

RESEARCH BRIEF

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# Robots as Symbols and Anxiety Over Work Loss

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The MIT Task Force on the Work of the Future has been charged with examining the implications of technology-related transformations for employment. How will transformations associated with AI and automation affect the future of work? Are people right to fear that a growing army of robots is coming to take their jobs? What repercussions will the changing nature of work have, and for whom? In a tumultuous year when crises relating to governance, racism, misinformation, and a global pandemic have joined the more slow-burning crisis of climate change to batter the United States, some might ask whether questions about the work of the future are among the most pressing for us to address. The answer is yes. The other major crisis of our time—expanding economic inequality—underwrites and magnifies the fault lines of all other crises. The impacts are cumulative, and attention to the changing nature of work can point out the kinds of additional pressures that may lie ahead.

The disproportionate death rate from COVID-19 among African Americans is one example of this intersection of today's growing inequalities. The effects of racism have become bound up with disproportionate exposure rates for groups with high numbers of "essential workers." What it means to be an essential worker, however, has shifted with the changing nature of jobs in what David Weil, Dean and Professor of the Heller School for Social Policy and Management at Brandeis University, has called the "fissured workplace," settings where employees find themselves increasingly outsourced, sub-contracted, working part-time or on demand, and with less leverage and fewer worker protections (Weil, 2014; Greenhouse, 2019). It is linked to the reality that loss of employment in the United States often means loss of health insurance as well as other essential benefits, while the uneven fallout of the 2008 financial crisis has left many with fewer resources and government supports to weather such crises. The result has been increasingly extreme patterns of compounded inequalities, affecting a disproportionate number of people of color.

I come to questions about the future of work as a cultural anthropologist. Among other things, anthropologists explore how people's interpretations of the world are key to analyzing broader economic and social patterns.<sup>1</sup> Consequently, as an anthropologist thinking about robotics and artificial intelligence (AI), I begin with the question: What do the robots *symbolize*? Over the last few years, worries about employment and displacement by robots and AI have become pervasive in popular discussions in the United States. While robots might be associated with many things (ranging from futuristic technophilia to dystopianism in Hollywood movies, for example), robots in the United States increasingly appear as symbolic encapsulations of broader anxieties about the changing nature of contemporary work. The observation that public discussion in the United States has gone from largely ignoring questions of technological transformation a decade ago to overexaggerating its effects by imagining robots as capable of far more than is currently true confirms that more is at stake than simply "robots."<sup>2</sup>

As a result, attempts to rein in public anxiety by debunking exaggerated claims about technology (either by challenging technologically determinist arguments or by noting that AI cannot do everything that boosters claim or critics fear) risk missing the point. Anxieties about robots are potent because they symbolically condense two key realities. First, middle- and working-class Americans *do* have ample cause for worry due to the expansion of increasingly precarious forms of employment which began long before COVID-19 generated widespread job loss. And, second, the reasons for these broader economic transformations are often opaque, making it tempting to focus on their material manifestations, in other words, the technologies themselves.

Tellingly, anxiety about robots is not ubiquitous across all countries. In Scandinavian countries, for example, robots are more commonly seen as welcome adjuncts to labor (Goodman, 2017). The reasons why are both obvious and telling. The United States' thin and embattled social safety net makes the consequences of job loss and insecurity far more dire here than in those wealthy countries where citizens can rely upon nationalized health insurance, guaranteed sick leave, subsidized child and elder care, and strong supports for education and retraining.

The goal of this brief is to move beyond "robot as Rorschach test" for job anxiety and explore some of the systemic reasons for changes in employment and the potential impacts of job displacement, particularly on more vulnerable individuals, families, and communities in the United States. History and ethnography<sup>3</sup> can help us with both. My own research focuses on working-class and lower middle-class populations, or those whom academics view as most susceptible to job displacement from robotics and AI. It builds upon research on everyday experiences of job loss historically among multiracial working-class populations in the Calumet region of Southeast Chicago and Northwest Indiana, once one of the largest industrial corridors in the world (Bensman and Lynch, 1987; Walley, 2013; Boebel and Walley, 2017; Walley et al., 2020). In particular, I am concerned here with lessons to be learned from past experiences of technological and work transformation in formerly industrial communities. These studies suggest that understanding work

transformation entails addressing not only the numbers and types of jobs lost or gained, but also the forms of sociality, identity, and meaning associated with that work. Such studies also indicate how contemporary work displacement linked to robotics and AI is likely to exacerbate prior rounds of job displacement that have already had pronounced impacts.

