Beyond Gridlock: Advancing the American Dream in a Global Knowledge Economy via Distinct Models for Labor and Employment Relations Policy

JOEL CUTCHER-GERSHENFELD
SAENGDOW PRASITTISUK
University of Illinois at Urbana-Champaign

Executive Summary

Twelve models of labor and employment relations in the United States are identified, each defined by a unique role in the overall policy system. An assessment of employment levels under each model reveals not only the dominance of the traditional, nonunion model, but also the degree to which it is not well defined under existing labor and employment policy; the relatively large number of United States citizens working under highly varied labor and employment policy regimes; and the lack of coherence of the system as a whole. In addition to debates about the union versus the nonunion models, the high-performance model, the small enterprise model, and the model in the not-for-profit sector are highlighted. Ultimately, lessons from across many models are needed to best advance the American Dream in a global knowledge economy.

Introduction

The laws and policies governing labor and employment relations in the United States have emerged over more than a century and have codified key aspects of what is termed the "American Dream," but these laws and policies were never specifically designed for success in a global knowledge economy. Given that fundamental changes are taking place in the nature of work, technology, organizations, and markets, we have to ask ourselves whether the "rules of the game" that we have established for ourselves in the 20th century will best advance the American Dream in the 21st century.

The aim of this article is to present a baseline portrait of the current set of laws and policies defining individual and collective rights and responsibilities in the workplace for employees, employers, and organizations representing these parties—so that the system as a whole can be examined relative to the demands of the emerging global knowledge economy. Traditionally, the system in the United States has been defined as featuring unionized and nonunion workplaces in the public and private sectors. A key point of this article is that we have actually defined under the law at least 12 distinct models for labor and employment relations, which vary considerably in the degree to which they are positioned for a world with the following features:

- Accelerating rates of change
- Increasingly interdependent, global labor markets, product markets, and capital markets
- A need for innovation, continuous improvement, and adaptability at individual, organizational, community, industry, and national levels

We refer to these features as a global knowledge economy, building on the analysis by Piore and Sabel (1984) and others documenting this as a "second industrial divide" comparable to the shift more than a century ago from a craft to an industrial economy. There are many ways to characterize what is emerging, reflecting the importance of information technology, biomedicine, and other changes, but we highlight

Authors' address: School of Labor & Employment Relations, 504 E. Armory Ave., Champaign, IL 61820

distributed knowledge since it is enabled by the new technologies and essential to innovation and continuous improvement (Nonaka 1991; Cutcher-Gershenfeld et al. 1998). We highlight knowledge-driven work as the next step in the succession from economies rooted in craft work and industrial work. The American Dream continues to be relevant in this context; it still makes sense to seek a combination of "good jobs" and high performance such that each generation can do better than the last (Adams 1931; Kochan 2005). This stands in contrast to stalled progress or, worse still, deterioration from one generation to the next, which is a deep concern given decades of growing income inequality in society (Bluestone and Harrison 1988), the collapse of the housing bubble, and the growth in consumer debt.

Citizens of a growing number of nations are embracing versions of what we term the American Dream, investing in the education of the next generation and supporting policies that will advance various combinations of social and economic success. While this is not a comparative article documenting what other nations are doing in this regard, the analysis presented here is motivated by the degree to which other nations are ahead of the United States in engaging these issues. For example, Australia's recent "Fair Work" legislation is designed to simultaneously foster enterprise-level business success and fair treatment for employees in the context of a global economy. Similarly, the continual evolution of the Scandinavian model for "flexisecurity" seeks to combine flexibility and security in ways that will help individuals and firms succeed. The recent national elections in Brazil centered to a great degree on whether the labor and employment system was helping or holding back the nation in the domestic and global economies. Thus, this article is a call to action for the United States—not advancing any one specific policy but providing a framework for seeing the system as a whole, revealing key constraints and opportunities, and offering options to better position ourselves to advance the American Dream in a global knowledge economy.

One View: Separate, Specific Policies on Labor and Employment Relations

The most common way of viewing labor and employment policy in the United States is via separate, specific laws, administrative procedures, and executive orders. In this section, we summarize this domain and trace the way it has emerged over time, but only to set the stage for the argument that this not the best way to advance the American Dream or to position the nation for the rigors of the global knowledge economy. Instead, in the next section, we will argue that it is better to begin with the distinct models that exist under various combinations of legislation and then consider the strengths and limitations of each model.

This overview of United States labor and employment policy begins with what in the United States are termed "reserved rights" for employers (Godard 2009). Essentially, employers have a property right in their business, and individual or collective rights for workers have been "carved" out of these property rights. The process has been different in other parts of the world, where the emergence of labor and employment policies begins with the move to constitutional monarchies and recognition of social partners (in many European nations), communist revolutions (in Russia, China, and other nations), the collapse of communist regimes (in eastern Europe), or other points of departure (such as India, which is distinct in many ways).

In defining *individual* worker rights and responsibilities in the United States, the carving out initially centered on child-labor laws and wage and hour laws, followed by civil rights laws, and other provisions. These legislative initiatives were primarily motivated by two reasons (one initially and the second more recently):

- Mitigating harmful or unfair conditions (what economists term "market externalities")
- Providing alternatives to litigation

In carving out these worker rights from employers' reserved rights, we have modified but not abandoned the principle of "employment at will," whereby employers retain the right to hire and fire individuals for any reason not specifically prohibited under the law or by contract. A relatively complete list of national legislation relating to individual-level employment is included in Appendix A. This domain of employment law (centered on individual rights) represents one leg of what can be considered a three-legged stool defining labor and employment policies in the United States.

In defining *collective* rights and responsibilities in the United States, we begin with the provision of union organizing and collective bargaining rights to railway employees in 1926 in order to avoid interruptions

to interstate commerce. In this case, employers voluntarily supported the legislation—supporting the carving out of collective rights in exchange for orderly mechanisms for negotiations that would foster labor peace. The extension of similar rights to many (but not all) workers in the private sector in 1935 and in the public sector beginning in the 1960s had the additional motivations, making the carving out of collective rights justified as follows:

- Preventing disruptions to commerce or public services
- Increasing consumer purchasing power
- Providing a "check and balance" between the power of employers and employees

Many other laws contemplate a combination of individual and collective interest with respect to workplace health and safety, plant closing, labor–management cooperation, and other matters. Key laws with a collective dimension are listed in Appendix B. This domain of labor law (centered on collective rights) represents a second leg of the stool.

The third leg of this analogy to a stool defining labor and employment policy in the United States consists of the full array of private individual and institutional interactions that take place in the absence of specific legislation but that are reflected in case law and actions specifically taken outside coverage under the law. Examples include lawsuits over unfair discharge, hiring independent contractors to avoid the responsibilities of being designated as an employer, and negotiating over "prohibited" subjects of bargaining.

There are many features of the policies associated with each leg of the stool that can be debated as more or less helpful in advancing the American Dream in the context of a global knowledge economy. However, such debates quickly become polarized, and the result over the past three decades has been a combination of increasingly narrow laws dealing with very particular individual rights issues and continued gridlock with respect to collective rights. It is this gridlock that, in part, motivates an alternative way of viewing the policy landscape—centered on 12 distinct models rather than specific laws. Before turning to these 12 models, however, it is important to note the current relevance of two different mechanisms by which labor and employment policies have emerged over more than a century in the United States.

First, there is a long history of state-level initiatives that served as an experimental "test bed" before national legislation was passed. Today, labor and employment policies are on the agenda at the state level with respect to both individual and collective rights, including issues of fair dismissal, workplace privacy, unmarried partner benefits and rights, public employee pensions, and even public sector collective bargaining itself. Thus, while we will be identifying and examining 12 United States models for labor and employment relations, a parallel question can be posed at the state level, and state innovation is already preceding national innovation.

Second, there have been economic or wartime crises that fostered innovation, later codified in legislative or policy form. The National War Labor Board (1919) brought labor and management together in ways that contributed to the Railway Labor Act of 1926. The National Industrial Recovery Act of 1933 set the stage for the National Labor Relations Act (NLRA) of 1936. While the National War Labor Board (1942) was followed by adjustments in the NLRA, its more direct legacies involve reinforcing and of the private aspects of the system, including launching a system for private arbitration of labor disputes and the choice (unlike many other nations) to have private, employer-based systems for pensions and health care. This is a highly consequential set of decisions that we will return to later. Of course, it remains to be seen what the legacy of the American Recovery and Reinvestment Act of 2009 will be. It is the aim of this article to foster dialogue such that it will be the best possible legacy relative to the aspiration for the American Dream and the demands of the global knowledge economy.

An Alternative View: Twelve Policy-Created Models for Labor and Employment Relations

We observe (and assert) that United States labor and employment policy has made (and should make) distinctions based on the nature of work, organizations, and markets. Each of the following 12 models reflects such distinctions, based on what was salient at that time. Thus, collective bargaining legislation was first established in the railroad sector since this transportation system was so integral to the economic vitality of the nation. However, agriculture was not included for coverage under the National Labor Relations Act since collective bargaining was not seen as appropriate in the context of either family farms or migrant labor. It is the distinctions based on the nature of work, organizations, and markets that represent core areas of policy choice. Looking back, there are some past distinctions (such as with agricultural work) that do not match today's realities. Looking ahead, a key question concerns what aspects of work, organizations, and markets are most relevant to highlight in the context of a global knowledge economy—which of these 12 models do we want to build on for the future?

While it could be argued that there are more than 12 models (additional possible models carved out under the law are noted at the end of this section), the 12 that are highlighted here represent models that are either (1) distinct and affirmatively supported by a specific law; or (2) distinct and the product of a combination of laws even if the model itself has never been specifically held up as a societal aim. The 12 different models for labor and employment relations in the United States are identified in Table 1 in order of size (based on approximate levels of employment) for the approximately 133 million people employed in the United States economy (BLS 2010a).

