

## New Products, New Ways of Working, and the New Economy

One of the most popular themes in discussions of work is the idea that recent changes in work constitute the equivalent of a second industrial revolution. Consider, for example, the impact computers have had on the ways jobs are performed and designed. Computers enable workers to correspond at great distances, telecommute from home, and access a wide array of information. These “smart machines” have absorbed many workers’ jobs and replaced human hands with robotic pincers that move with exacting precision. Computers also have spawned new markets for software and hardware, creating new jobs requiring new skills. Their reach spans the world, enabling near-instantaneous transmission of information, as well as the coordination of complex trade relationships that link companies with one another in global webs. It is hard not to conclude that computers have sparked revolutionary changes—not only in what is being produced and how jobs are designed, but also in the geographic distribution of work. What impact do these types of changes have on current and future generations of workers?

The use of the concept of a “new economy” (or alternate terms such as *global economy*) is widely accepted as a shorthand way of saying that work today is remarkably different than it was in the recent past. But in this chapter, we open this assumption to debate. If there is a new economy, what are its distinguishing characteristics? We argue that jobs *have* changed in profound ways. There are new technologies, organizational designs, industries, and markets. The economy has become increasingly international. These changes have introduced the need to develop new skills to fit changing opportunity structures. But what is equally true is that many aspects of the “old economy,” including the design of jobs to require limited skill, have either survived or been reproduced in new forms. After all, for every successful computer programmer who works at a company like Microsoft, one can find three poorly paid workers laboring on hamburger assembly lines at companies like McDonald’s.<sup>1</sup> Understanding the new, the

old, and the old in the new is the key to understanding the diverse needs and experiences of today's workforce.

In this chapter, we consider some of the major changes said to characterize work in the new economy, including the decline of mass production and manufacturing work, new skill requirements, the impact of new technologies, the emergence of new cultures of control, the gradual decline of organized labor, the rise of flexible work arrangements, and globalization. In each case, we argue that there have been significant changes but also that there are persistent features that reflect the perpetuation of the old economy within the new.

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## A Postindustrial Society?

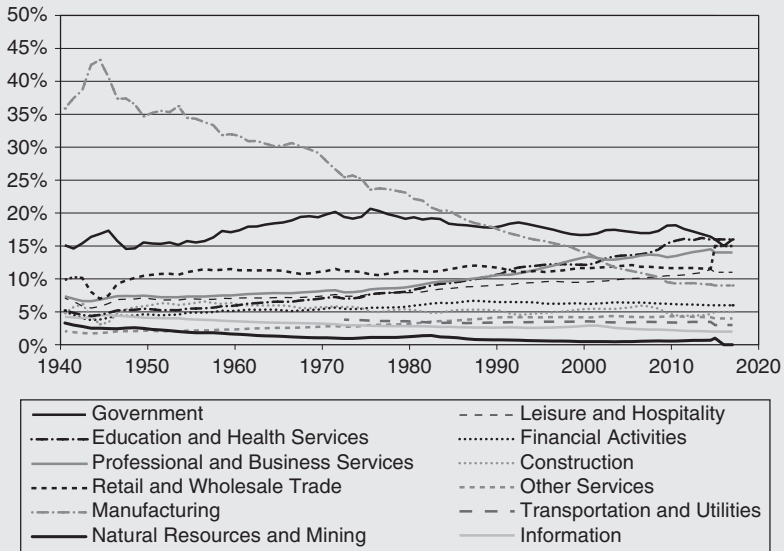
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One of the earliest forecasts of an emergent new economy came from sociologist Daniel Bell (1973), who argued in the early 1970s that America was entering a “postindustrial” era, in which the manufacturing-centered economy of the past was being replaced by an economy directed toward the provision of services. Bell was among the first to note something that subsequently became obvious to most Americans, particularly those located in the so-called rust belt of the industrial Midwest—employment opportunities had shifted away from manufacturing to other sectors of the economy.

Exhibit 2.1 shows that in 1940 the number of employees working in the manufacturing sector in America was more than double that in any other sector of the economy, accounting for over one-third of all employment. Until 1989, the manufacturing sector remained the largest employment sector. But as the population of the United States grew during the latter part of the twentieth century, manufacturing employment did not. Today, instead of employing one in three workers, as it did in the mid-twentieth century, manufacturing enterprises employ fewer than one in ten workers.

There are various explanations for this trend. Some argue that nearly all low-skill, low-wage manufacturing work is being funneled to developing economies, while the advanced economy of the United States focuses on knowledge work and services (Fröbel, Heinrichs, and Kreye 1982). However, it is also possible to argue that this simply reflects something “old”—the continued effort of employers to find the least expensive ways to produce goods (Cowie 2001). From this point of view, manufacturing remains central to the economy; however, it now takes place on a global scale, rather than on a national one. Yet another interpretation emphasizes that the United States is unusual—the decline of manufacturing employment is more pronounced here than elsewhere. Rather than

Exhibit 2.1 Trends in Employment in Twelve Major Sectors:  
United States, 1940–2017



Source: Bureau of Labor Statistics.

reflecting a long-term, general trend away from manufacturing, the U.S. pattern may reflect a choice by American employers to seek low-wage sites for manufacturing rather than invest more heavily in improving techniques at home (Appelbaum and Batt 1992). It may also reflect domestic economic policy choices favoring a strong U.S. dollar and the U.S. government's tolerance of policies in countries such as China, which keep their currencies artificially low. Such policies hurt U.S. manufacturing exports and make imported goods cheaper, resulting in stagnant or declining manufacturing employment in the United States (Scott 2015). All of these processes have played a role in shaping opportunity in the new economy.

The number of manufacturing jobs has declined in the United States and other economically advanced countries, but should we conclude that we are truly postindustrial? In the new economy, manufacturing enterprises continue to employ more than 12 million American workers. This may be an underestimate, as many industrial employers make increasing use of temporary workers, many of whom are not counted as industrial workers in government statistics. Although manufacturing employs a smaller percentage of Americans than it once did, it remains a major force in the

economy and creates demand for the products and services generated in other parts of the economy (Hatton 2011, Scott 2015). It is not at all clear that manufacturing employment is in an inevitable long-term decline to the point where it will disappear entirely. Rather, it remains an important but less dominant part of what is now a more diversified economy. It is also important to recognize that while the United States might view trends as “losses,” other countries, particularly those in the global south, view the movement of manufacturing jobs as “gains,” resulting in substantial economic improvements in those societies (Pandian 2017).

The fact that manufacturing opportunities have stagnated and declined in the United States does not mean that manufacturing jobs will entirely disappear. Nor does it mean that the *ways of working* that developed in the old economy are on a path to disappearing as a result. The practices of the old industrial economy are woven into the design of many jobs central to the new economy.

## The End of Mass Production?

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It is generally agreed that economic activity in the old economy centered on the production of manufactured goods (e.g., automobiles, steel, chemicals, appliances) in large quantities for mass markets. The Ford Model T is the classic example of what the American manufacturing economy produced—an affordable and highly standardized car, mass-produced by American workers in a central factory location (Chandler 1990). Coordinating hundreds (and sometimes thousands) of workers at a single location meant that employers such as Henry Ford had to develop bureaucratic management systems, complete with rigid job definitions, rules of conduct, and productivity expectations (Edwards 1979).

The dominant managerial approach of the time was to follow the practices of scientific management, which encouraged the replacement of skilled workers with cheaper, more dispensable low-skill workers, while removing discretion from the shop floor and placing it in the hands of management (Braverman 1974). Finding ways to enhance productivity through job simplification, replacing people with technology, and improving managerial control over what was happening in the workplace were all central to this approach. The assembly line epitomized this philosophy, a combination of technology and organization that harnessed workers to labor at repetitive, simple tasks. To appreciate how this affected the performance of work, consider the difference between making automobiles using highly skilled workers (as many of the first automobiles were made) and the assembly line methods pioneered by Henry Ford. Instead of relying on a skilled (and hard to replace) craft worker who controlled how

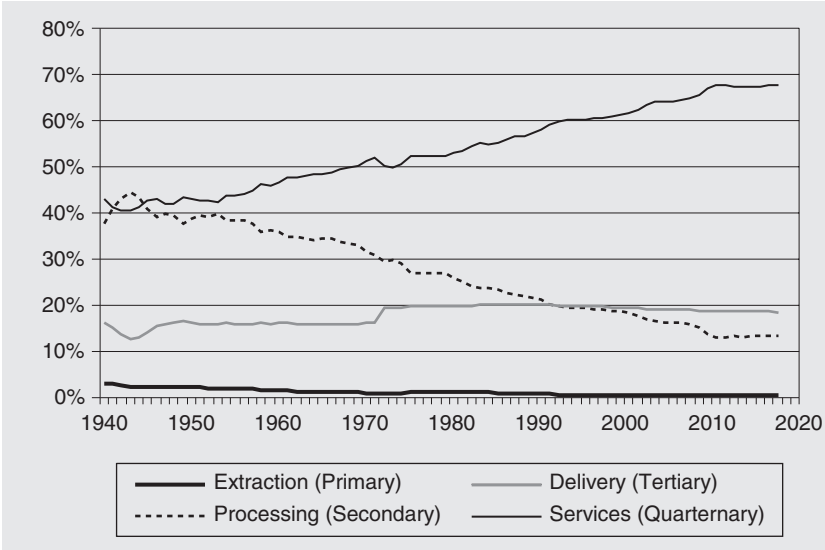
the work was done, the assembly line created jobs that required very little training, involved relatively simple repetitive operations, and dictated to the worker how the job should be performed. Perhaps most importantly, the worker lost control over the pace of work, as the assembly line pushed work forward at a speed primarily determined by management. The result was the creation of legions of deskilled jobs, the dissolution of many craft skills, and a decline in the worker's ability to control the conditions and rewards of work.

