

WORKPLACE DATA AND WORKPLACE DEMOCRACY

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Note: this essay draws from my monograph *Data and Democracy at Work: Advanced Information Technologies, Labor Law, and the New Working Class*, MIT Press (forthcoming Dec. 2022).

The COVID-19 pandemic upended our economy, but not our systems of class or racial hierarchy. A major factor in individuals' total risk was whether they can work remotely, which reveals a longstanding technological class divide. Under social distancing mandates, professionals retreated to their homes or second homes, using videoconferencing platforms to keep working—designing products, analyzing data, writing legal briefs, coordinating strategies. This was especially trying for parents who have to care for children as they do their own jobs, and the burdens of childcare fell disproportionately on women. Yet professionals had it relatively easy. Their creature comforts depended on armies of low-wage workers in our vast service economies who must perform their jobs in-person. Those workers, who are disproportionately non-white, had a very different relationship with technology. Rather than using it to create goods and services or to manage enterprises, those workers were often managed *by* technology, receiving orders and even official discipline through apps, tablets, and the like.

Indeed, many canonical images from the pandemic juxtapose U.S. companies' stunning technological sophistication with their workers' vulnerability. According to labor groups, Amazon warehouse staff—who work alongside armies of robots and whose every task is assigned and monitored by artificially intelligent devices—became infected early on because their company did not maintain physical distancing or adequate

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sanitation.¹ Workers at grocery stores and many restaurants faced similar risks of infection, even as they were monitored by point-of-sale devices that tracked how long they took to perform certain tasks.² The potential scope of the app-based “gig” economy also came into focus as delivery platforms like Instacart and DoorDash scaled up to meet consumer demand. Their workers entered businesses and interfaced with customers—putting them at a high risk of infection—and they could be supervised, demoted, and even fired via smartphone apps.

The pandemic highlighted and exacerbated long-simmering grievances in our economy and society. During the pandemic, many workers reached their breaking point, beginning to protest against dangers and mistreatment. Early in the pandemic, health care workers called out their employers’ failure to provide them with adequate safety equipment. Many others followed suit, walking out of warehouses, meatpacking and poultry plants, fast food restaurants, and elsewhere, to the point that some believe COVID sparked a strike wave.³ Then, as pandemic restrictions eased in 2021 and 2022, many companies struggled to staff back up, especially in the hospitality industry. Some longtime restaurant and hotel workers told reporters they were unwilling to tolerate such risks again or were exhausted after years of physically grueling service work.⁴ COVID was the final straw.⁵

A decade from now, we may look back on the pandemic as the end of an era in the American economy. That era began in the late 1970s and was defined both by astonishing technological progress and by exponential growth in precarious service jobs. In a forthcoming book, I argue that those trends—in technological development and in the degradation of work—were completely intertwined, in the sense that companies increasingly developed

¹ Chris Isidore, *Labor Group Says Amazon Massively Underreported Covid Cases Contracted at Work*, CNN, Nov. 30, 2021 [<https://perma.cc/L8MS-W2NH>].

² On grocery workers’ risks of infection, see Press Release, United Food and Commercial Workers, *America’s Largest Food & Retail Union Confirms Growing COVID-19 Impact on Frontline Workers*, (Sept. 7, 2020), [<https://perma.cc/GW2H-XXDA>]. On the use of point-of-sale devices for worker surveillance generally, see Brishen Rogers, *The Law and Political Economy of Workplace Technological Change*, 55 HARV. CIVIL RTS.-CIVIL LIBS. L. REV. 532, 575 (2020).

³ Clarissa A. Leon and Mike Elk, *The Bureau of Labor Statistics Counted Only Eight Strikes in 2020, Payday Report Counted 1200*, INSTITUTE FOR NEW ECONOMIC THINKING, PERSPECTIVES BLOG, (July 13, 2021), <https://www.ineteconomics.org/perspectives/blog/the-bureau-of-labor-statistics-counted-only-eight-strikes-in-2020-payday-report-counted-1-200> [<https://perma.cc/9CBG-58J4>].

⁴ The Daily Podcast, *Stories From the Great American Labor Shortage*, N.Y. TIMES, (August 3, 2021), <https://www.nytimes.com/2021/08/03/podcasts/the-daily/coronavirus-hiring-job-vacancies-hospitality-industry.html> [<https://perma.cc/5XFV-7N72>].

