
Unionization of Professional and Technical Workers

The Labor Market and Institutional Transformation

Richard W. Hurd and John Bunge

Changes in control structures and corporate hierarchies are combining with rapid advances in information technology to create intense pressure in labor markets for many professional and technical occupations. Employers face increased incentives to monitor job content while workers experience heightened anxiety about potential obsolescence. These influences are reinforced by developments in the political economy as greater reliance is placed on unrestrained market forces. In a recent article aptly titled “How the Economy Came to Resemble the Model,” Alan Blinder (2000) argues that labor is now viewed as “just a commodity” as evidenced in part by the rapid growth of contingent employment and by reduced job security for white-collar workers. In this evolving context, there is evidence that in a broad array of professional and technical occupations, workers are losing their revered control over job content along with the ability to exercise discretion.

In the medical field, the growth of health maintenance organizations, group practice, and managed care has changed the role of medical doctors, leading some social scientists to describe the “deprofessionalization of . . . medicine” (Anderson 1992, 241) and others to call for a new perspective, the “physician as worker” (Hoff 2001, 53). Similarly, pharmacists have transitioned from self-employment to organizational employment and in the process have lost autonomy (McHugh and Bodah 2002). Dramatic change in the structure of work is not limited to healthcare. A trend toward

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corporate acquisition of certified public accountant (CPA) firms is reducing the independence and discretion associated with accounting (Shafer, Lowe, and Fogarty 2002), while in academia the share of teaching handled by adjuncts and part-time faculty is growing (Rhoades 1998, 131–138). There are developments with similar implications for occupations as diverse as airline pilots whose latitude on the job is restricted by technology and symphony musicians whose work is routinized by management rules and close supervision (Hackman 1998).

And yet, employment continues to grow rapidly in relevant occupations. The Bureau of Labor Statistics projects that jobs for professional specialties will increase by 27 percent from 1998 to 2008, while those for technicians will expand by 22 percent; these are the fastest anticipated growth rates among the major occupational groups (U.S. Department of Labor 2000, 2–5).

Established institutions that serve the interests of white-collar workers find themselves at a critical juncture. On the one hand they can foresee the potential to augment membership and influence. On the other hand, they confront the reality of reconfigured labor markets. Growth (and indeed survival) is contingent upon being able to adapt to the changing needs and interests of professional and technical workers. The combination of technological advances and alterations in the functioning of white-collar markets suggests strategic reconceptualization and institutional transformation. This chapter explores the attitudes of professional and technical workers toward their jobs and labor market organizations in search of information relevant to institutional transformation.

Although primary attention is devoted to unions of white-collar workers, professional associations play an essential role in these markets and serve as an apt source of institutional comparison. While their membership bases often overlap, there are substantial differences in the emphasis and practices of these two types of organizations. Unions focus on relations with the employer, whereas professional associations cater to individual needs and simultaneously foster collegial relationships (within the profession and with the employer). Professionals are drawn to associations because of information, professional development, and networking. They are often drawn to unions because of trouble on the job. As Tina Hovekamp (1997) aptly contrasts in an article about librarians, professional associations bring people together outside of work around common knowledge and expertise, whereas unions bring people together within the workplace based on distinctions in power (242). The character and functions of professional associations are described in greater detail later in this chapter to help facilitate interpretation of statistical results.

5.1 Reflections on the Decline of Unions in the Private Sector

Private-sector union density in the United States has consistently been higher among blue-collar workers, especially in manufacturing, construction, transportation, and communication, and lower among white-collar workers, particularly in the service industries. As the economy has evolved with white-collar employment and the service sector growing disproportionately, unions have struggled to adapt. Nonetheless, scholarly analyses of union decline typically discount standard explanations tied to changing employment patterns. A review article by Chaison and Rose (1991) concludes that no more than one-quarter of the loss in union density in the United States can be accounted for by structural variables.

Freeman (1988) offers a strong critique of structural explanations, explicitly rejecting the increase in white-collar employment as a key influence. Of particular relevance here, he objects to the standard assumption in that line of research that union density in a sector remains fixed over time. As evidence of the flawed nature of this assumption, he refers to union expansion among public employees in the 1970s that featured unionization of white-collar professionals. Freeman then explores government industrial relations policies, employer resistance, and union strategy as more important influences. Since the early 1990s the research on union decline and potential resurgence has concentrated on these three factors, with some attention as well to globalization, deregulation, and public opinion.

In a recent paper, Farber and Western (2001) revisit the structural approach and offer a model that addresses the weakness in the earlier research by incorporating other factors. The implications of their analysis are compelling and pessimistic regarding the future of union density in the private sector. Rather than looking at trends in employment by industry or occupation, Farber and Western divide the private sector into two subsectors—the union sector and the nonunion sector. They argue that because of the combined influences of economic change, public policy, and employer antiunionism, there is a natural tendency for the share of employment in the union sector to fall.

A key observation based on data for 1973–1998 is that most new jobs are created in the nonunion sector. Except for expansion of employment in unionized facilities, the National Labor Relations Board (NLRB) certification process assures that virtually all new jobs are nonunion and must be organized in order to move into the union sector. This is seldom a simple process even when the employer owns unionized facilities elsewhere, given the widely accepted tenet that “deep seated opposition to unions [is] embedded in the ideology of American management and the culture of many American firms” (Kochan, Katz, and McKersie 1994, 56). The combined effects of globalization, deregulation, and the growth of the service sector merely serve to accelerate the pace of relative decline in the union sector.

If the union sector naturally shrinks, then union density can remain stable or increase only if union organizing in the nonunion sector is successful and is quantitatively sufficient to counterbalance or exceed the relative loss of union jobs. Because of the myriad of challenges that make union organizing difficult, private-sector density has fallen steadily for almost fifty years. As Hirsch (1996) notes, the drop in density is pervasive and has affected all industries for 1983–94 (19), a trend that has continued through 2003. Thus, not only have unions failed to penetrate industries and occupations beyond their base, they also have been unable to retain their share in those parts of the private sector where they are established.

In order to assess the potential for union growth, Farber and Western (2001) attempt to estimate the magnitude of union organizing activity that would be required to attain selected steady-state levels of density. Their forecasts are built upon the explicit and reasonable assumptions of fixed government labor relations policy, a union objective of wealth redistribution from employer to worker, and continuing employer antiunionism. A corollary implicit assumption is that labor market institutions (including unions) remain unchanged. Their estimates of the magnitude of increased expenditures on organizing required to reverse the downward trend in density are staggering. In order to halt decline, unions would approximately need to quadruple the share of resources devoted to organizing. In order to achieve a steady state of 12.25 percent (the current density is 9 percent), unions would have to devote resources to organizing that exceed 100 percent of their current total budgets (Farber and Western 2001, 480).