This approach was enormously successful and formed the basis for the growth of the giant American manufacturing enterprises (e.g., Ford, General Motors, U.S. Steel) that dominated the American economic landscape and symbolized American economic power worldwide. This approach also fostered distrust and hostility between workers and their bosses, who developed an “us versus them” mentality, in which each side saw the other as having interests fundamentally opposed to its own. Thus, as managers tried various tricks to speed up work, those laboring on the front lines developed alternate approaches to try to restrict production (Burawoy 1979, Edwards 1979).

If manufacturing is in decline, is mass production? To address this question, consider work as it is performed in different “megasectors”—broad groupings of different types of economic activity. Each of these sectors makes a distinct contribution to the economy—in extracting resources, in processing resources, in delivering goods, and in providing services.<sup>2</sup> The trends for employment in these sectors are represented in Exhibit 2.2, which shows the growing importance of service sector work, as well as the proportions of the labor force employed in other industries that seem (on the surface) to have helped society progress beyond mass production. However, consideration of many of the jobs within each of these sectors highlights how the typical strategies for organizing work in the manufacturing-based economy have been exported to other sectors and shape how work is performed outside manufacturing.

For most of human existence, most workers engaged in the extraction of raw materials—working in the areas of farming, fishing, forestry, or mining. But by the early twentieth century, these workers composed only a relatively small segment of the U.S. workforce. Those few who remain on farms today perform work that bears little resemblance to the pastoral ideals of the family farm. Rather, most farming occurs as part of agribusiness, in which the methods of mass production have been applied to the raising of livestock, poultry, and produce (Schlosser 2005). The extension of mass production into farm work has required some farmers to learn to use advanced technologies to manage production. However, it also has contributed to the creation of a divided opportunity structure that limits prospects for workers (such as migrant farm laborers) to grow and advance. Mining remains an intensely physical activity. Underground mining uses

Exhibit 2.2 Trends in Employment in Megasectors:  
United States, 1940–2017



Source: Bureau of Labor Statistics.

single-purpose machinery (such as “continuous miners”) to grind the earth and place ore on conveyors. These technologies operate as assembly lines that run in reverse. Other forms of mining, such as strip mining (or even mountaintop removal, in which whole mountains are demolished and the ore removed in the process), rely on heavy equipment and systematic processing of materials and operate on a scale that could only be characterized as “mass” production. All newer mining technologies require the application of greater skills than the older manual operations, but they also substitute massive equipment and sophisticated technology for human labor. This is one enduring persistent feature of the old economy, the drive to improve productivity by replacing labor through the use of complex technologies and managerial innovations. It also operates on the basis of massive scale implementation, indicating that mass production is not in decline.

The processing megasector focuses on the refinement of raw materials into finished goods, the intent of manufacturing and construction enterprises. As Exhibit 2.2 shows, processing work has declined significantly in the United States, which seems to support the “end of mass production” thesis. Yet, if we look at work within these sectors, mass production techniques have not been eliminated. It is true that there have been significant changes

in this sector. For example, the traditional giant steel mill of the past has given way to smaller, more flexible “mini-mills” that produce smaller runs of more specialized steel products. But contemporary factories are still mass-producing consumer goods. And in certain parts of this sector, most notably the building trades, modern practices have made production more reliant on the use of standardized materials. Many homes are “prefabricated” in construction factories and simply assembled on site. Even the construction of “custom” homes (the largest of which are pejoratively termed “McMansions”) depends heavily on cookie-cutter approaches to design and assembly. In short, flexible and custom production processes have taken hold in some areas, but they are being introduced in concert with a continued reliance on elements of mass production, not simply replacing them.

The delivery megasector (which includes transportation, wholesale trade, retail trade, and utilities) is one of the most visible and important elements of the new economy, as just-in-time production methods rely on sophisticated systems to ensure that parts and materials arrive just when they are needed and as consumers increasingly demand immediate delivery of products they purchase online. Although associated in most people’s minds with the new economy, this megasector, too, relies heavily on mass production techniques. For example, United Parcel Service (UPS) and Walmart (the world’s largest private employer) use vast conveyor belt systems to sort and funnel parcels for delivery. Their successes are not built on unique products or customized services; rather, they are based on the application of mass production distribution techniques built with high technology and advanced accounting systems. And then there is Amazon, whose “fulfillment centers” now employ huge numbers of workers across the globe ensuring that online orders reach their destinations promptly and accurately. Amazon’s employment practices have been the subject of increasing journalistic scrutiny in the past few years, scrutiny that has revealed a twenty-first-century workplace that has married modern computer technology to very familiar, twentieth-century ways of organizing work. Here’s how one observer described it:

Amazon’s shop-floor processes are an extreme variant of Taylorism that Frederick Winslow Taylor himself, a near century after his death, would have no trouble recognizing. With this twenty-first-century Taylorism, management experts, *scientific managers*, take the basic workplace tasks at Amazon, such as the movement, shelving, and packaging of goods, and break down these tasks into their subtasks, usually measured in seconds; then rely on time and motion studies to find the fastest way to perform each subtask; and then reassemble the subtasks and make this “one best way” the process that employees must follow. (Head 2014)

Jobs like these are not skilled or challenging tasks that lead to career advancement; they are the type of routine work that one pursues in order to earn a paycheck.

Finally, within the services megasector, which includes a wide array of enterprises—including leisure services, restaurants, hotels, real estate, financial, and public administration—mass production methods also can be found, often in highly developed, innovative forms. This sector includes some enterprises that do not rely on mass production—there are many relatively small enterprises in this part of the economy, such as bed and breakfast establishments, food trucks, and craft breweries. Businesses such as high-end restaurants rely on workers' skills to produce a "unique" product for the consumer. However, this sector also contains many highly standardized operations that use the techniques of mass production to good effect. Each McDonald's, for instance, is little more than a small factory, composed of deskilled jobs designed to execute production of a limited array of standardized goods. Every aspect of the process, including the dispensing of condiments, the design of the stores, and the way in which customers are greeted, has been standardized so that the experience of eating (or working) in a McDonald's is essentially the same wherever it is located. Even housecleaning teams are organized to work according to Taylorized methods, and the goals remain the same—to extract the maximum effort from each individual and minimize their chances of relaxing on the job (Ehrenreich 2001, Ritzer 2011).

In sum, there is a tendency to assume that the declining importance of manufacturing in the U.S. economy means that mass production is on the wane. It is not. Indeed, what has happened is that mass production techniques have been widely integrated into other sectors of the economy, including the rapidly growing service sector. Many of the key elements of traditional mass production, including the use of technology to pace work, careful design of routine work tasks, careful matching of workers to work tasks, and the use of insecurity and performance pressures to motivate workers, now characterize types of work that, in the past, were rarely organized in this way. It can be argued, in fact, that the ideas pioneered by Frederick Taylor and Henry Ford have become *more*, not less, influential in the contemporary "postindustrial" economy.

To be sure, new technologies and production methods have required an expansion in certain worker skills and transformed the ways in which work is performed. However, those same machines and methods also have replaced many workers, both in manufacturing and elsewhere, and the persistence and spread of mass production methods cannot be ignored. As discussed next, the reality is that the new economy relies on both high-skill and low-skill work, and it uses both mass production techniques and new flexibly specialized systems to produce goods and services.



## New Skills?

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The fact that the new economy is characterized by a new mix of industries has led some to conclude that it requires a new set of skills from the workforce. According to this argument, the traditional low-skill work characteristic of the industrial economy is being automated out of existence, while the new economy demands a workforce with “soft skills” needed for successful social interaction in service sector jobs. It also demands a more highly educated workforce, as the emergent “knowledge economy” relies heavily on highly trained workers with substantial quantities of technical and intellectual skills. Some argue that, as these new skills have supplanted manual skills, the trend toward work simplification also has been altered—even reversed. This is because the predictable, carefully designed, strictly managed, routine jobs typical of mass production might be difficult to transfer to activities that require face-to-face interaction or sophisticated knowledge and problem-solving skills. Thus, the new workforce will have to be more highly educated and able to work independently, outside the strict controls imposed on routine manufacturing work. Let us examine some of these “new” skills to determine whether the claims being made about them can be supported.

