Indeed, under the famous "Hicks paradox" it is "impossible" to derive an accurate theory on the incidence, duration and results of strikes because, if the parties had access to such a theory, they would merely agree to the predicted post-strike bargain and forgo the strike, thus obviating the predictive ability of the model. SIR JOHN RICHARD HICKS, THE THEORY OF WAGES 144-47 (2d ed. 1963); see also Kennan, supra note 73, at 1091.

75. DAVID CARD, STRIKES AND WAGES: A TEST OF A SIGNALLING MODEL 1 (National Bureau of Economic Research Working Paper No. 2550, 1988); Raquel Fernandez & Jacob Glazer, Striking for a Bargain Between Two Completely Informed Agents, 81 AM. ECON. REV. 240 (1991) (observing that most economists explain strikes as the result of imperfect information, but offering an explanation for strikes consistent with perfect information). Although Hicks subscribed to the idea that imperfect information was the primary cause of strikes, he also proposed in his famous "rusty weapon" passage the idea that unions may strike occasionally to maintain their ability to strike and to exert bargaining power:

Weapons grow rusty if unused, and a Union which never strikes may lose the ability to organise a formidable strike, so that its threats become less effective. The most able Trade Union leadership will embark on strikes occasionally, . . . in order to keep their weapon burnished for future use . . . .

Under a system of collective bargaining, some strikes are more or less inevitable for this reason; but nevertheless the majority of actual strikes are doubtless the result of faulty negotiation. . . . Any means which enables either side to appreciate better the position of the other will make settlement easier; adequate knowledge will always make a settlement possible.

HICKS, supra note 74, at 146-47. To my knowledge no rigorous model of this theory of strikes has ever been constructed.

expensive methods are not available.77 Thus, strikes are merely the cheapest way to educate the workers as to the optimal wage that can be extracted from the employer. Labor economists have paid much less attention to the problem of enforcement of the collective agreement. When they consider it, economists typically treat enforcement in a neutral fashion, as simply one of the services unions provide their members and as a cost of union administration.78 Under this analysis, the costs of collective bargaining are merely simple transaction costs to be subtracted from any benefits of collective bargaining.

2. The Costs of Collective Bargaining as Positional Externalities

Alternatively, one could explicitly account for the strategic nature of collective bargaining in modeling its costs. I define strategic behavior as any activity undertaken by one party to an agreement to increase its benefit from the agreement at the expense of the other party to the agreement.79 Examples of such activity include firing productive prounion employees, lying in negotiations, and intransigence or "hard bargaining" in negotiations or enforcement of the agreement. This type of activity results in costs, such as search and retraining to replace productive employees and strikes due to lying or intransigence in bargaining or enforcement. Thus, although these activities may increase one side's expected benefit from the agreement, they decrease the total expected value of the agreement to both parties. Moreover, to the extent that the division of the benefits from the agreement depends on the relative performance of the parties in collective bargaining, both sides may have incentives to act strategically. If one party decides to act strategically, the other side must either respond in like manner or forfeit the contest over the benefits of the agreement. In such a case, the costs incurred in attempting to gain the upper hand in the agreement are known as a positional externality.80 This is because the parties are competing for a relative position in undertaking the strategic behavior, for example who can be the most intransigent in bargaining, and the costs of responding to strategic behavior are external to the original decision to undertake such behavior. Due to this

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78. See Ashenfelter & Pencavel, supra note 70, at 430; Pencavel, supra note 70, at 181.


externality, the individual interests of the parties in pursuing strategic behavior diverge from their collective interest in avoiding it, and the conflict tends to escalate in cost even though the parties succeed only in wasting a portion of the benefit of the agreement.

The costs of collective bargaining can be modeled as positional externalities using game theory. In game theory, positional externalities arise in mixed motive or dilemma games that involve a divergence of individual and collective interests. The most famous such game is the "prisoner's dilemma," in which two accomplices in crime face certain conviction on a lesser offense and probable exoneration on a greater offense. The prosecuting attorney gives each the following choice: turn state's evidence against your accomplice and receive a suspended sentence for the lesser offense while your accomplice is convicted of the greater offense; or remain silent and hope your accomplice does not rat on you. In this game, the strategic behavior is turning state's evidence while the positional externality is the additional jail time a criminal serves when his accomplice rats on him. Due to this externality, each criminal's individual interest in turning state's evidence diverges from their collective interest in remaining silent. Each has individual incentive to turn state's evidence to reduce his jail time, but if each follows this individually rational choice they will both do time for the more serious offense.

A similar simple dilemma game can represent the problem of strategic behavior and positional externalities in collective negotiations. Consider the problem of a union and an employer in deciding how to divide the benefits of their agreement to produce some product. For purposes of simplicity, assume that the union and the employer have already maximized the potential benefit of their agreement by including all terms or conditions for which the benefits to the parties exceed their costs and are now bargaining over how to divide the total benefit of their agreement. Each party must receive at least the benefit its


82. In reality, strategic behavior may sometimes prevent the negotiation of efficient contract terms. For example, in negotiating over the inclusion of an employee benefit such as a pension in the collective agreement, the union will have incentive to underrepresent the value of a pension while the employer will have incentive to overrepresent the cost of a pension in order to influence the ultimate division of the benefits of the agreement in their favor. See HAMBURGER, supra note 18, at 117-22. If both are too successful in this misrepresentation strategy, the parties may fail to assess accurately whether a pension is worth more to the employees than it costs the employer and thus fail to include an efficient term regarding pensions in the contract. Id. at 122. For purposes of simplicity I exclude such possibilities from my negotiations game. I discuss below the realism of this assumption by examining whether transaction costs will prevent the negotiation of efficient contract terms in collective negotiations. See infra note 228 and accompanying text.
members or investors could receive for their invested time and resources by changing to other employers or employees; otherwise, they will pursue those options. In collective negotiations this minimum payment, known as the threat value of the agreement, would be equal to the competitive wage for the employees and a competitive return on capital for the employer. The benefit of the agreement in excess of these minimum values is the real subject of dispute and is known as the cooperative surplus. As previously discussed, in labor relations, this cooperative surplus will be made up of rents and productivity increases that are protected by barriers to entry. For the purposes of this negotiating game, assume that the total cooperative surplus to be divided by the parties over the term of the agreement is $10.

In this simple negotiating game, each side must decide whether to adopt a bargaining strategy of cooperation or intransigence in its efforts to divide the cooperative surplus. As previously discussed, intransigence constitutes a positional externality in collective negotiations. This can be seen by examining the common sense assumptions about the division of the cooperative surplus between the employees and the employer in Figure 3. The outermost diagonal line in Figure 3 shows all possible divisions of the cooperative surplus of $10 between the employees and the employer, from $10 for the employees and none for the employer, to $5 for each, to none for the employees and $10 for the employer. Assume that, if both parties bargain cooperatively over the division of the surplus, they will decide to divide it in half with $5 each for the employees and the employer. This "split the difference" assumption concerning the results of cooperative collective bargaining is simple, but it comports with other much more sophisticated models of divisional bargaining. If one side is intransigent in bargaining while the other is cooperative, the intransigent side will presumably achieve a larger share of the cooperative surplus. Thus, assume that, if the union is intransigent while the

84. Id.
85. This assumption may seem somewhat unrealistic because parties to collective negotiations could adopt one strategy, for example cooperation, and then later change that strategy if the other side's actions warranted change. However, even if one were to take account of the potential dynamic nature of strategies in collective negotiations, one would obtain results similar to those of my simple model due to a similar dilemma in the incentives to change strategies.
86. See supra notes 79-80 and accompanying text.
employer is cooperative, the division of the cooperative surplus will be $8.50 for the employees and $1.50 for the employer, while if the union is cooperative while the employer is intransigent, the division is $1.50 for the union and $8.50 for the employer. However, if both sides are intransigent, a strike ensues, which consumes $4 of the cooperative surplus in the form of $2 in lost profits and $2 in lost net benefits from employment. The parties ultimately settle by agreeing to share equally the remaining cooperative surplus, with $3 each for the employees and the employer.

To complete the negotiations game, all that is needed are assumptions about the time and information costs of collective negotiations and the distribution of bargaining benefits and costs among union and nonunion employees. Intransigence in bargaining will presumably also increase the time and information costs of negotiations. Thus, if both sides cooperate, then bargaining goes quickly, information is relatively cheap to obtain, and the time and information costs of negotiations are $0.25 for each party. However, if one or both sides are intransigent, then negotiations take longer, information is harder to obtain, and the time and information costs of negotiations are $0.50 for each party. Regarding the distribution of the benefits and costs of bargaining among employees, assume that two thirds of the employees
are union members and that, although the benefits of negotiations are spread equally among all employees, the employees' share of the costs of bargaining, including strikes, is borne only by union members. Finally, assume that in playing the negotiations game the union is concerned only with the benefits and costs to union members.

The union and employer payoffs for each possible combination of bargaining strategies that can be selected by the parties are given in Matrix 1. The employer payoff for each combination of choices is given in the upper right-hand corner of the cell representing that combination of choices, while the union's payoff for the same combination is given in the lower left-hand corner of the cell. These payoffs are computed by taking the relevant division of the cooperative surplus from Figure 3 and subtracting the relevant bargaining costs outlined in the above assumptions. For example, the employer's payoff when both parties are uncooperative in bargaining ($2.50) is computed by taking the employer's share of the cooperative surplus given in Figure 3 ($3) and subtracting the employer's time and information costs of bargaining ($0.50). Similarly, the union's payoff when both parties are uncooperative ($0.83) is computed by taking the union members' share of the cooperative surplus given in Figure 3 (2/3 x $3) minus the union's time and information costs in bargaining ($0.50) and the nonmembers' share of the costs of the strike, because all strike costs are borne by union members (1/3 x $2). Following game theory convention, I will refer to the cells of Matrix 1 from left to right, top to bottom, respectively, as cells 1, 2, 3, and 4.

Examining the payoffs of this game, one can see the divergence between individual and collective interests that characterizes positional externalities and dilemma games. From the individual perspective of each party, the strategy of intransigence in bargaining dominates because it yields a higher payoff regardless of what the other side does. Looking at the employer's payoffs, one sees that, if the union decides to cooperate, the employer does better by being intransigent ($8) than by being cooperative ($4.75), and, if the union decides to be intransigent, the employer again does better by being intransigent ($2.50) than by being cooperative ($1). Similarly, examining the union's payoffs, one sees that, if the employer decides to cooperate, the union does better by being intransigent ($5.17) than by

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88. The assumption that union members bear all the costs of strikes is roughly equivalent to the assumption that whenever there is a strike the employer maintains partial operations using the employees who are not union members. The assumption is somewhat unrealistic even on this account because it implicitly assumes that, during the strike, the strikebreakers always receive the wage for which the union ultimately settles. This unrealistic assumption, however, does not affect the conclusions of my model.
### Matrix 1
Union and Employer Expected Payoffs for the Negotiations Game

<table>
<thead>
<tr>
<th>Union</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooperative Bargaining</strong></td>
<td><strong>Intransient Bargaining</strong></td>
</tr>
<tr>
<td><strong>Cooperative Bargaining</strong></td>
<td>4.75</td>
</tr>
<tr>
<td><strong>Intransient Bargaining</strong></td>
<td>3.08</td>
</tr>
<tr>
<td><strong>Cooperative Bargaining</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Intransient Bargaining</strong></td>
<td>5.17</td>
</tr>
</tbody>
</table>

Including the values of union benefits received by employees who are not union members, the total wealth of each cell 1 through 4 is, respectively, 9.5, 9, 9, and 5.

being cooperative ($3.08), and, if the employer decides to be intransigent, the union still does better by being intransigent ($0.83) than by being cooperative ($0.50). Thus, if each party acts according to its own individual interests, one would expect both to be intransigent and cell 4 to be the expected outcome or equilibrium for the game. However, from the collective perspective of both parties this outcome is clearly suboptimal. Both of the parties can do better if they cooperate and confine their conflict to cell 1 ($3.08 for the union and $4.75 for the employer) rather than escalating the conflict to a strike that wastes a portion of the cooperative surplus as represented in cell 4 ($0.83 for the union and $2.50 for the employer). Thus, to the extent the parties act individually rather than collectively, the conflict will tend to escalate despite the best interests of both parties.

Although the results of a particular game can be changed by changing assumptions about the costs and benefits of intransigent behavior, the basic nature of collective negotiations as a dilemma game remains. Examining Figure 3 again, one can divide the triangle representing all possible divisions of the cooperative surplus after a strike into sectors I through IV according to the diagonal line from (0, 3.2)
to (8.5, 1.5)\textsuperscript{89} and the vertical line at (1.5, 0).\textsuperscript{90} If the expected settlement after a strike is in sector I, the employer will give in and not take a strike because he will earn more ($1.50) by capitulating. Similarly, if the expected settlement after a strike is in sector III, the union will give in and not strike because it will gain more benefits for its members by capitulating. The upper border of this sector slopes down, rather than being horizontal at (0, 1.5), due to the free riding of nonmembers on the benefits of undertaking a strike. However, if the expected settlement after a strike is in sector II or IV, both sides will have individual incentives to undertake a strike. This is true in sector II because each side will do better by striking than by capitulating to the other's hard bargaining. A strike is also possible in sector IV because, although each does better by capitulating, each will act recalcitrantly and hope that the other capitulates first.\textsuperscript{91} One can change the results of a particular game by changing the assumptions that determine the division of the surplus after a strike or the boundaries of the four sectors in Figure 3. For example, one could move the expected payoffs after a strike by assuming the union gains a larger share through a strike, or one could shift the boundaries of the four sectors by assuming each side gets a higher payoff for capitulating. However, if in a negotiations game between two parties the expected payoffs for a strike are consistently in sectors I or III so that one side is always capitulating, the other side will have incentive to lessen the share it gives for capitulation, expanding sectors II and IV and increasing the chances that the other side's expected payoffs recommend intransigence and a strike. History demonstrates that, in industrial relations, the parties

\textsuperscript{89} This line is determined by comparing the union's net benefit after a strike with the union's net benefit from capitulating without a strike for a generalized division of the surplus after the strike. Assume that the employees' share of the surplus after a strike is $Y$ while the employer's share is $X$. Accordingly, the union's net benefit after a strike is its portion of the employees' share $((2/3) \cdot Y)$ minus the costs of negotiations ($0.50$) minus the free riders' share of the costs of the strike $((1/3) \cdot (1/2) \cdot ($10 - (X + Y)))$. The union's net benefit if it capitulates without a strike is merely its portion of the employees' share ($2/3 \cdot $1.50) minus the costs of negotiations ($0.50$). Setting the union's net benefits with and without a strike equal to each other and simplifying, one obtains the equation $Y = 3.2 - 0.2X$, which is the diagonal line from (0, 3.2) to (8.5, 1.5). If the expected division between the employer and the employees after a strike is above this line, the union does better by striking; if it is below, the union does better by capitulating.

\textsuperscript{90} If the expected division between the employer and employees after a strike is to the right of this line, the employer does better by taking a strike. If the expected division between the employer and the employees after a strike is to the left of this line, the employer does better by capitulating.

\textsuperscript{91} In game theory, as on the playground, games with such payoff structures are known as games of "Chicken." \textsc{Hamburger, supra} note 18, at 83-87; \textsc{Shubik, supra} note 81, at 394. Games of chicken have an unstable "solution" where, as in dilemma games, individual incentives diverge from collective incentives and collectively irrational outcomes can result. \textsc{Hamburger, supra} note 18, at 86-87.
commonly feel that it pays to contest strikes — in other words, that both sides' expected payoffs from a strike are in either sector II or IV. Putting aside my many simplifying assumptions, if one accepts that the nature of intransigence in bargaining is that of a positional externality, then one must accept the dilemma nature of collective negotiations.

By proposing this simple game as an illustration of the problems of strategic behavior and positional externalities in collective negotiations, I do not argue that unregulated collective negotiations inevitably degenerate into a strike. Both the employer and the union should recognize their dilemma and, to their mutual benefit, often be able to curb the temptation to bargain in an intransigent manner. The parties will be aided in this effort by the fact that, unlike some other dilemma games, employer-union negotiations often involve an established relationship and communication. Particularly in mature collective bargaining relationships where the parties have a history of cooperative bargaining and can foresee future negotiations that could be jeopardized by present strategic behavior, the parties usually will be able to avoid the costs of intransigent bargaining. My point is that, despite the parties' common incentive and frequent success at solving the dilemma game of collective negotiations to their mutual benefit, at the heart of the game lie individual incentives that tend to escalate the game and sometimes produce suboptimal solutions that waste a portion of the cooperative surplus.

Similar dilemma games can be constructed for organizing campaigns and enforcement of the collective agreement. With respect to organizing, the cooperative or low-cost strategy might correspond to the mere publicity of pro- or antionion views in an employee election on union representation, while the recalcitrant or high-cost strategies might correspond to organizational strikes and discriminatory discharges. It seems reasonable to assume that a party's payoff in organizing depends on its relative performance, because resort to the recalcitrant or high-cost strategy by only one party will increase that party's chances of prevailing, while if both parties resort to the recalcitrant or high-cost strategy their efforts will tend to cancel each other


93. The prisoner's dilemma game previously discussed is commonly characterized as a dilemma in which the parties cannot communicate. See supra notes 81-82 and accompanying text. However, even when the parties to a dilemma game cannot communicate and have no relationship, empirical evidence suggests that many people can solve the dilemma to their collective benefit. See, e.g., Lester B. Lave, An Empirical Approach to the Prisoners' Dilemma Game, 76 Q.J. Econ. 424 (1962).
out with respect to resolving the conflict. Thus, one would expect that organizational campaigns would have a tendency to escalate into costly affairs, wasting a portion of the cooperative surplus, in much the same way that negotiation conflicts can escalate. The parties are probably less likely to arrive at the mutually beneficial armistice of confining themselves to the cooperative or low-cost strategy in the case of the organizing game than in the case of the negotiations game, because in an organizing campaign the parties have not yet established a constructive relationship or steady communication and are probably quite hostile to one another.

With respect to enforcement of the collective agreement, the cooperative or low-cost strategy is to resolve disputes over interpretation of the agreement through arbitration, while the recalcitrant or high-cost strategy is to resort to more costly litigation or strikes to resolve contract disputes. Again, it seems reasonable to assume that a party's payoff in enforcement depends on its relative performance, because resort to the recalcitrant or high-cost strategy by only one party will increase that party's chances of prevailing, while if both parties resort to the recalcitrant or high-cost strategy their efforts will tend to cancel each other out with respect to resolving the conflict. Thus, one would expect that enforcement conflicts have a tendency to escalate, wasting a portion of the cooperative surplus, in much the same way that negotiation conflicts tend to escalate. In the enforcement game, it would seem very likely that the parties would achieve a mutually beneficial armistice by agreeing to confine their contract disputes to the cooperative or low-cost strategies because they have an established relationship and communication, and indeed have already successfully negotiated a collective agreement. It is thus not surprising that the vast majority of collective bargaining agreements provide arbitration as the means of resolving contract disputes.94

II. THE TRADITIONAL MONOPOLY MODEL OF UNIONS AND AMERICAN LABOR LAW

Having established a sound basis in the economic analysis of unions and collective bargaining, we can now examine the traditional monopoly model of unions and its implications for American labor law. In this Part, I present the traditional analysis, apply it to American labor law, and critique it from an economic perspective.95

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95. Several valuable critiques of monopoly model applications to American labor law have already been made from a historical and legal perspective. See WEILER, supra note 22; Julius G.
A. The Model and Its Implications for Public Policy

The traditional monopoly model of unions and collective bargaining combines the first assumption discussed in each of the three sections of the primer on economic analysis. First, practitioners of the monopoly model commonly assume that union wage increases come from labor cartels. Although economists have long acknowledged employer product market power rents and Ricardian rents as possible sources of union wage increases, the traditional analysis has consistently focused on the labor cartel as the source of union benefits. Second, proponents of the traditional monopoly model of unions and collective bargaining assume that the employer responds to a union wage demand by moving up her labor demand curve. Many expositions of the monopoly analysis never consider the possibility of optimal bargaining, although some more sophisticated presentations assume that transaction costs prevent such bargaining. Finally, adherents of the traditional monopoly model of unions and collective bargaining implicitly assume that the costs of collective bargaining are simple transaction costs without any strategic nature. If one assumes that unions unilaterally set wages while employers unilaterally set levels of employment, there is little room to consider strategic behavior in collective negotiations. As previously discussed, the traditional model holds that strikes occur due to imperfect information. The traditional analysis also generally treats the costs of organizing the employees and enforcing the contract without explicitly taking account of the strategic nature of the underlying behavior.


96. For other expositions of the monopoly theory of unions, see EHRENBERG & SMITH, supra note 9, at 328-65; HIRSCH & ADDISON, supra note 13, at 21-22.

97. See sources cited supra note 96.


99. This also holds true for the applications of this theory to law. For example, although Epstein briefly discusses Ricardian rents as a source of union benefits, see Epstein, supra note 8, at 1384-85, he fails to deal consistently with this possibility throughout his analysis. For a similar treatment, see Campbell, supra note 52, at 1017.