Although Farber and Western (2001) must rely on incomplete information (particularly regarding expenditures on organizing) to make specific forecasts, the logic of their argument is convincing, and in essence their calculations are consistent with an emerging consensus among industrial relations academics. Is the labor movement doomed to obscurity in the private sector, or are there realistic options that could halt or even reverse decline? Unions have limited ability to influence environmental factors such as government industrial relations policy and employer antiunionism. But they do control their own resources and are in a position to reconfigure priorities and initiate internal institutional change.

Since the election of John Sweeney as president of the American Federation of Labor-Congress of Industrial Organization (AFL-CIO) in 1995, virtually all major unions have embraced organizing as a top priority (at least rhetorically). The federation's "change to organizing" effort, though, has emphasized almost exclusively the objective of increasing the resources devoted to the task. After eight years and a major reallocation of funds in many prominent unions, there is little if any progress. Private-sector union density continues to slide. Farber and Western's (2001) analysis helps explain why. With a naturally shrinking base, it becomes increasingly difficult to marshal the resources necessary to reverse momentum.

Perhaps the most important weakness in the “change to organizing” is that a resource shift, *ceteris paribus*, seeks to extend unionism as it exists. This paper accepts, consistent with Farber and Western, that it is unrealistic to presume that a resource shift alone will be sufficient to halt the decline in union density. Unions need to go beyond resources and explore innovations that in effect will increase the demand for their services. As David Brody (1991) argued a decade ago, the labor movement cannot assume that workers will accept unions in their current form, nor can labor define the aspirations of its potential members. The rapid growth of the CIO in the late 1930s was possible because of its capacity to become “the institutional embodiment of the vital job interests of the mass production workers” (308), in this case by offering an industrial union alternative to the AFL. Similarly, the expansion of membership in the public sector during the 1960s and 1970s was facilitated by the ascension of unions willing to adopt an approach more in tune with the experiences of government employees, in part by basing bargaining power on political influence rather than relying on economic weapons like the strike. Any resurgence of labor early in the twenty-first century is likely to depend on the ability of existing or emerging unions to identify and respond to the job related needs of substantial concentrations of workers who have unmet “aspirations for industrial justice” (Brody 1991, 308).

The structural explanations of union decline that were dismissed as insufficient in the late 1980s actually encompassed as a negative a potential route to union survival. To reinterpret the conclusions of that line of research in a more productive light, even if union density is roughly constant in those industries and occupations with relatively high levels of unionization (an unlikely scenario standing alone), long-term stability and growth depend on the ability of unions to appeal to workers in industries and occupations where employment is expanding but union density is low. And as the structural analysis points out, private-sector markets for white-collar workers are crucial because of steady disproportionate employment growth and limited penetration of unions. The changing conditions of professional and technical workers, particularly the loss of control over job content and reduced job security, present an opportunity for unions if they can adapt. Furthermore, the success of public-sector unions among professional workers demonstrates that with the appropriate institutional characteristics there is realistic potential to organize similar workers in the private sector.¹

The contrast in unionization between the private and public sectors is dramatic for professional workers. As table 5.1 shows, private-sector den-

1. The experience of public school teachers is particularly relevant. The evidence suggest that lack of control in the workplace created incentives for a militant response via unionization (Bacharach, Bamberger, and Conley 1990). And yet teacher unions struggled to find a comfortable identity that combined activism with concern for professionalism (Murphy 1990, 46–60).

Table 5.1 Professional workers representation gap

	2000	2000	Density gap (b - a)	Density ratio (b/a)
	Private-sector union density (a)	Public-sector union density (b)		
Professional workers	6.4	42.9	36.5	6.7:1
All other nonmanagerial workers	10.8	38.0	27.2	3.5:1

Source: Unpublished data from the Current Population Survey (CPS) provided by David Macpherson. For extensive union information based on the CPS, see Hirsch and Macpherson (2001).

sity is substantially lower for professionals than for other workers while public-sector density is higher. The gap in density is greater than for any other major occupational group. In relative terms, public-sector density is nearly seven times private-sector density for professional workers, almost twice the ratio for all other workers. This contrast suggests that there is substantial growth potential among professional workers if unions are able to respond to their concerns.

Success among professional workers would be an important accomplishment in its own right because this is now the largest occupational group. If a foothold can be established among professionals, unions will be in a position to use this as a base to spread into technical and clerical occupations; both of these latter occupational groups share the characteristic of relatively low private-sector unionization. In 2000, there were only 8.8 million union members in the entire private sector; that year there were 11.5 million nonunion professional workers. Add the technical and clerical occupations, and there were 28.4 million nonunion white-collar workers in the private sector. The potential importance of these workers to the future of the labor movement is self-evident.

If labor law and employer antiunionism are fixed, then any appeal by unions to white-collar workers is unlikely to succeed unless unions alter their character and institutional role to match the desires of potential members. The research reported here examines the institutional characteristics preferred by professional and technical workers. It does not offer a blueprint for union renewal, but it does suggest that there is much to be learned by comparing unions with professional associations, which are viewed by many white-collar workers as a more attractive institutional alternative.

5.2 Targeted Survey of Professional and Technical Workers

A survey was designed in cooperation with the AFL-CIO Department for Professional Employees, six national unions, and the Union Privilege Benefits Corporation. The idea behind this research was to interview

private-sector white-collar workers who had actually experienced the influences of union and management in the context of a contested organizing campaign. Responses reveal a complex but consistent pattern of attitudes among white-collar workers who are contemplating unionization. Because the interviews were conducted after the respective campaigns were concluded, the responses are grounded in experience and therefore should be more reliable than answers to hypothetical questions typically posed in opinion surveys.

Seven cases were selected in coordination with the participating organizations and represented a mix of close union wins, close union losses, and pullbacks due to lack of support. The survey was subsequently administered for two additional cases in conjunction with one of the participating unions. Among those surveyed were health care providers, librarians, university technical and professional employees, performers, transportation agents, education paraprofessionals, and industrial office and technical employees.

In the nine cases, the units being surveyed range from several hundred to several thousand. Unions provided lists of names, addresses, and phone numbers. Appropriate random samples were drawn for each case, and introductory letters were followed with telephone interviews conducted by Cornell University's Computer Assisted Survey Team. Final authority over survey content and full control over detailed data were retained by the authors and Cornell University. Participating unions received summary data and an analytical report (Hurd 1998). Interviews for the seven original cases were conducted in 1997 and 1998 and for the two subsequent cases in 1999 and 2000. Telephone contact was made with a total of 2,311 workers, and fifteen- to twenty-minute interviews were conducted with 1,751 of them for a 75.7 percent response rate.