### Interpersonal Skills in the Workplace

Suppose that you needed to hire a lawyer. What type of person would you select for the job? One might assume that the best legal representation would be lawyers who are able to find obscure loopholes and introduce a wide range of legal precedents into court proceedings. That assumption would miss an important observation—most legal decisions are straightforward and do not require a mastery of arcane knowledge. What lawyers bring to the table is relational expertise, such as their knowledge of whether a judge is likely to respond to appeals for sympathy. In reality, the legal success comes from the lawyer’s rudimentary knowledge of how courts work and ability to guide clients (and judges and juries) to be considerate of formal and informal rules of conduct (Sandefur 2015). Given the importance of interpersonal relationships, you would probably be better off hiring a local lawyer who did poorly on her bar exam, as compared to hiring a newcomer to your community who graduated at the top of her class.

Alternately, suppose you wanted to hire a person to be a fire fighter. Obviously, a good candidate would need to have the physical strength and experience to perform the tasks effectively and safely. But beyond technical skills, the ideal candidate would be someone who can effectively fit in with the cultures that exist among fire fighters so as to perform a very dangerous team-oriented job. Most fire fighters are men, and their interactions

are rich with emotional displays that convey joviality (good humor) and companionate love (feeling that their fellow fire fighters are “like family”). The bonds created by these types of values promotes trust, which in turn carries over to effective teamwork and interpersonal relationships (O’Neill and Rothbard 2017).

Lawyers and firefighters are old economy jobs that continue to exist in the new economy. Both occupations demonstrate that interpersonal dynamics and emotions on the job are not altogether new concerns within the world of work. However, the new economy evidences an increased reliance on these job elements, especially in *interactive service work* that necessitates direct personal encounters between employees and customers. These types of jobs require the workers to interact effectively with clients and, more often than not, to manage encounters that leave clients satisfied not only with the services rendered, but also with the experience of being served.

One clear conclusion of a growing body of literature is that skills such as the abilities to communicate effectively with others, to present oneself appropriately, and to function effectively in a range of social situations are essential components of contemporary jobs and are valued highly by employers. Depending on the type of service being provided and customers’ expectations, it is important to be able to put on emotional displays that are intense (e.g., smile frequently) and authentic (e.g., actually experience the warmth and friendliness beneath the smile) (Wang et al. 2017). This type of emotional labor can leave employees feeling emotionally depleted at the end of their workdays and, over the long term, it can contribute to burnout (Uy, Lin, and Ilies 2017). For some workers, the skills to engage in service interaction work have been cultivated through years of informal socialization, such as that received from parents, so that they already know how to “fit in” with the types of people to be served. However, individuals from disadvantaged backgrounds often have developed very different types of interaction styles that lead to a poorer fit between their cultural tool kits and jobs. A young worker who grew up in an inner-city neighborhood may have a very difficult time “reading” the signals given off by the responses of a more privileged client and may also feel uncomfortable in the encounter. And the client may not necessarily treat the young worker in the same way as someone perceived as being more similar in habits and disposition. These types of interpersonal dynamics present new challenges in fitting workers into the new opportunity structures, as the work is not only about mastering technical skills, but also social skills.

In theory, at least, interactive skills would seem to be resistant to routinization and simplification. However, as in the old economy, employers have attempted just that, and with considerable degrees of success. Perhaps the most familiar example of routinized interaction can be seen in the fast-food industry. As Robin Leidner (1993) documented in her pioneering study of interactive service work, McDonald’s has worked out very

specific guidelines not just for the production of the food their stores sell to customers, but also for structuring the interaction between workers and customers. Frontline service workers in the stores are given very specific scripts to follow and are instructed (and their performance is monitored) regarding what to say and how to say it. Nor is the management of interaction confined to employees, as McDonald's has succeeded in finding ways to encourage customers to behave in predictable ways; for example, by physically arranging the store to encourage customers to behave in prescribed ways (line up here, pick up your food there, don't linger too long, dispose of your trash on the way out), as well as limiting or scripting menu choices ("I will have value meal number seven"). As has frequently been noted, the experience of patronizing a McDonald's restaurant is more or less the same, no matter where it is located, as a result of this careful routinization. Call center work is another type of interactive service work that has been successfully routinized and elaborately managed. Employees must follow carefully developed scripts, and calls are monitored for "quality assurance." Employees of call centers located abroad undergo accent modification programs so that their English will not be too foreign to callers; they are also asked to become familiar with aspects of Western culture (such as sports) so that they can interact more effectively with callers (Belanger and Edwards 2013).

Like routinization in manufacturing, interaction constraints can be experienced as oppressive and intrusive by both workers and customers. Much of the early research on scripted interaction speculated about the possibility that following scripts, and interacting with others according to externally imposed routines, rather than one's *own* reaction to the situation, can breed feelings of inauthenticity and psychological distress (Wharton 1999). But efforts to make interaction more routine and predictable can actually help employees do their jobs, with the result that they sometimes embrace the protocols and actively collaborate with employers in imposing routines. Hochschild's (1983) classic study of flight attendants, for example, describes the various routines and scripts airline employees are trained to use during commercial flights. She points out that some of the reason for this training is to promote the corporate brand and to ensure that employees project the company's desired image. However, it is also the case that some of the routines help flight attendants perform difficult tasks: creating a reassuring environment that calms potentially panicky passengers, coping with angry customers when in flight (when there are limited options for discipline), and so on. Far from resisting or resenting routines, flight attendants adopt them willingly and make use of them voluntarily. More recent research on nurses finds that burnout is common, in part, because of the emotional turmoil the work involves. In this context, scripts and routines that help nurses manage interactions with patients might help to reduce emotional fatigue (Erickson and Grove 2007).

For better or worse, like work in the old economy, interactive service work is subject to the pressure of routinization. Once work is routinized, there exists the potential to replace people with machines. Can this be done within the service sector? Clearly this is possible. Consider, for example, that inserting a credit card into the pump at a self-serve gas station is now the preferred means of payment, an act that eliminates the need to interact with the service station attendant. And it is possible to apply technologies to more sophisticated types of service encounters. However, there also appear to be limits. For example, one study of an attempt to implement an automated help desk found that computers have the capacity to respond to commonly experienced problems or needs of clients. However, what did prove to be an obstacle was that callers could not be controlled in the same ways that they are at a McDonald's restaurant. For example, callers to help desks typically did not know how to describe their problem in ways that the help desk computer could understand. Lacking technical sophistication themselves, callers often provided vague, incomplete, or even inaccurate descriptions of the problem they were experiencing, with the result that the computer was unable to ask many follow-up questions and lacked the capacity to respond appropriately (Head 2003). Similarly, employers have found it difficult or impossible to reduce their reliance on the care work provided by nurses, whose interaction with patients, as well as the various physical tasks they perform, remain essential to effective health care (Clawson and Gerstel 2014). So, while employers continue to attempt to apply old-economy techniques to the organization of work tasks, some of the complex services needed in the new economy may prove unsuited to those approaches.

## High-Tech Work

The new economy is also frequently described as requiring a more educated workforce. According to this view, the "knowledge economy" or the "information economy" depends on a large and growing supply of highly educated, technically sophisticated employees, rather than the low-skill workers needed by mass production industry. An important element of this high-skill workforce is the so-called STEM (science, technology, engineering, mathematics) workforce; policy makers argue that economic growth increasingly depends on an adequate supply of workers trained in these areas, individuals who can design and maintain new technologies.

STEM jobs have, in fact, grown significantly. These trends need to be interpreted carefully, however, because opportunities for work in some STEM occupations have not been expanding. While there are many more jobs for workers with computer science training, for example, the same cannot be said for physicists, chemists, or even certain kinds of

engineers, where demand has grown more slowly, or not at all. Nor has the expansion of STEM employment been steady; on the contrary, since World War II, it has been marked by a boom-bust cycle, as periods of high demand are followed by an overproduction of graduates, layoffs, and falling demand (e.g., what happened after the Vietnam War or the more recent dot.com bust of the early twenty-first century). In some instances, exaggerated predictions of actual or looming shortages of qualified STEM workers can be linked to advocates with political agendas at stake (Salzman, Kuehn, and Lowell 2013; Teitelbaum 2014). So, while the growth of STEM employment is real and likely to continue, it will likely remain a relatively small, if increasingly important, part of the contemporary economy.

As the STEM workforce has grown, so have hopes that the new economy will create large numbers of well-paying, secure, challenging jobs. The success of enterprises such as Apple, Microsoft, and Facebook fuels enthusiastic visions of high-tech workers deeply engaged with creative work, making pioneering breakthroughs, and transforming knowledge into lucrative business opportunities. The demand for engineers, research scientists, and computer professionals, and the reality of success stories, indicate that these hopes are not unfounded. However, there is reason not to jump to the conclusion that the low-skill mass production economy has been fully replaced by an economy dominated by autonomous, creative STEM workers.