100. HIRSCH & ADDISON, supra note 13, at 21-22.

101. See Epstein, supra note 8; Posner, supra note 52.

102. See, e.g., HIRSCH & ADDISON, supra note 13, at 16.

103. The only instance for strategic behavior under the monopoly model occurs when the monopoly union faces a monopsonist employer. However, as discussed below, this possibility has been traditionally dismissed in the labor economics literature due to the supposed rarity of employer monopsony power. See infra notes 112-17 and accompanying text.

104. See supra note 69 and accompanying text.
The traditional monopoly analysis of unions and collective bargaining is presented in Figures 4, 5, and 6. Respectively, these figures depict the organized labor market, the unorganized labor market, and the product market of the organized employers. In constructing these figures, I have assumed that both the organized occupation and the product market of the organized employers enjoy barriers to entry. Under the traditional analysis, when the union organizes a sufficient number of employees in an occupation in the relevant product market, it imposes an increase in their wage from $W_c$ to $W_u$ as shown in Figure 4.\(^{105}\) The occupational barriers to entry prevent the organized employers from replacing the employees, and the employers respond by moving up their demand curve, reducing employment from $N_c$ to $N_u$. The employers accomplish this decrease in employment by reducing production and substituting capital for labor in the production process. This substitution of capital for labor results in "production inefficiency"\(^{106}\) because the organized firms now employ too much capital relative to labor, given the marginal productivity of capital and labor.

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105. The size of the wage increase the union imposes depends on the union's estimate of the decline in employment that will accompany the wage increase and the union's priorities in choosing between higher wages or more employment. However, in no case can the union wage exceed the occupational barriers to entry or cause the employer's price to exceed the barriers to entry to the product market. See supra notes 24-27 and accompanying text.

106. See Ehrenberg & Smith, supra note 9, at 360; Hirsch & Addison, supra note 13, at 21-22, 181.
and their respective opportunity costs in terms of the competitive interest rate and wage. The higher union wage also results in unemployment because more workers ($N_u$) would like to work at the union wage than employers are willing to employ ($N_d$). As shown in Figure 5, some of these workers ($N_c - N_u$) will seek employment in the unorganized labor market, pushing out the labor supply curve in that market from $S$ to $S'$ and depressing wages from $W_c$ to $W_c'$. This movement of workers from the organized to the unorganized labor market

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107. A profit-maximizing firm will employ additional units of an input only as long as the value of the marginal product those units of input produce exceeds the cost of those additional units of input to the firm. Hal R. Varian, Intermediate Microeconomics: A Modern Approach 325-29 (1987). In a competitive market, the price of an input will be set equal to its opportunity cost in terms of the value of its marginal product in the best alternative use. Id. at 326. Thus, when input prices are set competitively, the firm’s profit-maximizing activity will result in efficient production, and the firm will employ an additional unit of input only if its value to the firm exceeds its value in its next best use. Id. at 515-16. Under the traditional monopoly theory of unions, firms respond to a union wage increase by employing only those units of labor the value of whose marginal product exceeds the higher union wage and substituting units of capital that are now relatively cheap in the firm’s production process. This results in inefficient production because the firm now employs too little labor, given its opportunity cost, sending workers to be employed in less productive uses, and too much capital, given its opportunity cost, employing capital that could be better employed in other uses. Total wealth could be increased by doing away with the artificially high union wage so that inputs could once again be employed in their most valuable uses.

108. Assuming that prior to organization the equilibrium wages in the organized and unorganized labor markets were comparable (both $W_c$), the number of workers who will leave the organized labor market to seek work in the unorganized labor market equals the number who were previously employed in the organized labor market ($N_c$) minus those who are still employed there ($N_d$).
is commonly referred to as the "displacement effect." Finally, as represented in Figure 6, the decrease in production by the organized firms that accompanies the higher union wage results in a backward shift of the relevant product supply curve from $S$ to $S'$, an increase in the product price from $P_c$ to $P_c'$ and a decrease in consumption of the good from $Q_c$ to $Q_c'$. This decrease in consumption results in "consumption inefficiency" because consumers now enjoy too little of the product relative to other goods, given the opportunity costs of employing resources in the production of the organized good relative to other goods. The barriers to entry in the product market prevent

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109. HAROLD W. DAVEY ET AL., CONTEMPORARY COLLECTIVE BARGAINING 306 (4th ed. 1982); EHRENBERG & SMITH, supra note 9, at 350; see REES, supra note 98, at 160.

110. See EHRENBERG & SMITH, supra note 9, at 360; HIRSCH & ADDISON, supra note 13, at 22, 181.

111. In a competitive economy, firms will price their product at the marginal cost of producing that product, which in turn equals the opportunity cost of employing the resources used to produce the product in their next best use. VARIAN, supra note 107, at 322, 371. Efficient consumption ensues because consumers will purchase the good only if the benefit they derive from it exceeds the value that could be obtained by employing the resources used to produce the good in their next most valuable use. Under the monopoly analysis of unions, when the union raises the price of labor the employer must raise the price of the good above its opportunity cost, resulting in decreased consumer demand for the good and a shifting of that demand to less valued goods. Total wealth could be increased by doing away with the high union wages and correspondingly high union product price and allowing consumers once again to purchase goods for their opportunity cost.
The only exception to the above analysis that is traditionally considered in the monopoly model occurs when the employers exercise monopsony power in the labor market. Monopsony power exists when there is only one employer, or so few employers that they can explicitly or implicitly collude in offering wages. When an effective monopsony exists in the labor market, the employers no longer accept the market wage as given, but instead realize that they can drive down the market wage by employing fewer employees. As characterized in Figure 7, the monopsony maximizes profits by employing fewer employees \((N_m)\) and driving the wage down from \(W_c\) to \(W_m\). The oper-

112. See DAVEY ET AL., supra note 109, at 307-08; HIRSCH & ADDISON, supra note 13, at 22; Posner, supra note 52, at 991-92.

113. See DAVEY ET AL., supra note 109, at 307.

114. The marginal cost of labor curve for the monopsony \((MCL)\) lies above the labor supply curve. This is because the monopsony realizes that purchasing additional labor drives up the wage; the marginal cost of additional labor for the monopsonist equals the increased wage it must pay for the additional labor plus the increase in wages that must be paid to each previously purchased unit of labor. Because the height of the labor supply curve is equal to the wage at every level of employment, the marginal cost of the labor curve must lie above this curve. As depicted in Figure 6, the monopsony maximizes profits by employing labor until the point where the marginal cost of labor equals the marginal benefit of labor as represented by the labor demand curve (i.e., the monopsony will employ the quantity of labor \((N_c)\) given by the intersection of the marginal cost of labor curve \((MCL)\) and the labor demand curve \((D)\)). This follows because, at levels of employment below this amount, the marginal benefit of additional employees exceeds their marginal cost, and the total net benefit of employing labor is increasing, while at

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**FIGURE 7**

The Profit Maximization Problem of a Monopsonistic Employer

Wage \((W)\)

Employment \((N)\)
ation of the monopsony results in production inefficiency because the monopsony employs less than the efficient amount of labor in the production process. A union solves this problem because, by fixing the wage for labor at a given rate, it prevents the monopsony from driving down wages by employing fewer workers. Because the monopsony can no longer drive down the wage by cutting employment, the monopsony no longer has incentive to employ fewer than the efficient number of employees.115 The problem of the negotiation of a wage between a monopsony employer and a monopoly union represents an indeterminate bargaining problem, but if one assumes the employer and the union seek to maximize the monetary value of the rents from their endeavors, they will bargain to the competitive wage \( W^* \) and the competitive level of employment \( N^* \).116 Thus, when facing employer monopsony power, monopoly unions can increase employment and economic efficiency. Traditionally, however, economists limit the importance of this exception by arguing that employer monopsony power is rare in the economy.117

The costs of collective bargaining merely make employee organization even less attractive from a societal perspective. Under the monopoly model, employee organization will lower the short-run profits of organized firms because, at higher union wages and prices, the organized product market experiences excess capacity until the requisite number of producers leave the market to achieve the new organized levels of employment above this amount, the marginal benefit of additional employees is less than their marginal cost, and the total net benefit of employing labor is decreasing. Thus, at the point where the marginal cost of labor and the labor demand curve cross, the total net benefit of employing labor is maximized. The wage the monopolist will seek to pay to employ this amount of labor \( W_m \) is given by the labor supply curve, because this is the minimum amount the monopolist can pay to elicit the profit-maximizing amount of labor \( N_m \).

115. When confronted by a union, the monopsony faces a marginal cost of labor curve that is horizontal at the union wage from the origin until the labor supply curve and then rises above the labor supply curve.

116. DAVEY ET AL., supra note 109, at 308-09; see also W. Kip Viscusi, Unions, Labor Market Structure, and the Welfare Implications of the Quality of Work, 1 J. LAB. RES. 175 (1980).

market equilibrium.\textsuperscript{118} It also seems safe to assume that employee organization conflicts with the preferences of most managers. Thus, firms will have incentives to expend resources publicizing their views or firing productive prounion employees to resist employee organization.\textsuperscript{119} Organization will gain some employees a monopoly rent. However, because all workers commonly share the same wages and benefits whether they are union members or not,\textsuperscript{120} employees have individual incentives to "free ride" on the efforts of others by not actively participating in the union even though they enjoy its benefits.\textsuperscript{121} Unions will thus have incentive to expend resources publicizing their views, absorbing discriminatory discharges, and undertaking other organizational activities, such as rallies or strikes, in order to overcome employer resistance and individual defection.\textsuperscript{122} Additionally, both the union and the employer incur time and information costs in undertaking collective negotiations. Indeed, under the monopoly model, the fact that the employees have imperfect information regarding the optimal wage that can be extracted from the employer can lead to a strike to adjust employee expectations or sort out employers who can afford to pay a high wage from those who can only afford a low wage.\textsuperscript{123} Such a strike imposes costs on the employer and employees in the forms of lost profits and lost wages. If the strike is so widespread in a given product market that adequate substitute goods are not available, such a strike will also impose costs on consumers in the form of forgone consumption.

Finally, given the imprecision of language, disagreements over the interpretation of the contract are inevitable. Because the value of an agreement is only as good as its enforcement, both the union and the employer will have incentives to expend resources to resolve disputes

\textsuperscript{118} See HIRSCH \& ADDISON, supra note 13, at 12-14, 21-22.

\textsuperscript{119} Given the incentives of employers and unions, respectively, to resist and undertake employee organization under the monopoly model, it makes sense to call these activities "strategic behaviors" within the model because they are undertaken to benefit one party at the expense of the other. However, neither this characteristic of the activity nor the nature of these costs as a positional externality is ever explicitly taken account of in the model.

\textsuperscript{120} Indeed, similar treatment of union and nonunion employees is required by law. 29 U.S.C. § 158(a)(3) (1988).

\textsuperscript{121} Within the context of the monopoly model of unions such "free riding" is part of the ordinary defection from a cartel one would expect in a competitive economy.

\textsuperscript{122} Employers and unions might also expend resources to lower or raise barriers to entry or to shift demand and supply curves to gain an advantage in organizing or negotiation of the union wage. Campbell, supra note 52, at 1007-09. For now, I will take barriers to entry and demand and supply curves as given and concentrate on the costs of collective bargaining discussed in the text. I consider these costs more central to the analysis of American labor law.

\textsuperscript{123} Recall my discussion of imperfect information theories of strikes, supra notes 74-77 and accompanying text.
that arise under the agreement. These costs of collective bargaining are generally assumed to exceed the corresponding negotiation and enforcement costs that would be incurred under a competitive market. Under the monopoly model of unions and collective bargaining, the excess costs of undertaking collective bargaining are waste, because they further no productive purpose but only the cartelization of the labor market.

The traditional monopoly analysis concludes that unions and collective bargaining are inefficient and inequitable. Unions and their associated higher wages impose inefficiency in both the production and consumption of union goods. In addition, the collective bargaining process imposes costs on society in the form of discriminatory discharges, strikes, and possibly foregone consumption. These costs exceed the negotiation and enforcement costs of a competitive labor market and represent a deadweight loss to society. Unions are inequitable in that they achieve higher wages at the expense of other employees, who are displaced to now-depressed labor markets, and consumers, who have to pay higher prices for fewer goods. Given that these workers and consumers are likely to be similarly situated with respect to the initial distribution of wealth, it is hard to justify this redistribution of wealth on the basis of egalitarian or other common normative principles. In short, under the monopoly analysis, unions are bad and should be discouraged or outlawed. Moreover, any limitations on union power, such as employer resistance or employee free riding, are beneficial and should be encouraged.

B. Application of the Model to American Labor Law

Various authors have analyzed American labor law from the perspective of the monopoly model of unions and collective bargaining.

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124. This assumption is implicit in many analyses. See Epstein, supra note 8, at 1396-97; Posner, supra note 52, at 997-98. Arguably there would be economies of scale in collective bargaining with respect to the ordinary time and information costs of negotiation and enforcement of labor agreements. However, proponents of the monopoly model of unions and collective bargaining typically assume that these economies of scale are outweighed by the organizing and strike costs of collective bargaining that are not incurred in a competitive market. See, e.g., Epstein, supra note 8, at 1396-97. To my knowledge no rigorous empirical test of either of these assumptions exists.

125. In economics a deadweight loss is a cost that does not yield productive service or is not merely a transfer of wealth from one party to another. The MIT Dictionary of Modern Economics, supra note 31, at 97.

Perhaps the most comprehensive of these studies was undertaken by Richard Epstein. In characterizing Epstein's work as a traditional monopoly analysis, I do not mean to oversimplify his arguments. Epstein notes exceptions to the simple monopoly analysis, acknowledging possible sources of union wage increases besides labor cartel rents and acknowledging the strategic nature of collective bargaining. Moreover, Epstein expressly rejects one of the key conclusions of the monopoly model, that unions ought to be outlawed. However, although Epstein notes exceptions to the monopoly model, he does not consistently take account of these deviations throughout his analysis, the dominant thrust of which is unmistakably that of the traditional monopoly model. Epstein's conclusions have proved very controversial among traditional labor law theorists. Accordingly, I believe it is useful to examine Epstein's arguments within the context

127. Although his analysis is couched in terms of "libertarian values" and "utilitarianism," Epstein acknowledges the strong relationship between his analysis and the traditional economic analysis of unions. Epstein attributes the insights of his article to "recent advances" in legal theory and law and economics. Epstein, supra note 8, at 1358. He explicitly equates his brand of utilitarianism with wealth maximization. See id. at 1379 n.70, 1380. He further states that the key difference between his utilitarian and libertarian analyses is that the former takes account of third-party effects, id. at 1380-81, a distinction which seems to make little difference to the conclusions of his analysis.

128. See id. 1384-85 & n.85 (Ricardian rents), 1402 (product market rents).

129. See id. at 1384, 1396-97.

130. Epstein would allow voluntary contracts among workers to form unions, see id. at 1366, but would not afford union members any protection from employer discrimination. See id. at 1394-95.

131. For example, Epstein acknowledges the possibility of employer rents as a source of union wage increases, see id. at 1384-85 & n.85, 1402, but never takes this possibility into account in his discussion of the legality of yellow-dog contracts. See id. at 1370-75. Following the traditional monopoly union analysis, Epstein argues that yellow-dog contracts should be legal because, in a competitive market, workers will be compensated with higher wages for any losses they suffer in making such agreements. Id. However, if employer rents are available for employees to share, the employees' share of such rents is a public good among the employees that, due to free-rider problems, they will individually sign away for much less than their share is worth. Similarly, Epstein argues that employers cannot dictate wages to individual workers, because if they could they would reduce their wages to zero. See id. at 1372. He concludes that workers who individually bargain will not be taken advantage of in negotiations with their employer. However, if there are employer rents, then the employees can gain a share of those rents only by bargaining collectively. If the workers individually bargain, the employer will indeed reduce their share of any cooperative surplus to zero.

132. In his analysis, Epstein also generally assumes that competitive markets will prevail in the absence of unions, see id. at 1359, 1372, 1382; but see id. at 1384-85, 1402 (acknowledging employer rents as a possible source of union wage increases); that unions are labor monopolies, see id. at 1380-81, 1384; and that employers will respond to union wage demands by moving up their demand curve. See id. at 1362, 1380-81. Epstein's analysis is inconsistent on the nature of negotiations between employers and unions because he adopts all of the other assumptions of the monopoly model and several times assumes employers have no monopsony power, see id. at 1372, 1405, thereby logically precluding strategic behavior in collective negotiations, see supra note 117 and accompanying text, but he assumes that a union's formation creates a case of bilateral monopoly that will result in wasteful strategic behavior.

133. See Getman & Kohler, supra note 95; Verkuil, supra note 95.
of the monopoly model and to comment on them in light of my alternative bargaining model.

1. The Public Policy of Fostering Unions and Collective Bargaining

The public policy of fostering unions and collective bargaining that has served as the foundation of American labor law since the 1930s does not make sense from the perspective of the monopoly model of unions. The drafters of the New Deal labor statutes\(^\text{134}\) believed that individual bargaining often failed the interests of workers and that collective organization was a positive good that would allow workers to "exercise actual liberty of contract" and "obtain acceptable terms and conditions of employment."\(^\text{135}\) However, under the monopoly model of unions, individual bargaining will obtain for workers all the wages and benefits to which their productivity entitles them.\(^\text{136}\) Moreover, unions are both inequitable\(^\text{137}\) and inefficient,\(^\text{138}\) decreasing total wealth. Thus, the monopoly theory of unions, far from providing any logical basis for a law promoting employee organization, suggests unions should be prohibited.

Despite this fairly straightforward implication of the model, it is hard to find proponents of the monopoly model who actually advocate the prohibition of employee organization.\(^\text{139}\) Adherents of the model will sometimes acknowledge this deviation of existing law from the recommendations of the model but accept the basic determination to allow the cartelization of the labor market as a normative legislative decision.\(^\text{140}\) Even Epstein, who is among the most devoted to the model, would allow private voluntary agreements among workers to negotiate collectively and withhold labor as part of the realization of his libertarian ideals.\(^\text{141}\) However, Epstein would allow employers to discharge and discriminate against union members,\(^\text{142}\) and almost everywhere, the logic of his analysis leads to the solution of no un-

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136. See supra notes 8, 107 and accompanying text.

137. See supra notes 9-10, 105-11 and accompanying text.

138. See supra notes 105-11, 118-25 and accompanying text.

139. The only monopoly theorist I can find who has actually advocated prohibiting employee organization is Henry Simons. See Simons, supra note 8, at 1.

140. See, e.g., Campbell, supra note 52, at 995, 999; Posner, supra note 52, at 990.

141. See Epstein, supra note 8, at 1365-66.

142. See id. at 1389, 1391, 1394.
ions. 143 Epstein believes that individual bargaining is adequate to secure for workers all the wages and benefits to which they are entitled 144 and that collective bargaining is a needless complication, largely the creation of statute, that only wastes resources. 145 Epstein also views individual defections from a union as part of the natural workings of the marketplace that serve to undermine the labor cartel's monopoly profits. 146

2. The Purposes of Promoting Bargaining Equity and Industrial Peace

The monopoly theory of unions and collective bargaining provides no logical basis for the twin purposes of American labor law: promoting equality of bargaining power between employers and employees and promoting industrial peace. As previously discussed, 147 the drafters of the New Deal labor legislation sought to foster unionism as a means of promoting "industrial democracy" and greater equality of bargaining power between employers and employees. 148 The monopoly theory recognizes no need for workers to combine to negotiate with their employers. The discipline of the market ensures that the employer will pay the employees all that their productivity entitles them to and no more. By encouraging employee organization, the law actually promotes employees to a bargaining position superior to that of their employer, allowing them to form a cartel that can then dictate the market wage.

The proponents of the Wagner Act and the Taft-Hartley amendments also believed that encouraging collective bargaining and regulating the conduct of industrial relations could decrease the strife and conflict that had too often characterized American industrial relations, thereby promoting industrial peace. 149 The traditional monopoly model of unions recognizes little opportunity for conflict in bargaining. Absent a strike that is undertaken as the low-cost method of lowering unrealistic rank-and-file workers' expectations or of sorting out low-wage employers from high-wage employers, the union merely tells the employer what the wage will be, and the employer responds by

143. See id. at 1384-85, 1393-94, 1397, 1405-06.
144. See id. at 1366, 1371-72.
145. See id. at 1397-98, 1405.
146. See id. at 1384.
147. See supra note 2 and accompanying text.
149. See 29 U.S.C. § 151 (1988); supra note 2 and accompanying text.
telling the employees how many of them should show up for work the next day. Any law that sought to promote industrial peace and minimize the number of such informational strikes would focus merely on the reliable transmission to the employees of information about the employer's profitability rather than undertaking the wide-ranging regulation of collective bargaining contained in the current law. Moreover, there would seem to be little the law could do to minimize the number of such strikes because, if there were a cheaper means of conveying the information necessary to lower worker expectations or signal that the employer was a low-wage employer, the parties would voluntarily undertake it to avoid the costs of a strike.