Because the survey research is limited to nine cases, it would be inappropriate to assume that the views expressed would be representative of all professional and technical workers. The workplaces studied employ large concentrations of workers from the relevant occupations. The very fact that a contested union organizing campaign took place is itself indicative that collectively the workers interviewed are more interested in securing some type of representation than their counterparts in other nonunion settings, perhaps because of either dissatisfaction or a strong desire to join together with their peers. On the other hand, these characteristics make these workers particularly appropriate for the research at hand. Their views are relevant to the potential for increased unionization among professional and technical workers and to the question of the type of labor market institution that might best meet the needs of workers in an evolving economy. At any rate, because the analysis concentrates on differences among subgroups of those interviewed, whether these subgroups are relatively larger or smaller than they might be in other settings is not a factor that would limit the validity of the findings.

The survey addresses attitudes toward the job, the workplace, the em-

ployer, different types of employee organizations, and the organizing campaign. A total of 100 questions are posed: fifteen are about the job and the workplace, eight are about unions, seven refer to employee involvement programs, twenty-three cover characteristics or tactics of employee organizations, nineteen pose possible services offered by employee organizations, twenty-one concern the specific organizing campaigns, and eight relate to demographic information.

Examination of raw survey responses and descriptive summary data suggests that more extensive analysis should center on a question that asks each interviewee to select the type of employee organization most likely to attract his or her support. The following options are offered: union, non-union workplace association, employee involvement committee, professional association, or no organization. Unions and professional associations are the preferred choices in each of the seven cases that pose this question.² Furthermore, the vast majority of those who indicate that they ultimately chose to support unionization in the actual organizing campaign are drawn from these two groups. Combined with interesting patterns in responses to other questions, it is apparent that much can be learned from a comparison that centers on those preferring union and those preferring professional association. Before turning to the detailed analysis, the following section will review summary data to provide context.

5.3 Committed to Their Work

Although specific attitudes differ from one case to another because of varying objective conditions, what is far more impressive is the consistency across the samples and the different occupations. These professional and technical workers are strongly attached to their jobs and professions; 71.4 percent have been employed in the occupation for over ten years, and 71.5 percent anticipate being in the profession five years from the time of the survey. Job satisfaction is unusually high, with 83.4 percent either very satisfied or somewhat satisfied. Commitment to the job and the profession is reflected further in the selection of “freedom to exercise professional judgment” as the most important work-related issue. The group activity of greatest interest to these professionals is “meeting with management to discuss policies,” endorsed by 90.9 percent of those interviewed. When asked to identify the key reason to join an employee organization, the top choice is “give workers a voice.” The composite picture is a group of workers committed to their professions, confident of their own abilities to exercise independent judgment and interested in finding a way to increase their say in key decisions.

2. This question was omitted from the survey for one sample and posed differently for another.

However, the consistent views regarding work do not translate into consensus regarding the type of workplace institution that would be supported in order to secure voice. There are important variations in attitudes toward employee organizations generally and unions specifically, and it is these differences that largely determine the potential for some type of workplace association. What type of representation appeals to professional and technical workers? When asked what approach they would like to see in their workplace, 80.9 percent indicate preference for an organization that develops “a cooperative relationship with management” rather than one that is “aggressive and stands up to management.” This strong preference holds for union supporters and opponents alike. Another question asks interviewees to select a key reason *not* to join an employee organization. The most frequent answer is “creates conflict at work,” and the second choice overall is “loss of individual freedom.”

The combination of a desire for voice, aversion to conflict, preference for cooperation, and concern about preserving individualism presents a challenging mosaic for any organization that hopes to appeal to professional and technical workers and build consensus for collective action. In order to examine more deeply the organizational opportunities, it is necessary to concentrate on responses to questions regarding institutional form.

Table 5.2 summarizes responses to several relevant questions. The first column reports the type of employee organization preferred. Although unions are the first choice, barely more than one-third select this option. Nearly as many prefer a professional association, with substantially less support for a nonunion workplace association or an employee involvement committee. Only about one-eighth are opposed to any form of employee

Table 5.2 Organizational preferences and attitudes

Type of preferred employee organization	Share of total interviewees	E.I. programs address concerns of professionals ^a	Unionized professionals better off ^b	Vote yes ^c	Pro-union ^d
Union	35.2	40.0	93.3	93.6	69.4
Professional association	31.9	46.2	43.5	50.2	27.4
Nonunion workplace association	9.4	46.6	42.0	44.3	12.5
Employee involvement committee	11.3	53.8	25.5	23.6	9.4
No organization	12.2	49.1	34.2	23.7	12.3

Note: Column (1) adds to 100 percent; all other cells are self-contained and report the share of those preferring each type of organization who agree with or match the column heading.

^aEmployee involvement programs effectively address concerns of workers in your occupation.

^bWorkers in your occupation who are represented by a union are better off overall.

^cWould vote for a union in a hypothetical representation election on day of interview.

^dOpenly supported union during organizing campaign.

organization, a reflection of the degree of interest in some type of forum to voice work-related concerns.

To benchmark these responses, it is useful to compare them to the results of Freeman's and Rogers's (1999) Worker Representation and Participation Survey (WRPS). Because the WRPS involves a national random sample it undoubtedly is more representative of general attitudes than the research reported here, which is targeted to a narrow subset of professional and technical workers. Nonetheless, there are some intriguing parallels and dissimilarities. The WRPS offers a different set of institutional options, but it does include as choices (in slightly different form) union, employee involvement committee, and no organization; a fourth option is "laws that protect employee rights." The overall response is union 27 percent, employee involvement 49 percent, laws 15 percent, and no organization 9 percent (Freeman and Rogers 1999, 150–51).³

Freeman and Rogers (1999, 150–51) actually offer two versions of this set of alternatives; half of those surveyed have the opportunity to select "union," while the other half can choose "an employee organization that negotiates or bargains." The 27 percent overall support for union actually combines 23 percent choosing "union" in one-half of the sample and 31 percent choosing "employee association" in the other half. Comparing this to entries in the first column of table 5.2, the 9.4 percent selecting "non-union workplace association" in the survey reported here is roughly comparable to the 8 percent increase in support for representation Freeman and Rogers find when they replace "union" with "employee association." At any rate, the 35.2 percent support for a union among workers surveyed for this research is clearly higher than would be expected based on the WRPS benchmark. To reiterate, this is not surprising because these workers have experienced the direct influences of a union organizing campaign. Furthermore, this survey does not offer the WRPS's option of laws to protect employee rights, which may be viewed by some workers as a reasonable substitute for union representation.

