The Legalization of the Workplace

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This study uses longitudinal data on nearly 300 American employers over the period 1955–85 to analyze the adoption of disciplinary hearings and grievance procedures for nonunion salaried and hourly employees. Hypotheses are developed from an institutional perspective that focuses, first, on uncertainty arising from government mandates concerning equal employment opportunity and affirmative action and, second, on the role of the human relations professions in constructing employment-relations law and prescribing models of compliance. Event-history techniques are used to test these hypotheses against competing arguments concerning the internal structure and labor market position of employing organizations. Results on all outcomes strongly support the institutionalist model.

INTRODUCTION

Over the past few decades, workplace due-process mechanisms such as grievance procedures have spread beyond their traditional domain among unionized, blue-collar industrial workers and have increasingly been applied by employers to nonunion and salaried employees (Selznick 1969, \[\text{1}\])

1 The research reported here was supported by National Science Foundation grant SES-8511250; results and interpretations are solely the responsibility of the authors. We thank Keith Allum, Jessica Torres, and Roberta Stich for assistance in running the survey and coding data and Bill Bielby, Philip Selznick, Stephen Mezias, the members of the UCSB Comparative Institutions seminar, and the AJS reviewers for valuable comments on the manuscript. An earlier version was presented at the 1990 meetings of the American Sociological Association. Direct all correspondence to John R. Sutton, Department of Sociology, University of California, Santa Barbara, California 93106.

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0002-9602/94/9904-0003$01.50

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p. 91; McCabe 1988, chap. 2; Ewing 1989). There are a number of provocative speculations about why this has occurred. The business literature treats legalization as a rational adjustment to an increasingly white-collar, highly trained labor pool. The workers in this pool have valuable and portable skills; given the opportunities for horizontal mobility, they expect a sense of participation and citizenship in their work roles, and they are disinclined to tolerate traditional autocratic management regimes (see, e.g., Ewing 1982). Similar arguments have been framed within a transaction-cost framework by Williamson (1985, 1986). Critical theorists such as Edwards (1979) suggest that legalization is part of a more general strategy of formalized governance designed to enhance managerial control over workers and to forestall unionization.

These arguments treat legalization as a special case of bureaucratization, and in so doing, they may underestimate the significance of workplace legalization and misunderstand its origins. Philip Selznick argued over 20 years ago that legalization involves an important transformation in both the role of the employee and the nature of the organization. To the degree that they have formal rights to question managerial decisions, employees are not just subordinates in a hierarchical authority relationship but may become members of an association (Selznick 1969, pp. 51–52, 67–68); legalization lays the groundwork for employment-qua-membership to become a “protectable status.” Selznick suggested that the extension of membership not only expands organizational boundaries in a quantitative sense, but also transforms it qualitatively into an “emergent polity” (pp. 26–32). In short, legalization signifies the transformation of the instrumental organization into an institution.

We proceed in the spirit of Selznick’s institutional analysis, but our approach differs from his in two ways. First, we focus exclusively on the causes of legalization rather than its effects. The second difference concerns levels of analysis. Selznick suggested that changes in the legal environment have opened the door to due-process governance, but he focused on pressures for legalization arising from within organizations. Following Edelman (1990), we argue that such pressures arise primarily from the institutional environment. We will develop a model that accounts for legalization in terms of a wider transformation in the relationships among the state, organizations, and individual citizens. In the late 1960s and early 1970s, national and state governments in the United States became more aggressive in ensuring employee rights through equal employment opportunity legislation, affirmative action regulations, and related court decisions (see Edelman [1990] for a thorough summary). Equal employment opportunity-affirmative action (EEO/AA) law did not mandate new governance procedures, but it raised tremendous uncertainty about the
legality of traditional employment practices. Faced with an apparently hostile legal environment, employers adopted due-process governance to cool out potentially litigious employees and demonstrate good-faith compliance with government mandates (Staudohar 1981; Soutar 1981). Since 1980, federal pressure for equality in the workplace has lessened. We show that this conservative shift has slowed the pace of legalization but not reversed the general trend.

We focus our analysis on the adoption of three specific due-process policies: disciplinary hearings, grievance procedures for nonunion, exempt (salaried) employees, and grievance procedures for nonunion, non-exempt (hourly) employees. We define these policies in more detail when we describe our data. For now it is enough to note that all three policies imply some formal dispute-settlement mechanism outside the routine chain of command, but that they all represent different levels of commitment to employee rights. Disciplinary hearings allow employees to defend themselves against punitive actions initiated by management. In contrast, grievance procedures are initiated by employees; when employers institute grievance procedures, they expose themselves to a potentially unlimited range of complaints.

THEORETICAL PERSPECTIVES ON LEGALIZATION
To provide a foundation for our analysis of legalization, we review three lines of theorizing about different aspects of organizations and their environments. The first concerns organizations' internal structures, the second, their task environments, and the third, their institutional environments.

Arguments about the influence of internal structure appear both in Selznick's institutional study of legalization (1969) and in rational closed-system theories of organizational structure. While the two sets of arguments are motivated differently, they generate hypotheses that are remarkably similar. Selznick maintained that larger and older organizations, and those more committed to equitable, rule-bound administration, are more likely to support lawlike norms. Consequently, we expect that size, age, and bureaucratization encourage the adoption of due-process governance mechanisms.

From a rationalist perspective, legalization is a special case and an extension of bureaucratization. Like Selznick, rationalists emphasize size and prior bureaucratization as incentives to further procedural formalization. Several early cross-sectional studies found larger organizations were more likely to elaborate procedural rules (Blau and Schoenherr 1971; Pugh, Hickson, and Hinings 1969). The argument here is that formalization permits large organizations to achieve economies of scale and reduce
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uncertainty. However, Edwards (1979) has contested efficiency arguments, arguing instead that personnel policies are motivated by the need for control. His research identified a cluster of personnel practices used in core firms that constitute a system of employment management he called "bureaucratic control." Under bureaucratic control, internal labor markets provide a formal mechanism for handling hiring and promotion decisions; their main effect is to motivate employees and minimize voluntary separations by promising workers regular career advancement. To Edwards, disciplinary hearings and grievance procedures further reinforce the organization's commitment to bureaucratic personnel decisions and long-term employment, thus we would expect them to appear where internal labor markets are well developed.