⁵ *Id.*

and utilized new technologies to limit workers' collective power.⁶ Over that same period, American labor laws evolved in ways that enabled companies to use technology in that manner.⁷ The book also argues that there is a deeper causal logic at work: these technological and legal changes were driven by investors' demands for high returns in today's services-dominated economy. Many major companies, including those in retail, food service, logistics, hospitality, and building services, require workers without specialized skills, yet are plagued by slow productivity growth. Especially in those sectors, companies have turned to new technologies to discipline and control their workforces, and therefore to suppress wage growth. In that sense, recent processes of workplace technological change have also been processes of class formation. Finally, the book argues that a more fair and sustainable future of work is possible but will require ambitious reforms to democratize the governance of workplaces, workplace data, and the economy. The rest of this Essay summarizes the book's main arguments.

Conflicts over workplace technology and information are, of course, not new. For well over a century, workers and companies have fought over the generation and control of workplace information, since both parties recognize that access to information shapes the labor process and the parties' correlative powers. For example, to unionize or take collective action, workers typically must be able to meet, to discuss common concerns, and to plan without management's knowledge or involvement. In that sense, to build associational power, workers need some privacy, meaning some control over informational

⁶ The book and this essay borrow from and join a growing body of scholarship elucidating the role of data-driven technologies and associated legal regimes in our contemporary political and social order. *See generally* JULIE E. COHEN, *BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM* (2019); Amy Kapczynski, *The Law of Informational Capitalism*, 129 *YALE L. J.* 1460 (2020); Salomé Viljoen, *Democratic Data: A Relational Theory for Data Governance*, 131 *YALE L. J.* 370 (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3727562; Yochai Benkler, *Power and Productivity: Institutions, Ideology, and Technology in Political Economy*, 27-60 in DANIELLE ALLEN ET AL., EDS., *A POLITICAL ECONOMY OF JUSTICE* (2022).

⁷ In the United States, the law of work is divided into three major sub-fields: "labor law," which covers union organizing and collective bargaining; "employment discrimination," which applies civil rights protections to employment, and "employment law," which includes common law and statutory governance of the individual employment relationship. *See generally* Michael Fischl, *Rethinking the Tripartite Division of American Work Law*, 28 *BERKELEY J. EMP & LAB. L.* 163 (2007). I use the term "labor law" to refer to all three bodies of law because that is the practice in other nations, and for ease of exposition. For summaries of such changes in labor law that the book and this essay draw upon, *see* Rogers, *The Law and Political Economy of Workplace Technological Change*, *supra* note 2, 544-553; Rogers, *Capitalist Development, Labor Law, and the New Working Class*, (reviewing GABRIEL WINANT, *THE NEXT SHIFT: THE FALL OF INDUSTRY AND THE RISE OF HEALTH CARE IN RUST BELT AMERICA* (2021)), 131 *Yale L. J.* 1719 (2022).

flows.⁸ Conversely, companies have long sought to generate, capture, and quantify information about workers and work processes; they often seek to use that information to suppress worker mobilization. They can do so directly by retaliating against worker leaders or indirectly by designing production systems and processes in ways that deter worker organizing.

In recent decades, however, companies' abilities to use data to reshape production and class relations has been supercharged by developments in law and in data processing. Regarding the law, companies have pushed on multiple fronts to achieve greater freedom of movement vis-à-vis workers and the state. They enjoyed such authority prior to the Great Depression, but they lost it after the New Deal once workers unionized in large numbers. Companies pressed hard for such freedoms beginning in the 1970s, responding to various economic pressures, such as industrial overcapacity.⁹ As a result, our labor laws now treat employment as a fundamentally contractual system, largely disregarding the background inequalities that affect workers' and companies' bargaining power. This is apparent in the resurgent importance of employment-at-will, in the trend away from collective bargaining and toward individual employment relationships, and in trends toward purchasing labor through subcontractors, franchisees, or independent contracting arrangements. Courts and lawmakers also strengthened and deepened companies' property rights in their enterprises over this period, including their rights with regard to data and technology. As a result, employers now enjoy near-plenary powers to monitor and surveil workers in the worksite—and often during non-work hours as well. This legal reconstitution of employment paralleled changes in intellectual property, trade secrets, and other doctrines that similarly granted companies vast legal, operational powers over technology. As the book suggests, this consolidation of legal power reflects broader trends in the evolution of law over the same period—the era of neoliberalism—when vast

⁸ See Neil M. Richards & Jonathan King, *Big Data Ethics*, 49 WAKE FOREST L. REV. 393, 396 (2014) (arguing that privacy should be understood as “encompassing information rules that manage the appropriate flows of information in ethical ways.”). See also Julie E. Cohen, *What Privacy is For*, 126 HARVARD LAW REVIEW 1904, 1906 (2013) (arguing that “[p]rivacy is shorthand for breathing room to engage in the processes of boundary management that enable and constitute self-development.”)