Of greater interest is the contrast in the level of support for employee involvement committees. To clarify, Freeman and Rogers (1999, 150–51) use slightly different terminology, "joint employee-management committees." Furthermore they mailed to each participant in advance a description of how such committees might function, a step that could have increased interest. It seems highly unlikely, though, that these factors could explain the stark difference in support for employee involvement, 49 percent in the WRPS compared to 11.3 percent here. It seems more likely that the difference results from the preference of these professional and technical work-

3. In a slightly different context, Freeman and Rogers (1999) report that those in professional occupations are less likely to support unions than other nonmanagerial employees (71).

ers to address their work-related concerns through a professional association, an alternative not offered in the WRPS, which was designed for a broad cross section of workers from a diverse set of occupations.

The responses reported in the second column of table 5.2 are relevant in this context. Although only about one-tenth of those interviewed indicate a preference for employee involvement committees as an organizational form, nearly half agree that these programs effectively address the concerns of workers in their occupation. This assessment of the instrumentality of employee involvement committees is remarkably consistent regardless of the type of organization preferred, ranging from two-fifths of those who select union to only a little over one-half of those whose first choice is employee involvement. Contrast this consistency with the responses regarding union instrumentality reported in the third column. Overall there is a more positive assessment for the effectiveness of unions than for employee involvement, but there is considerable variation in opinion. Those who prefer unions are nearly unanimous regarding instrumentality, compared to only one-quarter of those who prefer employee involvement.

Clearly the union option generates a more spirited and diverse reaction than the more benign alternative of employee involvement. The final two columns lend additional texture to the range of attitudes towards unions. The hypothetical vote in a representation election is a staple in research on opinions about unions, and the fourth column shows that responses closely resemble those to the question on union instrumentality. However, union organizers have learned to be skeptical about workers' stated intention to vote yes, either in response to union-sponsored surveys or even to direct questions posed by organizers or co-workers. Given the intensity of management opposition in most campaigns, the current practice of organizers is to consider a yes vote reliable only if the worker publicly demonstrates support. The fifth column reports the "prounion" share of workers, or those who indicate that they openly supported the union during the organizing campaign.

Even among those who select unions as their desired type of organization, actual public support drops compared to hypothetical vote. In relative terms, the decline is even greater for those aligned with other institutional alternatives. Although those who prefer a nonunion workplace association show moderate interest in unions in their responses regarding instrumentality and hypothetical vote, in the actual organizing campaign their level of public support is indistinguishable from those who want no organization. The workers who would rather address concerns through employee involvement committees are actually the least likely to be active on behalf of a union. Workers who choose professional association display greater affinity for unions; they are more than twice as likely to be active supporters compared to those who select other nonunion alternatives. This

is actually a positive sign for unions because professional associations attract broad interest and because they operate as independent voluntary membership organizations similar to unions in many respects.

To look at the final two columns in a slightly different light, among the professional and technical workers surveyed, 83 percent of those who were “prounion” during the organizing campaign select either union or professional association as their preferred type of employee organization. If unions hope to extend their appeal among professional and technical workers they must reach beyond the pool of their most ardent supporters and connect with those for whom unionization is in effect a second-best solution. In order to explore how this might be accomplished, the statistical analysis that follows concentrates on comparisons between advocates for unions and professional associations, respectively.

5.4 Statistical Analysis

This chapter draws upon a data set that, though narrow in reach and technically not representative, is rich in information about the attitudes of professional and technical workers toward unions and other labor market institutions. Utilizing inductive statistical techniques, leads are developed and patterns emerge that have the potential to inform unions and other organizations that seek to represent the interests of white-collar workers. This analysis is conducted in the spirit of the methodology pioneered in the early years of the National Bureau of Economic Research by its founder and original research director Wesley C. Mitchell (see, for example, Mitchell 1927). His brand of institutional economics starts with data, and it is through the exploration and analysis of the data that Mitchell discovers explanatory hypotheses (Blaug 1986, 168).

The statistical analysis reported here pools data from the survey and utilizes exploratory inductive techniques.⁴ During the first phase of the research, classification trees are constructed in order to examine patterns in the data regarding preference among different types of employee organization. The primary comparison is between union and professional association. Classification tree analysis is an appropriate tool because it allows the data to sort themselves. Of the ninety-two substantive questions included in the survey, thirty-two are relevant to the question of organizational preference, and all of these are considered in the construction of the classification trees.

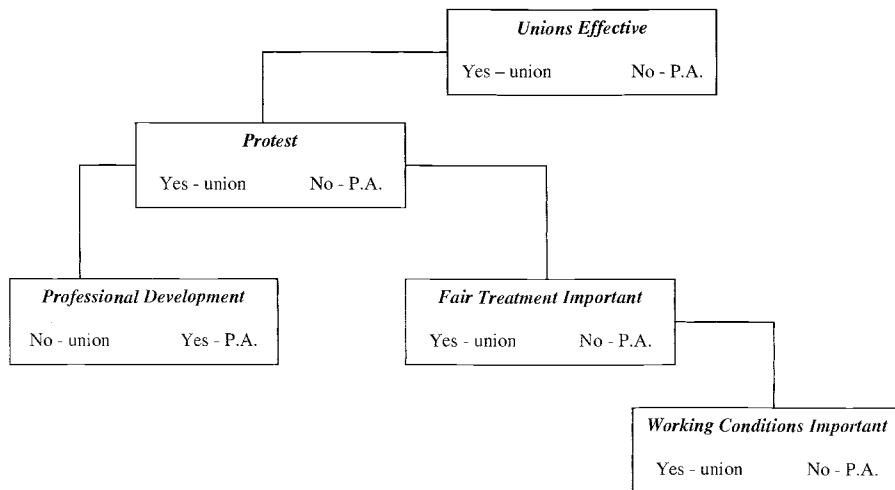
4. Only six of the cases are included in the detailed analysis. In addition to the two cases that do not pose a choice among organizational forms, another is omitted both because it is the only public-sector sample and because the ultimate choice faced by the workers is between two competing labor unions in a challenge election; thus, the situation is fundamentally different. However, for all three of the omitted cases, examination of the raw data reveal attitudes and patterns similar to those found in the six cases subjected to the more formal analysis.

In order to conduct significance tests, the second phase of the analysis relies on a stepwise logistic regression process to test the variables that emerge as useful in the classification tree sort. As a further check on the results, the third phase of the quantitative research utilizes the stepwise logistic regression methodology with all of the thirty-two variables considered in constructing the classification trees; in addition, six of the demographic variables are used as controls. Though not reported here, in each of the three phases the comparison of union with professional association is supplemented with comparisons of both union and professional association with other organizational forms.

The survey instrument includes five questions that address union instrumentality. One asks about unions in a generic sense, while the other four specifically reference unionized workers in the respondent's occupation in regard to wages and benefits, fair treatment, job security, and overall conditions. Not surprisingly, when all five measures of instrumentality are included, they dominate statistical tests of support for unions in comparison to alternatives. There are two ways to interpret these results. One could argue that union instrumentality in its various forms influences rational choice in a predictable direction and explains union support. An alternative interpretation is that these results are tautological because union supporters will be predisposed to believe that they will be instrumental and, further, that multiple variations of the instrumentality measure will simply reinforce the tautological nature of the test.