Open-systems rationalists treat workplace governance policies as adaptations to labor-market conditions. Economists maintain that labor turnover costs create a strong incentive for firms to implement elaborated governance mechanisms to stabilize employment (see Schlichter [1919] 1961). Williamson (1985, 1986) uses similar arguments in discussing the transaction costs associated with labor recruitment. In this view, the problem of labor turnover is exacerbated in industries where skills are not transportable between firms. Where skills are firm-specific, labor-replacement costs soar, owing to the need for specialized training (Doeringer and Piore 1971). Segmentation theorists argue that personnel practices reflect differences across industries in the social status of their respective labor pools: younger white males are more likely to be employed in core firms that offer high wages, promotion opportunities, fringe benefits, and personnel practices designed to minimize turnover; women, older workers, and minorities are disproportionately employed in peripheral firms where such incentives are lacking (Hodson 1978; Edwards 1979; Tolbert, Horan, and Beck 1980; Gordon, Edwards, and Reich 1982). Finally, both transaction-cost and labor-segmentation theorists offer arguments about the mediating role of unions. Williamson argues that nonunionized firms are likely to adopt purely internal grievance mechanisms as functional equivalents for the mediating role of unions (1985, chap. 10), and Edwards argues that core firms adopt bureaucratic control policies with the conscious intent of forestalling unionization (1979, p. 21). Either way, we would expect legalization to be most rapid among nonunionized organizations.

We use the term "neoinstitutional theory" to distinguish our approach from those we have just reviewed. Where closed-system rationalists view legalization as arising primarily from within organizations, we argue that it is drawn from the environment. Where transaction-cost and labor-segmentation models attend to the task environment, we are concerned more with the environment's institutional aspects. The argument of neo-
institutional theory is that formal organizational structure is, in varying degrees, a symbolic phenomenon, designed to demonstrate appropriateness and rationality rather than to achieve efficiency (Meyer and Scott 1983; DiMaggio and Powell 1983). In particular, the introduction of due-process governance mechanisms dramatizes a commitment to equity and justice, independently of how those mechanisms actually function.

In more formal theoretical terms, we see two distinct, but interactive, processes driving legalization in the workplace. First, we draw on DiMaggio and Powell's (1983) argument that the state exerts "coercive" pressure on organizations to adapt their structures to institutionalized norms. There is now abundant evidence that the American state has had a powerful influence on employment-relations policy (Baron, Dobbin, and Jennings 1986; Baron, Jennings, and Dobbin 1988; Dobbin 1992). Our analysis will focus on federal equal employment opportunity and affirmative action (EEO/AA) policy, as well as on key court decisions at the state level, as salient parts of the institutional environment. But legalization has not been a direct result of government mandates, and we are careful not to overestimate the state's coercive influence in this area. The federal government declared its intent to eliminate employment discrimination in Title VII of the 1964 Civil Rights Act and in Executive Order (EO) 11246 (issued in 1965), which required government contractors to take "affirmative action" to assure the employment of minorities. But as Edelman (1992, pp. 1536-41) has argued in detail, the coercive power of these policies has been weakened by their ambiguity concerning standards of compliance, their emphasis on procedural remedies rather than substantive outcomes, and their lack of effective enforcement mechanisms. The law has confronted employers with broad imperatives for fairness but has raised uncertainty about the legal consequences of employers' actions. The procedural interpretation of EEO/AA mandates by courts and administrative agencies has given employers the initiative to develop their own compliance strategies and rewarded them for gestures of compliance made in good faith.

We argue that, in recent decades, due-process governance mechanisms have become institutionalized as partial solutions to problems of legal uncertainty raised by governmental antidiscrimination initiatives. Some impetus for this argument comes from Edelman's (1990) finding that adoption of grievance procedures among California employers accelerated after the passage of the 1964 act. Here we offer a more detailed specification of variation in federal pressure over time. Our reading of the policy literature and of our own data suggests that it is unlikely that the Civil Rights Act by itself influenced rates of legalization, thus 1964 may not be the appropriate take-off point. Aside from its inherent ambiguity, Title VII was impossible to implement on a broad scale because
it required individual workers to file suit before enforcement actions could be undertaken (Lempert and Sanders 1986, pp. 378–79; Edelman 1992, pp. 1539–40). Executive Order 11246, issued the following year, had somewhat stronger enforcement mechanisms, but enforcement was “virtually nonexistent” for some time (Edelman 1992, p. 1541). By 1972, however, actions by all three branches of government had increased the potential for enforcing Title VII and EO 11246. In 1970, the Office of Federal Contract Compliance, the agency charged with enforcing EO 11246, issued Order 4, which required federal contractors to file workforce statistics and affirmative-action plans. In 1971, the Supreme Court ruled in Griggs v. Duke Power Company that no intent to discriminate had to be shown in suits against employers until Title VII; this position was reiterated in Albemarle Paper Co. v. Moody, decided in 1975. In 1972, Congress amended Title VII to give the Equal Employment Opportunity Commission (EEOC) authority to initiate suits against employers in federal court. Significantly, many policies in this period markedly broadened the government’s commitment to eliminate sex discrimination (Edwards 1973; Hellam 1973). Revised Order 4, issued in 1971, required government contractors to include women as well as racial minorities in their affirmative action plans. The Educational Amendments of 1972 altered the Equal Pay Act of 1963 to outlaw wage discrimination based on sex and added Title IX, prohibiting gender discrimination in education, to the Civil Rights Act. These actions increased the breadth and strength of the federal EEO/AA mandate but did not reduce its diffuseness or ambiguity. The enforcement climate changed again in 1980, the year Ronald Reagan was elected president, ushering in a period of probusiness, anti-civil rights enforcement policy (Days 1984, pp. 313–19). Thus it seems likely that pressure for adoption declined from 1980 at least through 1985, which marks the end of our observations.

Our second line of argument concerns the specific mechanisms by which due-process governance has been institutionalized as a legitimate response to the uncertainty of employment-relations law. Here we argue, again following DiMaggio and Powell, that “normative” pressures for legalization are exerted through the boundary-spanning activities of personnel management professionals. The general role of such professionals in diffusing models of governance has been noted for some time (e.g., Vollmer and McGillivray 1960; Selznick 1969, p. 91). More recently Edelman, Abraham, and Erlanger (1992) have documented the prominent role played by personnel experts and labor attorneys in constructing models of compliance with legal mandates. The putative role of such professionals is to package and transmit objective information to the employer about the labor market, including its legal aspects. But Edelman and her colleagues show that these professionals actively interpret legal doc-
trine—typically overstating the legal threat to employers—and disseminate recipes for compliance as a means for enhancing their prestige, autonomy, and authority within organizations.