I argue that the lessons to be learned from this historical and ethnographic perspective for policymakers are twofold. First, there is a strong need for public policies that discourage companies from enhancing their profitability by using technology to displace workers or downgrade skills and that instead encourage the use of technology to increase productivity in worker-supportive ways. Second, this scholarly work points to the need for a dramatic re-envisioning of social safety nets, an area where comparative research across countries can offer valuable insight. In sum, looking to the *past* and thinking about the ways that technology is embedded within and emerges from social relationships, rather than thinking in more technologically narrow ways, can help hone the questions we need to ask to plan for collective futures.

This discussion, however, first requires examining the disparate assumptions built into definitions of “social class,” “skill,” and “knowledge,” in order to counter the confusion and misconceptions that can result. During the 20th century, social class was generally determined on the basis of such factors as occupation, income, positioning within systems of economic production, and (sometimes) more social intangibles. However, this perennially fuzzy concept has become even more indeterminate. Many journalists and academics now define “social class” on the basis of whether or not individuals hold four-year college degrees. Although easier to measure, this redefinition of class transforms it into a binary metric—either you have a four-year college degree or you don’t. Those with a college education are now often assumed to be “elites” and those without one to be working class—a sleight of hand that conceptually erases the “middle class” once seen as quintessential to the American social landscape. This reconfiguration creates such anomalies as lumping together hedge fund billionaires with kindergarten school teachers among the “educated” and suggests that a college dropout like Bill Gates has something in common with a factory worker without a degree. It also generates an (overly) expansive umbrella for who might be considered “working class” (60% of non-Hispanic whites, for example, lack a bachelor’s degree) (U.S. Census Bureau, 2020; Metzgar, 2016; Walley, 2017). When pundits use the term “working class,” for example, it is often unclear who is meant—the industrial or former industrial workers central to its 19th-century definition? Rural farmers? Suburban business owners with some college? Office workers or managers? The impoverished?

Similarly, “skilled” work is now commonly assumed to be that which requires formal higher education, erasing long histories of skilled manual labor or other forms of craft or knowledge. The slippage in definitions of class and skill suggests both changing social realities on the ground and the need to examine the (potentially misleading) assumptions we bring to these discussions.

## Commonly Asked Questions about Robots, AI and the Work of the Future

ISN'T TECHNOLOGICAL TRANSFORMATION, INCLUDING AUTOMATION AND AI, NOT ONLY INEVITABLE, BUT ALSO A FORM OF PROGRESS THAT DEFINES HISTORICAL EPOCHS AND WILL ULTIMATELY BENEFIT ALL?

Scholars of science and technology have long been clear: Technology does not cause change on its own. Technologies are inherently *social*, and their impact depends on who builds and seeks out particular technologies and the varied and sometimes unanticipated ends to which they are put. The right question then is not whether technological innovation brings “progress,” but who initiates the process of technological transformation, and for what ends, and who stands to benefit or lose from such changes. Technologies can be used to support workers as well as replace them. For example, efforts to have workers and managers co-produce technology offers intriguing examples of the former (Kochan and Dyer 2017). Nevertheless, labor history in the United States suggests strong reasons for concern about how technologies might be used in the context of contemporary fissured workplaces. Here, I illustrate with an example from the industry at the heart of the U.S. economy during the 20th century—steel.