⁹ While this book focuses on legal changes in the United States, similar but less momentous shifts in workplace governance have occurred in many other nations. See LUCIO BACCARO & CHRIS HOWELL, *TRAJECTORIES OF NEOLIBERAL TRANSFORMATION: EUROPEAN INDUSTRIAL RELATIONS SINCE THE 1970S* (2017) (tracing changes in European industrial relations in recent decades, arguing that the general trend across nations is toward greater managerial discretion over workers).

swaths of our society were re-organized around idealized visions of market ordering.¹⁰

That long-running shift in labor law both facilitated and responded to the maturation of networked information technologies, as well as to broad changes in the class structure. As our economy underwent a secular shift away from industrial production, service industries became dominant. Now, successful companies often use novel surveillance technologies both to manage their massive workforces, and to suppress wage growth. Those technologies differ from past means of worker surveillance in several respects, each of which is reflected in their design as well as in their use.¹¹ For example, data-driven surveillance can operate over a vast distance, enabling cheaper oversight of massive numbers of workers or huge and far-flung supplier networks, even from corporate headquarters. Those technologies also operate asymmetrically, enabling companies to monitor workers but preventing workers from monitoring management. Most importantly, nascent forms of artificial intelligence (AI) operate very differently from human cognition. They analyze very large data pools to discern patterns and draw statistical inferences in ways humans never could. This leads to a new way of “seeing” or knowing the world that is *inductive* in character and genuinely different from other forms of productive knowledge. As the sociologist Gary Marx explained in a related context, such techniques enable judgments based not just on the unique individual but on that “individual in relation to statistical averages and aggregate categories.”¹² Contemporary AI systems nevertheless have an Achilles heel: they have no sense of the social and real-world context for their analyses.¹³ That context is inescapable in the workplace, which limits companies’ ability to automate today’s jobs.

¹⁰ See generally David Singh Grewal and Jedediah Purdy, *Introduction: Law and Neoliberalism*, 77 L. & CONTEMP. PROBS. 1, 5 (2014); see also Jedediah Britton-Purdy et al., *Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis*, 129 YALE L. J. 1784, 1794–1818 (2020) (summarizing high-level developments in legal theory during late 20th century that were indebted to neoliberalism).

¹¹ See GARY MARX, WINDOWS INTO THE SOUL: SURVEILLANCE AND SOCIETY IN AN AGE OF HIGH TECHNOLOGY 50–51, tbl. 2.1 (2016) (providing schematic overview of the differences between contemporary and historical forms of surveillance).

¹² *Id.* at 51.

¹³ See generally David H. Autor, *Polanyi’s Paradox and the Shape of Employment Growth*, in FEDERAL RESERVE BANK OF ST. LOUIS: ECONOMIC POLICY PROCEEDINGS, REEVALUATING LABOR MARKET DYNAMICS 129 (2015); see also David H. Autor, *Why Are There Still So Many Jobs? The History and Future of Workplace Automation*, 29 J. ECON. PERSP. 3, 5 (2015) (“[E]ven expert commentators tend to overstate the extent of machine substitution for human labor and ignore the strong complementarities between automation and labor that increase productivity, raise earnings, and augment demand for labor.”); Jason Pontin, *Greedy, Brittle, Opaque, and Shallow: The Downsides to Deep Learning*, WIRED

For the foreseeable future, then, the greater share of workplace AI seems dedicated to extending, deepening, and transforming managerial control over workers. In other words, new data-driven technologies are altering class conflicts by rendering nearly every facet of production legible to employers. Put more formally, companies have used their *legal powers* and *technological powers* to suppress workers' *associational power*, driving down wages and eroding working conditions.¹⁴ These long-running developments yielded many of the problems that exploded into public attention under COVID—including low wages, meager benefits, lean staffing, unpredictable schedules, lack of basic safety protocols, and potentially illegal subcontracting. The key developments can be broken into the following three categories.

The first involves the use of novel information technologies to alter the mixture of tasks performed by workers and managers at the “point of production” through automation and to manage workers more intensively. However, for both technical and economic reasons, the book argues that automation is unlikely to displace the world-historic numbers of low-wage workers in the years ahead. Instead, automation and algorithmic management are best understood as part of a wider trend toward “digital Taylorism.”¹⁵ This digital Taylorism tends to erode workers' associational power by reducing the skill levels required for particular jobs and by making it more difficult for workers to deliberate and make common cause with one another. While acting entirely within their rights, companies may closely monitor workers, demand an ever-faster pace of work, and terminate those who complain without giving any reason.¹⁶ They may use AI to reshape schedules, physical spaces, and workflow in ways that prevent workers from even speaking with one another and making it more difficult for them to take collective action.