TABLE 1
Twelve Models for Labor and Employment Relations in the United States

Employment relations distinguished by law/policy models	Approx. U.S. employment	Affirmative legislation
I. Traditional Nonunion Human Resource Management (HRM) Model	37.1 million*	
II. Traditional Nonunion HRM/Right-to-Work Model	26.8 million*	
III. Small Business Model (fewer than 20 employees)	21.8 million	
IV. Independent Contractors (nonagricultural)	10.3 million	
V. Not-for-Profit Sector Model	8.7 million	
VI. High-Performance Work Systems (Union and Nonunion) Model	7.7 million**	
VII. State and Local Public Sector Unionized Model	7.5 million	●
VIII. "New Deal" Private Sector Unionized Model	7.4 million***	●
IX. Federal, State, and Local Public Sector Nonunion Model	2.5 million	
X. Agricultural Model	2 million	
XI. Federal Public Sector Unionized Model	1.2 million	●
XII. Air and Rail Transportation Model	600,000	●

*Includes supervisors and other exempt nonunion employees in unionized workplaces; does not include an estimated 10% of nonunion workplaces with high-performance work systems.
**Includes a combination of the estimated 10% of union and nonunion workplaces as featuring high-performance work systems.
***Includes workers covered under collective bargaining agreements but not members of unions; does not include an estimated 10% of unionized workplaces with-high performance work systems.

All 12 models are discussed in more detail below (in order by size), with a focus on overarching policy objectives (where present), the way employment has been calculated, and additional relevant considerations. This is a departure from analysis of employment in the United States by industry/sector or geography. The focus of industry or sector analysis, for example, might be on the 18 million people employed in goods production (not including the 2 million in agriculture) as compared to the 90 million in services and others in additional sectors (BLS 2010a). Alternatively, a geographic focus might be on a comparison of states with a high percentage of the workforce represented by unions in 2009, such as New York (27.2%), Hawaii (24.3%), Alaska (23.6%), Washington (21.5%), and Michigan (19.9%), versus low unionization states such as

North Carolina (4.4%), Arkansas (5.0%), South Carolina (5.4%), (Georgia (5.9%), and Virginia (5.4%) (BLS 2010c). While such comparisons are important, the focus here is on distinct policy regimes that represent different points of departure for any consideration of United States labor and employment policy. Thus, the geographic comparison is of interest in that the low unionization states are also right-to-work states (where employees who are covered under a collective bargaining agreement cannot be required to pay dues to the union), which is a distinct policy regime, but it is not the geography per se that is the focus.

The aim in this portion of the article is neutral, accurate description, which is challenging given the deep values associated with the 12 models regarding private property, democratic rights, free enterprise, fair treatment, and other matters. As one colleague has observed, the focus is not on whether the cup is half full or half empty, but just on describing a cup—a cup that in this case has equal proportions of air and liquid (Ott 2010). Judgments are made, however, in the last paragraph presenting each model to highlight the labor and employment policy challenges in each case.

As is noted in each section, the employment numbers come from different sources and are not all for the same years. As such, these should be treated as approximate estimates that need further adjustment. Much of what is presented here will not be new to scholars of labor and employment relations and some policy makers and practitioners. There are, however, many scholars, policy makers and practitioners who do not have full awareness of all the models and it is a unique contribution to present them all together. This is written, therefore, as a descriptive primer that will also allow for a concurrent overview and consideration of all 12 domains.

I. Traditional Nonunion Human Resource Management (HRM) Model

The United States has never specifically stated as a labor and employment relations policy that we prefer to have employees unorganized and governed by a mix of private employer human resource management policies and individual employment rights. Yet this is a distinct model under the law and the largest number of employees in the United States operate under this model. This model is defined by the absence of other models carved out under the law.

The employment estimate is reached by totaling the employees in the United States who work in nonunion enterprises with more than 20 employees, outside of right-to-work states, who do not fall into any of the other categories in Table 1. There are a total of approximately 131 million nonagricultural employees in the United States (BLS 2010a) and another 2 million in the agricultural sector, for a total of 133 million employees in the workforce. All of the categories in Table 1 other than the first two models and the high-performance model add up to 62 million individuals. That leaves approximately 71 million individuals who are presumed to be operating under this model and the nonunion right-to-work model (which is addressed next). If we subtract out 10% that we assume are in high-performance work systems, it leaves 63.9 million workers for Models I and II. Currently, there are 28 states that operate with this model and that also have full access to rights under the National Labor Relations Act (states that do not have what is termed "right-to-work" legislation). In 2009, the nonunion workforce in these states constituted 58% of the total United States workforce, leading to an estimated 37.1 million people working under this model.[1] It is also of note that United States employment under this model is approximately evenly divided between organizations with over 500 employees and those with under 500 employees.

While there will still be a wide range of work practices across all nonunion, traditional workplaces, the policy regime is similar in all cases. This begins with what is termed "employment at will," where the employer retains the unilateral right to hire and fire with or without cause. This is tempered by various regulations that center on individual rights, including protections against discrimination for people in protected categories by race, gender, age, religion and others that fall under the jurisdiction of the Equal Employment Opportunity Commission (EEOC); protections for pensions that fall under the jurisdiction of the Employee Retirement Income Security Act (ERISA); wage and hour laws that are monitored by the U.S. Department of Labor's Wage and Hours Division; family medical leave provisions; and others. Although there are these and other federal agencies involved in regulating employment relations in such workplaces, no single federal agency has responsibility for it as a defined model for labor and employment relations.

It should also be noted that there is considerable variation at the state level. As Finkin (2001) points out, a comparison between Minnesota and Indiana (neither of which is a right-to-work state) reveals important differences with respect to economic security (minimum wage, unemployment insurance, workers compensation, indemnification, and plant closings), physical well-being (mandatory rest and meal breaks, occupational health and safety, and employee health insurance), individual liberty (anti-discrimination, parental leave, time off to vote, time off for political activity, whistleblowing protections, and off-duty conduct), and privacy, reputation, and dignity (drug testing; use of lie detectors; access to one's personnel records, service letters, and job references; and employer electronic interception of nontelephonic oral communications). Indeed, given the variation between these two illustrative states on all dimensions, it is surprising that employees of companies operating in both jurisdictions have not pushed for greater harmonization.

The only mechanism for governance in this sector, if it can be said to be one, would be private associations of HR executives and the professional standards of the HR profession. In Douglas McGregor's 1960 book, *The Human Side of Enterprise,* the independence of what were then termed "personnel" professionals was challenged. Having to contend internally with unilateral actions by management that are contrary to constructive human resource practices and principles continues to be a challenge for the profession. Issues of accelerating growth in executive compensation, outsized bonuses in the finance sector, and even the dynamics around a "jobless" recovery suggest that there may not be sufficient checks and balances in this system. Many of these organizations do have employee affinity groups, annual attitude surveys of the workforce, and mechanisms for dispute resolution and employee involvement, but they operate within the bounds established by the employer. Historically, there has been what is termed a "threat effect" of unions that served as an additional factor shaping employment relations in these nonunion settings, but the declining proportion of the workforce represented by unions and the relative ease with which employers in the United States can maintain union-free status has diminished this as a factor.

A core policy challenge for this model of employment relations is that it is the dominant model in the United States economy, but it has never been subject to or shaped by an explicit policy debate. It is a default model that has emerged through the deterioration of other models, rather than an intentional societal choice.

II. Traditional Nonunion HRM/Right-to-Work Model

This is the same as the first model with the exception that it involves one of the 22 right-to-work states that have passed a law holding that employees who are covered under a collective bargaining agreement cannot be required to pay dues to the union. This model has been criticized by unions and others for creating a "free rider" problem where workers enjoy the benefits of union coverage but are not required to bear the full cost. While some of these states, such as Nevada, still have relatively high levels of union density, the passage of these laws generally signals broader resistance to unionization. Thus, the variant on the first model present in these states is one in which collective rights and protected activities under the National Labor Relations Act are more restricted. Out of the 63.9 million individuals not covered by any of the following models, the 22 states that operate with this model and that are also right-to-work states constituted 42% of the nonagricultural workforce in 2009, leading to an estimated 26.8 million people under this model.

In addition to the core policy challenge associated with Model I, this model signals a further factor: these are the states that will most resist any policy changes that increase the ability of United States workers to organize and bargain collectively.

III. Small Business Model (Fewer Than 20 Employees)

Approximately 21.8 million people work for organizations with fewer than 20 employees. This estimate may overlap with the independent contractor model (below) for individuals who are incorporated as a firm with themselves as the sole proprietor (there are 6 million people working in establishments with zero to four employees, where zero would be the sole proprietors, but there are also many more individuals who are working as independent contractors without being incorporated as an organization or who are working for temporary help agencies). At this size, the organizations almost never have a full-time human resource

management professional, relatively few of these employees are unionized, and most firms are privately held. Moreover, many of these firms are exempt from various protections for individual rights in the workplace. For example, the Occupational Safety and Health Administration (OSHA) can exempt firms with fewer than ten employees from certain record-keeping requirements, the Equal Employment Opportunity Commission (EEOC) applies to firms with 15 or more employees, the Americans with Disabilities Act (ADA) applies to firms with 20 or more employees, and the Family Medical Leave Act (FMLA) applies to firms with over 50 employees. These and other similar exclusions make small businesses a distinct model in the United States system. In the absence of legal direction, most aspects of labor and employment relations reflect the values and orientation of the founder and early managers and don't necessarily correspond to standard terminology for labor and employment relations (Cutcher-Gershenfeld, McHugh, and Power 1996).

While the Small Business Administration (SBA) serves businesses with up to 500 employees, the shift to the nonunion HRM model (Models I and II in this article) generally happens at around 50–100 employees. The cutoff at 20 employees reflects the separate policy regime, with organizations between 20 and 50 employees on a spectrum moving toward Models I and II. The SBA, which was created in 1953, primarily offers loans, loan guarantees, contracts, counseling sessions, and other forms of assistance to small businesses. It is not charged with advancing a particular model of labor and employment relations, and no other federal agency has responsibility in this domain.

A key policy challenge in this domain is that core values, assumptions, and practices associated with an organization's labor and employment relations are forged in a firm's early years, yet, as a nation, we provide very little guidance or vision for how firms might best begin in their role as an employer and how they might anticipate evolving over time as they increasingly come under the law. By the time that there is full coverage under the law, there is already great diversity in practice—so it is no wonder that we have a highly varied system.

IV. Independent Contractors (Nonagricultural)

The Bureau of Labor Statistics estimates that there were 10.3 million people working as independent contractors in 2005, which it defines as "workers identified as independent contractors, independent consultants, or freelance workers, whether they were self-employed or wage and salary workers" (BLS 2005). The IRS (2011) notes that independent contractors are:

> people such as doctors, dentists, veterinarians, lawyers, accountants, contractors, subcontractors, public stenographers, or auctioneers who are in an independent trade, business, or profession in which they offer their services to the general public are generally independent contractors. However, whether these people are independent contractors or employees depends on the facts in each case. The general rule is that an individual is an independent contractor if the payer has the right to control or direct only the result of the work and not what will be done and how it will be done.