First, it should be remembered that not *all* jobs in high-technology, science-based sectors are well-paid, high-skill jobs. The computer industry employs many professionals but also needs relatively unskilled workers to assemble, package, and transport its products. Even sophisticated artificial intelligence systems such as search engines or the technologies that make businesses such as Uber and Lyft possible rely on badly paid workers (sometimes referred to as “ghost workers” since they are hidden from view) who do the things the technology can’t—such as screening out “adult” content from searches or checking that your Uber driver is actually the person Uber screened and has determined to be an acceptable driver (Gray and Suri 2019). Similarly, while health care requires doctors, researchers, and other skilled professionals, no hospital can function without a significant number of orderlies, maintenance workers, aides, technicians, and clerks. Nor are the trends for the *professional* STEM workforce uniformly positive. For example, STEM salary growth has not outpaced salary growth in other occupations, suggesting that the demand for STEM professionals is not as great as had been anticipated (Hira 2010, Teitelbaum 2014).

In addition, the independent, creative, entrepreneurial STEM career exemplified by Steve Jobs of Apple and Mark Zuckerberg of Facebook is not the reality experienced by many employees in this sector. While earlier predictions (e.g., Kraft 1984) that high-technology work would be

simplified and routinized in much the same way as manufacturing have proven exaggerated, STEM professionals work in jobs affected by a number of dynamics reminiscent of the old economy. For example, STEM employers in industries such as information technology (IT) can reduce the upward pressure on salaries produced by the shortage of well-trained workers by importing qualified employees from overseas. Much like manufacturing employers in the past, who encouraged and even sponsored immigration to keep labor costs down, contemporary IT employers look to countries such as India for sources of affordable labor. There is a growing controversy over the H1-B visa program that facilitates the import of technical professionals from overseas, as some claim that employers use this not because there is a shortage, but as a source of less expensive labor (Salzman et al. 2013, Teitelbaum 2014). Moreover, the new economy offers novel opportunities to take advantage of the availability of lower-cost labor overseas. Many analysts have noted how the electronics revolution has made it possible to digitize steps in the work process and locate them offshore, retaining only portions of the work to be performed in the United States (Aspray 2010, Blinder 2006). Interestingly, the import of technical professionals and the outsourcing of jobs may be directly linked; among the largest users of the H1-B visa program are Indian technology companies, who sponsor technical professionals coming to the United States to work for a time, then return them to India where they become key components of the growing Indian high-technology workforce (Teitelbaum 2014).

The actual work performed by STEM professionals generally requires considerable skill and expertise. However, it is not uniformly creative or autonomous in the way suggested by the more euphoric visions of the contemporary, high-technology workplace. Not all computer programming work, for example, is fully creative. Some computer professionals are engaged in the design of new systems and products and apply genuine creative autonomy as they enjoy the freedom to play with new ideas and concepts in their work. However, much computer programming (while it can be technically demanding) also can be relatively routine, formulaic work. For example, composing the well-understood computer code that forms the core of even new programs, or checking and debugging programs, can be (and often is) performed by lower-paid and sometimes less-qualified employees. This type of work is most likely to be outsourced to countries such as India (Aspray 2010, Parthasarathy 2004). There is also evidence of the emergence of what one observer called “pink-collar ghettos” in coding, with women concentrated in the less challenging, lower-paid front-end coding jobs, while men gravitate to more challenging and more financially rewarding work in the back end—working on servers, security protocols, Blockchain, and the like (Thompson 2019).

Finally, even the more creative kinds of programming work are often managed in ways familiar to the old economy. Rather than being given a

free hand to design and create whatever and however they please, computer professionals typically must design programs on schedules set for them by managers or external customers (in the case of suppliers and subcontractors to larger firms). They also often are required to incorporate user suggestions into their designs, and their compliance with these and other expectations is closely monitored (Barrett 2004). The jobs of software developers are a long way from being the routinized work of mass production workers—they enjoy much more autonomy and have more creative decision-making ability than does anyone working on an assembly line. At the same time, as in the old economy, employers tend to seek ways to limit the cost of labor and attempt to manage and control it. In sum, there has been a growth in high-skill work in the new economy and some of this work is performed in new ways with new intents. Nevertheless, high-skill work has not replaced low-skill work, and even high-skilled workers have been subject to controls established in the old economy.

## New Cultures of Control?

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Some observers of the new economy have argued that changes in technology, organization, and markets are transforming jobs, including manufacturing jobs, into more highly skilled jobs in small, high-tech, “flexibly specialized” enterprises (Piore and Sabel 1984). The workforce envisioned for this new kind of workplace will be highly educated, multitalented, as well as exercise creativity and decision making on the job. In this vision of the new economy, managers are cautioned against “micromanaging” and are advised to form workers into teams with their own team leaders. Even low-level employees are hired as “associates,” implying that their input will be valued. Others are not convinced. They point to the experiences of low-level service sector workers and agree with the critical philosopher Slavoj Žižek, who once quipped, “The employee of the month shows that one can be a winner and a loser at the same time.” And, though acknowledging that new methods of organizing work are more common, these skeptics suggest that the reorganization of work is not just about introducing new markets or technologies, but also about developing sophisticated new methods to control workers and undermine their power in the workplace (Curry 1993, Parker 1985, Parker and Slaughter 1988). Still others question whether even well-meaning managers attempting to create more creative, flexible work arrangements have the freedom, in the context of stockholder, financial, and other pressures, to create the workplaces they would like (Stuart et al. 2013, Thompson 2003). Thus, we must also ask, are new technologies and organizational designs increasing worker autonomy, creativity, and control?

Some of the most carefully conducted studies of this question have been performed by Steven Vallas, who has examined the introduction of

computer technology and worker teams in the pulp and paper industry. His findings are important because they both support and refute core predictions regarding what happens to workers in organizations that use new technologies and managerial strategies. First, consider teamwork. Some analysts see worker teams as an ideological trick, a way of getting workers to believe that they have control when they do not. Vallas found that, rather than hoodwinking workers, work teams shared grievances, developed a heightened distrust of management, and developed class solidarities. And, by virtue of being a team, they expressed complaints to management with less fear of personal reprisal (Vallas 2003a). However, Vallas also found that the expectation for shared decision-making responsibilities between workers and managers has been exaggerated. In fact, the introduction of computer-regulating systems in the paper industry tended to increase the distinction between those who had the authority to make decisions and those who did not. Older workers interpreted the new technology as an affront to the craft skills they had developed through years of experience on the job, and they expressed dismay at the new reliance on meters and printouts that provided information they already possessed (Vallas and Beck 1996).

One of the important insights from Vallas's studies is that the new economy seems to be marked less by fundamental shifts in the amount of control workers have and more by modifications to systems of accountability. In the old economy, the assumption was that workers should have no control and that jobs and machines should be rigidly designed and managed from above. In the new economy, where commitments to Total Quality Management foster a drive to work with exacting perfection, and where the responsibility for creating this outcome is placed on the shoulders of worker teams, a new dynamic of collective pressure is introduced. Workers now have increased responsibility for production but not control over many of the decisions that shape it. These findings correspond with a number of other analyses that show that workplaces in the new economy do not operate on trust and cooperation and that workers and managers remain skeptical of each other's intentions and motivations.

Another supposedly new dynamic is the re-creation of craft communities, which some believe are reshaping the ways work is understood and performed. For example, the success of Silicon Valley enterprises has been attributed to their operating in a regional community of similar companies that specialize in computer work (Pietrykowski 1999). In some ways, these regional centers operate in a manner similar to the craft communities of bygone eras and position workers to exert control through the development of a collective culture of standards and expectations. The work of skilled programmers in this environment is truly a team effort and requires considerable coordination of tasks that require varying levels of skill and control. In this environment, workers are often paid quite handsomely for



their efforts. On the surface, it looks like a model example of optimistic predictions about what work can become.

Questions have been raised, however, about how real these “craft communities” actually are. The high-technology industry may have its share of start-ups and small, “nimble” companies, but it also is increasingly dominated by corporate giants: Apple, Hewlett-Packard, IBM, Microsoft, Google, Intel, and Cisco all were among the sixty largest companies in the United States in 2014. As we discuss further later in this book, some elements of life in the Silicon Valley and other high-tech strongholds appear more enslaving than liberating. For example, high-technology workers experience both external and internal pressures to labor twelve- to fourteen-hour days and sacrifice their lives for their jobs (a reality satirized in Dave Eggers’s novel, *The Circle*). The project teams that form and reform within high-tech companies are subject to intense performance pressures and tight deadlines; the resulting managerial demands and coworker pressures push workers to put in long hours. The reality that one’s job may last only as long as the current project, and the hope that a show of commitment will lead one to be invited to join the next project, add to the external pressure (O’Riain 2007). But some of the pressure to work long hours is internal, as many high-tech workers embrace a sense of commitment to a culture in which the willingness to work long hours is taken for granted and normal (Harris and Junglas 2013, Shih 2004). It is paradoxical that a work environment that offers control also tightens the chains of work, resulting in workers laboring far longer hours than those preferred by most individuals.