The second category involves the changing terrain of employee privacy as it relates to workers' organizational efforts. As other scholars have shown, companies can use new data-aggregation techniques to illuminate many aspects of workers' off-duty conduct and personhood. For example, companies may be able to infer a worker's political beliefs or their particular health care needs from consumer and other data, even when that data is largely

(Feb. 2, 2018), <https://www.wired.com/story/greedy-brittle-opaque-and-shallow-the-downsides-to-deep-learning>, [<https://perma.cc/3AGF-TQ7S>].

¹⁴ See Erik O. Wright, *Working-Class Power, Capitalist-Class Interests, and Class Compromise*, 2015 AM. J. SOCIO. 958, 962 (2000) (discussing workers' “associational power” contrasted with “structural power,” or the power workers have individually or collectively by virtue of their skills or location in a tight labor market).

¹⁵ The term has been used by other publications in the past. *Digital Taylorism*, THE ECONOMIST: SCHUMPETER (September 10, 2015), <https://www.economist.com/business/2015/09/10/digital-taylorism> [<https://perma.cc/7DJD-CBHH>].

¹⁶ See Rogers, *supra* note 2 at 544-46.

anonymized. As other scholars have also shown, hiring algorithms and related uses of workplace AI may create serious headwinds to non-white, non-male, non-elite job applicants or disproportionately sort applicants of color into less prestigious positions. The book builds on those analyses to better understand how companies can use similar techniques to avoid unionization or even the threat of unionization. For example, companies can use data-aggregation and analysis in their hiring to screen out workers who are likely to challenge managerial authority. Companies can also use new surveillance devices and inductive learning technologies to suppress workers' organizing efforts actively, directly, and aggressively. For example, companies can monitor internal employee message boards using natural language processing algorithms, spotting keywords that might indicate a unionization drive is afoot before retaliating against ringleaders. Such retaliation is often illegal—and yet companies may be able to launder personnel decisions through new algorithms that obscure their intent from workers and regulators, making enforcement much more difficult. There are many reported examples of such efforts today: in 2020, Amazon posted, and then rapidly deleted, a job announcement for “intelligence analysts” to take such efforts to scale, utilizing worksite data analytics and public data sources to detect “labor organizing threats” against the company.¹⁷

Finally, in the third category, companies are using such technologies to alter their industrial organization. That involves two facially contradictory developments. Companies may shunt workers outside of their corporate boundaries, denying them basic legal protections and rendering many forms of worker collective action *illegal* even as they closely supervise workers' performance.¹⁸ That tends to reduce the size of firms. Meanwhile, companies can take these steps even as they exploit their control over valuable information to build a dominant position within their sectors—increasing their size or scope—giving them structural power over workers, competitors, and even lawmakers.

These changes in industrial organization have led to a characteristic form of organization in low-wage labor markets—including retail, fast food, hospitality, logistics, some care sectors, and the gig economy—where decisions are made centrally at corporate headquarters but legal responsibility for working conditions is diffuse. Companies' core operations are then insulated from competition while workers are forced into intense competition.

¹⁷ Lorenzo Franceschi-Bicchierai, *Amazon Is Hiring an Intelligence Analyst to Track 'Labor Organizing Threats,'* VICE (Sept. 1, 2020), <https://www.vice.com/en/article/qj4aqw/amazon-hiring-intelligence-analyst-to-track-labor-organizing-threats> [<https://perma.cc/CJP4-UZRX>].

¹⁸ See Rogers, *The Law and Political Economy of Workplace Technological Change*, *supra* note 2 at 549–50, 569–73.

The individualization and intensification of surveillance and management is not always *intended* to erode workers' associational power, but it often has that effect. Workers are fragmented from one another physically, socially, and legally, even as they are subject to similar forms of centralized control. All of this culminates in a new labor politics in which knowledge and control are centralized, surveillance is constant, and line-level workers have little autonomy and no voice on the job. Companies' power then extends, fractal-like, from the individual workstation to the worksite, to the supply and distribution chain, and to the broader political economy.

Workers must compete with one another for jobs, for shifts, or to stay in their employer's good graces—therefore facing substantial market discipline. As a result, service workers are increasingly a class in a structural sense, occupying similar positions in the division of labor and enduring similar inequities, even if they do not always understand themselves to be a class. Their lack of collective power drives down wages and working conditions, enabling companies to remain profitable and capture the lion's share of productivity gains. The enormous power disparities in today's labor market may even have skewed the development of AI itself, encouraging investment in technologies to control and discipline workers. In that sense, new technologies and their associated class politics are central to the political economy of contemporary capitalism.