Our review of the practitioner literature shows that personnel experts have prescribed due-process governance as part of their EEO/AA compliance strategies. These experts offer three arguments that are noteworthy. First, in articles, they consistently emphasize the complexity and ambiguity of EEO/AA law. Some writers attribute this ambiguity to a perceived contradiction between nondiscrimination (as mandated in Title VII) and affirmative action (e.g., Marino 1980), and others attribute it to confusing compliance requirements across different enforcement agencies and levels of government (e.g., Higgins 1976). Second, they argue in the literature that executives' uncertainty about compliance standards created a perceived need to upgrade the personnel function within their organizations (e.g., Froehlich and Hawver 1974; Giblin and Ornati 1974; Garris and Black 1974). We cannot say whether personnel departments, in fact, became more powerful; our point here is that personnel experts sought to use the threat of EEO/AA sanctions to increase their own prestige. Third, and most important for our argument, in the professional literature procedural fairness is emphasized as an important element in an effective compliance strategy. For Gery (1977, p. 203), compliance-oriented personnel reforms must include "establishment of a grievance system... to assure that all employees have an opportunity to resolve complaints... without having to appeal to external organizations such as the EEOC." Youngblood and Tidwell (1981, p. 32) argue that, to protect themselves from claims of unjust discharge under Title VII or other legal mandates, "enlightened personnel management typically embraces a formal grievance procedure as a means to ensure fair and consistent treatment of all employees." On the basis of data from a poll of federal affirmative-action compliance officers, Marino (1980, p. 32) recommends that employers "establish a formal EEO complaint procedure within the facility" in order to demonstrate good faith and sensitivity to the problem of discrimination. The importance or due-process governance may have increased as the problems of sexual discrimination, and more specifically sexual harassment, became more salient in the 1970s (Linenberger and Keaveny 1981).

The neoinstitutional model thus emphasizes the joint effects of state-induced uncertainty and expert prescriptions for governance. We offer three empirical arguments that will serve as tests. First, it seems likely that the pace of legalization has been influenced by the apparent rise and decline of government pressure for EEO/AA enforcement. Second, following several earlier studies (Dobbin et al. 1988; Edelman 1990, 1992; Dobbin et al. 1993), we suspect that an organization's proximity to the
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public sphere is an important determinant of its perceived vulnerability to antidiscriminatory norms and hence its receptivity to legalistic models of governance. Third, we test whether these models of governance are adopted more readily by organizations that are directly linked to the personnel professions.

Our analysis builds on, and seeks to extend, two earlier studies of workplace legalization, both from a neoinstitutionalist perspective. Dobbin et al. (1988) used a convenience sample of 52 California employers to analyze two outcomes: the number of different grievance procedures in place in each organization and grievance-procedure complexity (measured as the average number of steps across all grievance mechanisms). In cross-sectional analyses, they found that the number of grievance procedures increased with organizational size and employees unionization; complexity was associated only with size. It is interesting that this study found no difference between public and private employers on either outcome. Edelman's (1990) study used the same data but reported more sensitive dynamic analyses of the adoption of grievance procedures for nonunion employees. Edelman found that nonunion grievance procedures diffused more rapidly among large organizations, organizations with formalized personnel offices, and organizations that were closer to the public sphere; time-period tests showed an acceleration in adoption rates after 1964. This study goes beyond these early efforts in two ways. First, our empirical base is broader and more trustworthy: instead of using a small convenience sample, we draw on a relatively large sample of employers that is systematically stratified across several industrial sectors and regional legal environments. The second advance concerns the theoretical implications of our analysis. These studies have successfully established the plausibility of an institutional account of legalization but have not tested it against competing arguments. This study offers a more detailed institutional model and contrasts it empirically with dominant rationalist explanations focusing on the effects of organizational structure and labor-market conditions.

SAMPLE, DATA, AND ESTIMATION

The primary data for this study are drawn from a survey of 279 establishments. The sample includes public and private employers in the states of New Jersey, California, and Virginia. We stratified our sample by states to make our data collection more efficient and, on the basis of our reading of statutes, court decisions, and literature on employment relations law (e.g., Curtis, Simmons, and Armstrong 1981; Jensen 1988; Maltby 1990, p. 53; Hawkins 1988, p. 525), chose these states in order to assure variability in legal climates. California is the most progressive
state in our sample because of its unique combination of legislative and judicial activism. Like many other states, California has essentially extended federal equal employment opportunity guarantees to employees not covered by federal legislation, and California courts have been the most aggressive in the nation (with the possible exception of those in Michigan) in protecting employees from wrongful discharge. New Jersey's employment statutes are similar to California's, but the judiciary there has not been aggressively pro-employee, and Virginia is a right-to-work state with low levels of both legislative and judicial support for equal employment opportunity and employee rights. Thus we expected that California employers would be most responsive to due-process pressures and those in Virginia the least responsive, with New Jersey employers in the middle.

Within states, we chose a stratified random sample of establishments from 13 sectors of the economy. Private firms were sampled randomly within states, using the Dun and Bradstreet Million Dollar Directory (1985), from the following industries: publishing, chemicals, machinery, electrical manufacturing, transportation, retail trade, and banking. Hospitals were sampled from the directory of the American Hospital Association (1983). Nonprofit firms were chosen from the Encyclopedia of Associations (1985). Official and commercial telephone directories were used to sample public agencies at the federal, state, county, and municipal levels within each state. For most of the private firms, an estimate of the current number of employees was available from directories, and we excluded establishments with fewer than 50 employees. Size data were not available in advance for public agencies; we either queried the agencies by telephone or discarded responses from establishments that were too small.

Information was obtained through a mail questionnaire, which was typically filled out by a personnel director. The questionnaire asked a number of questions about organizational structure, demographics, employment-relations policies, and links to other organizations over the period 1955–85. On the basis of face-to-face interviews conducted in our pilot study, we are fairly confident of the information available from this source. We contacted a total of 620 organizations, and 386 questionnaires were returned. Of these, 86 were unusable because the organizations never met our minimum size criterion, which left a total of 300 valid responses. Our response rate of 48% compares favorably with those in other organizational studies: Blau et al. (1976) report a rate of 36%.

\[footnote{2} Aldrich et al. (1988) offer thoughtful insights on the limitations of such sources as a basis for sampling organizations. They conclude in particular that these sources are likely to underrepresent newer forms of organizations.\]
Lincoln and Kalleberg (1985) report a rate of 35%, and Edelman's (1992) recent Gallup-conducted survey achieved 54% (for a detailed discussion of the difficulties associated with sampling organizations, see Aldrich et al. [1988] and Kalleberg et al. [1990]).

It is important to mention a limitation in our sample that might affect the interpretation of our results. Since we sampled only organizations that were alive in 1985, we have no information about those that merged or were dissolved before that date. If the adoption of disciplinary hearings or grievance procedures is related to organizational mortality, this omission creates selection bias. We think this is unlikely because these are relatively small and peripheral changes in organizational structure, and they imply no alteration of core technologies, functions, or markets that would directly affect viability. We cannot prove this argument, however, without data on no longer existing organizations, which are practically unobtainable.