There is no clear United States labor and employment policy with respect to people working as independent contractors. Many individual rights are defined with respect to violations by an employer, which do not easily apply in the case of an individual contractor. Indeed, many employers have shifted work to independent contractors in significant part so that they can avoid the legal responsibilities that are borne by an employer (Davis-Blake & Uzzi 1993). In some cases, the consequences can be tragic, such as when safety training is not provided to contract workers in order to avoid having them seen as employees. This was a factor, for example, in the BP Texas City explosion in which 15 people died and more than 150 were injured after an untrained contract worker turned on the ignition in a vehicle located near leaking flammable fumes. The NLRB has been reluctant to define bargaining units comprised of individual contractors each dealing with different employers or bargaining units of single individuals, thereby limiting access to collective bargaining in these cases.

Yet this is a growing proportion of the workforce with unique employment concerns, as documented in Barley and Kunda's 2006 book, *Gurus, Hired Guns, and Warm Bodies*. As Bidwell and Briscoe (2009) note, independent contractors often perform work similar to that of regular employees; however, they are not

legally employed by the firms for which they do that work. They do not expect to build careers within a single firm, or even remain in the same organization for an extended period. A further complication in this sector involves the substantial numbers of individuals who work as independent contractors under the auspices of contracting firms, which constitutes what might be termed a quasi-employment relationship or a shared employment relationship with contracting firm—though the relationship is not defined under existing public policy. This constitutes a distinct model by virtue of the many areas that are not covered under existing federal or state labor and employment policy. It is similar to small firms in this regard—an aspect of our labor and employment relations systems in which individuals do not have standing under the law.

A core policy challenge for this model of employment relations centers on the degree to which it is in society's interest to accord to these individuals rights similar to those enjoyed by employees working for a single employer. Interestingly, the way collective bargaining operates in sports may be a relevant approach here—it focuses on professional standards and minimum floors for wages.

V. Not-for-Profit Sector Model

Under United States law, a not-for-profit organization is a private organization serving public purposes and not organized principally to earn a profit. These organizations are exempted from federal income taxes and most local taxes (Salamon and Anheier 1997). Further, as Hansmann (1987) notes, these organizations are "prohibited from distributing residual earnings to individuals who exercise control over the firm such as officers, directors or members. They are not prohibited to earn profit but the profit must be distributed to non-controlling persons. Individuals generally volunteers their services." Note that the term "not-for-profit" is often preferred over "nonprofit" since there can be profits, but that is not the principle aim, and profits must be distributed properly. Cornell University's Legal Information Institute (notes that "non-profit organizations include churches, public schools, public charities, public clinics and hospitals, political organizations, legal aid societies, volunteer services organizations, labor unions, professional associations, research institutes, museums, and some governmental agencies" (2011).

Butler (2009) reports for the Bureau of Labor Statistics that "in 2007, there were more than 1.64 million nonprofit organizations in the United States. The nonprofit sector has expanded in terms of number of organizations and number of paid employees. In 1994, there were more than 1.1 million nonprofit organizations in the United States, employing about 5.4 million people, or 4.4 percent of all workers. By 2007, nonprofits employed 8.7 million workers, or 5.9 percent of all workers. Health professionals, educators, other professionals, health technicians, administrative support workers, and service occupations account for the majority of paid workers in the nonprofit sector."

Labor and employment laws have major gaps relative to this sector in that much of the "work" is done by unpaid volunteers who generally do not have the same standing as employees on issues of discrimination and other matters. Also, the mission-driven nature of the organizations represents a fundamentally different set of operating assumptions in comparison to private, for-profit organizations. This is distinct relative to labor and employment policy in the ways that collective or individual rights for employees interact with the not-for-profit mission of the organization, which can happen in ways that risk a fundamental change in the mission. For example, a profit sharing plan in one of these organizations would violate the very definition of being not-for-profit. On the positive side, these organizations serve crucial roles in society and will have increasing importance in a world where people are living and working longer, with both needs from the not-for-profit sector and the capacity to pursue what are termed "encore" careers in this sector (Freedman 2007).

A core policy challenge for this model is the degree to which society will see it as important and support an approach to labor and employment relations that is matched to its mission and its extensive utilization of volunteers. While there is no metric on which to judge such matters, it is our view that many stakeholders in society would recognize and value a distinctive approach to labor and employment relations in the not-for-profit sector. Alternatively, it is worth considering whether a system of labor and employment policies that was appropriate for mission-driven organizations might also be applicable to other private sector organizations.

VI. High-Performance Work Systems (Union and Nonunion)

The roots of what we now term "high-performance work systems" date back to the socio-technical systems movement during the 1950s through the 1970s (Trist 1981), while also drawing on the principles of high commitment (Walton 1985), total quality (Deming 1986), lean and six sigma systems (Womack, Jones, and Roos 1990), and other approaches to work that are essentially knowledge driven rather than expert driven (Cutcher-Gershenfeld et al. 1998). It was in the early 1990s that scholars documented demonstrably superior performance from bundles of high-performance labor and employment relations practices (Cutcher-Gershenfeld 1991; MacDuffie 1994; Huselid 1995; Ichniowski and Shaw 1999). MacDuffie (1994) identified three primary factors that distinguish a high-performance work system, none of which are addressed in any direct way by labor and employment policy in the private sector:

When employees possess knowledge and skills that managers lack

When employees are motivated to apply this skill and knowledge through discretionary effort

When the firm's business or production strategy can only be achieved when employees contribute such discretionary effort

These factors were operationalized in MacDuffie's analysis based on the presence of the following bundle of employment practices:

- Work Teams
- Problem-Solving Groups (Employee Involvement or Quality Circle groups)
- Employee Suggestions Made and Implemented
- Job Rotation
- Decentralization of Quality-Related Tasks
- HRM Policies Index for Recruitment and Hiring Practices
- Contingent Compensation
- Minimal Status Differentiation
- Training of New Employees
- Training of Experienced Employees

The laws governing labor and employment relations are silent with respect to such bundles of employment practices, though some areas of government investment, such as in training, would have stronger impacts when combined with the other practices in the bundle. Documentation of such bundles has occurred in unionized and nonunion sectors. Indeed, Black and Lynch (1997) set traditional nonunion work practices as zero and documented the following performance levels for traditional unionized facilities and what they termed "transformed" or high-performance facilities (Table 2).

TABLE 2
Relative Performance of Union and Nonunion Facilities
with Traditional and Transformed Work Practices

	Traditional	Transformed
Nonunion	0%	15%
Union	–15%	20%

Source: Black and Lynch 1997.

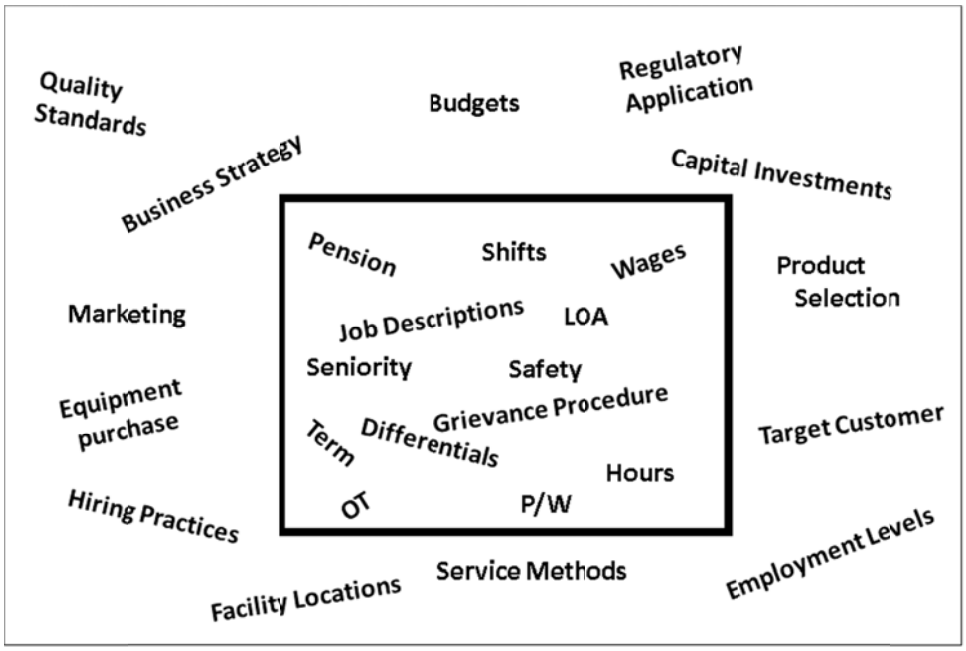
The high-performance unionized operations run counter to the popular image of unions but are entirely consistent with industry-leading gains in quality and performance by the UAW and Ford, Kaiser Permanente and its coalition of unions, and other strategic labor–management partnerships. This is separated from the balance of the private sector unionized workforce covered under the National Labor Relations Act since so much of the operation is at odds with distinctions under the law. These are all team-based work systems in which the line is blurred between lead workers and supervisors. The extensive infrastructure of joint programs on voluntary subjects of bargaining represents a degree of institutionalization that is more akin

to European models of co-determination. As well, on matters such as workplace safety, the operating systems in these locations typically exceed any standard that might be imposed via regulation. Thus, workplaces operating under this model can be accorded a much higher degree of self-regulation compared with traditional organizations (Estlund 2010).

Pairing unionized high-performance operations with nonunion high-performance operations may be seen as controversial. It is certainly the case that nonunion operations operate within bounds of collective discourse that are set by employers. Yet within these bounds, the degree of individual and collective voice is substantial. Indeed, though rarely challenged as violations of section 8A(2) of the NLRA, the levels of consultation and even what can be termed "collective bargaining" with a small "c" are extensive. For example, an early 1990s study of the Nipondenso auto supply facility in Battle Creek, Michigan, documented annual implementation of employee process improvement suggestions at a level of over 7,000 suggestions from approximately 700 employees. These were suggestions that emerged from team meetings, often with employee-initiated consultation across the workforce, and dealing with aspects of working conditions that encompassed and even exceeded what might be addressed by a union via a collective bargaining relationship (including safety, job design, product design, customer relations, supplier relations, and other matters) (Cutcher-Gershenfeld et al. 1998). Like their unionized counterparts, these are team-based work systems in which distinctions under the law regarding supervisory roles are blurred and the distinction between exempt and nonexempt employees can be blurred such that all employees are on a salary and all are involved in hiring and job assignment decisions. Compared to traditional organizations, these workplaces also have safety operating systems and other documented procedures that can warrant self-regulation.