In an effort to both capture the role of union instrumentality and avoid the problem of tautology, two steps are taken. First, only one instrumentality measure is included among the thirty-two variables selected for the classification tree and regression analyses. Second, all tests are performed both with and without the instrumentality variable. Systematic omission of the variable has the added advantage of potentially allowing other influences masked by union instrumentality to surface.

With classification tree analysis, observations are sorted among the selected options (in this case union or professional association) based on the variable that does the best job of classification. Once the first sort is accomplished, each subset is sorted again based on the remaining variable that does the best job of classification. Each new branch of the tree is referred to as a "node," and there is a "yes" leaf and a "no" leaf associated with each node. Although the basic sort assumes that "majority rules," some intermediate sorts accomplish this only in a relative sense that conceptually parallels comparative advantage. However, these relative sorts are allowed only if one or more of the remaining variables can further classify the data based on "majority rules." The trees presented in figures 5.1 and 5.2 are based on the 629 individuals from the six relevant cases who select either union or professional association. The trees have been trimmed to remove those branches that do not appreciably improve the sort in that



Overall correct classification: 78.4%

Fig. 5.1 Classification tree, unions vs. professional associations, union effectiveness

Note: Overall correct classification: 78.4 percent.

one or the other leaf has six or fewer observations (six represents 1 percent of total observations).

Figure 5.1 displays the classification tree constructed when the instrumentality variable is included. Not surprisingly, this variable, *unions effective*, does the best job of classifying the data. To avoid clutter, the actual breakdown of each sort is not presented, but it may be instructive to report this data for the initial sort to aid with interpretation. Of the 629 observations, 438 believe that unions are effective; of these, 308 prefer union, while 130 prefer professional association. Thus the “yes” sort is labeled “union.” Among the 191 remaining observations (those who believe that unions are ineffective or neutral), 169 prefer professional association while 22 prefer union. Thus the “no” sort is labeled “professional association.” In total, *unions effective* by itself correctly classifies 477 of the 629 observations; it is selected under the classification tree methodology because no other variable is as accurate at assigning observations.

Looking first at the right side of the tree, note that there are no further branches. This indicates that among the “nos” there is not another variable in the mix that improves the classification appreciably. On the left side of the tree, however, there are additional branches. Among those who agree that unions are effective, the variable that does the best job of refining the classification is *protest*. Those who would participate in group protests are

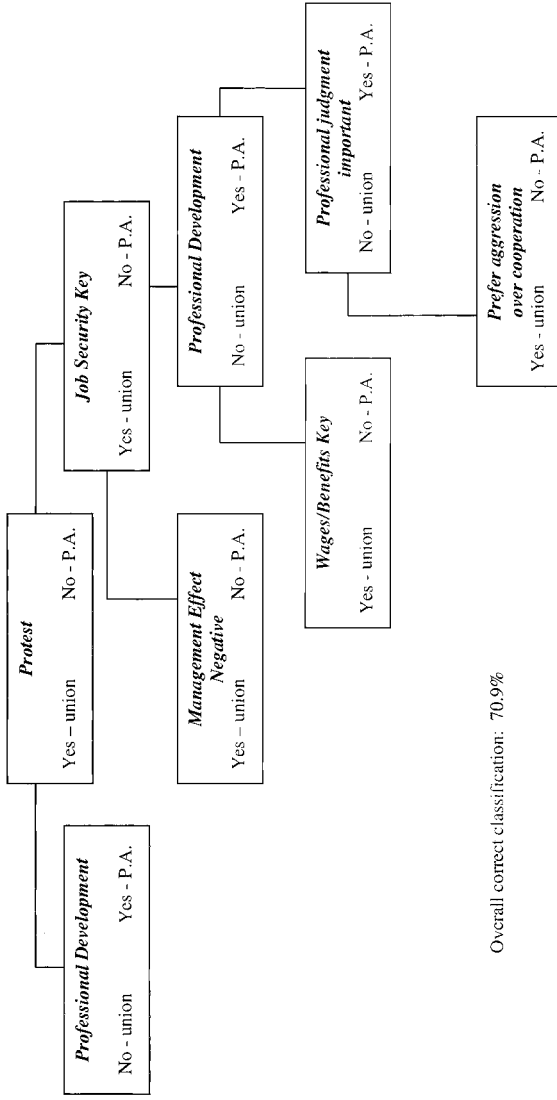


Fig. 5.2 Classification tree, unions vs. professional associations, characteristics of employee organizations
Note: Overall correct classification: 70.9 percent.

more likely to select union, while those who would not are more likely to select professional association.

A further sort of those willing to protest is possible using the variable *professional development*. Those who would participate in professional development activities outside of working hours are more likely to select professional association, while those not interested in professional development select union. Looking now at the right side of the *protest* branch, the classification can be refined using the variable *fair treatment*. Those who believe that procedures to assure fair treatment are especially important tend to select union, while those who do not tend to select professional association.

The final branch on the classification tree involves a further refinement among those associated with the “no” leaf of the *fair treatment* branch. Among this subset, the variable *working conditions* performs a successful sort. Those who agree that a key reason to join an employee association is to improve working conditions are more likely to select union, while those who do not agree are more likely to select professional association.

To summarize the message of figure 5.1, among the professional and technical workers surveyed, union supporters judge unions to be effective, are willing to participate in protests, and are concerned about fair treatment and working conditions. Those who prefer professional associations, on the other hand, are less convinced that unions are effective and shy away from protest but are interested in pursuing professional development opportunities.

Figure 5.2 displays the classification tree constructed when the union instrumentality variable is omitted. Although there is some overlap with figure 5.1 in terms of important variables, a number of other factors come into play. The variable that proves most successful in classifying the observations is *protest*. Following the same logic as applied in the interpretation of the tree in figure 5.1, the information displayed here can be summarized more succinctly. Those who prefer unions tend to support protests, to be concerned about job security, to give top management negative ratings, to believe that employee organizations should address wage and benefit concerns, and to prefer an aggressive approach that stands up to management. Among those surveyed, supporters of professional associations take a contrasting stance on these matters (at least relatively), express interest in pursuing professional development opportunities, indicate particular concern with protecting the freedom to exercise professional judgment, and prefer to be represented by an organization that adopts a cooperative demeanor with management.