Epstein's arguments concerning the twin purposes of American labor law only partially track those of the monopoly model. True to the theory of the monopoly model of unions, Epstein views collective bargaining as a needless and detrimental alternative to individual bargaining. The power of the individual worker to leave his employer for work elsewhere will protect the worker from exploitation by his employer. Allowing workers to organize across a product market allows them to dictate that market's wages and prices. However, with respect to the purpose of promoting industrial peace, Epstein deviates from the analysis of the traditional monopoly model of unions. Epstein argues that the current law creates a situation of bilateral monopoly between unions and employers in which these parties play noncooperative games of bluff and bluster that lead to costly strikes. In Epstein's view, the purpose of promoting industrial peace would be better served by leaving labor negotiations to individual bargaining that avoids such costly games. This deviation from the monopoly model is problematic because Epstein fails to identify the source of the employer's power to resist a labor monopoly in a

150. See supra note 22 and accompanying text.
151. See supra notes 3-5 and accompanying text.
152. This statement is only strictly true if the third-party costs of the strike are insignificant. If such costs are significant, a reliable method of communicating such information may exist that the parties would not voluntarily undertake because it is more costly to them than a strike, but that nonetheless costs society as a whole less than a strike. However, ignoring third-party effects, if, for example, completely opening the company books to the union would sufficiently lower worker expectations or sufficiently clearly indicate that the employer was a low-wage employer to avoid a strike, one would predict that the employer would do so voluntarily.
153. See Epstein, supra note 8, at 1403-08.
154. See id. at 1405-06.
155. See id. at 1370-72.
156. See id. at 1381-82, 1384.
157. Id. at 1396-97.
158. See id. at 1404.
bilateral relationship and survive in the economy.159 Furthermore, Epstein fails to examine the implications of such sources of employer power and the results of bilateral bargaining solutions consistently throughout his analysis.160 Thus, although Epstein abandons the monopoly model of unions on the subject of strikes where its logic and explanatory power seems weakest, he fails to treat consistently the implications of this desertion throughout his analysis.161

3. The Law on Organizing

The law on organizing also does not make sense from the perspective of the monopoly model of unions. Under the National Labor Relations Act,162 the question of employee organization is determined by majority rule of the affected employees.163 The primary means of determining employee majority sentiment is through an election supervised by the National Labor Relations Board.164 Current law prohibits certain employer strategies in resisting unions, including yellow-dog contracts,165 company unions,166 discrimination on the basis of union affiliation,167 and the making of threats or promises of benefits on the basis of union support.168 By providing this system of elections and restricting employer strategies, American labor law lowers employees’ costs of organizing.169 From the perspective of the monopoly theory of unions, the government should not facilitate the cartelization of labor markets by lowering the cost of organizing.

159. Although elsewhere in his article Epstein acknowledges both Ricardian rents and product market rents as possible bones of contention between the employees and employer, his arguments on industrial peace do not disclose the surplus that is the source of the bilateral negotiations. See id. at 1404-08.

160. See supra note 131.

161. Posner also abandons the pure form of the monopoly model of unions in discussing strikes and fails to take account of the implications of this abandonment for the rest of his analysis. See Posner, supra note 52, at 997.


163. 29 U.S.C. § 159(a) (1988); see MERRIFIELD ET AL., supra note 2, at 27.

164. 29 U.S.C. § 159(c) (1988). Unions can also demonstrate majority status through voluntary recognition by their employer, see I THE DEVELOPING LABOR LAW, supra note 2, at 341, or merely by a show of authorization cards signed by a majority of the affected employees where violations of the law by the employer preclude holding a meaningful election. NLRB v. Gissel Packing Co., 395 U.S. 575 (1969).


166. 29 U.S.C. § 158(a)(2) (1988). A company union is an association of employees organized and controlled by the employer. COX ET AL., supra note 2, at 41. Such organizations can be used as a bulwark against independent unions because they give the employees a portion of the benefits of organization and give some of the employees a vested interest in the employer’s organization.


Epstein's analysis of the laws on organizing directly tracks the monopoly union analysis. Epstein advocates abolishing the doctrine of exclusive representation\textsuperscript{170} that underlies the current system of elections, on the basis that individual employees have the right not to be represented by a union and individual defections will serve to undermine labor cartel rents.\textsuperscript{171} Moreover, Epstein argues that employers should be able to resort to any strategy in resisting unions, short of fraud or violence.\textsuperscript{172} Epstein denigrates arguments that employees are effectively compelled to accept yellow-dog contracts as a condition of employment due to an inequality in bargaining power between employers and employees, arguing that if employers could compel employees to accept unfavorable contract terms they could logically reduce wages to zero.\textsuperscript{173} Through the machinations of the competitive market, employees will be compensated for any loss they suffer in accepting yellow-dog contracts; otherwise, they would not agree to employment under such terms.\textsuperscript{174} Similarly, Epstein argues that there may be value in the adjustment of grievances by a company union, and, if such a union is in fact a sham or even a burden to the employees, the employer will have to compensate them accordingly to retain them.\textsuperscript{175} Epstein views the prohibition of discriminatory hiring and discharge as a similar, but more intrusive, restriction to that of the prohibition of yellow-dog contracts.\textsuperscript{176} He argues that employers should not be prohibited from retaining only loyal employees who are the most valuable to the firm for the sake of encouraging employee organization.\textsuperscript{177} Finally, Epstein argues that employers should be able to prohibit all employee organizing activities from their property and to make any antiunion statements they desire, short of fraud or threats of violence, including threats of reprisals or promises of benefits on the basis of union support.\textsuperscript{178} The basis of his argument is that the employer cannot reasonably be expected to provide an in-kind subsidy to a union it considers antithetical to its prosperity, or to remain neutral on a question of such enormous self-interest to the firm.\textsuperscript{179}

\textsuperscript{170} Epstein, \textit{supra} note 8, at 1398-99.
\textsuperscript{171} \textit{Id.} at 1384, 1398-99.
\textsuperscript{172} See \textit{id.} at 1365-66.
\textsuperscript{173} \textit{Id.} at 1371-72.
\textsuperscript{174} \textit{Id.} at 1382.
\textsuperscript{175} \textit{Id.} at 1391-92.
\textsuperscript{176} \textit{Id.} at 1392-93.
\textsuperscript{177} \textit{Id.}
\textsuperscript{178} \textit{Id.} at 1388-91.
\textsuperscript{179} \textit{Id.}
4. The Law on Collective Negotiations

Similarly, the law on collective negotiations makes no sense under the monopoly theory of unions. Current law designates the union selected by the majority of the employees as the exclusive representative of all the employees in the unit\(^\text{180}\) and requires the employer to bargain with the union in good faith.\(^\text{181}\) In Epstein's view, the designation of the union as the exclusive representative combined with the obligation that the employer bargain in good faith merely places the force of law behind the union's labor cartel.\(^\text{182}\) Returning to a competitive market, by allowing employers to partake in or even insist on negotiations with individual employees, would be more equitable and more efficient. Except where prohibited by state law,\(^\text{183}\) unions are allowed to negotiate and enforce "union security" agreements with their employers that require, as a condition of employment, that all employees contribute to the costs of collective bargaining.\(^\text{184}\) In addition, current law prohibits the employer from discharging striking employees,\(^\text{185}\) although it does allow the employer to permanently replace them.\(^\text{186}\) As Epstein points out, allowing the negotiation and enforcement of union security agreements and prohibiting the discharge of striking employees merely provides additional barriers to the market forces that would naturally tend to erode and limit union monopoly power.\(^\text{187}\)

Moreover, the monopoly model yields no coherent basis on which to distinguish "good faith" from "bad faith" bargaining. To determine if a party is bargaining in good faith, the Board and courts examine whether the party has a bona fide intent to reach agreement.\(^\text{188}\) The presence or absence of such intent is judged from the totality of

\(^{180}\) 29 U.S.C. § 159(a) (1988). The employer is prohibited from negotiating with individual employees concerning terms and conditions of employment, Getman & Pogrebin, supra note 2, at 97, and even preexisting individual employment contracts are superseded by any collective agreement. J.I. Case Co. v. NLRB, 321 U.S. 332, 339 (1944). Similarly, bargaining efforts or "wildcat" strikes by individual employees or groups of employees do not enjoy the protections of the National Labor Relations Act. Emporium Capwell Co. v. Western Addition Community Org., 420 U.S. 50, 65-70 (1974).


\(^{182}\) Epstein, supra note 8, at 1395-98.


\(^{185}\) See 29 U.S.C. § 157 (1988); 2 The Developing Labor Law, supra note 2, at 1003.


\(^{187}\) Epstein, supra note 8, at 1384 (discussing union security agreements), 1392-94 (discussing discriminatory discharges).

circumstances surrounding the negotiations. Although such a determination is very subjective, the Board and courts have determined that certain strategies and conduct are presumptively bad faith bargaining. In one such strategy, known as Boulwareism, the employer determines a bargaining position and presents it to the union on a “take it or leave it” basis combined with an extensive publicity campaign proclaiming that the offer will not be changed. Another such strategy, of particular interest to the discussion at hand, is the failure of the employer to provide requested information reasonably necessary for the union to perform its function as exclusive representative.

As previously discussed, the traditional monopoly model employs only a very simple model of collective negotiations in which the union sets the wage and the employer sets the level of employment. Such a primitive model provides no basis for defining “good faith” or for evaluating various bargaining tactics such as Boulwareism. Epstein realizes this, but he blames his inability to rationalize the problem on the intractability of the concept of “good faith” rather than on the inadequacy of his model. Because under the monopoly model strikes are the result of imperfect information, one might hope that the model could explain why the law requires employers to provide unions with certain information. However, under the monopoly model one would expect that employers will provide such information to unions voluntarily if doing so is the lowest-cost method of avoiding strikes.

190. “Hard bargaining” is not in and of itself a violation of the duty to bargain in good faith. Dierks Forests, Inc., 148 N.L.R.B. 923, 930 (1964). Both sides are allowed to make a firm final offer at some juncture in the negotiations. See, e.g., Philip Carey Mfg. Co., Miami Cabinet Div. v. NLRB, 331 F.2d 720, 725 (6th Cir. 1964), cert. denied, 379 U.S. 888 (1964). Moreover, the Act specifically states that the obligation to bargain in good faith “does not compel either party to agree to a proposal or require the making of a concession.” 29 U.S.C. § 158(d) (1988). However, where a party’s pattern of conduct in failing to meet sufficiently with the other side, respond to proposals, make and explain counterproposals, supply information, and supply a representative who can effectively negotiate on its behalf evidences a lack of a genuine desire to reach agreement, the Board will find a failure to bargain in good faith. See Getman & Fogel, supra note 2, at 126.
191. The tactic is named after the man who developed it in the late 1940s, former General Electric Vice-President Lemuel Boulware. Merrifield et al., supra note 2, at 512.
193. J.I. Case Co. v. NLRB, 253 F.2d 149, 154-55 (7th Cir. 1958). Unions have a similar obligation to supply relevant information. Local 13, Detroit Newspaper Printing & Graphic Communications Union, 233 N.L.R.B. 994, 996 (1977), aff’d, 598 F.2d 267 (D.C. Cir. 1979), But from a practical perspective it is much less important.
194. See supra note 22 and accompanying text.
195. See Epstein, supra note 8, at 1395-96.
196. As previously discussed, this statement is only strictly true if the third-party effects of strikes are insignificant. See supra note 152. If there are significant third-party effects, then
Even if one attempts to append a more realistic model of bargaining to the monopoly model of unions to account for the possibility of strategic behavior, these efforts to regulate collective bargaining make no sense. As Epstein notes, requiring disclosure of information to labor unions is merely another method of lowering the costs of organization, thereby encouraging labor cartelization with all its attendant problems.\footnote{See Epstein, supra note 8, at 1397.}

5. The Law on Enforcement of the Collective Agreement

Finally, the law on the enforcement of collective agreements seems somewhat inconsistent with the monopoly model of unions. Collective bargaining agreements are enforceable as a matter of federal substantive law under section 301 of the Labor Management Relations Act.\footnote{29 U.S.C. § 185 (1988); see Textile Workers Union v. Lincoln Mills, 353 U.S. 448, 449-52 (1957).} The Supreme Court has interpreted this federal substantive law to include federal authority to enforce agreements to arbitrate\footnote{Textile Workers Union, 353 U.S. at 449-56.} and several other features that encourage the resolution of disputes under collective bargaining agreements through arbitration.\footnote{In Local 174, Teamsters v. Lucas Flour Co., 369 U.S. 95, 104-06 (1962), the Court found that agreements to arbitrate include implied agreements not to strike or lock out over arbitrable issues. Moreover, in Boys Mkt., Inc. v. Retail Clerks' Union, 398 U.S. 235, 253 (1970), the Court found federal authority to enjoin strikes in contravention of an arbitration agreement despite clear language in the Norris-LaGuardia Act to the contrary. Finally, in the Steelworkers Trilogy, the Supreme Court announced a federal policy of deferring to arbitration in determining which issues are arbitrable and in resolving those disputes. United Steelworkers v. American Mfg. Co., 363 U.S. 564, 568-69 (1960); United Steelworkers v. Warrior & Gulf Navigation Co., 363 U.S. 574, 582-83 (1960); United Steelworkers v. Enterprise Wheel & Car Corp., 363 U.S. 593, 596 (1960).} Given the existence of a collective agreement, one could logically argue that, even under the monopoly theory of unions, the law should encourage arbitration as the low-cost method of resolving disputes over the contract. Within the context of the monopoly model of unions, encouraging arbitration would minimize the costs of collective bargaining to society, given the alternative solutions of resolving such disputes through economic warfare or through protracted and costly litigation. However, this argument still seems at odds with the monopoly model's general conclusion that collective bargaining is inequitable and inefficient. Why encourage the cartelization of the labor market by providing an inexpensive means of enforcing cartel contracts? Perhaps if the enforcement of cartel contracts were expensive enough, the cost would requiring the disclosure of information may minimize total societal costs even through it does not minimize the union's and employer's costs.
discourage cartelization. Moreover, one might argue that, even if society encourages the low-cost method of enforcing cartel contracts, consumers and unorganized workers who are injured by the cartel should have a right of action against the cartel similar to private suits for damages under the Clayton Act.\textsuperscript{201}

C. A Critique of the Monopoly Model from an Economic Perspective

As previously discussed, in resolving the three issues presented in the primer on labor economics, the traditional monopoly model of unions and collective bargaining combines the first of the various possible assumptions presented with respect to each issue. The monopoly analysis assumes that the source of union benefits is a labor cartel, that employers respond to union wage increases by moving up their labor demand curve, and that the costs of collective bargaining should be treated as ordinary transaction costs. The choice of each of these three assumptions is questionable on grounds of both logical arguments and empirical evidence.

1. The Assumption of a Labor Cartel as the Source of Union Wage Increases

It seems very doubtful that cartelization of the labor market is the sole, or even the primary, source of union wage increases in the American economy.\textsuperscript{202} The establishment of a labor cartel in any market without licensure would seem very difficult.\textsuperscript{203} Workers are the consummate atomistic competitors. Moreover, if labor cartel power were the only source of union wage increases, an organizing campaign that proceeded to organize one competitive employer at a time would get nowhere because there would be only costs of unionization, but no benefits, to show employees until the requisite number of employers was organized. A labor cartel in a competitive product market without employer rents or productivity increases associated with unionism would have to be simultaneously organized across many employers in order to survive — like Athena springing full-grown from Zeus’ head.

Employer product market power rents, Ricardian rents, and quasi-rents constitute much more likely sources of union wage increases. If the requisite barriers to entry to a product market exist, the employers

\textsuperscript{202} Weiler, supra note 22, at 124-33; Fischel, supra note 117, at 1072-73.
\textsuperscript{203} The members of an occupation can use licensure to generate labor cartel rents by lobbying to raise the requirements of licensure above what is needed to successfully perform in the occupation, thereby restricting the supply of labor in the occupation. In such a case the force of the licensure law enforces the labor cartel.
would be more likely to exploit them than would a labor cartel. The employers are much more concentrated than individual employees; moreover, normal economic profits sustain employers while they organize their cartel or increase their grasp on market share through expansion or merger. Indeed, when significant economies of scale exist in an industry, the employers, as producers, will naturally gravitate toward oligopoly or monopoly. No such anticompetitive gravity compels the workers to combination. Finally, it seems much more plausible that unions could organize employers who enjoy monopoly rents, Ricardian rents, or quasi-rents, because such organization could be undertaken on a more manageable basis, one employer at a time.

The arguments for the existence of at least some productivity increases associated with unionism also seem compelling. The argument that long-term implicit contracts yield benefits in monitoring and firm-specific human capital investment is intuitively appealing and well established in the economics literature. Without unions, workers are left with only the uncertain and inefficient discipline of reputation to


206. In fact, unions have historically organized one employer at a time. See, e.g., Victor G. Reuther, The Brothers Reuther and the Story of the UAW 146-47 (1976) (discussing UAW attempts to organize General Motors); cf. Cox et al., supra note 2, at 281-82, 288 (noting that unions may prefer to organize divisions of a single employer separately). See generally Dules, supra note 92, at 88-90 (describing early attempts to form national unions); Henry Pel- ling, American Labor 70 (1960).

207. See Parsons, supra note 45, at 789; Rosen, supra note 45; supra notes 45-49 and accompanying text.
prevent employers from breaching such contracts. Similarly, public goods dominate the conditions of employment in most employment contracts and pose a serious problem for the negotiation of efficient individual contracts. 208 It seems quite plausible that collective bargaining could help rectify this problem, as well as lower worker turnover, by giving employees a superior means of expressing their concerns.

Several authors have argued that union productivity increases cannot be real or substantial because, if they were, employers would encourage unionism and split the proceeds from these productivity increases with employees. 209 This argument ignores the fact that many employers are anxious to organize employees in committees or associations for the purposes of communication. Perhaps not coincidentally, the decline of unions in the United States has been accompanied by a rash of cases testing the legal bounds of employer efforts to organize employees despite the National Labor Relations Act's prohibition against company unions. 210 What employers are not interested in is organizing independent unions that could vie for a share of employer rents and interfere with management prerogatives. Even though such independent organization would yield greater productivity increases due to effective enforcement of long-term implicit contracts, greater accuracy in the assessment of employee preferences with respect to collective goods, and more effective monitoring of management efficiency, 211 employers do not want independent organi-

208. See supra note 50 and accompanying text. Addressing this public good problem is one of the primary goals of the new field of study called Human Resources Management. See, e.g., ROBERT E. SIBSON, STRATEGIC PLANNING FOR HUMAN RESOURCES MANAGEMENT 142-55 (1991); GEORGE E. STEVENS, CASES AND EXERCISES IN HUMAN RESOURCES MANAGEMENT (5th ed. 1991).

209. See Campbell, supra note 52, at 996-97; Epstein, supra note 8, at 1402-03; Posner, supra note 52, at 1000-01.

210. See NLRB v. Streamway Div. of Scott & Fetzer Co., 691 F.2d 288 (6th Cir. 1982); Hertzka & Knowles v. NLRB, 503 F.2d 625 (9th Cir. 1974), cert. denied, 423 U.S. 875 (1975); Member Raudabaugh Forecasts NLRB Ruling in Electromation Case Before December 1992, Daily Lab. Rep. (BNA) No. 141, at A-4 (July 22, 1992) (predicting that the Electromation, Inc. opinion on "employee involvement programs and quality circles" will be released before Christmas, 1992). Prior to the enactment of the Wagner Act, three out of five union members belonged to unions organized by their employers. COX ET AL., supra note 2, at 201. Although some of these company unions were undoubtedly organized merely as a bulwark against independent organization, some were honest attempts at increasing communication between the employer and employees that incidentally discouraged true organization. Id.

211. Although employer organization of employee committees holds the promise of some productivity increases due to greater communication between employers and employees, it seems unlikely that employer-organized committees could achieve the full productivity increases that are possible with independent unions. Captive committees could not be as effective as independent unions in enforcing long-term implicit contracts against the employer, solving the free-rider problem of collective goods in the workplace, or monitoring management, because the committee would be merely an extension of the employer. See JOHN F. WITTE, DEMOCRACY, AUTHORITY,
zation because sharing rents with employees decreases profits, and managers prefer not to be effectively monitored.\textsuperscript{212} Furthermore, employers can realize some of the productivity increases associated with independent employee organization by free riding on the information obtained by observing the production and employment practices of their organized competitors.

Empirical evidence also suggests that labor cartel power is less important than other sources of union wage increases. Based on available statistics, there seem to be few product markets in the United States that contain a percentage of organized workers that might even be imagined a labor cartel. Nationally, the proportion of private sector employees represented by a union is currently about 14\%\textsuperscript{213} Among industry groups and occupations for which such statistics are collected by the Bureau of Labor Statistics, the highest representation in any industry group on a national basis is 39\%, while the highest representation in any particular occupation on a national basis is 42\%.\textsuperscript{214} Although the percent organized in particular industries, such as automobiles or steel, is undoubtedly higher, typically such industries suffered from product market concentration prior to organization.\textsuperscript{215} Similarly, the highest percentage organized in any state is 36\%, although variations undoubtedly exist among local product markets.\textsuperscript{216}

\textsuperscript{212} Empirical studies suggest that, despite possible productivity effects associated with employee organization, unions typically decrease company profits. Freeman & Medoff, \textit{supra} note 20, at 181-90; Hirsch & Addison, \textit{supra} note 13, at 211-14. This is because the wage increase associated with unionism generally exceeds the productivity increase employee organization yields. Freeman & Medoff, \textit{supra} note 20, at 22.