Three of the items on our questionnaire provide outcome variables for our analysis. We asked employers when, if ever, they first (1) initiated disciplinary hearings for employees, (2) initiated formal grievance procedures for nonunion, exempt (salaried) employees, and (3) initiated formal grievance procedures for nonunion, nonexempt (hourly) employees. We also asked when, if ever, they discontinued each of the above procedures; as it turns out, none of the employers in our sample ever revoked these, once they were put into place.3 Our pilot interviews convinced us that all of the terms used in the questionnaire, while perhaps too technical for a lay respondent, would be immediately recognized by any executive who was routinely involved in personnel matters. Special problems were raised by our queries about grievance procedures. We focused on mechanisms that had some minimal level of procedural formality, but because of the wide range of variation across firms, it was impractical to ask for detailed information over time on the structure of grievance mechanisms.4 Use of the word "formal" in the questionnaire items insured, at

3 This observation may raise questions about our reliance on organizational memory, since it suggests that respondents may have forgotten the existence of any policies not in force at the time of the survey. We, on the contrary, regard it as a valid finding, since respondents often reported the discontinuation of policies and practices—such as time-and-motion studies, time clocks, dress codes, suggestion boxes, and annual bonuses—that are characteristic of more traditional management regimes.

4 Grievance procedures vary, e.g., in the number of steps involved, whether the first step is to report the grievance to an immediate superior or to an off-line official, whether—and at what point—the employee is entitled to representation, whether his or her representative may be another employee or an outside attorney, and whether the last step involves outside arbitration. See, e.g., Dobbin et al. (1988), Ewing (1989), McCabe (1988).
a minimum, that respondents would identify written policies. We also sought to assure that respondents did not report so-called open-door grievance policies as formal grievance procedures. Under these policies, employees are told simply to take their complaints to a supervisor. While employers often speak of these as grievance procedures and, in some cases, they are written into employee handbooks, they involve no structural changes and grant no rights to employees. To encourage fine distinctions, we included a question on open-door policies in sequence with the questions on grievance procedures.

We sought also to capture changes in covariates over the history of each organization. Thus we asked about the timing of a wide range of possible structural changes, such as the creation or dissolution of personnel offices. For continuous variables, such as the number of employees, we asked for estimates from 1955, 1965, 1975, and 1985. After coding, these data were transformed into annual observations, yielding a data set with an $N$ of 6,701 organization/year spells. For qualitative indicators of organizational structure, it was straightforward to recode responses into time-varying categorical variables. Annual values of continuous variables were estimated using linear interpolations between reported decennial figures. We are convinced that this method yielded estimates that are as detailed as organizational memory would permit; our interpolation strategy is obviously imprecise, but unbiased. We supplemented this organization-level dataset with additional industry-level data published by the Bureau of the Census (U.S. Department of Commerce 1986) and the Bureau of Labor Statistics (U.S. Department of Labor 1975–87). Wherever they were available in these sources, we gathered separate sets of industry-level data for each state. The data to be used here include annual indicators of wages paid to employees (by industry) and labor-force characteristics (by industry and state).

We use these data to analyze the adoption of due-process governance mechanisms within an event-history framework (Tuma 1979). Thus we focus not on the existence of disciplinary hearings and grievance procedures, but on their adoption within a given spell. The adoption of each legalization measure is an event, and the dependent variables are the

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5 For our data on organizational size, we took special steps to capture variation that was not linear across decades. Respondents were asked whether there had been any large changes in the number of employees; if so, how many and in what years (respondents could indicate as many as four such shifts, none reported more than two). These shifts were worked into our interpolations by assuming linear change on either side of a reported rise or drop.
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rates of adoption, which may vary both across organizations and over time. Adoption rates cannot be observed directly, but we can get a sense of the temporal path of the adoption process by examining hazard plots. Figures 1–3 show plots of integrated hazard functions for the adoption of disciplinary hearings and grievance procedures for nonunion, exempt and nonexempt employees. These figures show a fairly common pattern. According to our data, in 1955, 13% of employers had created disciplinary hearings, but only 4% had created grievance procedures for nonunion, exempt employees, and 5% had created grievance procedures for nonunion, nonexempt employees. By 1985, the figures were 51%, 49%, and 47%, respectively. Closer examination of these figures suggests that adoption rates may have accelerated in the early 1970s and perhaps slowed a bit after 1980. For now, we treat the adoption process as time-invariant, and specify a conventional log-linear model:

$$\log r = \Phi x.$$  \hspace{1cm} (1)

In this equation, \(r\) is the rate of adoption, \(x\) is a vector of variables, and \(\Phi\) is a vector of coefficients. Later we will offer specific hypotheses about time-period effects and offer a simple extension of this model.

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**Fig. 1.**—Integrated hazard function: adoption of disciplinary hearings, 1955–85 (with 95% confidence intervals).
FIG. 2.—Integrated hazard function: adoption of grievance procedures for nonunion exempt employees, 1955–85 (with 95% confidence intervals).

FIG. 3.—Integrated hazard function: adoption of grievance procedures for nonunion nonexempt employees, 1955–85 (with 95% confidence intervals).
EMPIRICAL ANALYSIS

Hypotheses and Indicators

We present hypotheses that correspond to the theoretical approaches discussed earlier, focusing first on the internal bureaucratic structure of the organizations, second, on the task environment, conceptualized here in terms of labor market structure, and third, on the institutional environment.

Indicators of internal structure include organizational size, age, and the development of internal labor markets (ILMs). Size is measured as the (log) number of employees; we expect positive effects on adoption rates. Age, measured in (log) years since founding, yields contrary hypotheses; while Selznick (1969) would predict that older (hence more bureaucratized and institutionalized) organizations would generate more formal procedures, Stinchcombe (1965) would expect structural innovations to appear mainly among new (hence less institutionalized and more flexible) organizations. Existence of ILMs serves as an indicator of bureaucratic control mechanisms already in place. It is measured using an index, ranging in value from zero to eight, that shows whether, in any given year, the employer used written job descriptions, tests for employment, promotion tests, salary classifications, performance evaluations, job ladders, centralized hiring, or centralized promotion and discharge.