## Technological Change and a Jobless Future?

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Perhaps the most extreme interpretation of the nature of work in the new economy is the view that rapid technological change is now threatening to produce an economy in which paid work itself is under threat. The robots and automated systems that have significantly reduced the size of the labor force in manufacturing have been followed by computers, artificial intelligence, and other technologies that can perform many of the tasks now performed by service workers and professionals. As a result, this view concludes, there is a real possibility that the postindustrial, “service” economy will turn into a jobless economy in which fewer and fewer Americans will be employed at all.

The idea that technology can replace workers and threaten jobs is hardly a new one. Indeed, as we have already noted, labor-saving technologies were central to the rise of mass production and the changes in manufacturing associated with the heyday of the industrial economy. In the very

early days of the Industrial Revolution, employers introduced new mechanized technologies that changed and even eliminated the jobs of many skilled textile workers (Thompson 1963). Workers reacted in anger and concern, fearing their livelihoods were threatened. Some even targeted the machines by trying to break them, a movement which in England came to be known as “Luddism.” The term *Luddite* continues to be used to this day to describe people who resist new technologies and fear its consequences for their well-being (Hobsbawm 1964).<sup>3</sup>

The derision with which Luddites are typically greeted reflects, in part, the fact that previous predictions that technology would eliminate work turned out to be incorrect. Clearly, early manufacturing work was changed as machines replaced hand labor, but jobs emerged in other sectors of the economy and more than compensated for any jobs that were lost. Similarly, mass production technologies reduced the number of workers needed to manufacture a given number of products, but the rise of postindustrial work created huge numbers of employment opportunities in the growing service sector. Technological change, in other words, has in the past eliminated certain jobs but also created others.

Some observers of the new economy, however, claim that what is happening now is different. They base this claim on two arguments. First, the *pace* of technological change is allegedly much faster than it ever was in the past, making it impossible for the economy to keep up with the rapid elimination of jobs by machines. Second, technological change in the past tended to eliminate physical labor and tasks that required relatively little skill or education; jobs that required intellectual skills or involved social interaction were largely unaffected by technology. Now, however, computerization has made it possible for machines to replace these types of work, threatening jobs that were previously largely immune to the effects of technological change (Ford 2016).

We can all think of changes that seem to fit this argument. Consider how often we interact with machines in settings where, not so long ago, we would be interacting with a paid worker. Most of us bank online and or use the ATM to withdraw cash (if we use cash at all), meaning that the traditional bank teller's role is less and less in demand. When we phone an organization to get help or answers to a question, more often than not, our question is answered not by a person but by technology that, using a synthesized voice, moves us through a complex set of choices, and is able to ask us questions to find out what we want (despite the challenges mentioned above). Spectacular acts of showmanship, such as the IBM Watson computer that defeated the best *Jeopardy* players of all time, or chess-playing computers that defeat world-champion grandmasters, demonstrate that new technologies can perform even the most sophisticated of tasks, making it seem possible that we may all be replaced one day by machines. Economic forecasters estimate that huge numbers of jobs, both

in the United States and globally, will be eliminated by automation in the next decades and that almost half of American jobs are threatened by automation by 2033 (Greenhouse 2019).

But, should we believe the view that there is something fundamentally new about contemporary technological change and that, this time, it really *will* lead to an *overall* decline of work opportunities? First, the motivation underlying the introduction of technical change is not new at all—as in the old economy, new technologies are introduced today to save on labor costs, reduce dependence on hard-to-find employees, and/or to make it easier to manage operations by replacing potentially resistant employees with compliant machinery. Further, while it is true that automation has displaced workers in some industries and occupations, there is clear evidence that, as in the past, it is producing labor demand in others, either by creating new jobs (e.g., in coding or data analysis) or by lowering prices, which stimulates demand for those cheaper products and creates employment in the sectors that produce them. There is, in fact, no real evidence that unemployment has increased in periods when automation accelerated, and some even argue that the pace of contemporary automation has been greatly exaggerated (Mishel and Bivens 2017).

The effects of technologies depend on how societies respond to innovation. In the United States, workers often fear technological change because they are often left on their own to cope with the job loss it may cause. Swedes, in contrast, are largely positive about robots and automation. They see it as making their economy more competitive and are much more likely to embrace it than are Americans. The difference lies in the fact that Swedes feel they share in the economic gains of automation—they receive generous benefits if they are laid off, and there is effective retraining of workers for alternative employment (Goodman 2017).

In short, while the new economy definitely is marked by rapid technological change that is affecting types of work that were not affected in the past, there is a very real sense in which this is not really new. As in the old economy, technology destroys some jobs and creates others, and we are faced with the same choices about how best to deal with the disruptive effects on workers and their livelihoods.

## Rigid Jobs or Flexible Jobs?

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In the old economy, workers were commonly expected to be physically present at their workstations and to structure their time commitments in accordance with rigid daytime/full-time schedules. Perhaps the most iconic characteristic of the old, manufacturing-centered economy, was the factory, an innovation designed to concentrate workers in one place, make it

possible to take advantage of large-scale technology, and maximize employers' ability to monitor and control the workforce (Freeman 2018). As work began to shift from manufacturing to services, the basic principles of the factory were transferred to the modern office, in which large numbers of employees are clustered together and directly scrutinized by managers and supervisors. However, as the labor force shifted to include increasing numbers of women, and as new technologies and organizational designs developed, many argued that jobs can, maybe even *need* to become more flexible. Do new technologies make it possible to monitor workers' performance at a distance? Do new types of workers really need to be clustered together and as closely scrutinized as workers in the old economy? If flexibility is now possible, can this "carrot" rather than the old economy "stick" be used to motivate employees to work well and hard? In stark contrast to the practices and philosophies central to the old economy, the thesis underpinning the implementation of flexible work arrangements is that the rigid schedules and physical co-presence of workers are not necessarily the best ways to design jobs.

Before discussing the extent of flexibility present in jobs in the new economy, it is important to note that flexibility is not always intended to help ease the balancing of work and family or to maximize the liberating potential of technology. Thus, we must ask, "flexibility for whom?" For example, the fast-food worker who is sent home early because business is slack, or who is told to stay late because of an unexpected rush, has a flexible work arrangement that operates primarily for the employer's interests. Sometimes organizational flexibility is used to legitimate dismissal of workers or justify the dismantling of work sites. The temporary work industry has very effectively used the idea and rhetoric of flexibility to persuade employers and employees that insecure jobs are mutually beneficial (Hatton 2011, Smith and Neuwirth 2008). These are not the types of flexible work arrangements we are concerned with here, although, as we discuss later in this book (especially in Chapter 4), this dark side of flexibility is a potentially growing phenomenon in the new economy.

The brighter side of flexibility is how it can be used to reconfigure job designs to suit the needs of workers. For example, sometimes workers seek flexible work arrangements to help them take care of a child or an aging parent. These types of needs might be satisfied by telecommuting, by reducing the number of hours worked, by scheduling work differently, or possibly by allowing a sabbatical from the job. Additionally, these arrangements may fit changing cultural preferences. For example, older workers commonly wish to remain integrated in the labor force but work fewer hours or work part of the year (Moen 2016). It is now clear that when they are applied with the employee's interests in mind, flexible work arrangements tend to help workers harmonize their lives with their jobs, as well

as mitigate negative personal and family outcomes that result from work–family conflict (Kelly et al. 2008).

There are essentially three broad types of flexible work arrangements. *Move work arrangements* include programs and practices that enable schedule variability, changes in starting and quitting times on a time-to-time basis, compression of workweeks, and opportunities to work at home, off-site, or at different worksites. Note that for these arrangements the amount of work remains the same, but the place or time at which the work is to be performed varies. In contrast, *reduce work arrangements* include programs and practices that enable workers to scale back work hours, to job share, to phase into retirement with reduced hours, or to work part of the year for a reduced amount of time. These options offer the prospect of temporarily limiting the amount of work to be performed. A third set of options can be considered *pause work arrangements*. These include programs and practices that enable workers to take temporary career breaks, sabbaticals, or paid or unpaid time for education or training to improve job skills. If employment opportunities are shifting in the new economy, we would anticipate that many of these move, reduce, and pause work opportunities would be available to workers. Are they?