**Figure 1. Pressed Steel in Southeast Chicago, 1918**



Source: Southeast Chicago Historical Society

Technological transformation in the steel industry was central to its history (Brody, 1960; White, 2016). Vertically integrated steel plants were the technological marvels of their time, capturing the imagination due to their massive size, scale, and danger (see Figure 1). Once the largest steel plant in the world, U.S. Steel–Gary Works, which is still operating in the Calumet region, extends 7 miles in length. At its peak, it employed 30,000 workers (most of them men, unlike in other industries such as textiles, which included many women). Mechanization of the steel industry during the late 19th century, encouraged by business leaders like Andrew Carnegie, was central to its mass production and fundamental to the economic transformation of the country through the widespread use of steel for skyscrapers, railroads, cars, and farm equipment. Mechanization also displaced large numbers of workers along the way (Brody, 1960; Hirsch, 1990). Although some assumed such transformations were a form of progress given the dangerous and dirty nature of these jobs, management's goal was not to make life easier for steelworkers; nor was it simply to increase efficiency, although that was certainly an intent.

A parallel goal was to displace the highly skilled craft workers who had dominated iron production in order to create work processes that could be done by less skilled and cheaper laborers (Brody, 1960; Hirsch, 1990; White, 2016). Skilled craft workers were often unionized, and supervisors were dependent on their abilities and experience. In short, the technological shift from iron to steel, which allowed an expansion of less skilled workers, was not an inevitable byproduct of technological progress but was bound up with the desire to control labor.

These transformations were also inextricably linked to race and ethnicity. The shift to mass production of steel and less skilled labor was intended to expand jobs that could be done by newly arrived, quickly trained, and easily replaceable immigrant laborers (at that time largely Eastern European). In addition, steel producers deliberately sought to divide workers by seeking out, or transporting in, new groups who could be paid less or induced to serve as strikebreakers, as happened during the massive 1919 steel strike. This strike foundered as established craft workers refused to partner with newer immigrant workers or workers of color, even as craft unions were broken or made irrelevant by mass production. After the Wagner Act (or, National Labor Relations Act) of 1935, the Committee for Industrial Organization (CIO) launched a new, more inclusive attempt to unionize steel despite violent resistance by some companies. Its success was central to ushering in an era of general economic prosperity in the post-World War II period, despite ongoing inequalities along the lines of race and gender. Unions also made efforts to counter technological disruptions on workers by such means as strict job classifications and tasks, efforts later decried for leading to “rigidities” in workplace production.

In short, technological uptake in steel and other industries emerged, not simply because engineers generated progress through their inventions, but because these inventions were bound up with politically and economically motivated efforts to control labor and counter unionization. Not all wealthier countries, however, shared this pattern of labor relations. For example, some European countries, including Sweden and Germany, historically relied upon corporatist or works councils models in which worker representatives (chosen by workers themselves) and employers were mandated to resolve disputes and make binding decisions, sometimes with explicit government mediation. Although there was, inevitably, continuing political contestation over labor questions in these countries, in general, they did not experience the degree of bitterness and violence historically found in U.S. industrial relations (Rothstein and Tragardh, 2007; Thelen, 2014).

Today, these industrial histories continue to shape the ways in which contemporary technologies are taken up. Despite the fact that corporate demands for worker flexibility, including the use of contract and temporary workers, is increasingly common in many parts of the world, unions continue to be taken-for-granted industrial partners in countries like Sweden and Germany, even as rates of unionization in the United States have fallen by half, from 35% of the workforce in 1954 to 10.3% in 2019 (6.2% in the private sector) (DeSilver, 2018; U.S. Bureau of Labor Statistics, 2020). This means that in the United States there are far fewer opportunities for worker input into how new technologies will be adopted and used. In contrast, in Germany which, in addition to works councils, has legal principles of “co-determination” or worker participation in management in certain firms, industrial workers have a say in how new technologies will be used (as well as issues like executive compensation leading to far less escalation in CEO salaries compared to the United States).