\textsuperscript{213} There were approximately 82,462,000 private sector employees in the United States in 1987, of whom 10,859,000 were union members and 11,887,000 were represented by unions. Bureau of Labor Statistics, U.S. Dept. of Labor, \textit{Current Wage Developments} 7 (Feb. 1988); see also Leo Troy & Neil Sheflin, \textit{Union Sourcebook} (1985); U.S. Dept. of Labor, \textit{News: Union Members in 1989}, at 2 (1990).

\textsuperscript{214} Bureau of Labor Statistics, \textit{supra} note 213, at 7. The most highly represented industries are communications and public utilities while the most highly represented occupation is protective services. Id.; see also Michael A. Curne et al., \textit{Union Membership and Contract Coverage in the United States, 1983-1988}, 44 INDUS. & LAB. REL. REV. 5 (1990).

\textsuperscript{215} See, e.g., United States v. United States Steel Corp., 251 U.S. 417, 437-38 (1920) (noting the concentration of the steel industry in 1920). Price negotiation was also a factor in generating employer rents prior to organization in industries such as trucking and the airlines.

\textsuperscript{216} Statistical Abstract of the United States Table No. 666 (1988) (using 1982 data); Troy & Sheflin, \textit{supra} note 213, at 7-4 (using 1982 data). Unlike the previous figures,
Direct empirical evidence of the source of union wage increases is
difficult to produce due to the strategic incentives of employers in la­
bor negotiations. Product price increases may be associated with the
negotiation of a union contract even if the union wage increase will be
paid out of employer monopoly rents, because the employer has incen­
tive to underprice and plead poverty during negotiations and then ad­
just prices up after negotiation of the contract.217 However, the best
available evidence suggests that union wage increases come largely at
the expense of employers218 and are strongly associated with the mar­
ket power of the employing firm.219 Most empirical models,220 and
even many modern presentations of the monopoly theory of unions,
depend on employer product market power, Ricardian rents, or quasi­
rents as the source of union wage increases.221

Finally, studies have found convincing evidence that some indus­
tries enjoy significant productivity increases from unionism.222 Per­
haps the best of these studies was conducted by Kim Clark, who
compared the physical output of cement plants before and after organ­
ization and between different organized and unorganized plants, find­
ing statistically significant productivity increases with organization

cited supra notes 213-14 and accompanying text, this figure includes the more highly organized
cited supra notes 213-14 and accompanying text, this figure includes the more highly organized
public sector. As of 1982, the most highly organized state was New York, followed closely by
Michigan. TROY & SHEFLIN, supra note 213, at 7-4.


218. See RICHARD B. FREEMAN, UNIONISM, PRICE-COST MARGINS, AND THE RETURN TO
ADDISON, supra note 13, at 211-14; Clark, supra note 54, at 918 (using accounting data on over
900 product-line businesses to conclude that unionization substantially decreased profits but had
little effect on price, output, or capital-to-labor mix); Paula B. Voos & Lawrence R. Mishel, The
Union Impact on Profits: Evidence from Industry Price-Cost Margin Data, 4 J. LAB. ECON. 105,
128-29 (1986) (using price-cost margin data on 139 industries over the years 1968-1970 to esti­
mate that on average 80% of union wage and benefit increases was paid out of company profits
and only 20% was paid out of price increases to consumers).

219. See HIRSCH & ADDISON, supra note 13, at 208-14; Thomas Karier, Unions and Monop­
oloy Profits, 67 REV. ECON. & STAT. 34 (1985); Thomas A. Pugel, Profitability, Concentration and
the Interindustry Variation in Wages, 62 REV. ECON. & STAT. 248 (1980); Nancy L. Rose, Labor
Rent Sharing and Regulation: Evidence from the Trucking Industry, 95 J. POL. ECON. 1146,
1175 (1987); Michael A. Salinger, Tobin's q, Unionization, and the Concentration-Profits Rela­
tionship, 15 RAND J. ECON. 159 (1984). Rose and Salinger found that, where unions are success­
ful in organizing, they can capture the lion's share of firm monopoly profits (about 75% according to Rose's study). For a similar empirical argument that unions primarily share in
employer product market rents based on the deregulation of the airlines, see WEILER, supra note
222, at 131-32.

220. See, e.g., HIRSCH, supra note 32; Clark, supra note 54.

221. HIRSCH & ADDISON, supra note 13, at 21.

222. See FREEMAN & MEDOFF, supra note 20, at 168-69; HIRSCH & ADDISON, supra note
13, at 195-208 (surveying and interpreting the relevant literature). But see John T. Addison &
Barry T. Hirsch, Union Effects on Productivity, Profits, and Growth: Has the Long Run Arrived?,
7 J. LAB. ECON. 72 (1989) (concluding that productivity effect of unions has not yet been proved); Peter J. Turnbull, Trade Unions and Productivity: Opening the Harvard "Black Boxes",
that ranged from 6% to 10%. However, other studies suggest that not all industries enjoy such productivity gains and that productivity increases associated with employee organization can evaporate if labor relations turn sour. Although further work needs to be done in identifying the sources of union wage increases in particular industries and over the American economy as a whole, it now appears to be a gross oversimplification and mischaracterization to assume that labor cartelization is the sole or even the dominant source of union wage increases in the American economy.

2. The Assumption That Employers Respond to Union Wage Demands by Moving Up Their Demand Curves

The assumption that employers will respond to union wage demands by moving up their labor demand curve rather than bargaining over wages and employment is also theoretically unsound. The logic of the employer’s and employees’ incentive to bargain to solutions off the employer’s labor demand curve has already been demonstrated. The only real question is to what extent transaction costs prevent the negotiation of optimal terms. The relevant transaction costs include time and information costs, failures to negotiate efficient contract terms due to strategic lying, and enforcement costs.

Traditionally, economists have assumed that time and information costs are relatively low under collective bargaining compared with other bargaining situations because the process generally involves only two principal parties who can readily meet and who understand the subject of negotiations. Accordingly, it seems unlikely such costs would prevent the negotiation of optimal contract terms in collective bargaining. The parties’ knowledge will also make strategic lying difficult, particularly as to the optimal capital-labor mix. If nothing else,


224. The available studies yield estimates of changes in productivity associated with employee organization from -18% to 32%. HIRSCH & ADDISON, supra note 13, at 196-97.

225. See HIRSCH & ADDISON, supra note 13, at 200.

226. See supra notes 54-60 and accompanying text.

227. Among the possible strategic behaviors in bargaining, strategic lying is the only one that poses a serious threat to the negotiation of optimal contract terms. The others, including hard bargaining, pose more of a threat to the peaceful division of the cooperative surplus. Accordingly, these strategic behaviors have a greater impact on whether a collective agreement can be reached without a strike than on the terms that will ultimately be negotiated in the collective agreement.

228. See Schwab, supra note 12, at 267-68.
the union can check employer representations merely by observing what competing firms are doing.

Regarding enforcement costs, arguably it may be difficult to negotiate an optimal level of employment that can be effectively enforced. Employers need flexibility to respond to changes in demand by adjusting the level of output and employment, and it would seem difficult for the union to police changes in employment to determine whether the employer is laying off workers to respond to a drop in product demand or to return opportunistically to his labor demand curve.\textsuperscript{229} However, the union could detect such opportunism on the part of the employer by monitoring the capital-labor mix. If such opportunism is a serious problem, the contract could specify the composition of work crews for each station with the requirement that if the workers are laid off their machines must be idled.\textsuperscript{230} Alternatively, unions could lessen employers' incentives to act opportunistically by negotiating lump-sum payments to cover the employees' share of the expected cooperative surplus and a competitive hourly wage to cover the employees' opportunity costs in employment.\textsuperscript{231} Moreover, given the parties' continuing relationship, the optimal level of employment could plausibly be set by implicit agreement with the union punishing perceived opportunistic behavior by the employer in later negotiations.

Recent empirical work strongly endorses the employer bargaining response over the employer labor demand curve response. Although transaction costs may prevent optimal bargaining in some individual cases, studies examining whether organized employers operate on their labor demand curve or at some higher negotiated level of employment consistently reject the labor demand curve response.\textsuperscript{232} The shape of

\textsuperscript{229} Indeed, collective bargaining agreements that explicitly specify the level of employment are not common. HIRSCH & ADDISON, supra note 13, at 16; ANDREW J. OSWALD, EFFICIENT CONTRACTS ARE ON THE LABOR DEMAND CURVE: THEORY AND FACTS (Industrial Relations Section, Princeton University Working Paper No. 178, 1984).

\textsuperscript{230} Such \textit{sunk cost loss provisions}, requiring that the employer suffer a demonstrated loss (idling the machine) when purportedly responding to decreases in demand, decrease the employer's incentive to act opportunistically and prevent her from moving to an inefficient capital-labor mix. Wachter & Cohen, supra note 45, at 1378-79. Examples of such provisions include specifying the minimum number of musicians in an orchestra, the minimum crew size, or the maximum number of students in a classroom. See Randall W. Eberts & Joe A. Stone, \textit{On the Contract Curve: A Test of Alternative Models of Bargaining}, 4 J. LAB. ECON. 66 (1986); Frederick R. Warren-Boulton, \textit{Vertical Control by Labor Unions}, 67 AM. ECON. REV. 309 (1977).

\textsuperscript{231} Campbell, supra note 52, at 1017-18. A variety of other devices can be used to achieve agreements off the employer's labor demand curve without explicit provisions governing the number of workers or hours. These devices include work reduction provisions, provisions covering changes in technology, profit sharing, tenure and seniority provisions, equipment differentials, and taxes on output. See Clark, supra note 54, at 897; Eberts & Stone, supra note 230; Warren-Boulton, supra note 230. Such provisions are fairly common in collective bargaining agreements.

\textsuperscript{232} See John M. Abowd, \textit{The Effects of Wage Bargains on the Stock Market Value of the
the contract curve between the parties will vary from case to case, and studies have found examples of both rightward- and leftward-leaning contract curves.\textsuperscript{233} Although further work needs to be done, perhaps the best characterization of the impact of unions in this regard, based on the available empirical evidence, is that unions negotiate optimal contracts that have little impact on the capital-labor mix or the level of output by organized employers. This characterization is based primarily on two studies, one by Kim Clark, the other by John Abowd.\textsuperscript{234} Clark examined a sample of over 900 union and nonunion businesses to gauge the impact of employee organization on various measures of firm performance, including return on capital, growth, and capital-labor mix. He found that, although organized firms tend to earn substantially lower returns on capital than nonunion firms operating in comparable technological and competitive environments, employee organization had little effect on firm growth and the capital-labor mix.\textsuperscript{235} Abowd examined the effect of unexpected changes in collectively bargained labor costs on the value of common stock for a broadly representative sample of organized businesses. He found that, on average, unexpected increases in wealth to workers corresponded to decreases of similar size in the value of the common stock to shareholders.\textsuperscript{236} This equal and opposite relationship in worker and shareholder wealth is consistent with the bargaining analysis\textsuperscript{237} and the characterization of the contract curve between employers and unions as typically vertical over the economy as a whole.

3. \textit{The Failure To Account for the Strategic Nature of Collective Bargaining}

Finally, the traditional monopoly model of unions is deficient because it fails to account explicitly for the strategic nature of collective bargaining and the fact that many of the costs of collective bargaining are positional externalities. Perhaps the most damning shortcoming of


\textsuperscript{233} In his study, Card found a leftward-leaning contract curve, showing a willingness on the part of the examined unions to trade employment for wages. Card, \textit{supra} note 232, at 1065-66. In the typographical industry, MaCurdy and Pencavel found a rightward-leaning contract curve, indicating a willingness on the part of the union to trade wages for jobs. MaCurdy \& Pencavel, \textit{supra} note 54.

\textsuperscript{234} See Abowd, \textit{supra} note 232; Clark, \textit{supra} note 54.

\textsuperscript{235} Clark, \textit{supra} note 54, at 918.

\textsuperscript{236} Abowd, \textit{supra} note 232, at 775.

\textsuperscript{237} \textit{Id.}
the traditional monopoly model is that the adoption of the first two assumptions of the model — that unions are labor cartels and that employers respond to union wage demands by moving up their demand curve — logically precludes the consideration of strategic behavior in the conduct of collective negotiations. To preclude consideration of this fundamental characteristic of collective bargaining in an economic model would seem to be a very serious mistake.

Although some of the costs of collective bargaining are ordinary time and information costs, it is quite evident that many activities in collective bargaining are strategic in nature and result in costs that are positional externalities. Organizing campaigns, discriminatory discharges, recalcitrant bargaining, and some enforcement activities are all undertaken for the purpose of gaining a larger share of the joint benefits of production for the active party. Moreover, the reward of each party based on relative performance and the tendency for conflicts in collective bargaining to escalate into costly affairs are also evident. It seems reasonable that the more one side spends in an organizing campaign relative to the other, the better will be that side's chances of prevailing in the campaign. Because finishing second in an organizing campaign does neither the employer nor the union any good, both will have incentives to expend resources up to the amount the organized employees would be expected to benefit at the expense of the employer by successfully organizing, if they think it will allow them to prevail. Far from conceding high-rent industries to unions, employers will thus presumably contest these industries all the more vigorously to preserve their claim on the high rents.

Similarly, "hard bargaining" can have its rewards in collective negotiations. However, if both sides follow this individually rational strategy, the result may be the waste of resources in a strike or lockout that reduces the total value of the rents and productivity increases to be divided between the parties. The answer to the question of why

238. See supra note 103 and accompanying text.

239. Some minimum level of expenditure to negotiate and enforce an agreement is inevitable due to the costs of acquiring information, meeting a minimum number of times to negotiate the agreement, and good-faith disagreements over the later interpretation of the agreement.

240. See HAMBURGER, supra note 18, at 107-08; Posner, supra note 52, at 993-94.

241. When a rent (here, the organized employees' expected benefit at the expense of the employer) is open to more than one-party competition, acquiring that rent can theoretically consume the entire rent as well as prompt similar wasted expenditures by the losing side. Posner has made a similar argument with respect to the waste of monopoly rents by firm competition for the monopoly position. See RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 12-13 (1976).

242. Some economists have begun to take account of this strategic argument. See, e.g., HIRSCH & ADDISON, supra note 13, at 31.

243. Many authors have realized the strategic nature of collective bargaining and strikes,
the parties sometimes engage in strikes and lockouts despite their deleterious effect on the ultimate bargain is that activities like intransigence in bargaining may be individually rational even though they do not always produce collectively rational results.\textsuperscript{244}

Finally, enforcement of the collective agreement creates incentives for strategic behavior. If resort to economic weapons is allowed during the course of the agreement, the union has incentives to reinterpret or renegotiate the contract whenever there is a backlog of orders and the employer is vulnerable, while the employer has similar incentives whenever demand for the product lags and the union is vulnerable.\textsuperscript{245} The result, of course, would be a dramatic increase in bargaining and enforcement costs. Similarly, resort to costly litigation by a party whenever it loses an arbitration might yield individual gains but would significantly decrease the benefit of the agreement to both sides.

Although it is too early to judge the empirical success of models that account for the strategic nature of collective bargaining, models of strikes as merely the result of asymmetric information do not adequately explain the phenomenon. Models that explain strikes as necessary to lower unrealistic worker wage expectations do well explaining aggregate macrodata of strike frequency, but these results depend on intuitive guesses as to the determinants of workers’ resistance and concessions in strikes, rather than any analysis of rational economic behavior.\textsuperscript{246} Moreover, these models are intuitively unappealing because they implicitly assume that the union leadership un-

\textsuperscript{244} Recently some sophisticated game theory models of strikes have taken advantage of the strategic nature of strikes to explain strike activity in models with perfect information. See, e.g., Fernandez & Glazer, supra note 75. In addition, Professor Masahiko Aoki has written some interesting articles describing firm production and growth as a cooperative game between shareholders and employees. See Masahiko Aoki, \textit{A Model of the Firm as a Stockholder-Employee Cooperative Game}, 70 AM. ECON. REV. 600 (1980); Masahiko Aoki, \textit{Equilibrium Growth of the Hierarchical Firm: Shareholder-Employee Cooperative Game Approach}, 72 AM. ECON. REV. 1097 (1982). Another bargaining model that may prove useful in the analysis of labor law has been developed in Robert Cooter et al., \textit{Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior}, 11 J. LEGAL STUD. 225 (1982). Finally, Professor Joel Rogers has recognized and discussed the implications of dilemma games among workers in organizing. See Joel Rogers, \textit{Divide and Conquer: Further “Reflections on the Distinctive Character of American Labor Laws,”} 1990 Wis. L. REV. 1, 10.

\textsuperscript{245} The strategic nature of contract enforcement has long been recognized with respect to contracts in general. See Richard A. Posner, \textit{Economic Analysis of Law} 42-43 (1st ed. 1972); Daniel A. Farber, \textit{Contract Law and Modern Economic Theory}, 78 NW. U. L. REV. 303, 310-11 (1983). However, to my knowledge no one has yet applied these arguments to labor law.

\textsuperscript{246} Kennan, \textit{supra} note 73, at 1102.
dertakes every strike knowing that the union will lose. Similarly, models that explain strikes as the low-cost method for unions to sort out high- and low-wage employers do not fare well empirically. These models predict an increase in the incidence of strikes when the economy declines and such sorting of employers would be useful, when in fact strike incidence decreases during recessions. Such models also predict that wage increases after long strikes that should successfully sort out low-wage employers should be lower, *ceteris paribus*, when again the opposite is true.

III. A Bargaining Analysis of Unions and Collective Bargaining

The shortcomings of the traditional monopoly model of unions suggest a need for greater examination of the alternative elements of an economic model of unions and collective bargaining discussed in Part I of this article. In this Part, I present a model of unions and collective bargaining that employs these alternate assumptions and explore its implications for public policy. Previous authors have provided analyses combining alternative assumptions concerning the source of union wage increases with the assumption of the employer's bargaining response to a union wage increase. I extend these analyses by adding arguments regarding the strategic nature of collective bargaining and the proper characterization of many costs of collective bargaining as positional externalities. As will be seen later, these arguments hold particular relevance for the economic analysis of labor law. I refer to this model as the *bargaining model* of unions and collective bargaining because it examines the possible bargaining solution between employers and employees to the problem of producing and dividing the benefits of their joint enterprise.

247. EHRENBERG & SMITH, supra note 9, at 346.

248. See Kennan, supra note 73, at 1112. But see Peter C. Cramton & Joseph Tracy, *Strikes and Holdouts in Wage Bargaining*: Theory and Data, 82 AM. ECON. REV. 100 (1992) (arguing that if one takes account of "holdouts" in which workers work without a contract, as well as strikes, asymmetric information models do better at explaining observed data).

249. See Kennan, supra note 73, at 1114.

250. See HIRSCH & ADDISON, supra note 13, at 14-18; Clark, supra note 54, at 894; Macurdy & Pencavel, supra note 54, at S3.

251. In the labor economics literature the term *bargaining model* or *bargaining analysis* is generally associated only with the assumption that the employer responds to a union wage increase by bargaining over wages and employment, not necessarily with assumptions concerning the source of union wage increases or the proper characterization of the costs of collective bargaining. See, e.g., HIRSCH & ADDISON, supra note 13, at 14-18. Thus, I use this term in a somewhat more restrictive manner than is common in the literature.
A. The Model and Its Implications for Public Policy

In the bargaining model of unions and collective bargaining I combine all of the assumptions concerning unions and collective bargaining discussed in Part I of this article that were not adopted in the traditional monopoly model of unions. First, I assume that product market power rents, Ricardian rents, quasi-rents, and productivity increases associated with worker organization together constitute the dominant source of union wage increases that the model should consider, although the implications of labor cartel rents are also considered. To the extent that organizational productivity increases are not generally enjoyed throughout the product market, these productivity increases and the employer product market rents constitute the cooperative surplus to be produced and divided by the parties in my bargaining analysis. Second, I assume that employers and unions seek to negotiate optimal contracts with respect to both wages and employment. To ease exposition, I assume that the employer and the union negotiate to maximize the monetary value of the cooperative surplus and thus have a vertical contract curve. However, the implications of a leftward- or rightward-leaning contract curve are also considered. Finally, I explore the implications for public policy of explicitly accounting for the strategic nature of collective bargaining and the fact that many of the costs associated with collective bargaining are positional externalities. Based on my criticisms of the monopoly model of unions, I argue that this bargaining model of unions more accurately describes the typical operation of unions and collective bargaining in the American economy. However, at the very least it allows me to clarify the debate about the equity and efficiency of unions and to explore the implications of relaxing some of the assumptions of the traditional monopoly model.

The conclusions about the equity and efficiency of unions derived from the bargaining model differ markedly from those derived from the traditional monopoly model. As shown in Figure 8, when confronted with a union wage demand, rather than retreating along his labor demand curve, the employer bargains with the union to reach a joint welfare maximizing solution on the contract curve (C). To maximize the monetary value of employer rents, the employer and the union will agree to the employment of the same amount of labor (N) that would have been employed in a competitive market. Where the union is more willing to trade employment for wages the contract

252. See supra notes 40-53 and accompanying text for a discussion of the "cooperative surplus."
curve will lean to the left, and there will be some decrease in the level of employment associated with employee organization. Moreover, where the union delves into employer quasi-rents to raise wages, the long-run contract curve will lie to the left of the short-run contract curve, because in the long run the employer will cut back on his union workforce with the exhaustion of the firm's capital investments. In addition, if the rents that the union gains are from an effective labor cartel, then in the long run the employment of workers in the industry will fall as employers leave the industry to gain more competitive rates of return on their investment. However, this decrease in employment will be less than predicted by the traditional monopoly model because it will be mitigated by the bargaining response.