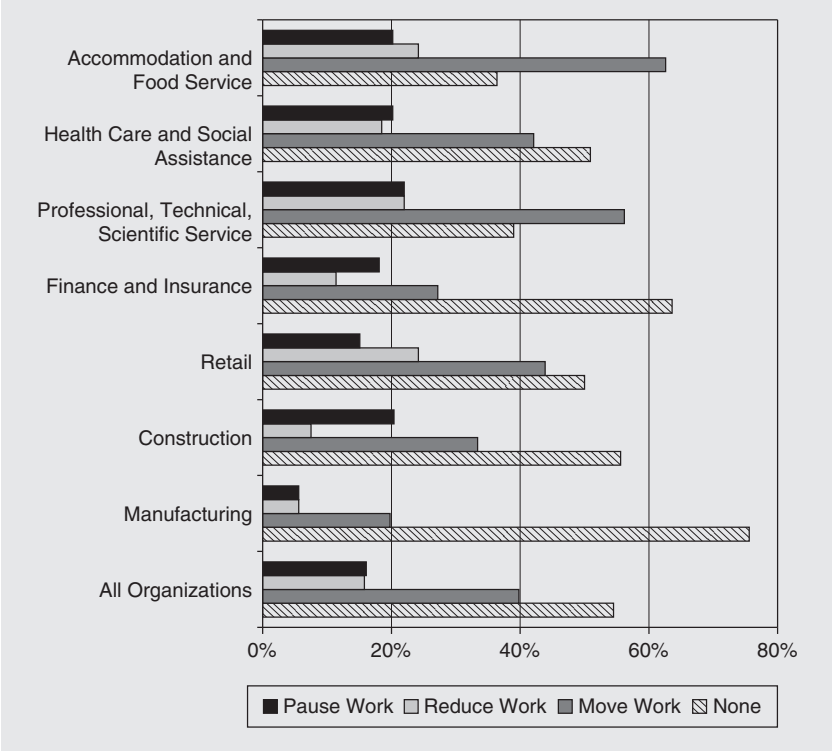
Consider findings from one study of American companies, presented in Exhibit 2.3 (Sweet et al. 2014). Over half of the employers (54%) provided no flexible work arrangements to most or all employees. It is also evident that the availability of flexible work arrangements varies widely across sectors. Organizations in the manufacturing sector are the least likely to enable employees to move, reduce, or pause work, with 75% of organizations not offering any of these options to the majority of their workforce. In contrast, employers in the professional, scientific, and technical services sectors and in the accommodation and food services sectors are much more likely to offer access to flexible work arrangements (most commonly the option to move work in accordance with schedule flexibility). Among employers that offer flexible work arrangements, the most common approach is to enable workers to alter where or when they did their work (39%). Few employers provided most of their workers with the option to reduce work (15.8%) or pause work (16.1%).

The availability of flexible work arrangements also varies by the type of job being performed and by the type of worker performing that job. Ironically, the workers who often need flexibility the most—especially women—are the least likely to receive these options (Swanberg, Pitt-Catsouphes, and Drescher-Burke 2005). Office administrative assistants, for example, are usually expected to work standard 9-to-5 shifts and to be at their desks during the workday, every day, even if work is slack. The managers for whom they work, however, may have numerous options to make “I-deals” that might configure their schedules to meet their personal needs,

to work at home, or to negotiate reduced work if they wish (Rousseau 2005). The unevenness in the allocation of these types of opportunities is a critical concern in reconciling work and family for workers in all segments of the economy.

In sum, the existing evidence shows that some types of flexibility are more prevalent than others, but the option to reduce work or to take a break from work is not commonly provided to workers. Why is the availability of flexible arrangements so limited? Some evidence suggests that these practices help bolster workplace performance, facilitate retention, enhance the job, and may even contribute to a company's reputation (Arthur and Cook 2004, Richman et al. 2008). And if this is the case for all employers, then the limited implementation may simply reflect a structural or cultural lag that likely will be reconciled eventually. However, at

**Exhibit 2.3 Percentage of Companies Offering Flexible Work Options to Most or All of Their Employees: United States, 2009**



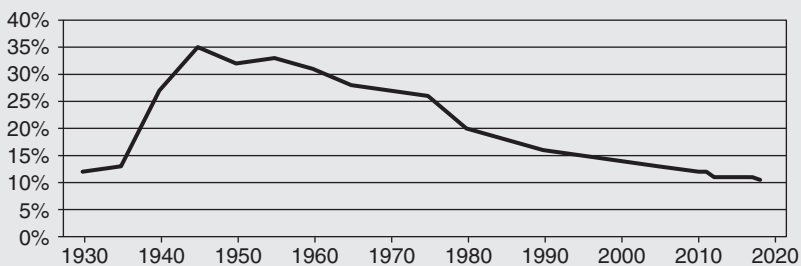
Source: Adapted from Sweet, Besen, Pitt-Catsoupes, and Golden (2014).

present there is conflicting evidence about the extent to which different types of flexible work arrangements consistently result in positive “returns on investments” (Kelly et al. 2008). In the end, employers are the ones who decide whether to extend flexibility to employees, and they look for evidence that the benefits of doing so (increased productivity, decreased turnover) outweigh the costs. And decisions in organizations are not only made at the top, but also at the local level by individual managers, who vary in their personal beliefs on the impact of new ways of organizing work (Sweet, Pitt-Catsouphes, and James 2017). In the contemporary economy, in which managers find themselves under pressure to reduce labor costs, the case for truly flexible work arrangements must be based on evidence that it enhances the bottom line and does not complicate management demands (Hatton 2011, Thompson 2003). In the absence of clear evidence of this result, it should be expected that the availability of flexibility will remain limited and uneven across industry sectors and occupations. In this sense, the potential of the new economy to make possible new ways of working remains constrained by a much more traditional set of concerns that emerged in the old economy.

## The End of Organized Labor?

Another possible indicator of an emerging new economy is shifting balances of power between collectivities of workers and their employers. As Exhibit 2.4 shows, the rise of the old economy was accompanied by a dramatic increase in union membership in the United States. At the middle of the twentieth century, roughly one in three American workers belonged

Exhibit 2.4 Percentage of American Workers Who Were Union Members: United States, 1930–2016



Source: Bureau of Labor Statistics.

to a union. In the latter part of the century, however, membership plummeted, and despite a short-lived increase in union membership in 2007 and 2008, by 2017, only 11% of workers belonged to unions. Overall, the decline of unionization in the private sector has been particularly sharp; less than 7% of private-sector workers belonged to unions in 2016. The one exception to the general pattern of decline has been in the public sector. According to the Bureau of Labor Statistics (2020), government sector unions remain vigorous and have even grown, representing almost 34% of government employees in 2018. But, as we discuss next, even in this sector the union movement is being challenged.

One reason for falling union membership is that a declining proportion of the workforce is employed in manufacturing, the sector in which unionization has traditionally been strongest. In addition, as American manufacturing employment has contracted, employers have become increasingly willing to close facilities or to relocate both within the United States and abroad, so that unionization in the manufacturing sector has declined. In some cases, employers have moved away from areas where unions are strong to those where they are not; consider the shift of automobile manufacturing away from the union stronghold of Detroit to nonunion states in the South. In other cases, efforts to unionize have been stymied by threats to close shop and by actual relocation. Free trade agreements such as the North American Free Trade Agreement (NAFTA) have made it easier for companies to move across borders, largely because those agreements often do not contain strong protections for labor organizations (Luce 2014). The development of complex supply chains, with major producers being supplied by a network of smaller companies scattered across the globe, has also contributed to union decline. Not only are the supplier companies small and mobile (making them hard to organize), they are also less economically secure, which in turn discourages collective bargaining. Still, nonmanufacturing workers do join unions in many other countries (including Canada). And the decline of unionization in the United States has occurred not just in sectors exposed to capital mobility but also in sectors such as transportation and construction that cannot relocate. So, the real reason for declining unionization may be the failure of American unions to organize workers in the growth sectors of the new economy (Milkman 2006).

American unions have been criticized for their lack of emphasis on organizing new groups in the post–World War II era, but even when they try, unions often meet with failure. One hindrance they face is that laws in the United States have made it comparatively difficult. Although American workers won the right to organize with the New Deal–era Wagner Act (which also established the basic legal framework for collective bargaining in the United States), numerous restrictions have since been placed on unions and union organizing activities. The Taft–Hartley Act of 1947 was particularly important in this regard. This piece of legislation, strongly



backed by an anti-labor, postwar U.S. Congress, prohibited some of the most effective strategies that had been used to expand the reach and power of unions, most notably the closed shop (in which all workers at a particular place of employment are required to be union members), the sympathy strike (in which workers in one industry strike in support of workers in another), and the secondary boycott (in which unions attempt to persuade others not to do business with a particular firm whose workers are on strike). Even more importantly, Taft–Hartley made organizing new groups of workers much more difficult by authorizing states to pass “right-to-work” laws (which prohibit unions from making paying dues or fees a condition of employment), by strengthening employers’ ability publicly to speak out against and resist unionization drives, by permitting strikebreakers to vote in union certification elections, and by making the process of union certification far less flexible than it had been.<sup>4</sup>

As anti-union pressure from conservative groups and politicians grew in recent years, a number of new states (some of which were traditional union strongholds) passed right-to-work legislation: Indiana (2011), Michigan (2012), Wisconsin (2015), West Virginia (2015), and Kentucky (2016) (Greenhouse 2019). In general, postwar U.S. labor policy has not favored new union formation, and the National Labor Relations Board, which regulates collective bargaining, has become more conservative in its rulings over time (Gould 2007). It is also the case that employers have become increasingly determined to maximize profits and push up share prices, leading them to take a much tougher stance toward union organizing and wage demands (Greenhouse 2019). In some cases, this involves the use of the “carrot”; that is, making union membership less attractive by providing, voluntarily, some or all of the good labor conditions that unions gain for their members (Milkman 2006). In others, it involves the “stick”; that is, aggressive efforts to block unionization through methods such as firing organizers and the use of experts to develop strategies of keeping unions out (Bronfenbrenner 2009, Head 2004).