In light of this history, the key question to ask in the current moment is not whether robots will take people's jobs, but how companies as institutions investing in new technology intend to use AI and robotics and why. Is the motivation to use AI to cut costs or to complement workers' tasks in ways that increase productivity? If the goal is to *cut costs*, then it is more likely that technology will be used to displace workers (particularly since, in the United States, employers rather than the government generally bear the cost of providing healthcare and other benefits, placing companies with large stable workforces at a competitive disadvantage)<sup>4</sup>. The tendency to view workers as costs to be minimized corresponds with the dominance of corporate ideas of shareholder value as well as what Weil describes as the fissured workplace. In *Liquidated: An Ethnography of Wall Street*, anthropologist Karen Ho (2008) notes how "stakeholder" management models dominant in the 1940s to 1970s expected corporate profits to be shared among various stakeholder groups. She demonstrates how this later morphed into a pervasive, even sacrosanct, cultural belief on Wall Street in "shareholder value," or the desire to keep share prices high for the sole benefit of shareholders, which Wall Street then imposed on corporate America through corporate takeovers.

As previously in-house employees morphed into outsourced or subcontracted workers in this fissured workplace, they became a mere line item on a budget that companies then sought to minimize to uphold share prices. According to Weil, this shift forced companies that supplied subcontracted labor to larger firms into cut-throat competition with one another in ways that put additional downward pressure on wages and benefits (Weil, 2014). While cultural views of "shareholder value" have begun to be challenged even within the business world,<sup>5</sup> as well as by non-unionized workers through campaigns like Fight for \$15, such views remain dominant in management training. In sum, if the management perspective is that value only legitimately accrues to shareholders and that workers are simply external costs to be minimized, technological change will be used to displace employees and/or offset unionization.

If, however, companies' intended goal in using new technology is to increase *productivity* rather than simply cut costs, there are two distinct paths such companies might take. The first also has a long debilitating history for workers, namely, using technology to surveil employees or enact technologically enabled speedups. Although less common in the steel industry, because that industry was less dependent on assembly lines, speedups were historically pervasive, as classically lampooned by Charlie Chaplin in his 1936 film *Modern Times* (see Figure 2). The second path to increasing worker productivity instead focuses on using technology to support workers at particular tasks in ways that make those workers more productive. In this instance, increases in productivity, whether in industry or service work, happen through the retention of experienced workers with skills and knowledge that can be harnessed to improve products or customer experiences and has been championed by various "good jobs" initiatives (Ton, 2014). While this latter route has also been shown to lead to greater profits, it again goes against culturally ingrained assumptions of shareholder value and cost minimization among U.S. managers (Ton, 2020).



**Figure 2. Charlie Chaplin portrays Worker having a Break-down due to an Assembly Line Speed-up in *Modern Times* (1936)**



Source: Getty Images

In any of these three scenarios (i.e., using technology to displace workers; using it to increase productivity through debilitating increases in demands; or using it in employee supportive ways), technological change resulting from greater reliance on robotics and AI could well result in fewer jobs in those sectors. However, the difference between companies that view workers as mere cost liabilities, as opposed to partners in increasing productivity, is a stark one, meaning that the uses of technology have profound implications for workers' experiences. While this formulation leaves aside questions that anthropologists and humanities scholars might raise about how productivity should be defined and by whom (and whether it is or should be the sole way of valuing work), it does suggest that even within customary economic frameworks very different ways of conceptualizing technology are possible with key implications for workers. In short, in order to understand the effects of robotics and AI on the work of the future, it is necessary to understand the changing nature of corporations themselves, companies' motivations in using new technologies, and how these motivations are generated within a context of rules and norms linked to government institutions, legal structures, unions and worker movements, as well as broader cultural values. Again, the relevant question is not one of technological progress, but about who creates new technologies and for what ends, and how technologies come to be used in certain ways. Policymaking that helps guide these choices in ways that are beneficial to employees, and not solely shareholders, is critical.

#### WHAT CAN PRIOR HISTORIES OF JOB DISPLACEMENT TEACH US ABOUT THE POTENTIAL EXPERIENCE OF LOWER-INCOME GROUPS OR THOSE MOST LIKELY TO BE DISPLACED BY AI AND AUTOMATION IN THE FUTURE?