Any productivity increases associated with employee organization

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253. HIRSCH, supra note 32, at 10-11, 16-17.

254. If the union can establish an effective labor cartel then it can dictate where on the contract curve the parties operate. Assuming the union selects a wage higher than the competitive wage, the employers in the organized industry will earn less than the competitive rate of return they had previously earned, and there will be incentive for employers to leave the industry to gain greater returns elsewhere. This exodus of employers will continue until the supply of the good produced by the industry has fallen to the point where the now-higher price of the good yields a competitive rate of return on the remaining employers' investment.

255. Because the contract curve lies to the right of the demand curve, the bargaining model predicts less decrease in employment and less increase in product price from the establishment of an effective labor cartel than does the traditional monopoly model.
will shift the employer’s labor demand curve and the contract curve to the right ($D'$ and $C'$ respectively) because the employer will want to employ more labor at any given wage.\textsuperscript{256} Such a productivity shift will increase the optimal level of employment negotiated by the employer and will tend to counteract any willingness on the part of the union to trade employment for wages in negotiations or any decrease in employment due to the formation of an effective labor cartel. Where the union is more willing to trade wages for employment so that the contract curve leans to the right, the union in essence spends a portion of the employees’ share of the cooperative surplus to increase the number of job openings above the competitive level.\textsuperscript{257} Because in each of these cases the union wage exceeds the competitive wage, there should presumably be an excess supply of workers willing to take union jobs. However, under the bargaining model where employer rents and productivity increases are the dominant source of union wage increases, little if any production inefficiency or displacement of workers from one labor market to another occurs. On the contrary, worker organization may lead to production efficiencies and an increase in employment in organized firms.

Similarly, under the bargaining model the employer has little incentive or opportunity to pass on any of the union wage increase to consumers. Assuming that the employer was optimally pricing to maximize the value of his rents before the employees organized, any adjustment away from this optimal price will only reduce the rents that are divided between the employer and the employees. Where the union is willing to trade employment for wages so that the contract curve leans to the left, an employer who enjoys product market power rents may profit by decreasing supply and increasing price.\textsuperscript{258} However, no such price increase is possible where the employer has already fully exploited the extent of his product market barriers to entry before the advent of the union.\textsuperscript{259} Where the union establishes an ef-

\textsuperscript{256} Productivity increases associated with employee organization are like any technological innovation in that they shift the employer's labor demand curve and may change the optimal labor-capital mix. HIRSCH \& ADDISON, supra note 13, at 202-04; Clark, supra note 54, at 896-97.

\textsuperscript{257} As previously stated, this most likely occurs in industries in which the level of employment is severely contracting so that even with attrition and productivity increases associated with organization, the employer's desired level of employment is well below the level desired by union members. Indeed, such a rightward-leaning contract curve has been found in the typographical industry, which has recently suffered a severe contraction in jobs due to technological innovations. Macurdy \& Pencavel, supra note 54.

\textsuperscript{258} If the employer enjoyed only Ricardian rents, quasi-rents, and productivity increases associated with employee organization, she would not be able to raise the product price, because the employer is a price taker in the product market.

\textsuperscript{259} Empirical evidence suggests that most cartels and monopolists price at the limit of their
fective labor cartel, the price of the good will rise as output is decreased, but once again the bargaining response will mitigate this effect.260

Also, as before, productivity increases associated with employee organization will offset in part or in whole any tendency to increase price due to the willingness of the union to trade employment for wages or the establishment of an effective labor cartel. Indeed, to the extent that such productivity increases spread throughout the product market through organization, firm expansion, or free riding, they will tend to drive down the optimal price, and consumers may even enjoy lower prices due to employee organization.261 Where the union is willing to trade wages for employment so that the contract curve leans to the right, the resulting contract can only increase output and reduce price relative to what would have existed in a competitive market, assuming the additional workers add anything to production. Under the bargaining model there is thus little, if any, consumption inefficiency or product price increase associated with employee organization, and, to the extent productivity increases associated with employee organization spread throughout the product market, consumers may enjoy a price decrease due to organization.

Thus, one can argue under the bargaining analysis that unions serve the goal of equity and perhaps even the goal of efficiency. The absence of any appreciable displacement of workers or product price increase associated with employee organization means that union benefits come largely at the expense of employers and from productivity increases associated with employee organization rather than from other workers or consumers. Assuming that the average stockholder barriers to entry rather than at the theoretically optimal price given by the product market demand curve at the output level where marginal revenue equals marginal costs. Measured elasticities of demand for various industries range from 1.98 to 0.03 with 0.56 as the unscientific “mean.” HENDRIK S. HOUTHAKKER & LESTER D. TAYLOR, CONSUMER DEMAND IN THE UNITED STATES: ANALYSES AND PROJECTIONS 61-144 (2d ed. 1970); A. Koutsoyiannis, Goals of Oligopolistic Firms: An Empirical Test of Competing Hypotheses, 51 S. Econ. J. 540 (1984); Ahsan Mansur & John Whalley, Numerical Specification of Applied General Equilibrium Models: Estimation, Calibration and Data, in APPLIED GENERAL EQUILIBRIUM ANALYSIS 69-127 (Herbert E. Searf & John B. Shoven eds., 1984). Assuming a linear demand curve and a moderate increase in the marginal costs of production so that the ratio of the optimal monopoly price to the competitive price is equal to the elasticity of demand plus 0.25 divided by the elasticity of demand, POSNER, supra note 241, at 245-48, these elasticities suggest optimal price markups for cartels and monopolies of from 13% to 833% with an unscientific “mean” of about 45%. However, typical markups from real cartels and monopolies range from 12% to 35%. Mark A. Cohen & David T. Scheffman, The Antitrust Sentencing Guidelines: Is the Punishment Worth the Costs?, 27 AM. CRIM. L. REV. 331, 347 (1989). Given the historically low penalties and slack enforcement of our antitrust laws, this disparity suggests that cartels and monopolists typically raise their prices to the full extent of available barriers to entry.

260. See supra note 255 and accompanying text.

261. Clark, supra note 54, at 896-97.
is wealthier than the average worker and society generally favors redistributing wealth from rich to poor, or that society believes workers should share in the rents generated by their joint enterprise with employers regardless of the parties' relative wealth, unions serve society's redistributive goals.\(^\text{262}\) Moreover, if the productivity increases associated with employee organization exceed associated inefficiencies due to unions' willingness to trade employment for wages, unions' ability to establish effective labor cartels, possible increases in transaction costs due to collective bargaining, and any external costs on the public from strikes, then employee organization is also wealth maximizing.\(^\text{263}\) It follows that, at the very least, unions should be lawful and collective bargaining agreements should be enforceable. But are these two simple policies enough to ensure an optimal social policy with respect to industrial relations, or does society need more extensive regulation of the conduct of collective bargaining?

The third assumption of the bargaining model, that collective bargaining is a strategic endeavor and that many of its associated costs are positional externalities, suggests the need for extensive regulation

\(^{262}\) There is no efficiency reason why some of the employer product market power or Ricardian rents should not be redistributed to the workers who help produce them, because these rents are payments in excess of that necessary to call forth the employment of the employer's capital resources. Indeed, to the extent that unions force employers to share product market power rents, they discourage employer cartelization of the product market and increase economic efficiency.

\(^{263}\) It seems plausible that employee organization is wealth maximizing in some industries. As previously discussed, in what are perhaps the most careful studies of productivity increases associated with employee organization, Clark found an increase in production of 8% to 10% in the cement industry. Clark, Evidence, supra note 223, at 635. One study found that the efficiency gain from removing the union relative wage effect (using the monopoly model of unions) never exceeds 0.2% of GNP. Robert H. DeFina, Unions, Relative Wages, and Economic Efficiency, 1 J. Lab. Econ. 408, 428 (1983); see also Rees, supra note 217, at 96-97; Albert Rees, The Effects of Unions on Resource Allocation, 6 J.L. & Econ. 69, 69-78 (1963). Taking this estimate as an outside estimate of any production or consumption inefficiency under the bargaining model, and assuming that 20% of employees are organized in the economy as a whole, one obtains an estimate of the average production and consumption inefficiency associated with an organized employer of about 1%. There are probably economies of scale from collective bargaining with respect to time, information, and enforcement costs. Assuming that these costs are the same for collective and individual bargaining, the only potential excess costs from collective bargaining are the costs of organization and strikes. The average worker covered by a collective bargaining agreement spends fewer than three days a year on strike. Kennan, supra note 73, at 1125. Tripling this, to include a crude accounting of organizational costs and external costs on the public from strikes, and assuming that the decrease in productivity associated with strikes is proportional to the number of days missed, one gets a rough estimate of about 3.6% as the decrease in productivity due to the excess costs of collective bargaining. Thus, a generous estimate of the total average loss of efficiency in a shop due to collective bargaining is under 5%.

Even if unions are not wealth maximizing, some authors have argued that there are sociopolitical benefits from allowing workers to organize and act as a voice for workers and a counterbalance to organized capital in social and political fora. See Freeman & Medoff, supra note 20, at 191-206; Getman & Kohler, supra note 95, at 1433. If that is the case, even putting aside redistributive objectives, unions may be social welfare maximizing even if they are not wealth maximizing.
of the conduct of labor relations. Recall that, as demonstrated in the negotiations game, because uncooperative or recalcitrant bargaining is a positional externality, conflicts in collective negotiations tend to escalate into costly strikes despite the parties' mutual interest in avoiding such strikes. Similarly, because many of the more costly strategies in organizing and contract enforcement, such as discriminatory discharges, strikes, lockouts, and resort to litigation, are also positional externalities, conflicts in these areas tend to escalate into costly affairs despite the mutual interest of the parties to avoid such escalation. Escalation of conflicts between employers and employees is not desirable from a societal perspective because it wastes the cooperative surplus produced by the parties. Therefore, it makes sense for the government to undertake reasonable measures to regulate labor relations to avoid such waste and promote the efficient resolution of such disputes.

There are two basic methods by which the government can seek to avoid such escalation and promote more efficient solutions to conflicts involving positional externalities. First, the government can change the expected payoffs of the game by penalizing or prohibiting the wasteful high-cost strategies so that it becomes individually rational for each party to confine itself to the efficient low-cost strategies. For example, in the bargaining game presented earlier, if the government prohibited intransigent bargaining and enforced this prohibition with an expected penalty of $4, both the employer and the union would decide to bargain cooperatively.

264. Returning to the bargaining game represented in Matrix 1, by combining all the benefits to the parties associated with the game and subtracting all costs, we see that the mutually cooperative solution of cell 1 is wealth maximizing while the mutually uncooperative solution of cell 4 is wealth minimizing. See Matrix 1, supra text accompanying notes 86-87. In addition, there may be some external costs to consumers from the strike not accounted for in the game if adequate substitutes do not exist and the consumers have to forgo consumption during the strike. These costs further undermine the mutually uncooperative solution of cell 4 from a wealth maximization perspective.

265. HAMBURGER, supra note 18, at 177-81. The government or society can also attempt to solve dilemmas by a third method: shaping people's preferences to promote cooperative behavior. Families teach taking turns or sharing to solve dilemmas that arise out of conflicting desires as to which activities to undertake together or who will use common resources that only one person can use at a time. HAMBURGER, supra note 18, at 128-30. The government also uses preference shaping to attempt to solve dilemmas. For example, the government uses criminal punishment to promote preferences for respecting our common interest in respect for bodily and property integrity over individual interests in assault and theft. See DENNIS C. MUELLER, PUBLIC CHOICE II 9-15 (1989) (positing a model of crime as a dilemma game); Kenneth G. Dauschmidt, An Economic Analysis of the Criminal Law as a Preference-Shaping Policy, 90 DUKE L.J. 1. To date, however, preference shaping has not been used as an important solution to dilemmas in labor relations.


267. The expected employer payoffs for cells 1 through 4 would then be, respectively, 4.75, 4, 1 and -1.5, with the cooperative strategy dominating. Similarly, the expected union payoffs for
enact measures that promote the parties’ ability to recognize and follow their collective interest in not escalating the conflict and to observe an explicit or implicit private armistice that confines the resolution of their conflicts to the efficient low-cost strategies. Through logical arguments and empirical studies, social scientists have identified the following measures as promoting cooperative or low-cost solutions to dilemma games like those found in industrial relations: promoting homogeneity among the constituencies of the players of the game; limiting the number of players; requiring exchanges of information among the players; prohibiting certain bargaining strategies, including lying, committing to third parties, or cutting off negotiations; promoting repeated play of the dilemma game; and enforcing explicit private agreements to refrain from undertaking the high-cost strategies.\footnote{268} Promoting homogeneity and reducing the number of players simplifies the game so that the players are more likely to see their collective interest in cooperation.\footnote{269} Reducing the number of players also prevents a few uncooperative players from free riding on the cooperative efforts of the rest.\footnote{270} Requiring exchanges of information on the game allows the parties to see their collective interest in avoiding escalation and promotes trust.\footnote{271} Bargaining strategies such as promoting homogeneity and reducing the number of players would, respectively, 3.08, 0.5, 1.17 and -3.17, with the cooperative strategy dominating. This example assumes that the recalcitrant party pays the entire penalty. Under different bargaining models, the incidence of a penalty for strategic behavior may not be so straightforward. For example, a penalty for employer recalcitrance in organizing will reduce the cooperative surplus and perhaps the union’s share of that surplus. Although this subject deserves serious scholarly attention in the future, for the purposes of this article I will assume that penalties on either party do not affect the other’s ability to gain a share of the cooperative surplus and that the incidence of a penalty therefore falls entirely on the offending party.


\footnote{269} Hamburger, supra note 18, at 242-43; see Mancur Olson, The Logic of Collective Action 9-15 (1971); Coleman et al., supra note 87, at 676; John Fox & Melvin Guyer, Group Size and Others’ Strategy in an N-Person Game, 21 J. Conflict Resol. 323 (1977); Henry Hamburger, Dynamics of Cooperation in Take-Some Games, in Mathematical Models for Social Psychology (Wilhelm F. Kempf & Bruno H. Repp eds., 1977). The Coase Theorem, which is dependent on cooperative bargaining, can break down with as few as three bargainers due to potential complexities in negotiations. Mueller, supra note 265, at 31.

\footnote{270} Hamburger, supra note 18, at 242-43; see Mancur Olson, The Logic of Collective Action 9-15 (1971); Coleman et al., supra note 87, at 676. For example, if an employer has to negotiate with three separate groups of employees of approximately equal size, all of which are necessary to production, and two groups are cooperative, the third may hold out, free riding on the cooperative surplus produced by the other employees. In such a case, the per capita benefits to the holdout group would be greater than if the employees all bargained in one group, and the chances of employer retaliation against one holdout would be smaller because the employer would not want to waste the cooperative surplus produced with the other employees. Hamburger provides a means to analyze such situations using relatively simple graphs. See Hamburger, supra note 18, at 161.

\footnote{271} See Hamburger, supra note 18, at 116, 126, 173, 241; Anatol Rapoport & Albert
as lying, committing to third parties, and cutting off negotiations are themselves strategic acts that can jeopardize the larger game.\textsuperscript{272} Repeated play increases the costs of strategic behavior by making such behavior a threat not only to current negotiations but also to future negotiations.\textsuperscript{273} Finally, making explicit private armistices enforceable encourages the parties to negotiate such armistices and changes the payoffs of the game to make cooperation individually rational.\textsuperscript{274}

Which of the two solutions the government should employ in a particular situation depends on their relative costs and benefits in that situation. For example, in conflicts over employee organization, the high-cost strategies of discriminatory discharges and strikes are relatively easy to identify and monitor, and the chance of a voluntary armistice between the two unfamiliar, hostile parties seems remote. In

\begin{itemize}
\item \textsuperscript{272} Although a party might capture a larger share of the cooperative surplus by misrepresenting the value or cost of a contract term, if both parties successfully undertake this strategy they may miss opportunities for efficient exchange. See supra text accompanying note 86. Similarly, although one party might gain a larger share of the cooperative surplus by committing to a third party for a favorable division of the surplus, both parties following this strategy can prevent efficient contracts. For example, if during collective negotiations an employer commits to a creditor that he will obtain 80\% of the cooperative surplus, the employer gains a great bargaining advantage. However, if the union follows a similar strategy by committing to the membership or public, in language too strong to retract, that it will obtain 80\% of the cooperative surplus, clearly no contract can be reached that meets both of these commitments. In like fashion, each party might individually gain a strategic advantage by giving a final take-it-or-leave-it offer and cutting off negotiations, but if both parties follow this strategy negotiations break down.
\item \textsuperscript{273} Actually, by the logic of backward induction, if each party acts only according to its individual rationality, finite repeat play should not help solve dilemma games because it pays to be uncooperative in the last play of the game when there are no future games for revenge, and accordingly it pays to be uncooperative in the next-to-last game, and so forth; any incentives to be cooperative based on future plays of the game "unravel." See Shubik, supra note 81, at 259-60; Michael Taylor, Anarchy and Cooperation 29 (1976); Alexander J. Field, Microeconomics, Norms, and Rationality, 32 Econ. Rev. & Cultural Change 684, 698 (1984). This argument breaks down, however, if the end of the relationship is uncertain or if the parties are willing to settle for a strategy that is only slightly short of the self-interested maximum. Drew Fudenburg & Eric Maskin, The Folk Theorem in Repeated Games With Discounting or With Incomplete Information, 54 Econometrica 533 (1986); Roy Radner, Monitoring Cooperative Agreements in a Repeated Principal-Agent Relationship, 49 Econometrica 1127-28 (1981). Moreover, empirical studies of dilemma games show higher levels of cooperation in finite repeated games than nonrepeated games, although cooperation rates are lower in the beginning of play while people are learning to cooperate and also lower toward the end of play when they begin to act opportunistically. See Lave, supra note 93.
\item \textsuperscript{274} Axelrod, supra note 18, at 11; Cooter, supra note 273, at 14-16.
\end{itemize}
such a situation, the efficient government policy to promote cooperative or low-cost solutions in industrial relations would be to rely primarily on penalties and prohibitions to regulate organizing conflicts. As a counterexample, in conflicts over collective negotiations, the high-cost strategy of intransigence may be harder to identify and monitor, while the probability of a voluntary armistice between two parties with an established relationship is significant. In this circumstance, the efficient government policy to regulate labor relations would be to rely more heavily on measures that promote voluntary armistices in regulating collective negotiations. Finally, in conflicts over enforcement of the collective agreement, the parties have a working relationship, having successfully negotiated a contract, and they have had the opportunity to agree explicitly to a voluntary armistice. Because so many employers and unions seem willing to include the armistice of final binding arbitration in their collective agreements voluntarily, it seems adequate to confine government efforts in regulating enforcement conflicts to the strategy of promoting such agreements and making them enforceable, even though the high-cost strategies of strikes and litigation are easy to identify and monitor.

The optimal labor policy that seems to emerge from the bargaining analysis is one that makes unions lawful and regulates labor relations to promote low-cost resolution of conflicts in collective bargaining. Such a solution affords society the benefits of unions in redistributing and perhaps maximizing wealth while avoiding needless waste in industrial relations disputes. However, based on the analysis to this point, one could advocate some alternative policies as optimal. First, if employer strategic behavior is merely wasteful rent seeking, why allow it at all? The government could heavily fine employers for any resistance to employees in organizing or negotiations, and the employees could run the firm as a cooperative, taking all available rents. This proposal would seem to have the benefits of saving the strategic costs of even the low-cost strategies of resolving industrial conflicts and would redistribute even more wealth from employers to employees. Second, even if we are going to allow some employer resistance to unions, why limit union strategic behavior? Although employer strategic behavior is a waste, union strategic behavior serves the beneficial purpose of redistributing wealth from the employer to the employees. One could argue that if a little redistribution is good, the larger

275. See supra text accompanying note 94.

276. Within the context of the negotiating game presented in Matrix 1, this position amounts to promoting cell 1 as the optimal solution the government should encourage in its labor relations policy.
amounts that would occur if unions had the upper hand in industrial conflicts would be even better.\textsuperscript{277} Finally, assuming that the primary benefit of unions is their redistribution of rents from employers to employees, why undertake such a complex labor policy as outlined above? It would seem preferable simply to enact a stricter antitrust policy or a tax on employer rents that would redistribute this wealth more broadly among the population. By examining the limitations of these alternate proposals, one can see additional arguments and assumptions that are necessary to support the adoption of a policy encouraging unions and limiting both sides to balanced, low-cost strategies for the resolution of labor relations conflicts.

Each of the first two proposals entails significant costs. Prohibiting all employer resistance to unions would undermine the efficient operation of organized businesses. Independent management must offer some efficiency in the operation of a business, most probably in the monitoring of work effort, or else they would have been displaced by cooperatives in our economy a long time ago.\textsuperscript{278} Some minimum amount of employer resistance is part of the cost of maintaining independent employers. Besides, despite their obviously self-interested motive, employer communications regarding the desirability of employee organization or union demands undoubtedly carry some information of value to the employees in deciding whether to organize and what negotiating demands to make.\textsuperscript{279} Similarly, allowing unlimited union strategic behavior would entail an expenditure of resources. Even in a one-sided contest, recognitional strikes, union recalcitrance in bargaining, and strikes to interpret the contract would waste a portion of the cooperative surplus.\textsuperscript{280} Thus, it seems unlikely that either

\textsuperscript{277} Within the context of the negotiating game presented in Matrix 1, this position would amount to advocating cell 3 as the solution the government should promote rather than cell 1.