We use three measures of labor market structure to test the effects of the task environment. First, we use a binary variable coded "1" for unionized employers and "0" for nonunionized employers to examine the role of unions as labor market mediators. According to Williamson (1985) and Stinchcombe (1965), adoption of grievance procedures for nonunion employees is likely to be more rapid among organizations without union contracts; disciplinary hearings may potentially appear as a result of unionization. Second, an industry-level measure of average annual wages per employee provides a direct indicator of the cost of labor; indirectly, it represents the potential for high turnover and dependence on firm-specific skills. Arguments from transaction-cost and segmentation theories would predict higher rates of legalization in industries with high average wages. Third, we use the percentage of female workers, measured within industries by state, as an indicator of peripheral labor markets. As segmentation theorists might expect, our early tests showed that percentage female, percentage black, and percentage older than 65 years are all highly intercorrelated; percentage female was most strongly associated with legalization, however, and is used here as a proxy for peripheralization generally. The hypothesis is that industries with higher percentages of female workers are more resistant to legalization. Two final comments about measurement: first, the wage measure has been con-
verted to constant dollars (in units of $1,000). Second, both industry-level variables, when coded as annual figures, showed secular increases across all industries during the 30 years covered by the study. We have de-trended the data by calculating annual changes in each.

Our model of the institutional environment suggests that legalization is the emergent result of two interactive processes: diffuse coercive pressure for fair governance emanating from the state and the promotion of normative models of compliance by professional employment-relations specialists. We argue, first, that organizations' proximity to the public sphere influences their vulnerability to pressures for legalization. One hypothesis is that public agencies are more inclined to legalization than private firms. This simple dichotomy may appear tautological, suggesting only that government obeyed its own mandate, but we think the story is more complicated. We agree with Edelman (1992) that pressure for legalization has emanated primarily from the federal government and, more specifically, from particular agencies at the federal level. But the American state is remarkably fragmented and disarticulated (Skowronek 1982; Hamilton and Sutton 1989). The EEO/AA law is no more transparent to government agencies than it is to private firms; public and private employers alike have been forced to construct strategies of compliance. Our model suggests that public agencies were in a privileged position to develop persuasive compliance strategies but that their compliance was by no means automatic.

We supplement this argument with two hypotheses about the state's influence on organizations in the private sector. Private firms that contract with the federal government are dependent on the state financially and fall under federal affirmative action reporting requirements; thus we expect them to be more prone to legalization than other firms. Nonprofit associations are considerably closer to the public sphere than for-profit firms because of their special legal status and public-purpose charters. Because they occupy a sectoral space "between states and markets" (Wuthnow 1991; see also DiMaggio 1986), they are also probably more exposed to institutionalizing pressures emanating from the state and thus more likely to adopt due-process governance.

If this were not the case we would expect legalization to diffuse downward, from the federal government to state and local agencies. In parallel analyses we tested for such differences; results showed no systematic patterns—if anything, local government agencies were most receptive to legalization—and models were not improved by this more complicated specification. As we would expect, legalization moved across levels of government at about the same pace (tables are available from the first author). Note also that, in these data, nonprofit associations were coded as private firms, and hospitals were coded as public or private depending on ownership status as reported by the American Hospital Association (1983).
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We approach the state’s role in another way by examining interstate differences in adoption rates. Early tests of interstate effects showed, as we expected, that legalization was most rapid in California, where courts have been most critical of the traditional employment-at-will doctrine, followed by New Jersey and Virginia. But by far the greatest variation is between California and the other two states; here we focus on California as a uniquely uncertain and often hostile legal environment for employers and hypothesize that employers there had higher rates of adoption. Location in the public sector, federal contractor status, nonprofit status, and location in California are all measured using binary (0,1) variables.

We offer two hypotheses concerning the influence of employment-relations professionals. It is likely that organizations that have formal personnel offices and those that retain outside labor attorneys have been more likely than others to incorporate legalistic models of governance. The presence of personnel offices and linkages to labor attorneys are both indicated by binary (0,1) variables.

The last institutional hypotheses are concerned with temporal changes in federal EEO/AA policy. We have argued that federal pressure increased after 1972 and declined after 1980. To test this argument, we estimated time-period models specified in the following way:

\[ \log r_p = \Phi x + \Theta_p. \]

Here the subscript \( p \) refers to one of three periods (1955–72, 1973–79, or 1980–85). We hypothesize that the rate of adoption for disciplinary hearings and both types of grievance procedures was higher in the middle period than before or after—to state it more formally, we hypothesize that \( \Theta_1 < \Theta_2 > \Theta_3 \).

In what follows, we use identical modeling strategies to report results on the three legalization measures. In each case, the first step in the analysis is to test rationalist arguments concerning internal structure and labor market conditions. In the second step, we add the measured covariates from the institutionalist model. Both of these models address population heterogeneity only, as specified in equation (1). The third step is to include time-dependence terms that track salient changes in the legal environment; these models are specified in the form of equation (2). This three-step modeling procedure allows us both to assess the relative contribution of institutionalist arguments and to observe shifts in specific coefficients as we add terms to the equation. We use only those spells for which there are no missing data on any of the variables of interest (about 88% of the total sample). Means, standard deviations, and zero-order correlations for all independent variables are reported in appendix tables A1 and A2 for both the total and reduced samples. Those figures show
that the pattern of variation in the original sample is closely preserved after spells with missing data have been deleted.

**Results**

Table 1 shows results from models predicting the adoption of disciplinary hearings. Coefficients in model 1 lend initial support to three hypotheses offered by rationalist theory. As predicted, larger organizations adopted disciplinary hearings at a significantly higher rate, as did those with well-developed ILMs and those with union contracts.\(^7\) Coefficients for age, wage growth, and the percentage female in the industrial labor force are not significant. Note that the direction of the wage-growth effect is negative, suggesting that, on average, legalization was more rapid in

\(^7\) Most of our hypotheses are directional; for these we use one-tailed z-tests to assess significance. The exceptions are hypotheses regarding age and unionization (in the case of disciplinary hearings), to which we apply two-tailed tests.
cheaper labor markets—the very opposite of what transaction-cost theory would predict.

Model 2 shows that the inclusion of institutional covariates improves the fit of the model significantly ($P < .001$), despite the fact that only one coefficient—that for public agencies—is significant. As predicted, employers in the public sector were clearly and significantly more rapid adopters. While the coefficients for the other institutionalist variables are in the expected direction, only that for nonprofit associations even approaches significance. There are also interesting changes in coefficients associated with the rationalist variables. The wage coefficient grows about 40%, but remains insignificant and unexpectedly negative. More interesting, the coefficients for size and ILMs drop effectively to zero when we control for institutional effects. In trying to make sense of this shift, we initially suspected that size and complexity of ILMs are related to the establishment of personnel offices in ways that might obscure their individual effects on legalization. There are no methods for measuring such indirect effects within an event-history framework (Yamaguchi 1991); as an exploratory test we estimated an equation similar to that in model 2 but omitting the personnel variable. In these results the ILM coefficient is unchanged, suggesting that the effects of ILMs and personnel offices are independent; the size coefficient increases by about 40%, but does not approach its magnitude in model 1. We conclude that size is partially important because it increases the likelihood of having a personnel office. The growth of ILMs seems unrelated either to personnel offices or disciplinary hearings.8