The presumed degree to which technological change due to robotics and AI will result in fewer overall jobs is highly contested. Some have argued that the impact will be severe; others counter that newer technologies will bring new kinds of jobs, including many not yet envisioned. While large-scale aggregate job loss has not yet been demonstrated, it is also impossible to project future jobs numbers based on past experiences. History is always contingent, as historians might say; we do not know what events might intervene or what unexpected trends might emerge. However, we do know that individuals and regions that lose jobs are often not the same individuals or regions that benefit from newly created jobs. It is also

clear that many of the jobs lost in recent decades were higher-quality jobs than those currently being created, particularly for work on the lower end of the economic spectrum (Weil 2014; Case and Deaton, 2020). In Southeast Chicago, the site of my own research, there has been a widespread sense for many decades that available jobs are often not “real” jobs (i.e., jobs that one can depend upon or raise a family on) in contrast to jobs from the earlier industrial period. In short, official jobs numbers can disguise many people’s *felt experience* of job decline even if the aggregate number of jobs remains the same.

Despite debate over how changing technology will affect overall jobs numbers, the recognition that significant job displacement *will* occur at least in certain sectors is uncontested. Given this reality, what can histories of prior job displacement in the United States teach us—not to predict the future, but to suggest the kinds of questions we should ask as we prepare for a range of possible outcomes? Industrial job loss—or deindustrialization—has been significant among wealthy countries, although its implications have varied greatly by country.<sup>6</sup> Between 1980 and 2014, the United States lost nearly 7 million jobs, or more than a third of U.S. manufacturing positions.<sup>7</sup> Here, I focus on job loss in the Calumet steel region which was hard hit by the first generalized wave of deindustrialization in the United States (in other words, industrial job loss that transcended downturns in specific industries) as it occurred in the late 1970s to early 1980s. Between 1979 and 1982, 150,000 steelworker jobs were lost in the United States and 300,000 over a decade, eliminating more than half of all steelworkers (Rowe, 2016). What can this experience of job displacement and its social impacts teach us? And how, according to an increasingly international literature on deindustrialization, does the United States’ experience compare with those of other countries?

This first wave of deindustrialization in the United States did not happen primarily due to AI or automation. Instead, it was a product of several factors: an economic recession in the early 1980s; government policies relating to deregulation; a deliberately overvalued U.S. dollar intended to fight inflation but that made exports prohibitively expensive; competition with nationally subsidized industries elsewhere; and, perhaps most crucially, the shift to new corporate models (Bensman and Lynch, 1987; Walley, 2013; Bluestone and Harrison, 1984). These new models, linked to what academics have called finance capitalism, flexible accumulation, and neoliberalism, among other terms, also overlap with Weil’s discussion of the “fissured workplace.” More generally, this has entailed a shift from corporations as entities that generate profits by making things or selling services to entities that may make more money through buying and selling other companies or subsidiaries, and/or by re-envisioning themselves as brands that sit atop global production and supply chains in which companies are “disentangled” (Appel, 2012) from responsibility for workers both internally and at other points in the chain.

Along with many other U.S. industrial regions, the Calumet’s once dominant steel companies were hard hit during the 1980s and 1990s and either closed down entirely or radically down-sized, leading to the loss of close to 100,000 jobs in the bi-state area (see Figure 3). This was not inevitable. During the 1980s, Steven High (2003) demonstrated that neighboring Canada experienced similar pressures and did not

close a single steel or auto plant (in part due to government regulations that ensured that companies plowed back profits into mills and that attached costs to shutdowns). In Southeast Chicago, where all steel mills eventually closed, unemployment levels at one point reached 40%. In the eight years following the 1980 closure of the Calumet's first steel mill, 800 out of that mill's 2,400 workers died, many due to stress-related illnesses (Bergsvik, 1989). Indeed, increases in rates of suicide, alcoholism, divorce, poor health, and other signs of distress are commonly noted in deindustrialized communities (see also Chen, 2015; McIvor, 2019a; Dudley, forthcoming).

**Figure 3.** Chicago's Wisconsin Steel Post-Shutdown, 1982



Source: Southeast Chicago Historical Society

As Steven High (forthcoming) notes, deindustrialization's effects have been uneven geographically, with older industrial regions being particularly hard hit. Such regions include England's "Midlands" coal country where coal mining had been a way of life for over 400 years, preceding capitalism itself. In a study of health effects in Scotland, Arthur McIvor found that although a minority of displaced miners thought the closing of the mines had been positive given mining's negative health and psychological effects, the majority of workers did not and experienced greater ill health due to displacement from work than from the work itself (McIvor, 2019a; 2019b).