In this context, it is helpful to consider a visualization developed by Kaiser Permanente and the coalition of unions with whom it bargains. This organization is an example of a high-performance unionized operation. Figure 1 features what they term the "NLRA box." As the figure illustrates, many of the most important matters addressed through their labor–management partnership are not required subjects of bargaining under the NLRA. It is in having governance mechanisms for addressing these topics that the union and nonunion high-performance work systems are similar.

FIGURE 1
Inside and Outside the NLRA Box



Source: Kaiser Permanente and the Coalition of Unions.

While there is much in common between unionized and nonunion high-performance work systems, one key difference is that nonunion systems are often seen by the labor movement as part of an anti-union strategy. In fact, knowledge-driven systems that are pursued *only* as part of union avoidance are likely to be superficial in comparison to those that genuinely value front-line knowledge that enables continuous improvement. Thus, though it is controversial, we are suggesting that the unionized and nonunion high-performance work systems have more in common from a policy point of view and that both are distinct from other models in similar ways.

The high-performance model is of particular importance from a policy perspective since it combines high performance and what are generally seen as "good" jobs (high pay for given occupations, safe working conditions, investments in training, and fair treatment). Indeed, recent research on labor standards in supply chains demonstrates that the use of high-performance work practices is more influential in improving work standards than either government standards or inspection regimes by nongovernmental organizations (NGOs) (Locke, Qin, and Brause 2008). It might well make sense for policy makers to carve out special privileges under the law for high-performance work organizations.

Although there is not a precise measure or even a single operational definition of a high-performance work system, various estimates place the proportion of workplaces with these practices at approximately 10% of the unionized and nonunion workforces (Black and Lynch 1997; Cutcher-Gershenfeld and Kochan 2004; Osterman 2006). Working from parts of Table 1, 10% of private nonunion (nonagricultural and nontransportation) employees in Models I and II is 7.1 million workers, and 10% of the same unionized set of employees is 830,000, for a total of 7.7 million workers. Of all the models, this has the highest degree of uncertainty about the estimated level of employment—10% is a very rough approximation that is offered here as a point of departure for dialogue rather than as a definitive estimate. Note as well that this proportion of high-performance work organizations is what has emerged in the absence of clear or strong policy support—a higher proportion is possible with stronger support.

A central policy challenge with the high-performance model involves mechanisms to expand this combination of high performance and good jobs, as well as what might be termed "harmonization" of these operations with existing laws and administrative procedures.

VII. State and Local Public Sector Unionized Model

Union organizing in the public sector grew substantially in the late 1960s and 1970s, first with organizing and collective action in the absence of enabling legislation; then, when it became clear in many states that the provision of public services and access to collective bargaining for public employees required legislation, laws broadly modeled on the National Labor Relations Act were passed. Twenty-six states have laws providing collective bargaining rights to most state and local employees and 12 additional states have laws extending these rights to some, but not most, public employees. The aim of these laws is well illustrated by the Statement of Policy in the 1967 New York Public Employees' Fair Employment Act (Civil Service Law, Article 14), known as the Taylor Law after arbitrator and scholar George Taylor, who chaired the 1966 Committee on Public Employee Relations that preceded the law in New York:

> The legislature of the state of New York declares that it is the public policy of the state and the purpose of this act to promote harmonious and cooperative relationships between government and its employees and to protect the public by assuring, at all times, the orderly and uninterrupted operations and functions of government. These policies are best effectuated by (a) granting to public employees the right of organization and representation, (b) requiring the state, local governments and other political subdivisions to negotiate with, and enter into written agreements with employee organizations representing public employees which have been certified or recognized, (c) encouraging such public employers and such employee organizations to agree upon procedures for resolving disputes, (d) creating a public employment relations board to assist in resolving disputes between public employees and public employers, and (e) continuing the prohibition against strikes by public employees and providing remedies for violations of such prohibition.

While the Taylor Law prohibited strikes, based on a balancing of employee rights and the public interest, most public employment laws do allow for strikes and other forms of collective action, with the exception of emergency service personnel, such as police officers and firefighters, who generally have access to some form of final and binding-interest arbitration in the event of an impasse in collective bargaining. Employment relations in this sector are also governed by state civil service systems that overlay additional policies and procedures for many aspects of wages, hours, and working conditions. This model (and other public sector models) is distinct from private sector models in that choices concerning labor and employment relations are always balanced against the public interest associated with all governmental services (Taylor 1967). This model is also distinct in that the workforce (and its representatives) are also the electorate who votes for the political leaders who then hire the managers with whom the workforce bargains, adding inherently political dimensions (Summers 1974). There are some parallels between the ways that the public sector is different from the private sector and the ways the not-for-profit private sector is different from the for-profit private sector in that both the public sector and the not-for-profit sector involve employees who have additional identities connected to management as voters or donors.

The Bureau of Labor Statistics estimates that there are approximately 2.2 million unionized state wage and salary employees and another 5.3 million unionized local wage and salary employees, for a total of 7.5 million people working under this model (BLS 2010b). The erosion of defined benefit pension plans and increased health care cost sharing in the private sector, combined with declining tax revenues, has created enormous pressure on negotiated public sector labor agreements at state and local levels. Unions that traded off wages for benefits in past decades are now facing public pressure for having benefits that exceed private sector norms—even if the higher-quality benefits do not make up for forgone wages (Allegretto and Keefe 2010). As well, over three decades of conservative political challenges to the size of government have eroded the historic service-oriented image of public employees and painted public sector unions as narrow, self-interested organizations. While there have been a number of innovations at state and local levels in service delivery and operational improvements, often utilizing continuous improvement principles from the private sector, there is little public awareness of these efforts. Indeed, a handful of public sector locations have operations that would be considered high-performance work systems.

A core policy challenge for this model is to articulate an approach to labor and employment relations that demonstrably integrates the legitimate rights and interests of organized public employees with society's legitimate interest in efficient and effective public services.

VIII. "New Deal" Private Sector Unionized Model

In 1935, the National Labor Relations Act (NLRA) was passed as part of President Roosevelt's New Deal, with the following aims and objectives presented in Section 1 (§151):

> The inequality of bargaining power between employees who do not possess full freedom of association or actual liberty of contract and employers who are organized in the corporate or other forms of ownership association substantially burdens and affects the flow of commerce, and tends to aggravate recurrent business depressions, by depressing wage rates and the purchasing power of wage earners in industry and by preventing the stabilization of competitive wage rates and working conditions within and between industries.
>
> … It is the declared to be the policy of the United States to eliminate the causes of certain substantial obstructions to the free flow of commerce and to mitigate and eliminate those obstructions when they have occurred by encouraging the practice and procedure of collective bargaining and by protecting the exercise by workers of full freedom of association, self-organization, and designation of representatives of their own choosing for the purpose of negotiating the terms and conditions of their employment or other mutual aid or protection.

This act was amended in 1947 by the Taft-Hartley Act and again in 1959 by the Landrum-Griffin Act, adding unfair labor practices by unions, reporting requirements, and other adjustments in the original law. Administration is via the National Labor Relations Board (NLRB) for rights under the law and the

Federal Mediation and Conciliation Service (FMCS) for labor–management relations once collective bargaining has begun.

The initial policy choice here is for the determination of wages, hours, and working conditions to be through a process of collective bargaining between the employer and independent, democratically selected representatives of the employees. There is abundant evidence that this policy aim has been eroded to the point that only one in ten cases where more than 50% of the workers have signed representation cards actually get to a first contract if there is any unfair labor practice involved (Ferguson 2008). This is what has motived the proposed Employee Free Choice Act, though the issues associated with union recognition are just one part of the larger policy challenge facing the United States when it comes to labor and employment relations. There are also many cases of parties innovating in the strategy, structure, and processes for bargaining (Walton, Cutcher-Gershenfeld, and McKersie 1994), though evidence suggests that only approximately 10% of labor–management relationships feature innovation in front-line work practices, collective bargaining processes, and strategic decision making (Cutcher-Gershenfeld and Kochan 2004). It is this 10% that is treated separately here as high-performance work systems. It is of note that many of the protections of individual rights with respect to discrimination, pensions, workplace safety, and other matters impacting nonunion enterprises also applies to these unionized employees. There are of course, many associated complications where workers have recourse under collective bargaining and under the law or instances where the use of one venue (collective bargaining or laws protecting individual rights) limits access under the other.

For 2009, the Bureau of Labor Statistics estimates that there were 7.4 million private sector workers who were members of unions under this act and a total of 8.2 million workers who were covered by the act (including individuals who are covered by collective bargaining agreements but are not members of unions). If we subtract the 10% of employees in high-performance work systems (820,000) from the 8.2 million, we get a total of approximately 7.4 million employees who are presently covered under this policy domain.

This part of the overall labor and employment relations framework has the strongest claim to having helped build a middle class in society during the three decades following World War II. A key policy challenge looking ahead is whether there is a policy regime under which the traditional, private sector unionized segment of the United States workforce can reclaim its mantle as an engine for building a middle class in society.

IX. Federal, State, and Local Public Sector Nonunion Model

The Bureau of Labor Statistics (2010b, 2010c) estimates that there are approximately 1 million nonunion federal wage and salary workers, 767,000 nonunion state wage and salary workers, and another 720,000 nonunion local wage and salary workers, for a total of approximately 2.5 million nonunion public sector workers. These include individuals working in the public sector at state and local levels for which there is no union present and individuals not in bargaining units in jurisdictions for which other public sector workers are covered by a union.

Many of these workers operate under civil service procedures. Where public sector workers are represented by a union, the negotiated terms and conditions with the union often carry over in part to the unrepresented workers. In the present era of concessionary bargaining in the public sector, benefit cuts for these workers typically precede pressure for cuts with unionized workers.

There is very little research or policy consideration of these nonunion public sector workers except in comparisons between union and nonunion public sector workers. As such, a core policy challenge for this model is that it is not a coherent model—it is derivative from a combination of the civil service and public sector collective bargaining model, but there is no overall clear vision driving labor and employment relations for these nonunion public sector employees.