\textsuperscript{278} Indeed, to date worker cooperatives have had little success in American economy. It seems that whatever savings they realize in avoiding fights between the employer and the employees over shares of the cooperative surplus are more than made up for by problems of shirking and inability to make decisions. \textit{But see} \textit{When Workers Decide: Workplace Democracy Takes Over North America} (Len Krimerman \& Frank Lindenfelf eds., 1992); C. George Benello, \textit{The Challenge of Mondragon}, \textit{in From the Ground Up: Essays on Grassroots and Workplace Democracy} 89 (1992) (discussing the success of the Mondragon cooperative).

\textsuperscript{279} The elimination of all employer resistance would also impinge on other concerns. Employers have a limited First Amendment right to speak out against employee organization and union demands. \textit{See NLRB v. Virginia Elec. \& Power Co.}, 314 U.S. 469, 477 (1941) (suggesting that First Amendment concerns would be implicated if an employer were prevented from "expressing its views on labor policies or problems"); \textit{NLRB v. Golub Corp.}, 388 F.2d 921, 928-29 (2d Cir. 1967) (finding that the First Amendment protects an employer's prediction that unionization would harm the company and its workers).

\textsuperscript{280} This waste can be seen by comparing the total wealth of cell 3, which represents a one-sided contest in favor of the union, and cell 1, which represents the low-cost balanced solution, in the negotiating game represented in Matrix 1.
of the first two proposals would be wealth maximizing. 281

Moreover, although some might favor the additional redistribution of wealth these policies would entail, society as a whole may not share this view. A policy that involved only a limited redistribution of wealth could be supported by a widespread subjective belief that the additional benefits of redistribution to be gained by prohibiting employer resistance or allowing unlimited union strategic behavior are not worth the losses in efficiency those policies entail. Alternatively, a widespread belief may exist among the members of society that there should be some "equity" or balance in the contest between labor and management to divide the fruits of their joint efforts. Thus, in weighing the tradeoff between efficiency and redistribution inherent in the selection among alternate possible labor policies, or in determining what rules lead to a fair and equitable distribution of the cooperative surplus, society might decide to restrict both sides in labor relations conflicts to the cooperative or low-cost solutions for normative reasons, believing that this leads to the optimal distribution of the cooperative surplus. Such a normative decision on a distributional matter is, of course, largely a matter of taste on which reasonable minds can differ. 282

On the possibility of preventing or taxing employer rents through our antitrust and tax policies, although some adjustment of these policies might be desirable, it would be very costly and probably impossible to eliminate all employer rents through such measures. The government is at a substantial disadvantage, relative to the employer and the union, in identifying and pursuing employer rents. Information on market demand, competitiveness, barriers to entry, and methods of production that is necessary to estimate employer rents is available to the parties as part of their production process but would be very costly for the government to obtain. Moreover, economies of scale ensure that, under an efficient antitrust policy, some markets will inevitably become concentrated enough for firms to earn market power rents. Such rents could be eliminated only by pursuing divestitures that would result in inefficient production and raise prices to

281. However, a proposal to encourage employee stock ownership as a means of reducing incentives to strike would work along these same lines and may have some merit. If employees owned a significant share of the company, their interests in dividing the cooperative surplus would more closely coincide with those of the employer, decreasing the incentive for either side to act strategically. Under such an arrangement, effective monitoring by management and the employees would probably still be possible.

282. Indeed, on a normative basis, one could even argue for the complete prohibition of unions if one believed employers should receive all of the cooperative surplus and that the social benefits of such an antiredistribution answer to the distributional question outweighed any possible wealth-increasing effects of unions.
consumers. There may also be normative objections to taxing away all Ricardian rents from those who jointly produce them. Thus, it seems that under any antitrust or tax policy that could be pursued at reasonable cost, employer market power and Ricardian rents would exist that would be available for redistribution through employee organization.

In summary, the bargaining analysis concludes that unions and collective bargaining are equitable and perhaps even efficient. Unions increase employees' wages by gaining for employees a share of employer rents and by increasing productivity. Unions and employers have incentives to lessen the impact of the union wage increase on the level of employment and product price in order to maximize the value of the rents and productivity increases they divide. Employers are further limited in their ability to pass on union wage increases to consumers in the form of price increases to the extent of the product market barriers to entry they enjoy but have not yet exploited. Thus, union wage increases come largely at the expense of employers and not other workers or consumers. If the productivity increases associated with employee organization exceed any inefficiencies unions cause and any increase in bargaining costs associated with collective bargaining, unions and collective bargaining will also be efficient. Therefore, it makes sense for the government to permit and encourage employee organization.

Moreover, under the bargaining analysis, conflicts in collective bargaining are strategic endeavors, the costs of which tend to escalate in the absence of government regulation. In conflicts concerning organizing, negotiations, or enforcement of the collective agreement, the parties are commonly rewarded based on their relative performance with respect to various costly strategic behaviors. As a result, the costs of such conflicts are positional externalities that tend to escalate even though such escalation serves only to waste the joint benefits of production. Such waste is socially undesirable because it is inefficient. Thus, it makes sense for the government to regulate the conduct of labor relations to prohibit or discourage such waste. The government can accomplish this either by prohibiting costly strategic behaviors or by enacting measures to promote the parties' ability to perceive and act in their collective interest to avoid escalation. Which of these two strategies the government should adopt to govern a particular conflict will depend on the relative costs and benefits of each strategy as applied to the conflict. Finally, there are efficiency losses associated with

either prohibiting all employer resistance to unions or in allowing unions to undertake unlimited strategic behavior. Assuming that society values these losses in efficiency more than the additional redistribution of wealth that would accompany such policies, or assuming society desires some balance or "equity" between unions and employers in industrial relations conflicts, society should attempt to limit both unions and employers to cooperative or low-cost strategies in the resolution of industrial relations conflicts.

B. Application of the Model to American Labor Law

1. The Public Policy of Fostering Unions and Collective Bargaining

The pervasive policy in American labor law of fostering unions and collective bargaining\(^{284}\) makes sense under the bargaining model of unions. The bargaining model holds that unions redistribute employer product market and Ricardian rents from employers to employees.\(^{285}\) Thus, unions serve societal goals by redistributing wealth progressively and allowing workers to gain a more equitable share of the proceeds from their labor. There is no productive reason why employers should not share these rents, which are payments in excess of what is necessary to call forth the employer's resources into employment. In addition, fostering unions may maximize wealth. Under the bargaining solution, employers and unions who seek to maximize the monetary value of the employer rents they divide will employ the same amount of labor and set the same product price as they would in the absence of a union. Inefficiency in production and consumption will occur only to the extent that the union is willing to trade employment for wages at the expense of maximizing the monetary value of the cooperative surplus and to the extent that the union derives its wage increases from an effective labor cartel. Assuming that the union values the employment of its members, such inefficiency will be less than that predicted by the monopoly model of unions. Furthermore, unions promote efficiency by spurring management to undertake greater efforts, enforcing long-term implicit contracts, negotiating efficient levels of public goods, and decreasing turnover costs as workers exercise their collective voice to address dissatisfaction with working conditions. In many cases, the increases in efficiency associated with employee organization will outweigh the decreases in efficiency associated with such organization.

\(^{284}\) See supra note 2 and accompanying text.

\(^{285}\) See supra notes 253-63 and accompanying text.
2. The Purposes of Promoting Bargaining Equity and Industrial Peace

American labor law's twin purposes of promoting greater equity in bargaining power between employers and employees\(^{286}\) and promoting industrial peace find ready recognition within the context of the bargaining model.\(^{287}\) Employees can gain a share of the cooperative surplus only by binding together to negotiate. Each individually will receive at most only the competitive wage for his services.\(^{288}\) In addition, only by binding together can the workers achieve all of the productivity increases associated with employee organization, such as the monitoring of management efforts, the enforcement of long-term implicit contracts, and the efficient negotiation of public goods.\(^{289}\) Thus, by fostering unions and collective bargaining, the law allows workers to elevate their bargaining power to a position of rough parity with their employer's and affords them the opportunity to make a productive contribution to the governance of the workplace. Similarly, the bargaining model suggests that the government should attempt to minimize the extent to which the parties engage in strategic behavior. Such behavior is costly and, although it may be individually rational, from a larger societal perspective it serves only to waste the cooperative surplus. Thus, the purpose of promoting industrial peace finds direct translation into the bargaining model as society's desire to minimize wasteful strategic behavior on the part of unions and employers.

This interpretation of the purpose of promoting equity in bargaining power also provides a rationale for several of the provisions of

\(^{286}\) See supra note 1 and accompanying text.

\(^{287}\) See supra notes 1, 6 and accompanying text.

\(^{288}\) Various Board and court decisions discussing the Act's purpose of promoting equality in bargaining power seem consistent with this view. See, e.g., NLRB v. E.C. Atkins & Co., 331 U.S. 398, 404 (1947); NLRB v. Jones & Laughlin Steel Corp., 301 U.S. 1, 23 n.2, 33-34 (1937); Lewis v. Quality Coal Corp., 270 F.2d 140, 143 (7th Cir. 1959), cert. denied, 361 U.S. 929 (1960) (holding that union's threat to strike does not create unfair bargaining power in favor of employees sufficient to render employment contract illegal); Beckwith v. United Parcel Serv., 703 F. Supp. 138, 141 (D. Me. 1988) (noting that the NLRA is concerned with equating bargaining power between employer and employees), \textit{aff'd.}, 889 F.2d 344 (1st Cir. 1989); United States v. International Union, United Mine Workers, 77 F. Supp. 563, 567 (D.D.C. 1948) (stating that organization is the only means by which employees can achieve a measure of equality of bargaining power with employers); National Maritime Union v. Herzog, 78 F. Supp. 146, 155-56 (D.D.C.) (holding that Congress sought to promote equality of bargaining power not only by guaranteeing employees the right to act collectively but also by protecting an elected union's exclusivity as a bargaining agent and imposing on employers the duty to bargain in good faith), \textit{aff'd.}, 334 U.S. 854 (1948); Kinder-Care Learning Centers, Inc., 299 N.L.R.B. 1171, 1172 (1990) (finding that employees are at a disadvantage in bargaining with their employer unless they are able to organize and bargain collectively); Meyers Indus., 281 N.L.R.B. 882 (1986) (holding that NLRA contemplates collective action as a means of achieving equality of bargaining power), \textit{aff'd. sub nom.} Prill v. NLRB, 835 F.2d 1481, 1484 (D.C. Cir. 1987).

\(^{289}\) See supra notes 40-53 and accompanying text.
American labor law previously discussed in relation to the monopoly model of unions. The bilateral relationship between the employer and the union created by the grant of authority of exclusive representation and the employer's obligation to bargain in good faith is no longer the prelude to labor cartel exploitation envisioned by Epstein. Instead, this bilateral relationship and the employees' right to strike are the necessary prerequisites to the employees' fully sharing in the proceeds of the enterprise and fully contributing to its total product. Similarly, the prohibition of yellow-dog contracts and the allowance of union security agreements do not needlessly interfere with the individual's right to contract, as maintained by Epstein, but instead rightly permit the employees to solve the free-rider problem that otherwise might undermine their ability to secure collectively a share of the cooperative surplus and to express their views on consumption and production. Because the benefits of collective bargaining constitute a public good, individual bargaining will not adequately protect the employees' interest in collective bargaining, and the employees will individually bargain away their right to the benefits of collective bargaining by signing yellow-dog contracts for much less than those benefits are collectively worth. In the same fashion, without union security agreements, it is individually rational for the employees to free ride on the efforts of the union, thereby undermining the chance that the union will actually succeed in gaining a share of the cooperative surplus and a voice in the running of the business. The allowance of state right-to-work laws under section 14(b) of the National Labor Relations Act undermines the employees' ability to solve the free-rider problem and thus seems contrary to the fundamental purposes of the Act.

Similarly, the bargaining model's interpretation of the purpose of promoting industrial peace as an effort to discourage wasteful strategic behavior provides a rationale for the general strategy for regulating industrial relations found in American labor law. As discussed earlier, the government can seek to promote cooperative solutions to the dilemma games that arise in collective bargaining in two basic ways:

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290. See supra notes 126-201 and accompanying text.
291. See supra note 182 and accompanying text.
292. See supra note 145 and accompanying text.
293. This analysis is consistent with the historical view, denigrated by Epstein, that employees would too easily surrender their right to organize to employers. See Epstein, supra note 8, at 1371-72. A similar argument can be made within the context of the monopoly model, but there we do not want employees to solve the free-rider problem because doing so results in a labor cartel.
prohibit or fine costly strategic behavior, and enact measures that pro-
mote the parties' ability to recognize and follow their collective inter-
est in avoiding strategic behavior. 295 American labor law contains
both types of provisions. Moreover, the relative reliance on each of
these methods to discourage strategic behavior and promote coopera-
tive solutions varies under the law in a way that seems efficient under
the bargaining model. In regulating organizing, where the lack of an
established relationship, beyond antagonism, between the parties dims
the prospect that the parties will realize and follow their collective
interest in avoiding strategic behavior, the law relies almost exclu-
sively on prohibiting strategic behavior to promote cooperative solu-
tions. In regulating collective negotiations, where the established
relationship between the parties improves the prospect that they will
realize and follow a cooperative solution, the law relies both on
prohibitions of strategic behavior and on measures designed to en-
courage the parties to achieve the cooperative solution themselves. 296
In the area of enforcing collective agreements, where the parties have
an established relationship and where the vast majority of parties
achieve agreement on the cooperative method of resolving disputes
through arbitration, the law merely endeavors to make such agree-
ments enforceable.

3. The Law on Organizing

American labor law's basic approach to organizing makes sense
under the bargaining theory of unions and collective bargaining. The
law severely restricts or prohibits the most costly strategic behaviors
on both sides in favor of the cheaper method of determining represen-
tation questions through a Board-supervised election. The National
Labor Relations Act severely limits both the circumstances under
which unions may lawfully engage in recognitional picketing and
strikes and the length of time that such activities may persist. 297 These

295. See supra notes 93-94 and accompanying text.

296. As a remedy to the problem that many a union never achieves a contract after being
elected as the bargaining representative, Weiler has proposed that unions and employers have
recourse to interest arbitration for impasses in the negotiation of first contracts. See WEILER,
supra note 22, at 249-51. This proposal seems consistent with the bargaining model of unions
and collective bargaining because in such cases, even though the parties are through the organiz-
ing stage, they still have no established relationship and thus would seem relatively unlikely to
realize the cooperative solution on their own. See supra notes 93, 275 and accompanying text.

297. The Act prohibits employees from engaging in recognitional picketing for more than a
"reasonable" period, not to exceed 30 days, without seeking an election and entirely prohibits
them from engaging in recognitional picketing if the employer has lawfully recognized another
union or a valid election has occurred within the past 12 months. 29 U.S.C. § 158(b)(7) (1988).
The employer may cut short even this limited period of lawful recognitional picketing by peti-
limitations, combined with the availability of the relatively inexpensive alternative of conducting an election campaign, have led unions to rely on the election procedure as the primary method of resolving representation disputes. Similarly, the Act prohibits employers from undertaking discriminatory discharges, blacklisting employees, locking out employees, or relocating the plant in order to avoid union organization. In contrast to the monopoly model, where such activities are useful because they undermine labor cartel power, these activities are merely wasteful rent-seeking on the part of the employer that should be prevented in the context of the bargaining model. One may wonder how effective these prohibitions are, because the remedies under the Act are merely reparative, and employer incentives to commit the offenses may greatly exceed the expected costs of the remedies. However, the effort to discourage costly strategic behavior in favor of the less expensive resolution of organizing disputes through elections seems well founded under the bargaining theory of unions.

Even the Darlington doctrine, which states that the employer is allowed to close his plant completely to avoid unionism as long as this act is not intended to intimidate employees in other plants operated by the employer, finds support within the context of the bargaining model. Under the model, a complete closure without intimidating intent is distinguishable from a case in which the employer moves his plant to avoid unionism or locks out his employees to discourage unionism. When the employer closes his plant, the employer cannot hope to recoup any of the costs of this behavior from future rents that the firm might earn. Because there is no hope of recouping the costs of closing from the future rents of the firm, the complete closing of a plant without intimidating intent cannot be a strategic activity. Instead, the decision to close must be based on either the employer's conclusion that the employees have miscalculated in selecting a union and that insufficient rents or productivity increases exist to support

298. See supra note 5 and accompanying text.
301. See supra notes 165-79 and accompanying text.
302. See infra notes 370-76 and accompanying text.
304. The absence of future benefits is precisely the basis on which the Court in Darlington distinguished these cases. See 380 U.S. at 272-73.
employee organization, or on the employer's strong personal distaste for dealing with organized employees. Thus, complete closure without intent to intimidate other employees is not a strategic behavior that the law should attempt to minimize under the bargaining theory of unions.

Contrary to Epstein's analysis, the redistributive and wealth-maximization arguments of the bargaining model support the complete prohibition of company unions. Although company-sponsored employee organizations may be able to achieve some of the productivity-enhancing effects associated with employee organization, they probably never could achieve all of the productivity increases associated with independent unionism. Moreover, even if employer organizations are wealth maximizing, the employer has incentive to structure such organizations so that they never constitute an independent bargaining power that would vie for a share of the cooperative surplus. To the extent that such organizations act as a bulwark against independent organization, either by mitigating some employee concerns or by giving some employees a personal investment in the company employee organization, employers may promote them even in the absence of productivity increases to avoid sharing the cooperative surplus with the employees. By totally prohibiting company unions, the National Labor Relations Act encourages independent employee organization, the productivity increases such organization entails, and the sharing of the cooperative surplus between employers and employees.

The bargaining model's analysis also supports the provisions that govern the conduct of representation elections. In contrast to the monopoly model, the bargaining model affirms the proposition that the government should facilitate means by which the employees can make

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306. See supra note 175 and accompanying text.
307. See supra notes 210-12 and accompanying text.
308. This would be the case if inefficiencies associated with independent unionism outweighed any increases in productivity that could be achieved only through independent unionism.
309. Thus, such organizations historically did not allow for employee meetings outside of the employer's supervision, procedures for voting to strike, or the accumulation of a strike fund. S. REP. NO. 573, 74th Cong., 1st Sess. 9-11 (1935), reprinted in 2 NLRB, LEGISLATIVE HISTORY, supra note 2, at 2309-11.
310. Under this analysis, recent cases allowing employer-sponsored employee organizations based on the "newfound" benefits of employer-employee "cooperation" are misguided in that they ignore the purpose of the NLRA of promoting independent unions that can achieve not only the benefits of cooperation but also a share of the cooperative surplus. See, e.g., NLRB v. Streamway Div. of Scott & Fetzer Co., 691 F.2d 288 (6th Cir. 1982); Hertzka & Knowles v. NLRB, 503 F.2d 625 (9th Cir. 1974).
311. See supra notes 162-69 and accompanying text.
a reasoned decision about whether organizing is in their economic interest.\textsuperscript{312} A Board-supervised election is an inexpensive procedure by which just such a decision can be made. The only legitimate role for the employer in such a procedure is to provide accurate information on the relative costs and benefits of organization to the employees. Because of the employer's strong incentives to do much more and to act strategically in coercing the employees not to organize, the government must carefully regulate the employer's conduct in representation elections.

Several provisions of American labor law seem aimed at minimizing the costs of elections. Allowing unions access to the names and addresses of all eligible employees and allowing employees access to the employer's property for purposes of union solicitation on nonwork time\textsuperscript{313} seems consistent with the objective of lowering election costs. However, the doctrine of allowing employers to exclude nonemployees from making union solicitations even in nonwork areas on nonwork time\textsuperscript{314} seems to raise the costs of elections, with the principal effect of merely indulging employers' strategic interest in resisting employee organization. The legitimate employer interest that this rule ostensibly preserves is the integrity of the employer's private property interest in the plant.\textsuperscript{315} However, the benefits of preserving such an interest in a public area such as a parking lot seem small compared with the costs the rule places on the process of organization.

Similarly, many of the decisions governing the conduct of elections seem designed to limit the employer's role to providing useful information and to prohibit employer strategic behavior or efforts to encourage the employees to free ride on others' collective efforts. For example, the doctrine that employer predictions about the consequences of unionization must be based on objective facts and convey the employer's genuine belief as to demonstrable consequences beyond his control further these purposes.\textsuperscript{316} This doctrine limits the employer to conveying potentially useful information as to whether the rents earned by the firm merit employee organization. The doctrine

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\textsuperscript{312} This conclusion seems consistent with the Board's description of its objective to provide "laboratory conditions" in representation elections. See Peerless Plywood Co., 107 N.L.R.B. 427, 429-30 (1953); General Shoe Corp., 77 N.L.R.B. 124, 126-27 (1948); Getman & Pogrebin, \textit{supra} note 2, at 37.

\textsuperscript{313} Republic Aviation Corp. v. NLRB, 324 U.S. 793 (1945).


\textsuperscript{315} 351 U.S. at 112; Getman & Pogrebin, \textit{supra} note 2, at 41.