Among wealthy countries, the experience of U.S. workers has been particularly severe given the weak U.S. social safety net and the fact that workers generally lose healthcare coverage when they lose their jobs. It is telling, for example, that among Organisation for Economic Co-operation and Development (OECD) countries that have experienced deindustrialization, only the United States (more recently joined by Britain) has experienced decreased life expectancy. This decrease is concentrated among those with high school

educations and is sometimes referred to as “deaths of despair” due to their association with socioeconomic dislocation (Case and Deaton, 2015).<sup>8</sup>

The expanding qualitative literature on deindustrialization, including studies from Canada, Great Britain, Germany, Russia, China, and India, among others, often notes a sense of violent socioeconomic displacement and an attendant sense of the past weighing on the present. In this literature, such realities have been conveyed through concepts such as “haunting,” “ruination” (i.e., ruin as an ongoing process), and “the half-life of deindustrialization.” It has also included ruminations on the political meanings of nostalgia, including critiques of middle-class assumptions that misgivings about industrial job loss are merely “nostalgia” rather than reflections of actual social and economic dislocation with ramifications for the future (Linkon, 2018; Bright, 2015; High et al., 2017; Finkelstein, 2019; Muehlebach and Shoshan, 2012; Finkelstein, 2019; Walley, 2013; Strangleman, 2019).

Even in contemporary regions where deindustrialization appears to be a long-forgotten process, scholars note long-term intergenerational effects and how past forms of work seem to “haunt” people’s evaluations of contemporary work. These intergenerational effects emerge in concrete ways in the United States (i.e., through loss of work options, through degraded family finances that affect subsequent generations, and through loss of tax bases that affect services like education that are crucial to the next generation). However, they also emerge in more intangible ways, through an emotional sense of abandonment, loss of dreams, or bleakness about the future that some refer to as “post-Fordist affect,” a phenomenon Muehlebach and Shoshan (2012) argue has even affected regions where Fordism (or an industrial welfare state) existed only as an aspiration (see also Berlant 2007). There is also the reality that many formerly industrial regions in the United States and elsewhere have yet to recover, while in those regions that appear to have done so, the “recovery” may be based on gentrification and geographic displacement rather than demonstrated recovery for those directly affected.<sup>9</sup>

Which demographic groups have been most severely affected by past job displacement—and will they be similarly impacted again in the future? Although political discussions in the wake of the 2016 U.S. presidential election resurrected outmoded stereotypes of the “working class” as white male industrial workers, the U.S. working class has always been diverse and 40% of the contemporary working class are persons of color (Federal Reserve Bank of St. Louis, 2019). In the Calumet region, at the time of the steel mills’ demise in the 1980s and 1990s, approximately one-third of steelworkers were white (often of Eastern European backgrounds), about one-third were Mexican American, and about one-third were African American. A growing number were also women. By the late 1970s, workers of color had increasingly moved into positions of seniority in both mills and unions and were hardest hit by job displacement and wage loss (Doussard et al., 2009; Wilson, 1996).

Impacts on whites were also pronounced, although whites benefited from not having to face racial discrimination in housing and employment in ways that working-class individuals of color did. Media accounts have had the contradictory effect of both overplaying and downplaying the effects of deindustrialization on working-class whites. This effect was *overplayed* in response to Trump-era political rhetoric that symbolically focused on these workers, ignoring non-white working-class individuals. The impacts on working-class whites have been *downplayed* by tendencies to offer statistical averages on economic indicators *within* racial groups. Averaging income levels for whites, for example, statistically erases trends for working-class and poor whites by averaging them with an expanding category of wealthy whites. This is particularly problematic since it disguises the fact that life expectancy and real wages for whites with a high school education or less has gone *down* in recent years, while going *up* for the college-educated (Case and Deaton, 2020).