Until recently, government workers in the United States have not had to contend with strong antiunion efforts by their employer. Though some states limit public-sector unions in various ways (e.g., New York State’s “Taylor Law,” which prohibits strikes by public employees), government workers in general have encountered fewer obstacles to unionization than their private-sector counterparts, which probably accounts for much higher rates of unionization in the public sector. However, in the aftermath of the financial crisis of 2009, a number of state governments, including states with strong union traditions such as Ohio and Wisconsin, took aggressive action to curtail public-sector unions. Arguing that salaries and benefits paid to current and retired government workers were crippling state budgets, and complaining that union job protections limited flexibility and prevented institutions such as public schools from rewarding merit,

governors such as Scott Walker of Wisconsin and John Kasich of Ohio led movements to impose legislative restrictions on public-sector unions. Only Walker was successful, but the challenge to public-sector unions is real. A 2018 Supreme Court decision, *Janus v. AFSCME*, banned requirements that public employees be required to pay fees to unions that bargain for them, further weakening unions by allowing employees to “opt out” of paying union dues (Greenhouse 2019). Survey data indicate significant support for public-sector unionization rights, and efforts to overturn anti-public sector union legislation are under way. This indicates that the path to limiting the power of collective bargaining in the public sector may be politically risky. However, state governments’ success in limiting public-sector unionization almost certainly will negatively affect the terms of employment for public-sector work (Greenhouse 2011a).

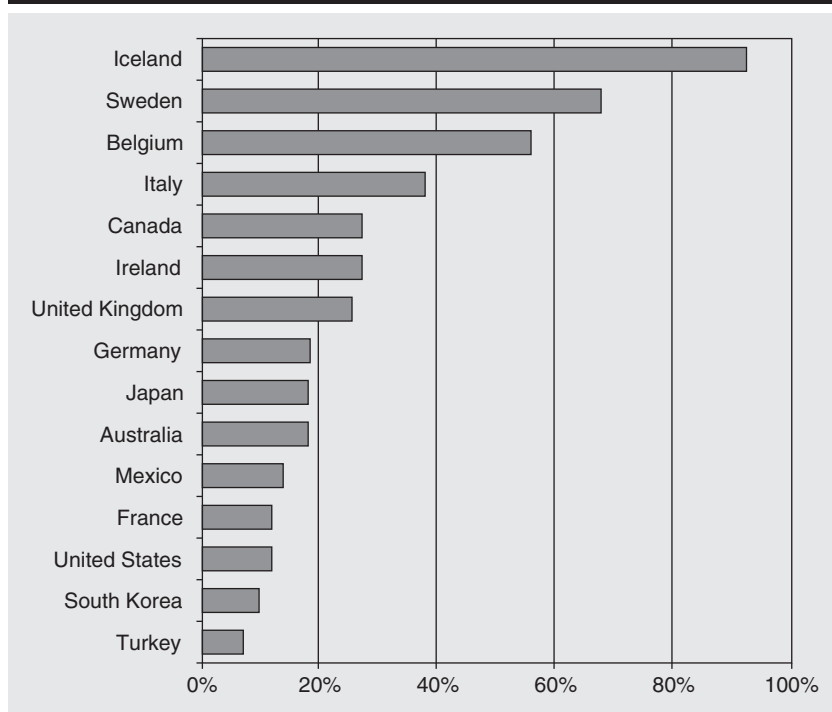
Some analysts have suggested that the new economy has the potential to change relationships between employers and employees for the better and that these new employer–employee relationships reduce the need for the checks that unions place on employers’ inclinations toward exploitation. For example, new management philosophies and new forms of work organization ostensibly promote collaboration and harmony between employers and their workers. Even if this is not what really happens, the belief that this is the case can have significant power. Work in smaller enterprises involves direct face-to-face relationships between workers and their employers, which discourages a “them and us” mentality, and as greater shares of workers are laboring in smaller enterprises, this might be having an influence. In this culture of cooperation, traditional unions may not seem attractive to workers, who may see them as threatening the company’s interests and their jobs. It has also been pointed out that workers are less likely to devote their entire careers to single employers, instead building portfolios and moving from employer to employer. In this context, unions representing particular workplaces appear to become less relevant. Still, portfolio careers are more typical of professionals, who generally move voluntarily, than of less-educated workers, who move because they have to (Kim 2013). A worker who is a victim of job insecurity is likely to view a union job more positively than someone who is building a career by “job hopping.”

The decline of unionization has occurred simultaneously with declining wages and job security (Western and Rosenfeld 2011). Thus, it may not be that changing management practices are making unions unnecessary; rather, it may be that unions have lost much of their ability to negotiate for workers’ interests or to persuade workers that they are better off with unions than without them. Some evidence suggests that unions have lost much of their teeth. For example, American unions’ ability to use the strike to put pressure on employers to raise wages or improve work conditions

has largely evaporated. Consider that, according to the Bureau of Labor Statistics, in 1970, 2,468,000 workers participated in 381 mass walkouts. In contrast, in 2017, there were only seven large-scale work stoppages, and these only involved 25,000 workers (U.S. Bureau of Labor Statistics 2018a). Only a surge of successful teachers' strikes in 2018 defied this trend toward declining union militancy (Greenhouse 2019).

The downward trend in union membership has been witnessed in most industrialized countries outside the United States, but the extent of these declines has been variable. Scandinavian countries have retained remarkably high union membership. Countries such as Australia, Germany, and the United Kingdom have significantly higher union membership rates than does the United States. Neighboring Canada has unionization rates more than double those of the United States (see Exhibit 2.5). Outside the Organisation for Economic Co-operation and Development (OECD), in the developing world, unionization rates have been growing (Luce 2014).

**Exhibit 2.5 Trade Union Members as Percentage of All Employees: International Comparisons, 2015**



Source: Organisation for Economic Co-operation and Development.

Evidence indicates that collective labor rights in most countries prove instrumental in securing higher wages for larger shares of these nations' workforces, as well as ameliorating causes of social inequality by advancing worker interests in political processes (Kerrissey 2015).

The United States stands out in the international arena because of the combination of dramatic declines in membership and its exceptionally low current levels of unionization. The fact that unions remain important in other advanced economies, and that service workers who are typically unorganized here belong to unions there, is strong evidence that unions can still matter. Early in the twenty-first century, a major national survey found that the majority of *unorganized* American workers would vote for a union if one were available to them (Freeman 2007). And, while support for unions waxes and wanes somewhat, public approval of labor unions has risen steadily since the Great Recession and now stands at 62%, its highest level in almost two decades (Saad 2018). A recent analysis of survey data on workers' attitudes found that most workers would like to have more "voice" at work, there has been an increase in the desire to join unions in recent years (including among younger workers), and better educated and minority workers are particularly favorable to joining unions (Kochan et al. 2018). Unions may not be a vestige of the old economy, but whether they will thrive in the new economy depends on whether they develop effective strategies for attracting new members and organizing new sectors of the workforce. It also depends on the resources made available to union organizers and the constraints placed on their actions.

## A New Global Economy?

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A final and much-discussed aspect of the new economy concerns globalization. Has the emergence of a global economy fundamentally changed the economy and the situation of workers worldwide? In some respects, the global economy is not really new. The histories of virtually all modern societies, from the sixteenth century onward, can be traced to international economic ties (Wallerstein 1979, 1983). For example, colonial America participated in international trade of slave labor, sugar, rum, tobacco, cod, and textiles (Kurlansky 1998). Had it not been for these exchanges, the present-day demographic makeup of the United States would be profoundly different, as would its culture. Likewise, the export of slaves to the United States had an enduring impact on the development of African societies. Trade with Asia is not new, and the European "discovery" of America was the result of attempts to find better trade routes. Indeed, international trade has long been in existence and has gone through numerous cycles of growth and decline (Chase-Dunn, Kawano, and Brewer 2000).

Nevertheless, one must still acknowledge that the extent of global economic activity is unprecedented and that the penetration of global capitalism to all corners of the world is both more complete and more complex than ever before. The new global economy can be described as a vast international network capable of rapidly developing and diffusing resources, technology, and information across the world. Among the key characteristics of the new global economy are the following:

- The immense volume of trade and consumption between societies
- The rapid transmission of information between societies
- Powerful and transportable technologies implemented throughout the world
- Intense “dis-integrated” production, spread over national boundaries
- Flexible arrangements that enable employers to shift production and consumption from one society to another.