Time-period effects are included in model 3. We treat the period 1955–72 as the reference category; its coefficient is constrained to equal zero, and we omit it from the table. The period coefficient for 1973–79 is positive and significant, indicating that baseline adoption rates (net of measured covariates) went up sharply between periods. The period coefficient for 1980–85 is essentially zero, indicating that, on average, adoption rates in that period dropped back to pre-1972 levels. This supports the argument that the more activist posture of EEO/AA law after 1972

8 On a related point, one reviewer has questioned our use of an ILM scale as a predictor on grounds that due-process governance is, in fact, an extension of internal labor markets—thus, perhaps, producing a spurious association that might obscure important causal effects. Indeed we suspect that both ILMs and grievance procedures are responses to change in EEO/AA law, but we are also convinced that executives recognize them as clearly different kinds of compliance strategies (see, e.g., Marino 1980). As a check on our assumptions we tested a full set of models that omitted the ILM variable and compared them to the ones in tables 1–3. Results were substantively identical, thus ruling out a suppressor effect. Tables showing supplementary tests of the personnel and ILM variables are available from the first author.
encouraged legalization and that, in the more conservative political climate after 1980, adoption rates declined. Controlling for time dependence in model 3 also changes some of the observed effects of substantive variables. First, the union coefficient drops a bit in magnitude, but remains significant. Second, the positive coefficients for nonprofit associations and location in California grow sharply larger (29% and 23%, respectively) and become significant. Third, the negative sign on the wage coefficient disappears. This is not a substantively important point since the coefficient in model 3 is still insignificant, but it enhances our confidence in the realism of these models. The initial result was surely an artifact of time dependence: across all industries in our data, inflation caused real wages to fall through most of the 1970s, precisely the time when disciplinary hearings diffused most rapidly; in models lacking time-period terms, the coincidence of rapid diffusion and inflation appeared as a negative effect of wages.

Models predicting the adoption of grievance procedures for nonunion, exempt employees appear in table 2. Four of the six coefficients for rationalist variables, shown in model 1, are significant. Larger organizations and those with more complex ILMs appear as more rapid adopters. Contrary to the findings for disciplinary hearings, unionized employers were significantly less receptive to grievance procedures of this sort. Again we observe an apparent negative effect of wage growth. The variables for age and percentage female show no effects. Tests of the institutional environment, displayed in model 2, show powerful effects of state action; location in the public sector, nonprofit status, and location in California all show anticipated positive (and significant) effects; but the effect of federal contracting appears to be zero. Influence of the personnel professions is strongly supported by coefficients showing that organizations with personnel offices and those that retained labor attorneys were significantly more rapid adopters. In model 2 the ILM coefficient is cut by nearly half, and the effect of size drops away entirely. As before, our supplementary tests show that part of the shift in the size effect (about 25%) is due to inclusion of the personnel office variable. Likelihood-ratio tests show that institutional effects contribute significantly to the model.

Addition of period effects in model 3 changes the picture in interesting ways. The ILM effect drops out, and the wage effect again becomes positive, but insignificant. Other effects are consistent with model 2; indeed the coefficients for unionization, location in the public sector, and nonprofit associations grow markedly stronger. The period effects themselves are a bit different from those in table 1. Both period coefficients are significant and positive, and, while the second coefficient shows that adoption rates decelerated about 20% after 1980, the difference does not appear to be statistically significant (using 95% confidence intervals,
TABLE 2
MAXIMUM-LIKELIHOOD ESTIMATES OF THE EFFECTS OF SELECTED VARIABLES ON THE ADOPTION OF GRIEVANCE PROCEDURES FOR NONUNION, EXEMPT EMPLOYEES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
<td>Coefficient</td>
</tr>
<tr>
<td>N employees (log)</td>
<td>0.23***</td>
<td>0.074</td>
<td>0.100</td>
</tr>
<tr>
<td>Age in years (log)</td>
<td>-0.112</td>
<td>0.090</td>
<td>-0.121</td>
</tr>
<tr>
<td>ILM index</td>
<td>0.230***</td>
<td>0.049</td>
<td>0.122*</td>
</tr>
<tr>
<td>Union contract</td>
<td>-1.04**</td>
<td>0.362</td>
<td>-1.26***</td>
</tr>
<tr>
<td>Annual change, average wages</td>
<td>-0.576**</td>
<td>0.220</td>
<td>-0.617**</td>
</tr>
<tr>
<td>Annual change, percentage female</td>
<td>0.097</td>
<td>0.306</td>
<td>-0.027</td>
</tr>
<tr>
<td>Public sector</td>
<td>0.558*</td>
<td>0.296</td>
<td>1.00***</td>
</tr>
<tr>
<td>Federal contractor</td>
<td>-0.086</td>
<td>0.256</td>
<td>-0.153</td>
</tr>
<tr>
<td>Nonprofit association</td>
<td>0.850**</td>
<td>0.292</td>
<td>1.19***</td>
</tr>
<tr>
<td>California</td>
<td>0.552**</td>
<td>0.213</td>
<td>0.672***</td>
</tr>
<tr>
<td>Personnel office</td>
<td>0.481*</td>
<td>0.255</td>
<td>0.428*</td>
</tr>
<tr>
<td>Labor attorney on retainer</td>
<td>0.843***</td>
<td>0.246</td>
<td>0.847***</td>
</tr>
<tr>
<td>Time-independent constant</td>
<td>-4.93***</td>
<td>0.446</td>
<td>-4.90***</td>
</tr>
<tr>
<td>Period effect, 1973–79</td>
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<td></td>
<td>1.56***</td>
</tr>
<tr>
<td>Period effect, 1980–85</td>
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<td></td>
<td>1.25***</td>
</tr>
<tr>
<td>$\chi^2$</td>
<td>56.24***</td>
<td></td>
<td>90.84***</td>
</tr>
</tbody>
</table>

NOTE.—$N = 4,644$ spells, 97 transitions; in model 3, the constant for 1955–72 is constrained to equal zero.

* $P < .05$.
** $P < .01$.
*** $P < .001$.

the two estimates overlap). Thus the model gives additional support to the hypothesis that changes in EEO/AA law accelerated the pace of legalization, but support for the “Reagan effect” in this case is weaker.