X. Agricultural Model

The Bureau of Labor Statistics estimates that approximately 2 million people work in the agricultural sector (2010b). This work has been carved out of many areas of labor and employment policy, reflecting initial assumptions that much of this work took place in family-run farms. Today, employment in the

agricultural sector still includes some family farms, but it also includes large-scale migrant labor and other forms of agricultural work. Collective actions (boycotts and protests) have succeeded in establishing state-level policies in some cases and voluntary recognition of farmworker organizations in others. Work in this sector is also intertwined with issues of immigrant labor, safe working conditions, farm support, and the nature of the food supply in the United States. From a policy perspective, labor and employment relations in agriculture is different from earlier models because of its reliance on migrant labor, which is a workforce that includes people who have no vote and no direct political influence.

A core policy challenge for the agricultural model centers on the degree to which exclusion from key areas of labor and employment policy continues to make sense and, if so, whether there is a preferred model of labor and employment relations to be articulated.

XI. Federal Public Sector Unionized Model

The Bureau of Labor Statistics estimates that there are approximately 1.2 million unionized workers in the federal sector (BLS 2010b), with the Federal Labor Relations Authority, which serves in ways that are analogous to the NLRB in the private sector. The scope of bargaining is limited to working conditions for these employees, with wages and benefits set separately for all federal employees (regardless of union status). Nearly all of these workers are also covered under civil service procedures.

Under the 1993 Executive Order 12871, which promoted federal sector labor–management partnerships, extensive innovation happened in work organization, process improvement, and even reward systems across many federal agencies. Over 100 civil service "exemptions" were approved during this period to support innovative experiments. While there are still legacy examples to be found from this era, the executive order was cancelled by President Bush and then reinstated by President Obama—with the full additional impact yet to be seen.

A core policy challenge for this model is the same as the state and local public sector unionized model, which is to articulate an approach to labor and employment relations that demonstrably integrates the legitimate rights and interests of organized public employees with society's legitimate interest in efficient and effective public services.

XII. Air and Rail Transportation Model

In 2008, approximately 470,000 people worked in the air transportation sector and another 130,000 worked in rail transportation (BLS 2009a, 2009b). Labor and employment relations for all nonmanagerial employees in this sector are covered under the Railway Labor Act (RLA), which is administered by the National Mediation Board (NMB). The RLA is the only governing labor and employment legislation for which Congress was approached on a joint basis by labor and management in advance of the drafting of the law. In the railway sector in particular, there are many craft unions (often more than a dozen in a given operation), while only a handful of railway operations are functioning with a single integrated union. Air transportation does not have as many crafts associated with its operations, but there may still be as many as a half-dozen associated with the operation of an airline. Although the RLA does not have a preamble or statement of intent, the structure of the law reveals a strong bias for protecting continued public commerce by ensuring that labor–management conflicts do not interrupted rail or air transportation.

A core policy challenge for the RLA concerns the degree to which rail and air transportation are still so distinct as to necessitate coverage under a separate law and the degree to which there are aspects of this law that may have broader applicability in the U.S. economy.

Additional Notes

Before turning to the next section, which assesses the models relative to the challenges of a global knowledge economy, there are additional notes to make regarding aspects of the United States labor and employment policy systems not covered by the above models.

Domestic maritime workers. The Seaman's Act of 1915 (officially, the Act to Promote the Welfare of American Seamen in the Merchant Marine of the United States) and the Jones Act of 1920 (officially, the

"Merchant Marine Act") provide an exceptionally high level of protection for a very small segment of the United States workforce. Seamen who are operating within U.S. coastal waters and in commercial maritime operations between the mainland and Hawaii and Alaska must be on U.S. flagged vessels and must operate based on a signed individual contract of employment that meets set standards. The numbers of employees covered under these laws are hard to determine, but they are sufficiently small that we have not called this out as a separate model. At the same time, if the United States were to consider a more comprehensive approach to individual employment contracting, this model represents an established precedent.

Employee ownership. In an overview of the domain that he terms "shared capitalism," Carberry (2010) sums up employment levels in this domain as follows:

> The National Center for Employee Ownership (NCEO) provides the most reliable estimates of the number of firms using different types of plans. In early 2010, the NCEO estimates that there were approximately 10,500 companies with [Employee Stock Option Plans] (with 12.7 million participants and $900 billion in assets); 800 companies with 401k plans that are primarily invested in company stock (with 5 million participants and $200 million in assets); 3,000 firms with [Broad Based Employee Stock Option Plans] covering 10 million employees; and 4,000 firms with [Employee Stock Purchase Plans] covering about 11 million employees (NCEO 2010). Currently, there are 300 worker cooperatives in the US covering over 3,500 employees with $400 million in annual revenues (National Federation of Worker Cooperatives 2010).

While many ESOPs, company stock 401(k) arrangements, and other such plans serve primarily as an additional employee benefit and not as a fundamentally different legal model for labor and employment relations, some do involve shared governance that could be considered an additional model in the United States context. There are many policy implications in this domain, all of which center on the degree to which incentives for firms to operate in this way can increase stability and effectiveness in organizations, while also increasing consumer purchasing power.

The informal economy. The Aspen Institute's FIELD project (2010) on micro-enterprises includes a special focus on the informal economy, which it defines in terms of four key characteristics:

- It involves licit but unregulated work: enterprises, employers, and self-employed individuals who do not comply with standard business practices, taxation regulations, and/or other business reporting requirements but are otherwise not engaged in overtly criminal activity.
- It includes both employed and self-employed workers, with some engaged in both kinds of work.
- Cash is the most common medium of exchange, although bartering also occurs.
- Work conditions for those who labor are inferior to those found in the formal economy.

In this context, the fact that it is unregulated and involved different (inferior) working conditions makes in a potential additional model for labor and employment relations in the United States. This part of the economy also includes undocumented workers, which raises distinct, but related policy issues. The Aspen Institute estimates that the informal economy represents additional economic activity on the scale of approximately 10% of GNP, with approximately 10 million people employed in this sector. In relative size, this would be the fifth largest grouping of "employees" among the 12 labor and employment policy models highlighted. It is listed here, however, since it is defined by the absence of policy. The overall policy challenge is the degree to which regulation, enforcement, and incentives will drive people from the informal economy into one of the above models for labor and employment relations.

International employment with multinational corporations. Although not part of the United States workforce, individuals working for U.S. multinational corporations around the world will need to be taken into account for future discussions of United States labor and employment policies in at least two ways. First, there are expatriate employees who presently enjoy some coverage under U.S. labor and employment policies, such as with respect to claims of discrimination. Second, as these multinational corporations seek to harmonize policies across locations (which may be engaged in interdependent work), they will be making choices about whether to use United States labor and employment policies as the point of departure or the policies of other

nations. Clearly, the work in each location is subject to local labor and employment law policies, but there are not constraints on "harmonizing upward." Further, there is a remarkably large set of legal domains where the policies of the corporate home country and the location of the work are neither better nor worse, but just very different. This is the case, for example, on matters such as workplace privacy, working hours, and representative mechanisms. (Indeed, as was noted earlier, Finkin [2001] documents similar state-level variation even within the United States.)

Deep differences in cultural values reveal themselves in the labor and employment policies of different nations, yet there is also a great potential for nations to have dialogue about coordination of policy regimes for labor and employment relations—a process that has begun in the European Union. Thus, beyond concerns over the global "race to the bottom" on wages, there may yet be a "high road" competition for preferred systems of labor and employment relations that will be shaped by the private choices of employers and the coordinated efforts of nations.

Additional possible models. If labor and employment policy has been and should be attentive to differences in the nature of work, organizations, and markets, then additional domains are emerging as relevant for policy consideration. These include supply chains in which many people with interdependent work are connected together. As was already noted in the section on high-performance work organizations, knowledge-driven, systems-level practices extend across supply chains in ways that directly impact the adherence to labor standards (Locke, Qin , and Brause 2008). In these and other ways, supply chains and similarly connected complex systems may be an appropriate unit of analysis looking ahead.

Green jobs have been highlighted as part of the federal recovery investment during the past two years and may, too, become a relevant category for labor and employment policy. Green jobs include the work associated with alternative forms of energy generation, energy transmission, and energy conservation. The key question here, as with all categories identified, is whether there are aspects of the work, organizations, or markets that require distinct treatment with respect to individual and collective rights. Much of this work is in the construction sector, and the use of project labor agreements and innovative apprenticeship models could, for example, become steps toward a larger framework under which green jobs are handled under the law.

A Framework for Action

There is no overarching, coherent policy aim connecting the 12 models identified here. They just represent different ways in which distinctions about work, organizations, and markets have been carved out of employers' property rights during nearly a century. Taking into account this diversity and considering what other nations have done, Colvin (2010) has argued that United States does not have a system for labor and employment relations—just a piecemeal collection of legislative actions. While we agree that the overall system lacks coherence, we are arguing here that each of the 12 models is individually coherent and that each represents an appropriate unit of analysis or framework for action. Indeed, when viewed as a whole, we believe that they represent a clear call for action. That we have instead experienced gridlock for over three decades is a source of deep frustration among scholars familiar with this situation and is a genuine set of lost opportunities for society. George Taylor called for all parties to take on what he termed "a mantle of responsibility for labor-management relations" (Chaykowski et al. 2000). This paper has been written to amplify and help guide such an effort.

We argue that labor and employment policy in the United States has been and should be attentive to differences in the nature of work, organizations, and markets. The key question for policy makers is whether, looking at the current system, we are attending to differences that best serve the public interest. To inform such discussions, we urge looking at the system in multiple ways. First, the 12 models can be arrayed across a spectrum in which increasing degrees of an employer's "reserved rights" are carved out, with increasing degrees of individual and collective employee rights accorded. Second, we use this spectrum framework to assess the models relative to the overall aim of advancing the American Dream in a global knowledge economy.

Arraying the models across a spectrum in the public sector might be presented as shown in Figure 2.

FIGURE 2
Spectrum of Public Sector Models for
Employee Individual and Collective Rights in the Workplace

Extensive ⟷		Limited
State and Local Public Sector Unionized (Model VII)	Federal Public Sector Unionized (Model XI)	Federal, State, and Local Public Sector Nonunion (Model IX)

In this case, the federal sector is to the right of state and local public sector due to the more limited scope of bargaining. In the private sector, this might be presented as shown in Figure 3.