Although classification trees help us tell a story about the data (or more accurately, allow the set of data to tell its own story), they are not capable of establishing the significance of relationships. The next stage of the analysis constructs a series of models using a stepwise logistic regression process. As applied, the stepwise process discards all variables with a p -value

greater than 0.100. All specifications are binary; all variables appearing here and in the additional models presented subsequently are defined in table 5.3. Note that for all of the regression equations the dependent variable is *union* defined as 1 for those selecting union and 0 for those selecting professional association. Thus a positive coefficient indicates that the independent variable is consistent with preference for a union, and a negative coefficient indicates preference for a professional association. In all cases the final logistic regressions fit the data well, according to a variety of goodness-of-fit assessments. For example, p -values for the residual chi-square test of goodness of fit range from 0.22 to 0.89.⁵

The first set of equations takes all of the variables that contribute to the construction of the classification trees (i.e., those displayed in figures 5.1 and 5.2) and tests for significance using a stepwise logistic regression process. The results are presented in table 5.4. Model I includes the instrumentality variable (*unions effective*); model II does not. Considering models I and II together, the stepwise regression process largely corroborates the story told by the classification trees. Seven of the ten variables that aid in the classification tree sorting process have a p -value of 0.066 or less, and in each case the sign of the coefficient is appropriate.⁶

For one of the six samples used to construct the classification trees, the survey instrument was edited to omit most demographic questions at the request of the sponsoring organization. Thus it is not possible in models I and II to control for race; income; or education; and a proxy (years of experience) is used in place of age. Two additional models were constructed repeating the stepwise regression with the variables from the classification trees but with the data only from the five cases where it is possible to use a full set of demographic controls. Though the details are not reported here, the results for the reduced sample (with full controls) are nearly identical to those of the complete sample (with partial controls). The same seven independent variables are significant with p -values of 0.069 or less.

Based on these tests for statistical significance, the story told by the classification trees can be refined. Those who prefer unions are significantly

5. The goodness of fit of a logistic regression model can be assessed by a number of statistics of varying degrees of technical sophistication (and correctness). In our data analyses all of these measures give the same result, namely, that the final models fit the data well. In the tables, we report the simplest statistic, here denoted p^* , which is the p -value of the residual chi-square test. Although there are mathematical technicalities regarding the degree of replication within subpopulations in the sample required for the chi-square approximation, here we are using the test as a summary measure of goodness of fit, and in this context, roughly speaking, the larger the p -value (which ranges from zero to one), the better the fit of the model. For more information see, for example, chapter 5 of Hosmer and Lemeshow (2000).

6. The stepwise regression methodology eliminated the variable *professional judgment* in model I even though it is retained in model II. In a separate run with all variables identified in the classification tree analysis including *unions effective*, the coefficient for *professional judgment* is -0.31 , almost identical to model II, but the chi-square value is only 1.90, which is not significant.

Table 5.3 Variable definitions

Variable	Specification (all independent variables binary) ^a	Description
Dependent variable		
UNION	1 = union 0 = professional association	Preference for a union or a professional association
Independent variables		
MGMNT NEG	1 = not positive at all 0 = very/somewhat/not very positive	Effect of top management on workers like you
PROF DEV	1 = yes 0 = no	In order to address work-related concerns, would participate in professional development activities outside of working hours
PROTEST	1 = yes 0 = no	In order to address work-related concerns, would participate in group protests to encourage management to change policies
JOB SEC	1 = key 0 = not key	A key reason to join an employee organization is to improve job security
COOP	1 = cooperate 0 = aggressive	Would like an employee organization to have a cooperative relationship with management or be aggressive and stand up to management
PROF JDG	1 = especially important 0 = not important	Freedom to exercise professional judgment is an especially important workplace issue
UN EFF	1 = better 0 = no difference or worse	Professional workers in your occupation who are represented by a union are better off overall
WRKLD	1 = especially important 0 = not important	Staffing, workload are especially important workplace issues

GOVT	1 = yes 0 = no	In order to address work-related concerns, would participate in appeals to appropriate government agencies
PETN	1 = yes 0 = no	In order to address work-related concerns, would participate in petition campaigns that ask management to change policies
INDV FR	1 = key 0 = not key	A key reason not to join any employee organization is loss of individual freedom
MEET MGMT	1 = yes 0 = no	In order to address work-related concerns, would participate in meetings with management to discuss policies
INFO	1 = key 0 = not key	A key reason to join an employee organization is as a source of information
Control variables ^b		
Unit dummies	1 = unit in question, 0 = all others	
Years of experience	1 = 10 years or longer, 0 = less than 10 years	
Gender	1 = male, 0 = female	
Race	1 = white, 0 = all others	
Age	actual age in years	
Income	1 = over \$40,000 annually, 0 = \$40,000 or less annually	
Education	1 = four-year college degree or higher, 0 = no four-year college degree	

^aThe binary specification is a reduction from original responses since some questions offered more than two choices. For the independent variables, those few who volunteered that they did not know or refused to answer are grouped with the option assigned a zero.

^bIn the tables that follow, “partial set” of controls indicates that only unit dummies, years of experience, and gender were used; “full set” of controls indicates that all controls except years of experience were used.

Table 5.4 Union versus professional association (variable selection based on classification trees; full sample)

Independent variable	Model I			Model II		
	Coefficient (standard error)	Chi ²	P-value	Coefficient (standard error)	Chi ²	P-value
Mgmnt neg	0.964 (0.274)	12.34	<.001	0.881 (0.244)	13.02	<.001
Prof dev	-1.032 (0.250)	17.09	<.001	-0.909 (0.221)	16.90	<.001
Protest	0.943 (0.216)	19.06	<.001	1.312 (0.194)	45.68	<.001
Job sec	0.579 (0.233)	6.17	.013	0.869 (0.213)	16.59	<.001
Coop	-0.601 (0.249)	5.83	.016	-0.743 (0.229)	10.56	.001
Prof jdg				-0.363 (0.198)	3.38	.066
Un eff	2.538 (0.273)	86.42	<.001	omitted		
Controls						
Unit dummies		yes			yes	
Demographic		partial set			partial set	
Goodness of fit		$p^* = 0.22$			$p^* = 0.24$	

Note: The goodness-of-fit statistic is explained in footnote 4.

more likely to believe that unions are effective, to give management negative ratings, to support protests, and to identify job security as a concern. Supporters of professional associations are significantly more likely to express interest in professional development, to prefer a cooperative approach with the employer, and to identify freedom to exercise professional judgment as a concern.

The next step in the analysis seeks to extend the search for significant relationships beyond the distillation facilitated by the classification tree methodology. An additional set of stepwise logistic regressions is constructed starting with the thirty-two variables potentially relevant to the question of organizational preference. The results are summarized in table 5.5; model III includes *unions effective* in the mix; model IV does not.