The book's overall argument therefore pushes forward two now-classic insights from the literatures on law and political economy, broadly-defined. The first, common to legal realism and its descendants, is that law is a human creation and can be revised to advance the broader social good.¹⁹ While processes of social change cannot be driven entirely by legal change, legal reforms and processes are central to social orders in modern democratic societies. Moreover, unlike social norms and forms of traditional authority, laws can be contested, questioned, and altered pursuant to intentional deliberative and political processes. The second insight, which is central to radical political economy and heterodox economics, is that capitalism as an economic and social order has a deeper logic that is not reducible to the views and aspirations of its denizens and that shapes the legal order in myriad ways.²⁰

¹⁹ For discussions on legal realism see *generally*, Morris R. Cohen, *Property and Sovereignty*, 13 CORNELL L. REV. 8 (1927); Robert L. Hale, *Coercion and Distribution in a Supposedly Non-Coercive State*, 38 POL. SCI. Q. 470, 471 (1923) (explaining how law helps to constitute economic relations). Examples within contemporary scholarship on "Law and Political Economy" include Angela P. Harris & James J. Varellas III, *Introduction: Law and Political Economy in a Time of Accelerating Crises*, 1 J.L. & POL. ECON. 1 (2020); Britton-Purdy et al., "Twentieth-Century Synthesis," *supra* note 9.

²⁰ On capitalism as a social order, see *generally* Wolfgang Streeck, *Taking Capitalism Seriously: Towards an Institutional Approach to Contemporary Political Economy*, 9 SOCIO-ECON. REV. 137 (2010); IMMANUEL WALLERSTEIN, *WORLD-SYSTEMS ANALYSIS: AN*

For example, capitalism encourages intense competition at most levels of the economy, leading to perpetual changes in technology and to new work structures that erode existing social protections.²¹ What's more, the business community's structural power even in democratic societies may limit the potential scope of democratically-motivated efforts to de-commodify labor and other basic goods.²²

In other words, the book stands both with those who insist that capitalism tends to erode or swamp all opposing normative orders *and* with those who note that, by acting together, non-elites have frequently democratized social and economic life through legal reforms. My hope is that embracing this tension will enable a sober, clear analysis of the crises facing us today while also generating space to envision a future of work and workplace technology that is far more egalitarian and sustainable than the present. Moreover, the fact that both technological change and class formation were thoroughly facilitated and shaped by law—a human creation ultimately subject to democratic revision—suggests that, by re-configuring workplace and data governance, a more egalitarian future of work is possible. Such an outcome will require political mobilization, but there are promising signs there as well.²³ For example, service workers are the paradigmatic “essential workers” of the COVID era—the ones who make sure we are all fed, clothed, housed, transported, and cared for. They have enormous latent power, which they have recently begun to exert, as noted above. Service workers also have a natural community of interest with many consumers and with a younger generation unwilling to tolerate an unfair, unsafe future. By unifying for a common cause, service workers and consumers could press for reforms to de-commodify many social goods and to make workers' associational power a legitimate modality of governance once again. Law today encourages employer dominance in many ways, but law can also encourage a different

INTRODUCTION (2004). For excellent recent legal scholarship that has taken up the question of law's relationship to capitalism *see, e.g.*, Angela P. Harris, *Foreword* to HISTORIES OF RACIAL CAPITALISM, vii-xx (Destin Jenkins & Justin Leroy eds., 2021); NTINA TZOUVALA, CAPITALISM AS CIVILISATION: A HISTORY OF INTERNATIONAL LAW (2020); David Singh Grewal, *The Laws of Capitalism*, 128 HARV. L. REV. 626 (2014).

²¹ JOSEPH SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY (1942) ch. 7 (discussing “creative destruction”); WALLERSTEIN, WORLD-SYSTEMS ANALYSIS, *supra* note 19, at 24-30 (summarizing relationship among technological innovation, monopoly rents, and core/periphery divisions in world capitalism).

²² *See* Claus Offe & Helmut Wiewenthal, *Two Logics of Collective Action: Theoretical Notes on Social Class and Organizational Form*, 1 POL. POWER & SOC. THEORY 67, 75-76 (1980) (explaining why even organized workers must be attentive to capital's needs).

²³ *See* GABRIEL WINANT, THE NEXT SHIFT: THE FALL OF INDUSTRY AND THE RISE OF HEALTH CARE IN RUST BELT AMERICA 28-32, 23-24, 262-64 (2021) (discussing the latent political and associational power of care workers, a subset of service workers).

political economy and a different class politics with a broader and richer sphere of human freedom.