FIGURE 3
Spectrum of Private Sector Models for
Employee Individual and Collective Rights in the Workplace

Extensive ⟷				Limited	Gaps in coverage
High-Performance Work Systems (Union and Non-Union) (Model VI)	Air and Rail Transportation (Model XII)	"New Deal" Private Sector Unionized (Model VIII)	Traditional Nonunion HRM (Model I)	Traditional Nonunion HRM/Right-to-Work (Model II)	• Small Business (fewer than 20 employees, Model III) • Independent Contractors (nonagricultural, Model IV) • Not-for-Profit Sector (Model VI) • Agricultural (Model X)

In Figure 3, the placement of high-performance work systems to the far left will, perhaps, not be controversial for the unionized cases but will be controversial in the nonunion cases. This again reflects the degree to which these nonunion systems are defined by a level of voice that partly overlaps with the scope of the RLA and the NLRA, but that also goes beyond the scope of these laws in many respects, including the degree to which the voice mechanisms are highly accessible and highly effective. Indeed, where employers do not recognize and support these voice mechanisms, the organizations drop out of this category and fall into HRM Models I or II. The model under the RLA is placed to the left of the unionized model under the NLRA since it allows for secondary boycotts. Finally, the four models in the rightmost column represent gaps in coverage under the law, including very small businesses, independent contractors, volunteers, and immigrant workers.

If the public and private sector (Figures 2 and 3) were to be integrated, the federal, state, and local nonunion model would be to the left of the private nonunion HRM model since civil service rights are present even in the absence of a union. Taken together, these figures help to further illustrate the spectrum of policy choices that the United States has made, either explicitly or by default. Implied in the figures is also the question about whether this spectrum is what we would want to establish if we were intentionally setting up a system for labor and employment relations policy.

Advancing the American Dream in a Global Knowledge Economy

Building on the spectrum format, a further way of viewing the models is with respect to the policy aims of advancing what we call the American Dream in a global, knowledge economy. As was noted at the outset, advancing the American Dream involves good jobs and high performance such that each generation can have hope of doing better than the last. Components of good jobs include work environment, environment relationship, quality of work life, and organizational performance (Lowe and Schellenberg 2001). A good job can

also be defined in terms of pay, hours of work, future prospects, job difficulty, and job content (Clark 2004). For the purposes of this paper, good jobs for employees in today's economy might be defined as ensuring:

- Dignity and Respect
- Safe Working Conditions
- Investments in Knowledge, Skills, and Capability
- Mechanisms for Workforce Engagement (at the workplace level)
- Stable or Rising Standards of Living
- Transitional Adjustment Mechanisms

Dignity and respect are considered essential to good jobs (Hodson and Sullivan 2007). They are relevant because the development and sharing of knowledge is a voluntary process that is undercut by disrespect. Similarly, safe working conditions are a foundational element, which can include the connection between physical safety and psychological safety (Klitzman and Stellman 1989). Investments in employee knowledge, skills, and capability encompass training, development, and accumulated experience contributing to innovation and continuous improvement via mechanisms for workplace-level engagement. Stable or rising standards of living addresses absolute living standards and reduce income inequality. Transitional adjustment mechanisms for employees reflect the dynamic nature of markets and technology.

For employers, there are many things to consider when advancing "high performance" in today's economy. A minimum list might be:

- Flexibility and Limited Regulation
- A Knowledgeable, Skilled, and Capable Workforce
- Mechanisms for Workforce Engagement (at the workplace level)
- Stable or Growing Returns on Investment
- Transitional Adjustment Mechanisms

Employer flexibility and limited regulation reflect the dynamic nature markets and technology, which are also reflected in the final item, transitional adjustment mechanisms for employers. A knowledgeable, skilled, and capable workforce, combined with mechanisms for workplace-level engagement, is at the heart of knowledge-driven work systems. Note that the forms of workplace-level engagement are similar in unionized and nonunion environments; there is far more variation above the workplace level. Stable or growing returns on investment reflect the core economic motivation for employers.

In addition to the mechanisms for workplace-level engagement, it is an important policy question regarding the degree to which the American Dream in the 21st century should also involve mechanisms for engagement at enterprise and societal levels. This is something we see in other nations but is a source of great contention in the United States given that our point of departure is the carving out of employers' property rights. On the one hand, the recent deep recession revealed the consequences of eroded consumer purchasing power and the lack of checks and balances with respect to financial markets. On the other hand, we have seen a redoubling of funding for efforts to restrict the scope of government, which is connected to populist sentiment along these lines. Thus, an additional consideration when reviewing the models is mechanisms for checks and balances, though we recognize that these may be controversial. Such mechanisms include:

- Mechanisms for Administrative and Strategic-/Enterprise-Level Engagement
- Mechanisms for Industry-, System-, and National-Level Stakeholder Engagement

These mechanisms for engagement build on the three levels offered by Kochan, Katz, and McKersie (1986) but are collapsed into two (workplace and strategic), with a broader societal level. Both involve checks and balances by which the workforce and its representatives are able to engage with management at the enterprise level and with other key stakeholders, such as financial markets, at the societal level. Since one of the primary mechanisms for such engagement is collective bargaining, that will be controversial for some employers. A different way of viewing this dimension, however, is to recognize the degree to which the principle of checks and balances is integral to governance in the United States, while there are many mechanisms by which this

could be achieved. Thus, a revitalized and impactful United States Council on Competitiveness could be just as important as existing and new mechanisms for employee voice in the workplace.

Table 3 assesses the three public sector models relative to the three broad criteria identified here—good jobs, high performance, and mechanisms for checks and balances. In each case, a plus (+) is used to signify a strong positive contribution by the model toward this aim, a minus (–) is used to signify strong limitations of the model toward this aim, and a combination of a plus and a minus (+/–) is used where there are both positive and negative aspects of the model relative to the aim of advancing the American Dream in the context of today's global knowledge economy.

TABLE 3
Assessing Public Sector Models for Labor and Employment Relations in the United States Relative to Advancing the American Dream

Employment relations models	Approx. U.S. employment	Good jobs	High performance	Checks and balances
State and Local Public Sector Unionized Model (Model VII)	7.5 million	+	+/–	+
Federal Public Sector Unionized Model (Model XI)	1.2 million	+	+/–	+
Federal, State, and Local Public Sector Nonunion Model (Model IX)	2.5 million	+	+/–	+/–

As Table 3 indicates, both the union and the nonunion models in the public sector are associated with what can be considered good jobs. When it comes to high performance, there are pockets of innovation in the public sector, but there are also instances of unnecessary bureaucracy. Finally, with respect to checks and balances, the unionized models do provide positive mechanisms (with more limitations in the federal sector), and there are even some mechanisms through civil service and other means in the nonunion parts of the public sector. Thus, one key policy question comes back to the adjustments that might be considered for each model such that it might better advance the American Dream. The estimates on employment in this Tables 3, 4, and 5 are all from Table 1 and the subsequent supporting text.

Table 4 assesses the five private sector models that do not have significant gaps relative to the three criteria. As was the case in Table 3, these are listed in descending order across the spectrum framework presented above (along with relative employment levels).

TABLE 4
Assessing Private Sector Models for Labor and Employment Relations in the United States Relative to Advancing the American Dream

Employment relations models	Approx. U.S. employment	Good jobs	High performance	Checks and balances
High-Performance Work Systems (Union and Nonunion) (Model VI)	7.7 million	+	+	+
Air and Rail Transportation (Model XII)	600,000	+	+/–	+
"New Deal" Private Sector Unionized Model (Model VIII)	7.4 million	+	+/–	+
Traditional Nonunion HRM (Model I)	37.1 million	+/–	+/–	–
Traditional Nonunion HRM/Right-to-Work (Model II)	26.8 million	+/–	+/–	–

Only the high-performance model in Table 4 is positive along all three dimensions. The other two unionized models are positive with respect to good jobs and checks and balances but are mixed with respect to the way these two models advance high performance in that they promote a more stable and skilled workforce but also are associated with more-restrictive contractual rules for operation. The two nonunion models are mixed in the degree to which they advance good jobs and high performance since they encompass both modern human resource practices and low-wage/low-skill approaches to staffing. While these models may include workplace levels of engagement, they rarely advance enterprise and societal forms of engagement that would constitute checks and balances. Again, this assessment is aimed at beginning a dialogue relative to each of these models and the ways that they might be adjusted to advance the American Dream.

Finally, Table 5 uses the same three criteria from Tables 3 and 4 to assess the models where there were major gaps in coverage that made it hard to array them on the spectrum of carved-out rights and responsibilities. These models are rarely in debate with respect to labor and employment policy, though over 40 million people are estimated to be employed under these models—nearly a third of the United States workforce.

TABLE 5
Assessing Models with Major Gaps Regarding Labor and Employment Relations in the United States Relative to Advancing the American Dream

Employment relations models	Approx. U.S. employment	Good jobs	High performance	Checks and balances
Independent Contractors (nonagricultural) (Model IV)	10.3 million	–	–	–
Small Business (fewer than 20 employees) (Model III)	21.8 million	+/–	+/–	–
Not-for-Profit Sector (Model V)	8.7 million	+/–	+/–	+
Agricultural Model (Model X)	2 million	–	–	–

As a model, the structure of the law with respect to independent contractors and agricultural workers is negative on all three dimensions—the largest gaps in this analysis. It would seem most justifiable to ask how work under these two models could be adjusted to better advance the aims of good jobs and high performance, as well as to encompass checks and balances. The legal structure for employment in small businesses has a mix of positive and negative features with respect to good jobs, reflecting the degree of shared capitalism in some cases and the lack of coverage for basic rights in others. These are similarly associated with high performance in a positive way given flexibility, but in a negative way given adjustment mechanisms and other criteria. Finally, the not-for-profit sector is assessed with a mixture of positive and negative aspects regarding good jobs and high performance given the combination of volunteer work and the mission-driven nature of these operations. In general, there are governance mechanisms associated with the not-for-profit status that do provide checks and balances at higher levels.

Given the above analysis, two models stand out. First, the high-performance work systems represent a combination of good jobs and high performance that also features checks and balances. Union leaders and scholars who are critical, in general, of nonunion models will acknowledge that a true high-performance work system must be knowledge driven in ways that the workforce does have a high measure of voice and input. The nonunion high-performance work systems have the most robust forms of collective voice among all the nonunion models. Nonunion human resource executives who are generally critical of operating in a unionized environment will acknowledge that a union operating as a strategic partner in a true high-performance work system can be advantageous in various ways. They will also often note that unions have historically played an important role in society and these settings, in which the union demonstrates flexibility and a commitment to high performance, represent the most appealing way in which this role could continue. There are still areas of

disagreement on all sides when it comes to high-performance work systems, but there is enough overlap to suggest that it is one point of departure for national dialogue on labor and employment relations.