Results are consistent with those already described as all but one of the variables from models I and II are significant. Several additional factors also surface. Model III indicates that union advocates are significantly more likely to identify staffing and workload as important issues and to endorse appeals to government agencies to address workplace concerns. Those who prefer professional associations are significantly more likely to be concerned about potential loss of individual freedom and to endorse petitions

Table 5.5 **Union versus professional association (variable selection based on stepwise regression)**

Independent variable	Model III			Model IV		
	Coefficient (standard error)	Chi ²	P-value	Coefficient (standard error)	Chi ²	P-value
Mgmt neg	0.841 (0.281)	8.95	.003	0.772 (0.251)	9.48	.002
Prof dev	-1.192 (0.266)	20.03	<.001	-1.062 (0.237)	20.02	<.001
Protest	1.064 (0.247)	18.53	<.001	1.290 (0.201)	41.19	<.001
Job sec	0.483 (0.244)	3.93	.048	0.895 (0.234)	14.68	<.001
Coop	-0.652 (0.259)	6.33	.012	-0.810 (0.236)	11.78	<.001
Un eff	2.600 (0.283)	84.45	<.001	omitted	omitted	omitted
Wrkld	0.690 (0.273)	6.38	.012	0.598 (0.242)	6.09	.014
Govt	0.914 (0.247)	13.67	<.001	0.925 (0.225)	16.87	<.001
Petn	-0.484 (0.271)	3.19	.074			
Indv Fr	-0.542 (0.239)	5.14	.023	-0.583 (0.215)	7.37	.007
Meet Mgmt				-0.778 (0.342)	5.17	.023
Info				-0.591 (0.333)	3.16	.076
Controls						
Unit dummies		yes			yes	
Demographic		partial set			partial set	
Goodness of fit		<i>p</i> * = .87			<i>p</i> * = .46	

Note: The goodness-of-fit statistic is explained in footnote 4.

as a way to address workplace concerns (presumably as a more dignified alternative to protests). Model IV reinforces the significance of workload, individual freedom, and appeals to government and also detects two additional variables associated with preference for professional associations—a heightened interest in meeting with management to discuss policies and a tendency to view employee organizations as a source of information.

The inductive statistical techniques used to construct classification trees and regression models have highlighted a total of sixteen variables that help distinguish between those professional and technical workers who prefer unions and those who prefer professional associations. Although different approaches yield somewhat different results, the stories that emerge

are extraordinarily similar. Supporters of unions tend to focus on terms and conditions of employment and workplace rights; they are drawn to direct action and aggressive organizations. Advocates for professional associations, on the other hand, appear to be more interested in occupational matters and individual control; they are drawn to organizations that seek influence through cooperation and information sharing.

In spite of the statistical contrasts, there clearly is substantial overlap in support for these two organizational forms. As noted earlier, many professional and technical workers who fit the profile of advocates for professional associations ultimately support union organizing campaigns. Similarly, detailed exploration of the survey responses of union supporters indicates that they too appreciate many of the apparent attributes of professional associations. And yet, questions remain regarding these two options. Are they mutually exclusive organizational forms? Are they viewed as substitutes or compliments by those who purchase their services? In order to gain a more complete understanding of the character of professional associations and thereby lend texture to the comparison, the authors gathered descriptive information on a broad range of professional associations and conducted in-depth interviews with key staff at many of them. The next section summarizes that research.

5.5 The Enterprise of Professional Associations

Professions achieve their standing not solely because of inherent qualities of the work, but also as a product of intentional collective effort among practitioners to elevate the social and labor market status of the occupation.⁷ Professional associations are essential to the process of establishing, maintaining, and enhancing professional identity (Ritzer and Walczak 1986). In the early stages of professionalization, a new association typically adopts a strong code of ethics that spells out the expectations of professional behavior and emphasizes service to the public. Based in part on its code of ethics, the association strives to promote a dignified public image for the profession. Simultaneously, it seeks to erect barriers to entry by establishing certification standards (either generally for the profession or for areas of specialty practice), typically through political action designed

7. Unless otherwise referenced, this section is based on documents gathered directly from selected professional associations and from interviews with key national staff members of these organizations. A broad range of associations were selected for study, including several from health care, engineering, and education plus an assortment of others including accountants, architects, social workers, librarians, and golf professionals. A special effort was made to include several associations of technical workers with modest educational requirements. A complete list of associations and interviews is available from the authors. Summary data has been obtained from the American Society of Association Executives, confirming that the information gathered on these associations fits the pattern for comparable organizations (American Society of Association Executives 1996).

to influence state licensure requirements. Ultimately most associations address scope of practice, attempting to delineate the expertise and competence of their members from those of related occupations.

Initial entry into a profession is tied, at least informally, to holding a relevant college degree; this expectation is often a prerequisite for full membership in the relevant association. In addition, successful performance on a licensing exam may be required in order to qualify for the legal right to practice. In some occupations, states establish additional formal requirements that must be met in order to retain licensure. Although national standards for a profession are not unusual, licensing and certification requirements normally are the province of state governments, and there may be substantial variation.⁸ Some associations participate in certification directly, and all maintain working relationships with agencies established to confer certification or licenses to those in practice. In this regard, professional associations monitor relevant legislation at the federal and state levels and promote regulations that protect their members' right to practice and that uphold quality standards. In those professions where state regulations include continuing-education expectations, associations offer programs to help meet those requirements.

Professional association members are attracted to events and publications that enhance their own knowledge and earning power by offering access to certification and state-of-the-art information. In those professions and states where licensing and certification are optional, the practitioners' desire for information is often satisfied by technical publications and annual conferences. In those jurisdictions with licensing exams and particularly where there are ongoing certification requirements, professional development takes on an elevated level of importance. The extent and type of continuing education offered by professional associations are largely determined by these intertwined factors of member interest, requirements for entry into practice, and formal procedures for relicensure and recertification.

In addition to professional development activities, most associations offer consumer services such as credit cards, home mortgages, financial advice, and travel bookings and discounts. These services are provided by vendors, and apparently are of only secondary interest to most members. However, associations whose members are in private practice or health care report that malpractice liability insurance is a very popular benefit.

In the context of the changing nature of professional work described early in the paper, many associations are in the process of expanding the labor market services they provide, particularly those related to job search; employment listings in association newspapers and on web sites, salary profiles of members in specific geographic areas and subspecialties, and career counseling services are all common. Some engineering associations

8. For an overview of key issues related to occupational licensing, see Kleiner (2000).

are in the process of setting up a portable pension plan in response to increased turnover and labor market mobility. Nonetheless, associations are reluctant to interfere in the workplace directly or in any way encroach upon employer authority. In most associations, employers are accepted as members and may even encourage their employees to join. At all levels, associations maintain cordial relations and often close collaboration with key employers, especially regarding professional development programs.