\textsuperscript{316} NLRB v. Gissel Packing Co., 395 U.S. 575, 618-19 (1969); Getman & Pogrebin, \textit{supra} note 2, at 47.
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appropriately prohibits employer threats or promises of benefits\textsuperscript{317} because these are merely efforts to coerce or bribe the employees into sacrificing their collective interest in organization. Such activities undermine collective bargaining by encouraging employees to act only on the basis of their individual interests and to free ride on others’ collective action. Even benefit increases that the employer offers to all employees and does not condition on the rejection of employee organization but grants in an effort to prevent employee organization should be prohibited under the bargaining theory, because they encourage the employees to free ride on the collective action of employees outside the bargaining unit and will result in a less than optimal amount of union organizing.\textsuperscript{318}

One possibly contrary doctrine currently in the law is that the Board will not review campaign statements by employers or unions as to their truth or falsity.\textsuperscript{319} Intentional falsehoods would seem to have no place in a system designed to allow employees, at minimum cost, to decide what is in their own collective interest with respect to organization. However, the Board may be correct that regulating campaign speech as to truth or falsity is just too costly and that such regulation impinges on First Amendment interests.\textsuperscript{320} Again, one should wonder whether the simple reparative remedies of the National Labor Relations Act offer sufficient incentive for the enforcement of the rules governing union organizing.\textsuperscript{321}

4. \textit{The Law on Collective Negotiations}

The law with respect to collective negotiations is designed to discourage strategic behavior and to promote industrial peace and thus is consistent with the arguments of the bargaining model. The law at-

\textsuperscript{317} 29 U.S.C. § 158(c) (1988).

\textsuperscript{318} Employers grant such benefits not out of the goodness of their hearts but because other employees have organized unions that pose a viable threat of organizing the employer’s shop. If the employer is allowed to frustrate organizing merely by offering the employees a wage increase equal or close to the union wage whenever organization threatens, the employees will be tempted to act in their individual interests and take the benefits of organizing without contributing to its costs; the result will be that too few employees will support collective activities and there will be too few unions. Fewer unions will provide less reason for employers to offer benefits to prevent employee organization and less realization of the redistributive and productivity benefits of employee organization.

\textsuperscript{319} Although the Board has oscillated in its view on the subject, see Getman & Pogrebiv, \textit{supra} note 2, at 59-61, the Board will not currently set aside an election based on misrepresentation in election solicitations. Midland Natl. Life Ins. Co., 263 N.L.R.B. 127 (1982). The only exceptions to this rule are cases when one party invokes the Board and its processes in its solicitation, 263 N.L.R.B. at 133 n.25, or uses forged documents in a solicitation. 263 N.L.R.B. at 133.

\textsuperscript{320} 263 N.L.R.B. at 131-32.

\textsuperscript{321} See \textit{infra} notes 370-76 and accompanying text.
tempts to prohibit intransigence in negotiations by requiring the parties to bargain "in good faith." As depicted in the simple negotiations game, "bad faith" or intransigence in bargaining is precisely what leads to strikes. Depending on one's model of bargaining, one could haggle over the best standard for good-faith bargaining; however, the existing standard of subjective intent to reach agreement seems aimed at precisely the problem of intransigence described in the game. One can raise legitimate questions about the Board's ability to determine intent and about the adequacy of existing remedies to discourage intransigence in bargaining, but the general concept of attempting to require cooperative bargaining in collective negotiations seems sound within the context of the bargaining model.

Moreover, unlike the monopoly model, the bargaining model provides a basis on which to evaluate strategies or conduct in collective negotiations that have been found to be in "bad faith." The prohibition against Boulwareism that exists under current law seems sound under the bargaining model because Boulwareism is basically a strategy under which the employer makes a strong commitment to the employees and the public not to change his bargaining position. If only one side commits to a given solution of the bargaining problem, it can help ensure a solution that favors that side, but if both sides make such commitments in their own favor, the result will be a deadlock that prevents a cooperative solution. Moreover, the unilateral method by which the employer arrives at her offer under Boulwareism bypasses potential productivity increases associated with employee organization. Even if the employer honestly tries to poll the employees as to their preferences and ideas, she cannot hope to do as well in assessing those preferences and ideas as an independent union, due to the employees' incentives to free ride and their fear of employer retaliation.

Similarly, the doctrine that employers are required to supply the

323. See supra notes 81-94 and accompanying text.
324. See LABOR STUDY GROUP, THE PUBLIC INTEREST IN NATIONAL LABOR POLICY 82 (1961); MERRIFIELD ET AL., supra note 2, at 505-06.
325. See infra notes 368-80 and accompanying text.
326. See supra notes 102-03 and accompanying text.
328. See supra notes 79-80 and accompanying text. By the same token, other methods of "painting oneself into a corner" should be discouraged in collective bargaining. However, the law should not discourage making "final offers" where the intent is not to act strategically but instead to communicate the extent of the cooperative surplus.
329. FREEMAN & MEDOFF, supra note 20, at 8-9.
employees with all relevant information for the purposes of collective bargaining\textsuperscript{330} finds support within the context of the bargaining model because such information allows the parties to see mutually beneficial cooperative solutions and engenders trust on both sides. However, the limitation on this doctrine that the employer is only required to give information on his ability to meet union demands when he claims inability to pay\textsuperscript{331} seems inconsistent with the Act’s purpose of limiting strategic behavior and promoting industrial peace. Although this rule requires the full sharing of information when the chances of resort to economic warfare are probably greatest, the law, by allowing the employer to keep such information to herself absent a plea of poverty, encourages strategic behavior on the part of the employer in representing her ability to pay and decreases the chances of a cooperative solution in negotiations. The only purpose served by allowing such strategic behavior is to allow the employer to trick the union into accepting a smaller share of the cooperative surplus. A rule on the sharing of information that sought to minimize the chances of strategic behavior and to maximize the parties’ ability to realize cooperative solutions would require the full sharing of all relevant information.\textsuperscript{332}

The distinction between mandatory and permissive subjects of bargaining is another doctrine that finds some support within the context of the bargaining model.\textsuperscript{333} Under current law, employers and unions are only required to bargain over “mandatory subjects” that fall within the broad meaning of the statutory phrase “wages, hours . . . , or other conditions of employment”\textsuperscript{334} and that “settle an aspect of the relationship between the employer and the employees.”\textsuperscript{335} Bar-

\textsuperscript{330} J.I. Case Co. v. NLRB, 253 F.2d 149 (7th Cir. 1958); see NLRB v. Truitt Mfg. Co., 351 U.S. 149 (1956).

\textsuperscript{331} MERRIFIELD ET AL., supra note 2, at 550.

\textsuperscript{332} See NEIL W. CHAMBERLAIN & JAMES W. KUHN, COLLECTIVE BARGAINING 78 (2d ed. 1965); ROGER FISHER & WILLIAM URY, GETTING TO YES: NEGOTIATING AGREEMENT WITHOUT GIVING IN (Bruce Patton ed., 1981); LAVANIA HALL, NEGOTIATION: STRATEGIES FOR MUTUAL GAIN (1993); see also Schwab, supra note 12, at 278-80. But see Wachter & Cohen, supra note 45, at 1373 (arguing that full disclosure of information is rarely efficient).

\textsuperscript{333} Contrast this with Epstein’s analysis of the obligation to bargain in good faith. See supra note 182 and accompanying text.


\textsuperscript{335} Allied Chem. & Alkali Workers v. Pittsburgh Plate Glass Co., 404 U.S. 157, 178 (1971); see also First Natl. Maintenance Corp. v. NLRB, 452 U.S. 666, 678 (1981); Fibreboard Paper Prods. Corp. v. NLRB, 379 U.S. 203, 211 (1964); NLRB v. Wooster Div. of Borg-Warner Corp., 356 U.S. 342, 350 (1958). Industry practice concerning the accepted subjects of collective bargaining is “highly relevant” in determining which subjects are mandatory. THE DEVELOPING LABOR LAW, supra note 2, at 761; see also GETMAN & POGREBIN, supra note 2, at 121-23. Examples of mandatory subjects include wages, hours, pensions, health benefits, safety precautions, shift differentials, and union security agreements where they are not prohibited by state law. THE DEVELOPING LABOR LAW, supra note 2, at 772-844.
gaining over other subjects concerning the employer's relationship with third parties or the union's relationship with the employees is "permitted," but not required, and neither side may resort to a work stoppage to enforce demands over such permissive subjects. By restricting the obligation to bargain to subjects that concern the employment relationship, the law simplifies the bargaining game. Negotiations over subjects that primarily concern the parties' relationship with other people would seem very likely to complicate the negotiations game in ways the parties cannot themselves resolve.

However, due to the benefits of collective bargaining under the bargaining model, the scope of mandatory subjects under the Act should be broadly construed. The Court's recent willingness to narrow the purview of mandatory bargaining and to find certain business decisions concerning the scope and direction of the enterprise to be peculiarly within the sole prerogative of management seems ill founded under the bargaining model. The Court's argument that the employer will voluntarily undertake bargaining with the employees on

336. Borg-Warner, 356 U.S. at 342. Permissive subjects are those the Board or courts consider too remote from the employment relationship or deem a peculiar prerogative of either the employer or the union. Merrifield et al., supra note 2, at 557. Examples of permissive subjects include benefits for nonemployees, provisions governing the internal operations of the union, and multiunit bargaining. Allied Chem. & Alkali Workers, 404 U.S. at 160 (discussing benefits for nonemployees); Borg-Warner, 356 U.S. at 350 (discussing internal operation of union); Oil, Chem. & Atomic Workers, Intl. Union v. NLRB, 486 F.2d 1266, 1268 (D.C. Cir. 1973) (discussing scope of the bargaining unit).

337. Moreover, the restriction of the obligation to bargain to subjects that concern the employment relationship helps ensure that collective bargaining and the possible resort to economic warfare are used only to further the purposes of employee organization of transferring wealth from employers to employees and achieving productivity increases in compensation and production. For example, negotiations of terms related to political objectives are not considered mandatory subjects of bargaining, and so strikes over such issues would not be protected activities under the National Labor Relations Act. However, the ban on injunctions of strikes contained in the Norris-LaGuardia Act has been interpreted to preclude injunction of such strikes. International Longshoremen's Assn. v. Allied Intl., 456 U.S. 212 (1982); Jacksonville Bulk Terminals, Inc. v. International Longshoremen's Assn., 457 U.S. 702 (1982).

338. In First National Maintenance, 452 U.S. at 666, the Court determined that the employer had no obligation to negotiate over a decision to close his business partially. Even though the subject was of paramount importance to the employees, the Court found other concerns of profitability and efficiency that justified a unilateral employer decision on the matter. 452 U.S. at 682-83, 686. According to the Court, "Congress had no expectation that the elected union representative would become an equal partner in the running of the business," 452 U.S. at 676, and "management must be free from the constraints of the bargaining process to the extent essential for the running of a profitable business." 452 U.S. at 678-79 (footnote omitted). Following the Court's lead, a plurality of the Board announced in Otis Elevator Co., 269 N.L.R.B. 891 (1984), that henceforth all decisions affecting the direction, scope, or nature of a business would be treated as nonmandatory topics unless they turned upon labor costs and that the employer would be free to make such decisions without bargaining with the union. 269 N.L.R.B. at 893. However, in Dubuque Packing Co., 303 N.L.R.B. No. 66 (1991), the Board retreated from this position and employed an analysis that was more sensitive to the problem of employer strategic behavior and the benefits of collective bargaining to devise a rule covering decisions to relocate the business. This analysis expressly examined whether the employer's decision would result in the replacement of the employees, whether its scope was akin to a decision not to be in business
such topics if bargaining will be profitable\textsuperscript{339} misses the point that, due to the divergence of individual and collective interests in dilemma games such as collective negotiations, employers may decide not to bargain in good faith based on individual incentives when in fact such bargaining would be wealth maximizing from a collective perspective.\textsuperscript{340} Moreover, within the context of the bargaining model, employees may have productivity-enhancing proposals to make through collective bargaining with regard to decisions concerning the scope and direction of the enterprise.

Other provisions of the law prevent strategic behavior and promote industrial peace by facilitating the parties' ability to realize their collective interest in reaching cooperative solutions in bargaining. The limitation that employees can organize only in "appropriate bargaining units"\textsuperscript{341} seems designed to promote homogeneity in bargaining interests among the employees represented by the union. Under current doctrine, the Board includes in a unit only those employees who share a sufficient "community of interest" with respect to their terms and conditions of employment.\textsuperscript{342} As previously discussed, such ho-

\begin{footnotesize}
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\item \textsuperscript{339} 452 U.S. at 682.
\item \textsuperscript{340} See supra notes 93-94 and accompanying text. This argument does not apply to management decisions that cannot result in a strategic behavior, for example the closing of a plant, because if there is no strategic gain for the employer in such decisions then there will be no divergence of his individual interests from the collective interests. Wachter and Cohen have made a convincing argument that, at least to date, the Court's determinations as to which decisions concerning the scope or direction of the enterprise are not mandatory subjects of bargaining correspond to those decisions that cannot result in strategic behavior. Wachter & Cohen, supra note 45, at 1386-95. If this trend continues, the Supreme Court's doctrine on this subject will not pose a serious problem under the bargaining model. However, the rhetoric of the Court's opinion in First National Maintenance is broader than a rule that simply allowed unilateral employer decisions where no strategic behavior was possible, see supra note 338, and I am not sanguine that the current trend will continue.
\item \textsuperscript{341} Before conducting an election, the Board will determine if the employees the union has petitioned to represent constitute an appropriate unit for the purposes of collective bargaining. See 29 U.S.C. § 159(b) (1988). In the absence of agreement between the union and the employer on an appropriate unit, the Board will conduct a hearing to determine whether the unit proposed by the union is appropriate. To be approved, the unit sought by the union need not be the "only" or "most" appropriate unit, but instead merely "an" appropriate unit, possibly among several acceptable formulations. Continental Banking Co., 99 N.L.R.B. 777, 782-83 (1952).
\item \textsuperscript{342} Kalamazoo Paper Box Corp., 136 N.L.R.B. 134 (1962); John E. Abodeely, The NLRB and the Appropriate Bargaining Unit 7-14 (1971); Getman & Pogrebins, supra note 2, at 24-25. In deciding whether employees share the requisite community of interest, the Board will consider a wide variety of factors, including methods of compensation, hours of work, employment benefits, supervision, training and skills, job functions and situs, contact with other employees, integration of work, and bargaining history. John D. Feerick et al., NLRA Representation Elections § 8.2, at 290-96 (2d ed. 1985); Getman & Pogrebins, supra note 2, at 25. With respect to situs, in most industries a single geographically distinct facility is presumptively appropriate. See A. Harris & Co., 116 N.L.R.B. 1628 (1956). Bargaining history is given weight largely because continuing an established unit is viewed as promoting stability in labor.
\end{enumerate}
\end{footnotesize}
mogeneity on the part of the employees simplifies the bargaining game and increases the likelihood that the parties will realize the cooperative solution.\textsuperscript{343} Board and court precedent confirms that the driving purpose behind the doctrine of appropriate bargaining units is to minimize strategic behavior or "promote industrial peace."\textsuperscript{344} The current doctrine that allows the parties mutually to agree to bargain on a multiunit basis\textsuperscript{345} probably does not undermine this purpose and may promote it, because parties would probably not agree to such an arrangement if it afforded one side a strategic advantage or if it decreased the total expected outcome from bargaining by increasing the chances of strategic behavior.\textsuperscript{346} The prohibition of unilaterally withdrawing from such multiunit bargaining once negotiations have begun\textsuperscript{347} was designed to prevent one side from strategically withdrawing from negotiations that it perceives as going badly, thereby increasing negotiating costs and decreasing the chances of a cooperative solution.\textsuperscript{348}

The doctrine of exclusive representation also facilitates cooperative solutions in bargaining. By prohibiting individual and subgroup bargaining, the National Labor Relations Act limits the number of parties to the negotiations game, thus simplifying it and increasing the chances of a cooperative solution.\textsuperscript{349} The success of this strategy in relations and thus industrial peace, one of the purposes of the NLRA. Buffalo Broadcasting Co., 242 N.L.R.B. 1105 (1979); Marion Power Shovel Co., 230 N.L.R.B. 576 (1977).

\textsuperscript{343} See supra notes 268-71 and accompanying text. Professor Leslie has previously argued that the legal doctrine on appropriate bargaining units is designed to group employees according to their preference with respect to public goods in order to facilitate the optimal provision of those goods in the workplace. Leslie, supra note 45, at 407-08. Although it may be true that the current rules fulfill this function, I would argue that the purpose of the rules goes beyond promoting the optimal consumption of public goods to simplifying the negotiations game and promoting cooperative solutions without economic warfare.

\textsuperscript{344} Mallinckrodt Chem. Works, 162 N.L.R.B. 387, 392 (1966) (holding that, in defining an appropriate unit, the Board will take into account the interest of employees and the public in stability of labor relations and accordingly uninterrupted operation of facilities); Cox et al., supra note 2, at 286 (demonstrating that Board's rule on hospital units was drafted with intent of minimizing work stoppages); see also Charles D. Bonanno Linen Serv. v. NLRB, 454 U.S. 404, 412 (1982) (stating that rules on multiemployer bargaining were designed to promote industrial peace).

\textsuperscript{345} See Retail Assoc., 120 N.L.R.B. 388, 395 (1958).

\textsuperscript{346} However, society may want to prohibit such multiunit bargaining because it facilitates labor cartelization and horizontal price-fixing among employers. Epstein, supra note 8, at 1382; Leslie, supra note 45, at 418.

\textsuperscript{347} Western Pac. Roofing Corp., 244 N.L.R.B. 501 (1979), aff'd., 669 F.2d 1332 (9th Cir. 1982). This prohibition allows unilateral withdrawal after negotiations have begun only under "unusual circumstances." 244 N.L.R.B. at 507.


\textsuperscript{349} See supra notes 267-70 and accompanying text.
simplifying the bargaining problem is limited by the fact that there may be more than one appropriate unit among an employer's employees. Thus, in facilitating cooperative solutions, there is a tradeoff between organizing the employees according to homogeneity of bargaining interests and minimizing the number players to the bargaining game. Case law recognizes this tradeoff.350

Finally, the presumption of the union's continuing majority facilitates cooperative solutions in bargaining by increasing the expectations of repeated play of the bargaining game. Under current legal doctrine, once a union has been recognized as the representative of the employees, it enjoys a strong presumption of continuing majority status.351 This presumption is sometimes irrebuttable. For example, the Board will not entertain evidence of loss of majority status, or even petitions for an election on that status, within a "reasonable time" after voluntary recognition,352 within one year after certifying the union pursuant to a valid election,353 or within the first three years of the life of a collective bargaining agreement.354 However, even outside these instances, the presumption remains strong. The Board has been very hesitant to accept employer evidence that a recognized union lacks majority status, preferring instead to see such issues resolved through decertification elections.355 The presumption of continuing majority even extends to cases involving successor employers who purchase the assets of a business and hire a majority of employees from the old unit.356 By increasing the expectations that the union will be around for a while and that the bargaining game will be repeated, the doctrine raises the expected costs of strategic behavior, because such behavior threatens the success not only of current negotiations but also of future negotiations in which the other side might seek revenge.357 The

351. GETMAN & POGREBIN, supra note 2, at 29-34. This presumption exists whether the union was voluntarily recognized by the employer or certified by the Board pursuant to an election. Id.
352. Id. at 83 n.63.
353. 29 U.S.C. § 159(c)(3) (1988); Brooks v. NLRB, 348 U.S. 96 (1954). This rule is commonly known as the election bar rule because a valid election will bar reconsideration of the union's majority status for one year.
354. General Cable Corp., 139 N.L.R.B. 1123 (1962). This rule is commonly known as the contract bar rule because negotiation of a valid contract will bar reconsideration of the union's majority status for up to three years.
355. GETMAN & POGREBIN, supra note 2, at 31.
356. Fall River Dyeing & Finishing Corp. v. NLRB, 482 U.S. 27 (1987). In order to take advantage of the presumption in this circumstance, the union must request bargaining before or at a time when the new employer has hired a "representative complement" of employees that includes a majority of employees from the old unit. 482 U.S. at 46-54.
357. See supra note 273 and accompanying text.
Supreme Court's announced purpose behind the presumption of the union's continuing majority comports with this interpretation of its value in reducing strategic behavior and promoting industrial peace.358

5. The Law on Enforcement of the Collective Agreement

The law on the enforcement of collective bargaining agreements also seems prudent under the analysis of the bargaining model. As previously discussed, the Supreme Court has found that agreements to arbitrate disputes under collective bargaining agreements are enforceable as a matter of federal substantive law.359 The courts can compel either side to comply with the agreement to arbitrate and can enjoin strikes or lockouts in contravention of that agreement.360 Moreover, the courts must show great deference to arbitrators, as to both their jurisdiction under the agreement and their resolution of the dispute, forsaking the temptation to allow the parties to litigate such matters.361 Agreements to arbitrate disputes under the collective bargaining agreement are the logical low-cost cooperative solution to the problem of contract enforcement. Resorting to economic warfare or costly litigation to resolve contract disputes is a positional externality that wastes the cooperative surplus. Thus, courts properly should enforce and encourage agreements to arbitrate while prohibiting or severely limiting the parties' recourse to economic or legal weapons. Moreover, the rationale for such provisions under the bargaining theory is that they will discourage wasteful strategic behavior and promote industrial peace, precisely the rationales given by the Court in developing this doctrine.362

358. Fall River Dyeing & Finishing, 482 U.S. at 38-39 ("The upshot of the presumptions [of a continuing majority] is to permit unions to develop stable bargaining relationships with employers, which will enable the unions to pursue the goals of their members, and this pursuit, in turn, will further industrial peace.").