Second, the not-for-profit sector is highlighted since there is relatively little disagreement that this mission-driven work is of great importance to society and the models for the engagement of volunteers have broader applicability. In many ways, the need to foster the engagement of volunteers has parallels to the knowledge-driven mechanism in high-performance work systems. While this is mostly outside of the public consciousness when it comes to labor and employment relations, it is also a helpful point of departure for national dialogue.

Furthermore, we also highlight small entrepreneurial enterprises as an additional important point of departure for national dialogue, even if there is no shared vision for labor and employment relations in this context. The labor and employment practices that are encoded into these small businesses have an importance that goes well beyond the over 21 million people estimated to be working in businesses with fewer than 20 employees. What is incorporated into these organizations today will have a legacy for tomorrow's large enterprises that grow from these small businesses.

Also, in the public sector there is a need to more fully integrate ways to advance "public goods" into the joint efforts of labor and management. This can build on recent examples of police and fire unions negotiating agreements with management to jointly work on improving public safety, teachers' unions negotiating agreements on improving educational outcomes, and other such examples. As well, civil service procedures and other aspects of the employment relationship need to be aligned with an appropriate balancing of flexibility with continuity and expertise in government operations.

The 2008 collapse of the economy did reveal the dual role that workers have as consumers and highlighted the historic role that unions and collective bargaining have played in our economy. Further, even in the parts of the unionized sector that are not high-performance work systems, there are innovations taking place with respect to new models for collective bargaining that involve more of a problem-solving approach and that are delivering better outcomes for labor and management (Cutcher-Gershenfeld and Kochan 2004). There are also initiatives within the AFL-CIO to support professional standards in professions even where there is not a union organization in place. Even more importantly, there are cases of parties taking the public interest into account through collective bargaining in the private sector as well as the above-mentioned public sector examples with police, firefighters, and teachers. These include industrial unions negotiating language to improve environmental outcomes, construction unions agreeing on integrated apprenticeships to expand green jobs, nurses and other health care workers negotiating to address skill shortages and new models for health care delivery, and other examples of parties using the institutional framework of collective bargaining to reach beyond wages, hours, and working conditions in ways that generate public value. In essence, collective bargaining achieved legitimacy as a social institution by virtue of both the way it threatened commerce and advanced consumer purchasing power. Additional ways in which collective action is seen as advancing the public interest increase the degree to which there will be policy attention to maintaining collective bargaining as a valued social institution. These developments suggest that the traditional union model for collective bargaining is amenable to innovation and that these innovative approaches should be part of any policy dialogue on labor and employment relations in the emerging global knowledge economy.

One key lesson from research on complex systems involves the crucial role of systems-level protocols and standards (Cutcher-Gershenfeld and Lawson 2010). These can be thought of as the "rules of the road" under which the stakeholders engage. For example, the exponential growth of the Internet was enabled, in part, by the Transmission Control Protocol/Internet Protocol (TCP/IP) standard that enabled distributed users and programs to orient and connect with one another. Thinking through labor and employment policy from this perspective includes, but is not limited to, the law. Norms, such as whether collective bargaining is more interest based or more adversarial, are just as important as a legal framework that supports collective bargaining. Similarly, a standard that links productivity gains to wage gains has important implications for consumer purchasing power. Thus, the challenge that goes beyond alignment of stakeholders in the United States around a more coherent and effective system of labor and employment relations policy will involve the incentives, enablers, and other guidance that is embedded in systems-level protocols and standards.

Conclusion

In the short story "On Exactitude in Science," Jorge Louis Borges writes of an ancient empire where:

> The craft of cartography attained such perfection that the map of a dingle province covered the space of an entire city, and the map of the empire itself an entire province. In the course of time, these extensive maps were found somehow wanting, and so the College of Cartographers evolved a map of the empire that was of the same scale as the empire and that coincided with it point for point.

This story ends on a somber note as he observes:

> Less attentive to the study of cartography, succeeding Generations came to judge a map of such magnitude cumbersome, and, not without irreverence, they abandoned it to the rigours of sun and rain. In the western deserts, tattered fragments of the map are still to be found, sheltering an occasional beast or beggar; in the whole nation, no other relic is left of the discipline of geography. (Borges 1946)

This article risks beginning the same journey—charting the range of labor and employment relations systems in the United States in successive degrees of detail such that it becomes a point-by-point description of all jobs in all sectors. Of course, identifying 12 models is still a long way from this extreme, and the main point here is that most discourse on labor and employment relations policy does not generally even consider this degree of detail.

Four of the twelve models were selected because they have distinct governing laws and regulations—these are the "New Deal" private sector unionized model, the state and local public sector unionized model, the federal public sector model, and the air and rail transportation model. Even among these models there has been divergence over time such that "unionized" jobs in the United States do not all fit within a single common model, even if all involve a common valuing of collective worker representation and some form of collective bargaining. Moreover, they vary in the ways that they help to advance the American Dream in today's economy. The public sector nonunion model generally features civil service procedures, which have both positive and negative roles with respect to the American Dream. Five of the models (the high-performance model, the independent contractor model, the not-for-profit model, the small business model, and the agricultural model) were singled out for the important ways that they do not fit into current governing laws and regulations and are distinct from one another. One of these, the high-performance model for unionized and nonunion operations, stands out in its correspondence to the American Dream. Finally, two models, the traditional nonunion HRM model and the traditional nonunion HRM/Right-to-Work model, are both the most prevalent models and the ones that are least able to be defined from the point of view of labor and employment relations policy—in this analysis, it is literally these models that remain when the rest have been defined.

All of these models face the challenges of shifts in markets, technology, and work (as reflected in the rising global knowledge economy); increased inequality and reduced consumer purchasing power; and erosion of employer-based components of labor and employment relations (health care, pensions, and training). The models each feature distinctive forms of work, organizations, and markets that have been treated in separate ways under United States labor and employment policy. In moving forward, it is most important that we proceed with dialogue at the level of alternative models, rather than specific laws advancing or eroding particular rights or responsibilities. Looking across the current diverse mix of models, we see a number of promising points of departure. In some cases, such as air and rail transportation or agriculture, the separate treatment may no longer be justified. In other cases, such as the treatment of independent contractors, the gap in policy is revealed as needing immediate attention. Beyond debates on the unionized versus the nonunion model or distinctions between the public and private sectors, additional models for consideration include the high-performance work system model (for combining good jobs and high performance), the not-for-profit model (for combining mission and engagement of volunteers), and the small entrepreneurial model (as the foundational circumstance for the next generation of enterprises). All have implications for national policy dialogue on labor and employment relations.

In the domain of labor and employment relations policy, there are core values and principles in debate. These include the forms of employee representation to be advanced, how much of the "employment at will" concept to preserve, the degree to which corporate property rights in the enterprise supersede individual property rights in a job, how to transition the informal economy into the formal economy (particularly with respect to immigration), and other matters. While this paper has offered some perspectives on these matters, we have primarily sought to anchor the policy debates in a clear-eyed, foundational view of labor and employment relations in the United States that is centered on distinct models rather than individual laws or policies. We observe and urge that policy has made and should make distinctions based on that nature of work, organizations, and markets. At present, we are operating with distinctions made sequentially over approximately a century. By mapping the terrain and offering up what we see as 12 distinct models, we sincerely hope that it will be easier to serve the overall national interest of revitalizing and advancing the American Dream in a global knowledge economy.

Appendix A: National Laws Defining Individual Rights and Responsibilities in Labor and Employment Relations

- Act to Promote the Welfare of American Seamen in the Merchant Marine of the United States of 1915 and the Merchant Marine Act (Jones Act) of 1920
- Keating-Owen Child Labor Act of 1916
- Social Security Act of 1935
- Public Contracts Act (Walsh-Healy) of 1936
- Fair Labor Standards Act of 1938, as amended
- Servicemen's Readjustment Act (G.I. Bill) of 1944
- Executive Order 8802: Prohibition of Discrimination in the Defense Industry (1941)
- Welfare and Pension Disclosure Act of 1958
- Manpower Development and Training Act of 1962
- Equal Pay Act (EPA) of 1963
- Civil Rights Act of 1964 (Title VII), as amended by the Civil Rights Act of 1991
- Age Discrimination in Employment Act of 1967 (ADEA)
- Federal Coal Mine Health and Safety Act of 1969
- Rehabilitation Act of 1973 (Sections 501 and 505)
- Employee Retirement Income Security Act (ERISA) of 1974
- Vietnam Veterans Readjustment Assistance Act (VEVRAA) of 1974
- Pregnancy Discrimination Act of 1978
- Job Training Partnership Act (JPTA) of 1982
- Consolidated Omnibus Budget Reconciliation Act (COBRA) of 1986 (health benefit provisions)
- Employee Polygraph Protection Act (EPPA) of 1988
- Whistleblower Protection Act of 1989
- Americans with Disabilities Act (ADA) of 1990
- Family and Medical Leave Act (FMLA) of 1993
- Uniformed Services Employment and Reemployment Rights Act of 1994, amended 2005
- Workforce Investment Act (WIA) of 1998
- Ticket to Work and Work Incentives Act of 1999
- Lilly Ledbetter Fair Pay Act of 2009

Appendix B: National Laws Defining Collective Rights and Responsibilities in Labor and Employment Relations

Collective Rights

- Railway Labor Act of 1926, amended 1936
- National Labor–Management Relations Act of 1935 (Wagner Act), as amended by:
  - Labor–Management Relations Act of 1947 (Taft-Hartley Act)
  - Labor–Management Reporting and Disclosure Act of 1959 (LMRDA) (Landrum-Griffin Act)
  - Various state and federal laws and executive orders governing public sector labor relations, including Executive Order 10988: Granting Bargaining Rights to Federal Employees (1962)

Legislation with Individual and Collective Dimensions

- Davis-Bacon Act of 1931
- Full Employment and Balanced Growth Act (Humphrey-Hawkins Act) of 1978
- Labor–Management Cooperation Act of 1978
- Occupational Health and Safety Act of 1970
- The Worker Adjustment and Retraining Notification Act (WARN) of 1988
- Executive Order 12871: Labor–Management Partnerships (1993) and Executive Order 13522: Creating Labor–Management Forums to Improve the Delivery of Government Service (2009)

Crisis Legislation

- National War Labor Board of 1919
- National Industrial Recovery Act of 1933
- Nation War Labor Board of 1942
- American Recovery and Reinvestment Act of 2009

Acknowledgements

We are deeply indebted to Bill Canak, Pat Canavan, Alex Colvin, Matt Finkin, David Jacobs, Tom Kochan, and Bob McKersie for many helpful comments and contributions to this paper. We also appreciate the many contributors to the online dialogue through the Labor and Employment Relations Association (LERA), which provided a timely and highly engaging context as this paper was coming together, and for comments at the LERA panel session.