The last set of models, showing effects on adoption rates of grievance procedures for nonunion hourly employees, is displayed in table 3. In model 1, size and ILM complexity appear to significantly encourage legalization; nonunionized organizations were significantly more rapid adopters than those with union contracts. Again wage increases show a counterhypothetical negative effect, and neither age nor percentage female shows any effect at all. In model 2, several of the institutional variables show significant effects. Nonprofit associations and California employers had significantly higher rates of adoption, but coefficients for location in the public sector and federal contracting are insignificant. Formation of a personnel office and retaining a labor attorney both accelerated adoption rates to a significant degree. In this intermediate specification, the ILM and unionization coefficients retain their significance, but the effect
TABLE 3
MAXIMUM-LIKELIHOOD ESTIMATES OF THE EFFECTS OF SELECTED VARIABLES ON THE ADOPTION OF GRIEVANCE PROCEDURES FOR NONUNION, NONEXEMPT EMPLOYEES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>MODEL 1</th>
<th></th>
<th>MODEL 2</th>
<th></th>
<th>MODEL 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient SE</td>
<td>Coefficient SE</td>
<td>Coefficient SE</td>
<td>Coefficient SE</td>
<td>Coefficient SE</td>
<td>Coefficient SE</td>
</tr>
<tr>
<td>N employees (log)</td>
<td>.226** .074</td>
<td>.038 .078</td>
<td>.065 .082</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age in years (log)</td>
<td>-.061 .097</td>
<td>-.018 .102</td>
<td>-.007 .102</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>ILM index</td>
<td>.231*** .050</td>
<td>.141** .058</td>
<td>.065 .060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union contract</td>
<td>-1.01** .365</td>
<td>-1.36*** .380</td>
<td>-1.70*** .392</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Annual change, average wages</td>
<td>-.622** .220</td>
<td>-.579** .233</td>
<td>.348 .281</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual change, percentage female</td>
<td>-.008 .304</td>
<td>.063 .311</td>
<td>-.090 .339</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public sector</td>
<td>.232 .324</td>
<td>.685* .340</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal contractor</td>
<td>.112 .256</td>
<td>.067 .258</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonprofit association</td>
<td>1.31*** .277</td>
<td>1.79*** .298</td>
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<td></td>
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</tr>
<tr>
<td>California</td>
<td>.416* .223</td>
<td>.555** .226</td>
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<tr>
<td>Personnel office</td>
<td>.738** .266</td>
<td>.748** .266</td>
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<tr>
<td>Labor attorney on retainer</td>
<td>.847*** .250</td>
<td>.778*** .251</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time-independent constant</td>
<td>-5.19*** .451</td>
<td>-5.25*** .493</td>
<td>-6.31*** .555</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Period effect, 1973–79</td>
<td>1.76*** .324</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Period effect, 1980–85</td>
<td>1.29*** .351</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>$X^2$</td>
<td>52.80***</td>
<td>95.76***</td>
<td>127.24***</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Note.—N = 4,683 spells, 91 transitions; in model 3, the constant for 1955–72 is constrained to equal zero.

* $P < .05$.
** $P < .01$.
*** $P < .001$.

...of size drops to zero; controlling for the effect of personnel offices alone accounts for most of this shift (about 68%).

Period effects operate like those in table 2: both coefficients are significant, and a likelihood-ratio test shows that model 3 fits the data significantly better than model 2. Again, adoption accelerated most rapidly from 1973 to 1979; adoption rates during this period were significantly higher than before, but the decelerative trend after 1980 is not statistically significant. Coefficients for substantive variables are only slightly changed. As in table 2, the ILM effect drops effectively to zero. The public-sector variable nearly triples in magnitude and becomes significant. Other institutional variables—once again with the exception of federal contracting—retain their positive effects in a fully specified model.

In summary, the most emphatic result of the analysis is that, for all outcomes, state pressure—indicated by public and nonprofit status, location in California, and period-specific policy shifts—appears strongly as-
Legalization

associated with the pace of legalization. Results also show differences across the three outcomes, mainly having to do with the mechanisms through which fuzzy government positions were translated into formal governance policies. Disciplinary hearings are associated with unionization but not with links to the human relations professions. Our reading suggests that disciplinary hearings have long been a standard feature of collective-bargaining agreements; we suspect that recent organizing efforts are at least partially responsible for their continued diffusion. By contrast, both types of grievance procedures are positively associated with links to the human relations professions and negatively associated with unions. We have three speculations about why the conservative shift in the 1980s shows strong effects on the adoption of disciplinary hearings and weaker (perhaps null) effects on both types of grievance procedures. First, since disciplinary hearings are associated with unionization, the decline in adoption rates after 1980 may be a by-product of the Reagan administration's attempts to weaken organized labor. Second, our data are right censored: the third period spans a relatively short five years, and it is possible that significant declines in adoption rates for both grievance procedures would appear if our observations were extended. Third, however, it is also possible that by 1980 the due-process model of governance was so well institutionalized in the nonunion workplace that it continued to spread at a rapid rate, independent of declining federal pressure.

DISCUSSION

Much previous theory, from Selznick's to that of the modern open- and closed-system rationalists, treats workplace legalization as arising mainly within organizations in response to internal pressures or demands of the task environment. We find almost no effects that support these arguments. In fully specified models, workplace size shows no significant effects. We find some evidence that size has an indirect effect on legalization via its association with personnel offices, but it is not an efficient cause. Unionization shows mixed and ambiguous effects—disciplinary hearings may be by-products of successful organizing efforts, but non-union grievance procedures appear most frequently in nonunion organizations; whether as a partial substitute for union governance, a strategy for forestalling unions, or both is unclear. Organizational age, the exis-

9 Unions have had some of their greatest successes recently in attempts to organize employees in the public sector, and we initially interpreted table 1 as suggesting that disciplinary hearings have grown mainly from public-sector unionization. We tested this interpretation by estimating a model that contained an interaction term for unionized public employees. The interaction term showed no significant effect, suggesting that the effects of sector and unionization are independent.
tence of ILMs, and the shape of external labor markets are unimportant. If the invisible hand of rationality is driving the process of legalization, we find no evidence of it.

What we do find is that the adoption of due-process governance has been influenced by governmental attention to fairness in the workplace and by the employment-relations professions. First, rates of adoption of the mechanisms we study are highly time dependent—rates went up with expanded legal and political pressure in the 1970s and show some signs of having leveled off in the 1980s. Second, proximity to the state pushes adoption rates up: public agencies and nonprofit associations were more rapid adopters of all three due-process reforms. Third, adoption rates are higher among California employers, who operate under a legislative and judicial regime that has been more assertive of employees' membership rights. Fourth, organizations that are structurally linked to the wider national environment through the professions (personnel officers and labor attorneys) are more likely to create both kinds of grievance procedures examined here.

Federal contracting, one of our more direct indicators of linkage to the state, appears entirely unrelated to legalization. This underscores our earlier point that due-process mechanisms are not a direct result of federal regulatory pressure, but rather a symbolic response to diffuse and ambiguously perceived shifts in the legal environment. Here the observed role of the human relations professions in the adoption of grievance procedures becomes theoretically important: these findings extend, and tend to confirm, arguments by Edelman et al. (1992) that personnel professionals and labor attorneys play a crucial role in constructing the legal environment and prescribing governance policies designed to mitigate its threat.