359. Textile Workers Union v. Lincoln Mills, 353 U.S. 448, 449-56 (1957); see supra note 6 and accompanying text.


362. Textile Workers Union, 353 U.S. at 455 ("It [the Labor Management Relations Act] expresses a federal policy that federal courts should enforce... agreements [to arbitrate]... and that industrial peace can be best obtained only in that way."); Teamsters Local 174 v. Lucas Flour Co. 369 U.S. 95, 105 (1962) ("We approve that doctrine [of finding implied no-strike clauses in agreements to arbitrate].... [A] contrary view would be completely at odds with the basic policy of national labor legislation to promote the arbitral process as a substitute for economic warfare.") (footnote omitted); see also American Mfg. Co., 363 U.S. at 567-68; Warrior & Gulf Navigation Co., 363 U.S. at 578-85; United Steelworkers v. Enterprise Wheel & Car Corp., 363 U.S. 593 (1960).
6. Recent Proposals for Labor Law Reform

Up to this point in my application of the bargaining model to American labor law, my objective has been to demonstrate how the bargaining model confirms the logic of the core principles of American labor law and to contrast that confirmation with the condemnation those same principles receive under the monopoly model of unions. However, the bargaining model does not confirm the wisdom of every doctrine under current law. Some problems under the bargaining model with current law, including the allowance of state right-to-work laws under section 14(b) of the National Labor Relations Act,\(^\text{363}\) the restrictions on union access to employees during organizing,\(^\text{364}\) the limitations on the union's access to financial information,\(^\text{365}\) and the recent trend in cases expanding the category of permissive subjects of bargaining to include management decisions over the scope of operation,\(^\text{366}\) have already been mentioned in passing. These imperfections may pose substantial barriers to the effective operation of unions,\(^\text{367}\) thus denying workers some of the benefits of unions that an interpretation of the National Labor Relations Act that was fully consistent with the bargaining model would allow. This section examines several of the recent proposals for reform of American labor law and evaluates them in light of the bargaining model. The analysis reveals several important ways in which current American labor law does not coincide with the optimal labor policy prescribed by the bargaining model.

One possible reform discussed by many legal theorists\(^\text{368}\) is to increase the penalties for violations of the National Labor Relations Act. The Supreme Court has held that the Board's power to respond to violations of the Act is remedial, not punitive, in nature.\(^\text{369}\) Accord-

\(^{363}\) See supra note 294 and accompanying text.

\(^{364}\) See supra note 314 and accompanying text.

\(^{365}\) See supra note 331 and accompanying text.

\(^{366}\) See supra note 338 and accompanying text.


\(^{369}\) Phelps Dodge Corp. v. NLRB, 313 U.S. 177, 208 (1941) (Stone, J., concurring) (citing Consolidated Edison Co. v. NLRB, 305 U.S. 197 (1938)).
ingly, the Board can fashion a remedy that attempts to correct the harm done, but it cannot punish a union or an employer to deter future misconduct. In policing organizing campaigns, the Board most often uses its remedial authority to undo benefits or reprisals distributed on the basis of union support or to set aside elections that have been tainted by unfair labor practices or a lack of the requisite "laboratory conditions." For employees who have been discharged for union affiliation, the Board can order reinstatement and backpay, with interest, net of any interim earnings. Moreover, because the Board has decided that "make whole" remedies in which employees are compensated for lost wages and benefits due to employer failure to bargain in good faith are outside its power under the Act, the Board lacks full remedial power to remedy bargaining offenses. For the most part, the Board's remedies for bargaining violations consist of cease-and-desist orders combined with affirmative orders to bargain in good faith. When an employer or union has committed an unfair labor

370. GETMAN & POGREBIN, supra note 2, at 73. Under NLRB v. Gissel Packing Co., 395 U.S. 575 (1969), the Board can order an employer to bargain with a union on the basis of authorization cards signed by a majority of the employees where the employer has won the election but has committed such serious unfair labor practices that they effectively preclude the running of a fair rerun election. However, this remedial power is exercised sparingly. GETMAN & POGREBIN, supra note 2, at 74-77. In some cases of repeated and flagrant violations, the Board has awarded litigation and organizing expenses to a union. Autoprod, Inc., 265 N.L.R.B. 331, 332 (1982); GETMAN & POGREBIN, supra note 2, at 148. The Board also has authority, under § 10(j) of the NLRA, to seek immediate injunctions of such unfair labor practices as the discriminatory discharge of an employee during an election campaign. 29 U.S.C. § 160(j) (1988). However, the Board has been loath to exercise this power, perhaps fearing that such remedies would themselves unduly influence the outcome of the election. GETMAN & POGREBIN, supra note 2, at 73.

371. Isis Plumbing & Heating Co., 138 N.L.R.B. 716 (1962), revd. on other grounds, 322 F.2d 913 (9th Cir. 1963). Similarly, in the case of an employer who relocates to avoid unionization, the Board can order that the aggrieved employees be offered jobs in the new shop and receive backpay until they take the new jobs or find comparable employment in the old location. GETMAN & POGREBIN, supra note 2, at 78.

372. Ex-Cell-O Corp., 185 N.L.R.B. 107 (1970). The Board's rationale was that such a "make whole" remedy would be tantamount to requiring the employer to accept a contract term, a remedy that defies the statute's premise of freedom of contract. 185 N.L.R.B. at 110; see also 29 U.S.C. § 158(d) (1988); H.K. Porter Co. v. NLRB, 397 U.S. 99 (1970).

373. MERRIFIELD ET AL., supra note 2, at 540. Such bargaining orders are ultimately enforced through the contempt powers of the federal courts. 29 U.S.C. § 160(e) (1988). An additional remedy for a bargaining violation may be reinstatement after a strike or the loss of a troublesome employee. If an employer's unfair labor practice contributes in whole or in part to the employees' decision to strike, or if such a practice prolongs a strike, then the strike becomes what is known as an unfair labor practice strike and the strikers have a right to reinstatement even if they are permanently replaced. GETMAN & POGREBIN, supra note 2, at 148. Similarly, if the union commits an unfair labor practice by, for example, striking over a permissive subject, then striking employees can be discharged without right to reinstatement. Mastro Plastics Corp. v. NLRB, 350 U.S. 270, 284-89 (1956); NLRB v. Mackay Radio & Tel. Co., 304 U.S. 333, 345-46 (1938). If an individual employee commits misconduct during a strike, such as violence or vandalism, he can be discharged without right to reinstatement. NLRB v. Fansteel Metallurgical Corp., 306 U.S. 240, 256-57 (1939); NLRB v. Ohio Calcium Co., 133 F.2d 721, 726-27 (6th Cir. 1943); Clear Pine Mouldings, Inc., 1983-84 NLRB Dec. (CCH) ¶ 16,083, at 27,418 (1984).
practice, the Board will also order the offending party to post notices stating that it will no longer violate employee rights under the National Labor Relations Act. Many scholars believe these purely remedial penalties are inadequate to deter employers and unions from committing violations of the Act. As a result, proposals have been made to increase penalties, including double backpay for workers discharged during organizing campaigns and monetary compensation for employer refusals to bargain in good faith.

Analysis of the problem under the bargaining model confirms the need to increase penalties under the National Labor Relations Act. Even if society valued the benefits the parties received from violating the Act, economic theory would suggest that, to maximize social welfare, the penalties for such activities should be set so that the perpetrator's expected cost from engaging in the activity equaled the cost the activity imposed on other people. Because not all violators are successfully caught and prosecuted, this would mean that the actual penalties for violations of the Act should be set higher than mere remedial damages so that the expected cost to the perpetrator equaled the costs imposed on the victim. However, under the bargaining model, violations of the Act, such as firing pro-union employees and refusing to bargain in good faith, merely constitute wasteful rent-seeking on the part of the perpetrator and do not yield social benefits. Ideally, to maximize social welfare, society should set penalties for such activities so high that potential perpetrators will always be deterred from undertaking the activities. In the real world, however, arbitrarily high penalties for dismissing pro-union employees may deter legitimate discharges based on job performance, and employers or unions may be mistakenly convicted of bargaining in bad faith when no violation has

374. Getman & Pogreb. supra note 2, at 73.
375. See supra text accompanying note 368.
377. Gary S. Becker, Crime and Punishment: An Economic Approach, 76 J. Pol. Econ. 169, 191-93 (1968). Setting the penalty at this level maximizes social welfare because the perpetrator will commit the offense only if the benefits he receives from it exceed the costs of the offense to others. Id.
378. The expected cost of a violation of the Act to a perpetrator equals the probability that she will be caught and successfully prosecuted times the actual penalty. If not all offenders are successfully caught and punished, the probability of being successfully caught and punished must be less than one. Therefore, in order for the expected costs of the offense to the perpetrator to equal the costs of the offense to the victim, the actual penalty for the offense must exceed the costs of the offense to the victim.
occurred. Accordingly, economic theory suggests that, to maximize social welfare, penalties for socially valueless activities should be set so that the social benefits from increased deterrence equal the social costs of deterring marginally lawful activity and sometimes mistakenly imposing penalties on innocent defendants. 380 The current remedial penalties of the National Labor Relations Act, which often do not even fully compensate the victim, fail to meet this standard.

Another commonly suggested reform is to streamline and speed the union certification process. 381 The current system of elections, the argument goes, allows employers too many opportunities to delay and to coerce employees through threats or the discharge of union supporters. 382 Statistics on the filing of unfair labor practice charges against employers during organizing campaigns suggest that the problem has substantially worsened in the late 1970s and 1980s. 383 To remedy this problem, some have proposed relatively simple solutions, such as setting shorter deadlines for holding elections after filing certification petitions. 384 Paul Weiler has proposed the more extreme solution of adopting the Canadian system — certifying unions based on cards signed by a majority of employees stating that they want the union as their representative. 385 This system avoids the need for lengthy election proceedings and denies employers the opportunity to coerce employees.

Under the bargaining model, the purpose of certification elections is to provide an inexpensive means by which the workers can accurately weigh the benefits of organization against its cost. 386 Delays, and the opportunity for strategic behavior they create, are a cost of the certification process that should be kept to a minimum. Shorter deadlines for elections are desirable as long as they leave employees ade-

380. Id. at 1243-45. Theoretically, one should also take into account the marginal costs of destroying marginal incentives for good behavior. Id. I have omitted this point from the text for purposes of simplicity. The costs of deterring marginally lawful behavior, mistaken punishment, and destroying marginal incentives for good behavior all also enter the problem of setting the optimal penalty when society values the perpetrator's benefits from the offense. They are, however, generally omitted from simple analyses of that problem because they are commonly assumed to be swamped by the costs of deterring the beneficial but prohibited activity.

381. Labor Reform Act, supra note 376, at 5; Meany, supra note 376; Paul Weiler, Promises to Keep: Securing Workers' Rights to Self-Organization Under the NLRA, 96 HARV. L. REV. 1769, 1776-86 (1983).

382. Weiler, supra note 381, at 1776-86.

383. Id. at 1780. Weiler's statistics show that in 1970, 1975, and 1980 the numbers of employer discrimination charges filed in organizing campaigns were 9290, 13,426, and 18,315, respectively. During this time the number of petitions filed by unions for representation elections declined from 7773 and 8061 in 1970 and 1975, respectively, to 7296 in 1980. Id.

384. See Labor Reform Act, supra note 376, at 5.


386. See supra notes 268-70 and accompanying text.
quate time to consider the question and make a reasoned decision. As for Weiler's proposal, whether the current system of elections or the Canadian system based on cards is the cheaper means of determining union representation is an empirical question. Although his proposal would undoubtedly save costs over the present system by precluding employer opportunistic behavior, it would also impose some additional costs by preventing employers from providing useful information on the question of representation and by increasing the possibility of fraud and coercion on the part of unions. The benefit of Weiler's proposal in discouraging employer opportunistic behavior might be lessened if the National Labor Relations Act had penalties adequate to deter such behavior. However, Weiler can reasonably argue that the current system's costs in terms of employer opportunistic behavior outweigh any additional costs that would be incurred under his proposal. 387

Another reform that has recently gained support is to limit or proscribe the employer's ability to permanently replace striking employees. Under the provisions of the National Labor Relations Act, employers are prohibited from firing or discriminating against striking employees. 388 However, in an opinion that baffles even my best students, the Supreme Court in Mackay Radio held that the Act did not prohibit employers from "permanently replacing" striking employees. 389 Initially, the problems posed by this case were largely theoretical because few employers permanently replaced employees. However, employers have recently resorted to this strategy with increasing frequency. 390 As a result, in the 1980s and early 1990s there has been a growing consensus that the loophole created by Mackay must be addressed, 391 and indeed a bill currently before Congress, which has passed the House, would limit employers' ability to perma-

387. This seems particularly true given the Board's current determination that it cannot effectively police the truth or falsity of campaign statements. See supra note 319 and accompanying text.


389. NLRB v. Mackay Radio & Tel. Co., 304 U.S. 333, 345 (1938). The primary distinctions between permanent replacement and discharge are that an employer must have a replacement employee in hand in order for the act to be a replacement, and permanently replaced strikers enjoy a preference in filling positions as they become open with the employer, while discharged employees do not. Laidlaw Corp., 171 N.L.R.B. 1366 (1968).

390. WEILER, supra note 22, at 111; see also 137 CONG. REC. H5454 (daily ed. July 16, 1991) (statement of Rep. Fazio) (“[E]mployers in the 1980s have discovered a forgotten loophole that [allows] them to permanently replace striking workers. [and] they used it every chance they got.”). According to Rep. Owens, the threat of permanent replacements, while held over workers' heads, was not used until recently. Id. at H5455. Rep. Levin noted that the purpose of H.R. 5 is to restore the NLRA to its historic purpose of promoting democracy, equity, and stability, and not to permit the 1990s to be a repeat of the 1980s. Id.

391. Weiler was among the first to make this argument. Paul Weiler, Striking a New Bal-
nently replace striking employees.392

The bargaining model offers qualified support for this proposal. Allowing employers to permanently replace striking employees creates a tremendous opportunity for costly strategic behavior whereby the employer escapes the bargaining game by permanently replacing pro­

tion employees with justifiably intimidated employees. Allowing per­
manent replacements provides some impetus toward cooperation in bargaining on the part of the union by raising its expected costs from a strike; however, the one-sided nature of this impetus frustrates the re­
distributive purposes of encouraging unions. Allowing employers to permanently replace strikers merely leads to union capitulation, not bargaining equity and industrial peace.393 However, even from the perspective of the bargaining model, if one were concerned about the potential growth of labor cartel power, one might want to adopt some intermediate policy discouraging employer strategic behavior without completely prohibiting the permanent replacement of striking employ­ees. In addition to preventing employer strategic behavior, the complete prohibition of permanent replacements also raises significant barriers to entry in the labor market that could facilitate cartelization.394

A final proposal on which the bargaining model allows useful com­
ment is Weiler's proposal to include interest arbitration as a remedy for employers' failure to bargain in good faith in first-time contract negotiations.395 Citing the recent rise in the failure rate of unions to obtain first contracts after organizing an employer,396 Weiler has ar­
gued that such a bargaining remedy would put some teeth in the Act's directive to bargain in good faith and help ensure that employees real­


393. If employers need the alternative of continuing operations during a strike to achieve an "equitable" balance of bargaining power, this problem can be met with temporary replacements. The National Labor Relations Act allows the temporary replacement of strikers. 2 THE DEVELOPING LABOR LAW, supra note 2, at 1012-13. Any additional benefit the employer could achieve by obtaining more or better replacements with the promise of permanent positions would be outweighed by the tremendous opportunity for strategic behavior that allowing permanent replacements creates.

394. Of course, if one is really concerned about the existence or growth of labor cartel power, probably none of these proposals for labor law reform makes sense.

395. See Weiler, supra note 391, at 405-12.

396. Id. at 354-55. Between 1950 and 1980, the rate at which unions achieved first contracts after organizing an employer decreased from 86% to 63%. Id.
ize their right to bargain collectively after choosing to organize.\textsuperscript{397} Although increasing monetary penalties for failure to bargain in good faith may also solve the problem, Weiler's proposal has some appeal under the bargaining model because it recognizes that the parties' awareness of their collective interest in cooperation will be weakest when their relationship has just begun. Accordingly, the proposal reserves the most extreme and intrusive remedy, having a neutral party specify the terms of the collective agreement, for the cases in which the parties' ability to see their collective interest in agreement is probably lowest.

CONCLUSION

The traditional monopoly model of unions and collective bargaining is deficient for three reasons. First, the model focuses on only one among several possible sources of union wage increases, the cartelization of the labor market. Logical arguments and empirical evidence suggest that this exclusive focus on labor cartelization is misplaced and that employer rents, quasi-rents, and productivity increases associated with unionism are also important in the American economy as sources of union wage increases. Second, the model assumes that employers respond to union wage demands by moving up their demand curves when such a response is not Pareto optimal and both the employees and employers could be made better off by negotiating agreements that call for lower wages and higher levels of employment. Empirical evidence rejects the employer demand curve response and supports the proposition that employers and unions negotiate optimal contract terms. Finally, the model implicitly assumes that the costs of collective bargaining are ordinary time and information transaction costs, ignoring the strategic nature of collective bargaining. These deficiencies suggest the need for a new economic model of unions and collective bargaining that recognizes alternative sources of union wage increases, assumes that the parties optimally bargain over contract terms, and explicitly recognizes the strategic nature of collective bargaining. In this article, I have developed such a model, which I call the \textit{bargaining model} of unions and collective bargaining.

The bargaining model confirms the basic logic of the fundamental tenet of American labor law that the government should foster unions and regulate the conduct of industrial relations in order to promote bargaining equity and industrial peace. Under this analysis, unions allow workers to gain a greater share of the proceeds of the business

\textsuperscript{397} \textit{Id.} at 405-12.
and to make valuable contributions in the running of that business through the expression of their collective voice. Thus, by promoting workers to a more equitable bargaining position relative to their employer, unions can serve societal goals of redistributing wealth from employers to employees and perhaps even maximizing total wealth. Despite these beneficial attributes of collective bargaining, both employers and unions often have individual incentives for strategic behavior in the conflicts that occur in organizing, negotiations and enforcement of the collective agreement. Because of these incentives, the conflicts of collective bargaining have a tendency to escalate into costly affairs, wasting a portion of the potential proceeds of the business, despite the parties' — and society's — collective interest in avoiding such waste. The government can minimize such waste by regulating the conduct of collective bargaining to prohibit or discourage strategic behavior and to promote industrial peace.

Many specific provisions of American labor law make sense within the context of the bargaining model. To resolve conflicts in organizing, the National Labor Relations Act promotes elections as a relatively low-cost method for employees to make a reasoned decision about whether the benefits of organization outweigh its costs. The employer is prohibited from using yellow-dog contracts or promises of benefits or reprisals to encourage employee free riding on efforts to organize. Costly strategic behavior by either side, such as discriminatory discharges or recognitional picketing, is prohibited or severely limited. To resolve conflicts in collective negotiations, the law enforces a bilateral relationship in which the employer is required to bargain with the union, as the exclusive representative of the employees, over wages, hours, and working conditions. This bilateral relationship promotes equity in bargaining between employers and employees with its attendant benefits of wealth redistribution and increased productivity. Strategies or behaviors in collective negotiations that are likely to result in costly strikes, such as intransigence in bargaining and Boulwareism, are prohibited or discouraged. Moreover, the law promotes the parties' ability to recognize their collective interests in cooperative bargaining by organizing the employees in relatively homogeneous units, encouraging repeat negotiations through the presumption of a continuing majority, and requiring exchanges of relevant information. Finally, to resolve conflicts in the enforcement of collective agreements, the law enforces and encourages agreements to arbitrate as the low-cost method of resolving such disputes while discouraging resort to costly litigation or strikes.

The bargaining model also suggests several ways in which current
American labor law could be improved. Perhaps chief among these improvements would be a substantial increase in penalties for violations of current law. The current remedial penalties of the National Labor Relations Act do not adequately deter costly strategic behavior. Additional benefits from collective bargaining can be gained by further facilitating employee organizing and promoting cooperative solutions in collective bargaining. This might be achieved by giving unions greater access to employees on employer property during organizing campaigns; streamlining employee organizational campaigns; giving the union greater access to employer financial information; repealing section 14(b) of the National Labor Relations Act, which allows state right-to-work laws; and requiring good-faith bargaining on all subjects of direct relevance to the employees' and employer's relationship. Finally, the bargaining model provides qualified support for recent legislative efforts to restrict employers' ability to permanently replace striking employees. The possibility of permanently replacing striking employees creates tremendous potential for costly strategic behavior on the part of employers and encourages union capitulation to employer demands, frustrating the redistributive purposes of allowing employee organization. Although the bargaining model demonstrates the consistent logic behind the core principles of American labor law, some further substantial changes would allow workers to enjoy more fully the benefits of collective bargaining.