With growing concern among professional workers about their labor market status and the changing nature of work, associations are experiencing some pressure to be more proactive. A few publish professional employment guidelines that amount to standards of employer conduct. Others have attempted to open a dialogue with employers. But these efforts are merely suggestive and have no enforcement mechanism. Even such modest initiatives can create problems that most associations would rather avoid. As one association executive explained to us in a conversation that was not for attribution, “We have to be careful not to get our members crosswise with our companies.”

Most professional associations are content to focus on what they do best and serve the professional interests of their individual members. They are reluctant to interfere in the workplace and for the most part eschew union like activity. A few associations with large numbers of members who are represented by unions in the public sector actually endorse union representation, although they do not provide collective-bargaining services themselves. And with the American Medical Association’s new attention to collective-bargaining options, some associations in health care are reconsidering historic opposition to unions.

By in large, though, unions and professional associations continue to operate in different realms. The research on professional associations summarized here confirms their importance in promoting specific professional and technical occupations. It also points to a clear link between professional development activity and the labor market; indeed, in many occupations, continuing education is necessary to maintain status as a licensed practitioner. By all indications, the pressure on these associations to address labor market deficiencies and to defend professional integrity and authority is increasing. This phenomenon deserves monitoring and further in-depth analytical attention.

5.6 The Potential for Institutional Convergence

In the broad context of their decline in the private sector, unions must address a number of specific challenges if they are to retain their role as influential economic institutions. Perhaps the most important is to determine how to extend membership and influence in labor markets for professional and technical workers. It is unlikely that demand for union

representation among these workers will increase without some affirmative action on the part of labor organizations to reconfigure themselves, either by offering a substantially altered set of services or by adopting a markedly different strategic approach. Simply appealing to latent demand for traditional union representation is extraordinarily unlikely to produce a groundswell of interest.

The statistical analysis presented here facilitates inference regarding the type of labor market institution preferred by professional and technical workers. To recap the descriptive overview of survey responses, these workers are satisfied with their jobs, display long-term attachment to the occupation, and are interested in protecting individual autonomy at work. At the same time they want to enhance their role in decision making, preferably through dialogue with management in a cooperative framework rather than through confrontation.

This combination of attitudes does not neatly match existing institutions. Unions offer voice at work but promote collective rather than individual influence and often rely on adversarial tactics. Professional associations offer opportunities to enhance individual expertise and promote the profession, often in collaboration with employers, but do not address workplace concerns or promote influence on the job. Although employee involvement programs seem to fit some of these attitudes, they do not promote occupational concerns and (among those surveyed) are not viewed as a preferred institutional form.

The detailed comparison between those who align with unions and those drawn to professional associations helps guide the analysis. The classification trees and stepwise logistic regressions tell a story on behalf of the professional and technical workers. Union advocates want to address working conditions, wages and benefits, workloads, and job security. They hold relatively negative views towards management, are concerned about fair treatment, and will participate in protests to voice their opinions. Supporters of professional associations, on the other hand, place priority on exercising professional judgment at work and want to protect individual freedom. They are attracted to organizations that provide relevant information and professional development opportunities. At the same time they do have workplace concerns but prefer to address them by meeting with management in a cooperative spirit.

The characteristics of professional associations described in the preceding section are largely consistent with the factors associated with preference for professional association that emerge from the statistical analysis. There are a few factors, however, that go beyond the traditional sphere of associations. Especially important is a desire to address workplace concerns directly by meeting with management to discuss policies. Though the absolute difference is small, it is particularly notable that advocates of professional associations are significantly more interested in meeting with

management than are union supporters. Unions do provide mechanisms to address workplace concerns with management; professional associations do not. This indicates a potential for unions to appeal to these workers by offering them voice and simultaneously raises questions about professional associations' resistance to assuming such a role. The message is reinforced by the evidence in one of the statistical models that workers who prefer professional associations are more likely to sign petitions to address workplace concerns. Although a less-assertive stance than the support for protests from union adherents, this willingness to petition the employer again would not fit the culture of most professional associations.

Given the active promotion by associations of government intervention in the context of licensing and certification requirements, it is also notable that union advocates are significantly more likely to endorse appeals to government agencies as a way to address workplace concerns. The model developed by Weil (chap. 1 in this volume) facilitates exploration of this apparent contradiction. Weil describes how labor market institutions can affect workplace regulation, distinguishing between actions to influence regulations and those that affect enforcement. He concentrates on the latter in his model.

The statistical results linking union supporters with appeals to government agencies are consistent with Weil's (chap. 1 in this volume) formulation, which argues that agents such as unions can help resolve the public goods problem inherent in workplace regulation. The fact that it is union supporters that embrace this type of activity is consistent with the overall profile of these workers based on the survey. They are relatively more concerned about terms and conditions of employment, more negative toward management, and more vigilant about fair treatment. These all match their concern for protecting rights in the workplace, which can be addressed by unionization, by appeals to appropriate government agencies, or by both.

Based on survey responses, those who prefer professional associations are less likely to address workplace issues by appealing to government agencies. This is not inconsistent with the political role of professional associations because their focus is on actions to influence regulations regarding *access* to the labor market rather than on enforcing rights in the workplace. To return to Weil's (chap. 1 in this volume) model, by concentrating on enforcement he omits the potential role embraced by associations. Professional and technical workers, though less concerned with fair treatment and workplace rights, may nonetheless be quite supportive of actions that enhance their labor market position. This is clearly consistent with interest in professional development because it offers the potential to increase productivity and market value.

The future of unions and, indeed, of professional associations may lie in the nexus between these two organizational forms. Unions are capable of asserting collective voice in the workplace to exercise rights and promote

enforcement of regulations. However, they can play this role only if they gain majority status, a prerequisite under U.S. labor law for establishing the union as bargaining agent. Achieving majority status among professional and technical workers may well depend on the union's ability to attract those who want a voice at work but whose preferences are otherwise more closely aligned with the package of services offered by professional associations. This implies more attention to professional or occupational issues both on the job and in the broader labor market, initiatives to provide access to professional development opportunities, and perhaps a modified demeanor vis-à-vis employers. Professional associations are likely to face pressure simultaneously to move toward unions, especially if professional and technical workers continue to express concern about limitations on their ability to exercise professional judgment.

Professional and technical workers are interested in career development and education, but they are also concerned about what happens on the job. They want information about their profession but also about their employer and their workplace. They are attracted to organizations that serve as advocates, but they also seek a forum to speak out themselves and the ability to control the content of their work. There is a natural tension between the growth in professional and technical employment and the deprofessionalization of the work. In the context of this tension there are incentives for unions and professional associations to find common ground. As labor markets induce convergence, they create the potential for the emergence of institutions capable of addressing the multifaceted needs of the expanding professional and technical workforce.

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