We conclude by noting some implications of our findings. We can, obviously, make no real inferences about the effect of workplace legalization for substantive employee rights. Our findings suggest that legalization is not aimed inward, toward specific employee demands or organizational requirements, but outward at the shifting concerns of regulators and courts. Thus due-process rules are vulnerable to the logic of loose coupling (Weick 1976), and it is problematic whether substantive justice on the shop floor is systematically affected by the adoption of formal procedures (Gwartney-Gibbs and Lach 1991, 1993). Nonetheless, as Edelman observes (1992, p. 1541), research on the work force has shown significant improvements in the status of minorities and women over the past few decades. Whether this is at all due to more equitable governance, or whether governance policies themselves are by-products of more fundamental changes in the normative expectations of managers, employees, and more general publics, our study can provide no evidence.
Nor do we want to overestimate the degree to which legality has become a dominant model of employee relations. Our evidence suggests that concepts of employee rights, citizenship, and due process have become powerful metaphors of governance among organizations in some societal sectors. It is tempting to suggest further that legalization may combine with other incorporative programs—for lifetime employment, career-development training, and the like—to give rise to a new employment-relations regime, one that is considerably different from the Weberian bureaucratic model. Such a strong statement would be premature at this point. We are mindful that some organizations—and by no means inconsequential ones—are moving in precisely the opposite direction, toward part-time work, subcontracting, homework, and out-sourcing to foreign labor markets (Pfeffer and Baron 1988). Ironically, these moves might also be responses to threats in the legal environment, albeit responses of avoidance rather than engagement. Future research should explore whether legalistic/inclusive and discretionary/exclusive policies form empirically distinct clusters across organizations, and, if so, where each tends to be most entrenched. Much will depend, it seems, on the assertiveness of the federal government in pursuing EEO/AA goals and, perhaps, also on institutional processes affecting labor regimes at the global level.

APPENDIX

TABLE A1
MEANS AND STANDARD DEVIATIONS OF INDEPENDENT VARIABLES, FOR TOTAL AND REDUCED SAMPLES

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>TOTAL SAMPLE</th>
<th></th>
<th></th>
<th>REDUCED SAMPLE</th>
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<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
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<tr>
<td>N employees (log)</td>
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<td>4.85</td>
<td>1.61</td>
<td>5,929</td>
<td>4.82</td>
<td>1.61</td>
</tr>
<tr>
<td>Age in years (log)</td>
<td>6,701</td>
<td>3.38</td>
<td>1.18</td>
<td>5,929</td>
<td>3.31</td>
<td>1.15</td>
</tr>
<tr>
<td>ILM index</td>
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<td>2.66</td>
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<td>2.57</td>
<td>2.40</td>
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<td>.196</td>
<td>.397</td>
<td>5,929</td>
<td>.205</td>
<td>.404</td>
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<tr>
<td>Annual change, average wages</td>
<td>6,701</td>
<td>.160</td>
<td>.458</td>
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<td>.454</td>
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<tr>
<td>Annual change, percentage female</td>
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<td>.434</td>
<td>.389</td>
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<td>.293</td>
<td>.455</td>
<td>5,929</td>
<td>.225</td>
<td>.418</td>
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<tr>
<td>Federal contractor</td>
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<td>.280</td>
<td>.449</td>
<td>5,929</td>
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<td>.463</td>
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<td>Nonprofit association</td>
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<td>.102</td>
<td>.303</td>
<td>5,929</td>
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<td>.478</td>
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<td>.482</td>
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<td>Personnel office</td>
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<td>.466</td>
<td>.499</td>
<td>5,929</td>
<td>.449</td>
<td>.498</td>
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<td>Labor attorney on retainer</td>
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<td>.256</td>
<td>.436</td>
<td>5,929</td>
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<td>.433</td>
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### TABLE A2

**Zero-order Correlations of Independent Variables**

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<thead>
<tr>
<th>Variable</th>
<th>Employees</th>
<th>Age</th>
<th>ILM Index</th>
<th>Union Contract</th>
<th>Annual Change, Average Wages</th>
<th>Annual Change, Percentage Female</th>
<th>Public Sector</th>
<th>Federal Contractor</th>
<th>Nonprofit Association</th>
<th>California</th>
<th>Personnel Office</th>
<th>Labor Attorney on Retainer</th>
</tr>
</thead>
<tbody>
<tr>
<td>N employees (log)</td>
<td>...</td>
<td>.191</td>
<td>.367</td>
<td>.211</td>
<td>-.031</td>
<td>.010</td>
<td>-.036</td>
<td>.193</td>
<td>.107</td>
<td>.446</td>
<td>.296</td>
<td></td>
</tr>
<tr>
<td>Age in years (log)</td>
<td>.193</td>
<td>.111</td>
<td>.091</td>
<td>.007</td>
<td>-.050</td>
<td>.232</td>
<td>-.142</td>
<td>-.016</td>
<td>-.099</td>
<td>.085</td>
<td>.116</td>
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<td>.393</td>
<td>-.074</td>
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<td>.181</td>
<td>.465</td>
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<td>.141</td>
<td>.219</td>
<td>-.034</td>
<td>.166</td>
<td>-.018</td>
<td>.092</td>
<td>-.030</td>
<td>.111</td>
<td>.194</td>
<td>.400</td>
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<td>.019</td>
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<td>-.044</td>
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<td>.033</td>
<td>-.041</td>
<td>-.101</td>
<td>.015</td>
<td>.070</td>
<td>-.059</td>
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<tr>
<td>Annual change, percentage female</td>
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<td>-.041</td>
<td>-.076</td>
<td>.163</td>
<td>-.132</td>
<td>-.139</td>
<td>-.019</td>
<td>-.027</td>
<td>.090</td>
<td>-.018</td>
<td>.078</td>
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<td>Public sector</td>
<td>.136</td>
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<td>.385</td>
<td>.052</td>
<td>.066</td>
<td>-.128</td>
<td>-.402</td>
<td>-.217</td>
<td>.089</td>
<td>.130</td>
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<tr>
<td>Federal contractor</td>
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<td>-.116</td>
<td>-.051</td>
<td>.080</td>
<td>.034</td>
<td>-.232</td>
<td>-.363</td>
<td>.088</td>
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<td>-.040</td>
<td>-.114</td>
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<td>-.195</td>
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**Note.**—Diagonal upper half of table shows correlations using pairwise deletion of missing data (maximum \( N = 6,701 \)), and diagonal lower half shows correlations using listwise deletion (\( N = 5,929 \)).
REFERENCES


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