Endnote

[1] This was calculated using data from BLS (2010c), which indicates that a total of 75.6 million people work for employers in these states, of which 13.5 million are represented by unions (15.8%), as compared to 48.9 million people working in right-to-work states, of which 3.5 million are represented by unions (8.3%), not all of which are members of unions; subtracting out the people represented by unions leaves 62.2 million and 45.4 million, which are 58% and 42%, respectively.

References

Adams, J.T. 1931. The Epic of America. Simon Publications (2001).

Allegretto, S.A., and J. Keefe (2010). *The Truth about Public Employees in California: They Are Neither Overpaid nor Overcompensated.* Policy Brief, Institute for Research on Labor and Employment.

Aspen Institute 2010. *Field Project on Micro-Enterprises.* Retrieved from http://www.fieldus.org/projects/InformalEconomy.html

Barley, S.R., and G. Kunda. 2006. *Gurus, Hired Guns, and Warm Bodies: Itinerant Experts in a Knowledge Economy*. Princeton: Princeton University Press.

Bidwell, M.J., and F. Briscoe. 2009. "Who Contracts? Determinants of the Decision to Work as an Independent Contractor among Information Technology Workers." *Academy of Management Journal 52*(6):1148–1168.

Black, S.E., and L.M. Lynch. 1997. *How to Compete: The Impact of Workplace Practices and Information Technology on Productivity*. NBER Working Papers 6120, National Bureau of Economic Research, Inc.

Bluestone, B., and Harrison, B. 1988. *The Great U-Turn: Corporate Restructuring and the Polarizing of America*. New York: Basic Books.

Borges, J.L. 1946. "On Exactitude in Science." In *A Universal History of Infamy*. 1975 Reprint. London: Penguin Books.

Bureau of Labor Statistics. 2005. *Independent Contractors in 2005*. Retrieved from http://www.bls.gov/opub/ted/2005/jul/wk4/art05.htm

Bureau of Labor Statistics. 2009a. *Employment by Major Industry Sector, 1998, 2008, and Projected 2018*. Retrieved from http://www.bls.gov/news.release/ecopro.t02.htm

Bureau of Labor Statistics. 2009b. *Union Members*. Retrieved from http://www.bls.gov/news.release/union2.nr0.htm

Bureau of Labor Statistics. 2010a. *Employees on Nonfarm Payrolls by Industry Sector and Selected Industry Detail*. Retrieved from http://www.bls.gov/news.release/empsit.t17.htm

Bureau of Labor Statistics. 2010b. *Union Affiliation of Employed Wage and Salary Workers by Occupation and Industry*. Retrieved from http://www.bls.gov/news.release/union2.t03.htm

Bureau of Labor Statistics. 2010c. *Union Affiliation of Employed Wage and Salary Workers by State*. Retrieved from http://www.bls.gov/news.release/union2.t05.htm

Butler, A., Bureau of Labor Statistics. 2008, rev. 2009. *Wages in the Nonprofit Sector: Management, Professional, and Administrative Support Occupations*. Retrieved from http://www.bls.gov/opub/cwc/cm20081022ar01p1.htm

Carberry, E.J. 2010. "Shared Capitalism in the Economy of Permanent Crisis: A Dead Letter or Untapped Potential?" LERA Annual Meeting, January 2011.

Chaykowski, R., J. Cutcher-Gershenfeld, T.A. Kochan, and C. Sickles Merchant. 2000. *Facilitating Conflict Resolution in Union–Management Relations: A Guide for Neutrals*. Ithaca, NY: Institute on Conflict Resolution.

Clark, A.E. 2004. *What Makes A Good Job? Evidence from OECD Countries*. Paris: DELTA.

Colvin, A.J.S. 2010. "Locating US Employment Relations: Paradigmatic Model or Characteristic Divergence?" LERA Annual Meeting, January 2011.

Cornell University Legal Information Institute. 2011. *Non-Profit Organizations*. Retrieved from http://topics.law.cornell.edu/wex/Non-profit_organizations

Cutcher-Gershenfeld, J. 1991. "The Impact on Economic Performance of a Transformation in Workplace Relations." *Industrial and Labor Relations Review 44*(2):241–260.

Cutcher-Gershenfeld, J., and T. Kochan. 2004. "Taking Stock: Collective Bargaining at the Turn of the Century." *Industrial and Labor Relations Review 58*(1):3–26.

Cutcher-Gershenfeld, J., and C. Lawson. 2010. *Valuing the Commons: A Fundamental Challenge across Complex Systems*. NSF/SBE 2020 White Paper on Future Research in the Social, Behavioral & Economic Sciences.

Cutcher-Gershenfeld, J., P. McHugh, and D. Power. 1996. "Collective Bargaining in Small Firms: Preliminary Evidence of Fundamental Change." *Industrial and Labor Relations Review 49*(2):195–212.

Cutcher-Gershenfeld, J., M. Nitta, B. Barrett, N. Belhedi, S. Chow, T. Inaba, I. Ishino, W. J. Lin, M. Moore, W. Mothersell, J. Palthe, S. Ramanand, M. Strolle, and A. Wheaton; with C. Coutchie, S. Lee, and S. Rabine. 1998. *Knowledge-Driven Work: Unexpected Lessons from Japanese and United States Work Practices*. New York: Oxford University Press.

Davis-Blake, A., and B. Uzzi. 1993. "Determinants of Employment Externalization: A Study of Temporary Workers and Independent Contractors." *Administrative Science Quarterly* 38:195–223.

Deming, W.E. (1986). *Out of the Crisis*. Cambridge: MIT Press.

Estlund, C. 2010. *Regoverning the Workplace*. New Haven: Yale University Press.
Ferguson, J.P. 2008. "The Eyes of the Needles: A Sequential Model of Union Organizing Drives, 1999–2004." *Industrial and Labor Relations Review 62*(1):3–21.
Finkin, M. 2001. "International Governance and Domestic Convergence in Labor Law as Seen from the American Midwest." *Indiana Law Journal 76*(1):143–172.
Freedman, M. 2007. *Encore: Finding Work That Matters in the Second Half of Life*. New York: Perseus Books.
Godard, John. 2009. "Institutional Environments, Work and Human Resource Practices, and Unions: Canada vs. England." *Industrial and Labor Relations Review 62*(2), article 3.
Hansmann, H. 1987. "Economic Theories of Nonprofit Organization." In W. Powell (Ed.). *The Nonprofit Sector: A Research Handbook*. New Haven: Yale University Press.
Hodson, R., and T. Sullivan. 2007. *The Social Organization of Work*. Belmont. CA: Thomson and Wadsworth.
Huselid, M.A. 1995. "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance." *Academy of Management Journal 38*:635–672.
Ichniowski, C., and K. Shaw. 1999. "The Effects of Human Resource Management Systems on Economic Performance: An International Comparison of U.S. and Japanese Plants." *Management Science 45*(5): 704–721.
Internal Revenue Service. 2011. *Enterprise Employment Size by Industries*. Retrieved from http://www.irs.gov/businesses/small/article/0,,id=179115,00.html
Klitzman, S., and J.M. Stellman. 1989. "The Impact of the Physical Environment on the Well-Being of Office Workers." *Social Science and Medicine 29*(6):733–742.
Kochan, T.A. 2005. *Restoring the American Dream: A Working Family's Agenda for America*. Cambridge: MIT Press.
Kochan, T.A., H. Katz, and R. McKersie. 1986. *The Transformation of American Industrial Relations*. New York: Basic Books.
Locke, R.M., F. Qin, and A. Brause. 2008. "Does Monitoring Improve Labor Standards? Lessons from Nike." *Industrial and Labor Relations Review 61*(1).
Lowe, G.S., and G. Schellenberg. 2001. *What's a Good Job? The Importance of Employment Relationships*. Ottawa: Renouf Publishing.
MacDuffie, J.P. 1995. "Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry." *Industrial and Labor Relations Review 48*(2).
McGregor, D. 2006. *The Human Side of Enterprise,* annot. ed. Joel Cutcher-Gershenfeld (Ed.). New York: McGraw Hill.
Nonaka, I. 1991. "The Knowledge-Creating Company." *Harvard Business Review 69*(6):96–104.
Osterman, P. (2006). "The Wage Effects of High Performance Work Organization in Manufacturing" *Industrial and Labor Relations Review*, 59(2), 187-204.
Ott, R. 2010. Personal conversation.
Piore, M., and C. Sabel. 1984. *The Second Industrial Divide: Possibilities for Prosperity*. New York: Basic Books.
Salamon, L.M., and H.K. Anheier, H.K. 1997. *Defining the Nonprofit Sector: A Cross National Analysis*. Glasgow: Bell & Bain.
Summers, C.W. 1974. "Public Employee Bargaining: A Political Perspective." *Yale Law Journal 83*(6):1156–1200.
Taylor, G. 1967. "Public Employment: Strikes or Procedures?" *Industrial and Labor Relations Review 20*(4):617–636
Trist, E. 1981. *The Evolution of Socio-Technical Systems: A Conceptual Framework and an Action Research Program*. Ontario Ministry of Labour: Ontario Quality of Working Life Centre.
U.S. Departments of Commerce and Labor. 1994. *Fact Finding Report of the Commission on the Future of Worker Management Relations*. Washington, DC: Government Printing Office.
U.S. Small Business Administration. 2007. *Small business*. Retrieved from http://www.sba.gov/contractingopportunities/officials/size/table/index.html
Walton, R.E., J. Cutcher-Gershenfeld, and R. McKersie. 1994. *Strategic Negotiations: A Theory of Change in Labor–Management Relations*. Boston: Harvard Business School Press.
Walton, R.E. 1985. "From Control to Commitment in the Workplace." *Harvard Business Review 63*(2):77–84.
Womack, J., D. Jones, and D. Roos. 1990. *The Machine That Changed the World*. New York: MacMillan.