It should be added that the new global economy is also characterized by new types of legal and political arrangements designed to promote globalization. In the past, global economic activity was supported politically in various ways. Nineteenth-century colonial occupation created economic opportunities for employers in the dominant country (e.g., British enterprises benefitted greatly from British colonial activity in places such as India). Even after the colonial empires dissolved, enterprises in the developed world often continued to derive considerable benefit from activities in the former colonies, aided by political, military, and diplomatic support from their home governments. On the other hand, international economic activity, especially among industrialized countries, was often limited in various ways by tariffs and other legal arrangements designed to protect domestic economies. It is this last situation that has begun to show signs of change in the new economy. Accompanied by economic theories that trumpet the benefits of free trade and the free movement of goods, services, and investment, many countries have joined in a variety of free trade agreements and even currency unions that remove many of the barriers to international economic activity. Notable examples include NAFTA, designed to enhance free trade among the United States, Canada, and Mexico, and the European Union, which has created a large free trade zone among many of the countries of Europe and includes a common currency shared by at least some of its members. These political efforts to promote globalization have met with some high-level resistance—in the United States, President Trump has made his opposition to NAFTA and other multi-lateral trade

deals a hallmark of his presidency, and the British in 2016 voted to leave the European Union (Brexit). However, the fact that the effort to replace NAFTA with a better deal resulted in only relatively minor modifications, the predictions that Brexit will have disastrous consequences for the British economy, and the continued emergence of new global trade deals (such as the Trans-Pacific Partnership, which moved forward without American participation), suggest that globalization and the international emphasis on free trade are not a passing fad.

These arrangements make it much easier for goods and services to move across borders and for companies based in one country to establish facilities (or move them) to a range of others. One result has been that cultural and technological changes in developed and developing countries are accelerating at unprecedented rates. The speed of change, the extent of diffusion, and the flexibility of webs of connection set the current organization of work apart from the systems that preceded it (Castells 2000, Mattsson 2003, Milberg 2004). As one observer has remarked, the world is now, probably for the first time, approaching “universal capitalism” (Wood 2003).

Companies are integrating themselves into the global economy for a variety of reasons. An obvious reason is that companies try to move closer to emerging markets for their products; as countries such as China, India, and Brazil grow and industrialize, their residents emerge as new markets for products made by foreign companies, who often set up facilities nearby to be able to manufacture products for local consumption. Labor cost savings also are a major motivator; some companies locate in low-wage countries not to sell their products there, but to reduce the cost of manufacturing goods to be sold in the United States and other developed economies. This is why some companies who had invested in production facilities in China, where labor costs have begun to rise, are now considering moving manufacturing operations to countries such as Vietnam and Indonesia.

Some critics argue that manufacturers, particularly those in highly polluting industries, are drawn to developing countries with lax environmental rules and enforcement. For this reason, many economists argue for stricter environmental standards as a means to control job flows. However, not everyone agrees, as counterevidence suggests that companies seek stable regulations, not necessarily loose ones, in making decisions about where to invest (Jones 2005, Rivera and Oh 2013). The tax structures of nation-state systems also encourage the movement of jobs. Companies that operate in multiple countries have the opportunity to concentrate their tax obligations in the country with the lowest tax rates. In some cases, they may even deliberately “move” outside the United States, while continuing to have operations in the United States, in search of tax havens. Major U.S. companies now have headquarters in places such as Bermuda, the Cayman Islands, and Luxembourg for this reason. In recent years, public

attention has been drawn to the increasingly common practice of “inversion,” in which U.S.-based companies merge with foreign companies and move their base abroad. The result is that large companies, such as medical equipment maker Medtronic and even Burger King, move at least a portion of their corporate operations overseas, in the process making huge tax savings by “locating” in a lower-tax country (Davis 2014). Companies also internationalize operations to secure government contracts and extend the global reach of their product lines.

The emergence of a global economy has had significant effects on workers in the United States and other industrialized countries, partly because the “national” character of companies has weakened and become ambiguous. American companies such as Ford have long had overseas operations in Europe. However, the scale of those overseas operations is something quite new. General Motors (like nearly all the major employers in the new economy) is a multinational corporation that operates both within and beyond the political realms of nation-states. Today, General Motors employs almost as many workers outside the United States as it does within (in some years, its overseas labor force has been larger than its U.S. labor force),<sup>5</sup> and it manufactures and sells cars around the world, with most of its sales *outside* the United States. Companies such as General Motors are reconfiguring to expedite shifts in production from place to place, as workers in Michigan have discovered. When companies move or open new facilities abroad, they bring more than jobs—they also sometimes spread culture and methods of organizing work. A good example of this can be seen in the case of Japanese companies, which have built facilities in both the industrialized and developing worlds. These plants became vectors through which Japanese production methods diffused to places such as Marysville, Ohio; northern Mexico; or Spain (Elger and Smith 1994). However, in other cases, foreign companies adopt local practices. A *Los Angeles Times* editorial argued that European companies, when they establish facilities in the United States, actually adopt American-style practices (such as “union-free” workplaces) that differ radically from the same companies’ practices in their home countries (Meyerson 2011).

The emergence of a global economy has undoubtedly brought with it much that is new. Workers in the United States are much more likely to encounter technologies and managerial practices that originated elsewhere, and workers in developing countries have been drawn into more direct relationships with global webs of production. Still, arguing that all this is *entirely* new seems an exaggeration. Employers have relocated in the past, and even the earliest industrial firms in America “borrowed” practices from the pioneering British. It seems more accurate to say that globalization has accelerated and intensified existing dynamics at work. At the same time, the socioeconomic differences between the developed and developing world

have not been erased by these changes (an observation that we document in the next chapter). Nor have national differences in workplace practices been eliminated by globalization (Smith and Meiksins 1995). As with the various other changes we have reviewed, there is much of the old within the new global workplace.

## Conclusion

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Does the existence of new products and new ways of working verify the existence of a new economy? The answer is both yes and no. The U.S. economy has shifted away from a primary reliance on its manufacturing base, and the expanding service sector is creating new job demands, as well as opportunities. So, the economy is new in respect to the diversity of goods and services produced. But in many of the new jobs and industries, old ways of working and managing work are applied, indicating the persistence of the old economy. While some of the new jobs require different skill sets, substantial portions of the labor force work in low-skill jobs that require few skills, again indicating that not everything has changed. While organizations have redefined manager-worker relationships and are relinquishing more control to workers, some of these changes appear to be window dressing and in other circumstances have not led to a true enhancement of job quality. While the new economy offers prospects for flexible work, availability is limited and uneven. And while the global economy has shifted work opportunities, some of these changes are not so much new as they are extensions of tendencies that have been present for centuries.

We argued throughout this chapter that, while there is a new economy, it has been laid on top of and has not replaced the old economy. We also argue that the same forces that underpinned the development of the old economy continue to shape many of the contours of the new economy. The new economy offers great opportunities to liberate work, through new applications of technology, through new organizational designs, and by harnessing the contributions of a diverse workforce. But it also contains many elements of the old economy that block these opportunities and perpetuate and reproduce old ways of working. Both optimistic predictions that we are entering a new world of work and pessimistic comments about “old wine in new bottles” miss the complexity of contemporary work. Our analysis indicates that there will be both change and continuity in the emerging new economy and that there will be both positive gains for some workers and (if left unchecked) continued hardships for others.



## NOTES

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- 1 The Bureau of Labor Statistics reports that in 2013, a total of 3,696,180 people were employed in computer and mathematical occupations in the United States and 11,914,590 in food preparation and serving-related occupations.
- 2 Economists use the terms primary, secondary, tertiary, and quaternary sectors. However, because they also use the phrases *primary* and *secondary labor markets* to describe divided opportunity structures, we use the terms *extraction*, *processing*, *delivery*, and *service provision* in accordance with the divisions identified by Kenessey (1987).
- 3 The original Luddites were generally portrayed as backward-looking opponents of technological change, and that is what the term “Luddite” has come to mean in the present day. However, historians have demonstrated that, while the original Luddites were hostile to new machinery, they were not simply trying to break machines but were using the threat of damaging machinery as a bargaining chip to win better wages and employment conditions from employers (Hobsbawn, 1964).
- 4 The United States employs a cumbersome, two-step process for union certification in which workers must first sign cards indicating their interest in forming a union, then, at a later date, vote. Under the Taft–Hartley Act, all of this must take place under the watchful bureaucratic eye of the National Labor Relations Board.
- 5 According to its 2018 Annual Report, General Motors employed about 173,000 people in total in 2018, with about 40% of these employed outside the United States. Recent decisions to close plants in the United States (including the Lordstown plant near Youngstown, OH) and to shift production elsewhere may increase the share of non-U.S. workers in future.