Today, the long-term impacts of job displacement dating back to the 1980s are still widely apparent in many formerly industrial regions like Calumet. While it was argued during the 1980s and 1990s that better jobs associated with a high-skills “new economy” would replace the once “middle class” industrial jobs that were lost, this has not proven to be the case. The job landscape of the contemporary Calumet region illustrates this reality. The region is not so much deindustrialized as what Sara Wylie and I (n.d.) refer to as “para-industrial,” meaning a place where remnant industries are interspersed with formerly industrial brownfields but which provide far fewer jobs. These remaining industrial workplaces are often heavily automated and employment is increasingly shaped by Weil’s “fissured workplace.”

For example, while all of Southeast Chicago’s steel mills closed, a handful have remained open in Northwest Indiana albeit in a much-transformed way. U.S. Steel–Gary Works, which once employed approximately 30,000 people, employed only 5,000 workers by the early 2000s, the result of the intertwined fallout of the first wave of deindustrialization as well as growing automation. On a visit I made in 2002, a Gary Works official swept his hand across a factory floor devoid of workers and stated to me that, “It’s a highly automated process; you just don’t see a lot of workers these days.” The mill, however, continues to produce the same overall amount of steel as in its heyday.

In contemporary Southeast Chicago, a secondary industry that handles scrap and bulk material is interspersed amidst the remaining toxic brownfields and remnant legacy industry. These smaller firms tend to employ 20–50 workers and often pay far less, have fewer benefits, are often non-union, and include a growing number of part-time, temporary, or contract workers. One of the few examples of new industry on Chicago’s South Side, a much-heralded LEED-certified Method Soap factory built in 2015, was attracted to the region by strong government incentives. However, the factory ended up employing only 100 workers, had dedicated space for sub-contracted workers, and was immediately sold to a new conglomerate not beholden to commitments to local governments (Harris, 2015; Marotti, 2017).

For Southeast Chicago workers in non-industrial jobs, the remaining “middle class” form of employment is in (embattled) unionized public sector jobs. Others work in precarious service sector jobs. In the poorest areas, gangs and informal sector work are dominant. Many have returned to older historical patterns of living with extended family to save money. The military is one of the few options for upward mobility since it pays for higher education. The sense that jobs are precarious in comparison to the past is pervasive. In short, the changing nature of work in “para-industrial” regions like Southeast Chicago is not simply about automation or even the loss of industrial jobs, but about the fact that contemporary working-class jobs, whether industrial, service sector, or otherwise, are often “bad jobs” in terms of stability, wages, and benefits compared to those of the past.

Rather than focusing on the impacts of technological change on jobs from the point of view of individuals or specific job sectors, ethnographers tend to focus on families and communities. Such studies teach us that the effects of job displacement are cumulative. For example, a poorly paid home healthcare aide or an administrative assistant whose work has been displaced by personal computing may be married to a displaced industrial worker who now drives for a ride-sharing company. Their children may work retail in box stores, fast-food restaurants, or other jobs likely to be displaced by automation. As families and communities have fewer resources, they are less able to serve as informal social safety nets for others in their networks. These dislocations are also cumulative. Communities and families that experienced deindustrialization may also be grappling with the fallout of the financial and housing crisis of 2008, particularly since homeownership is the primary form of wealth among working-class and lower middle-class families (contributing to the disproportionate impact of the crisis on Black and Latinx families (Stout, 2019).

The frothiness of the stock market both before and during much of the current coronavirus pandemic—despite extreme levels of unemployment—reminds us that, under shareholder value regimes, job loss and downsizing readily co-exist with high stock prices (Eavis 2020, Read 2020, Ho 2008). In other words, Wall Street is no longer a barometer of “the economy” (as it was during the 1950s and 1960s); it has become disentangled by the fissured workplace from the economic health of most Americans.

Given that the United States has not recovered from prior rounds of politically destabilizing job displacement, the prospect of new rounds of technologically induced displacement due to automation and AI—even if less than pundits fear—should give all of us pause. Again, the record of other wealthy countries demonstrates there are other paths to be taken. Stronger social safety nets and more equitable ways of funding public education, as a way to counter industrial job displacement for future generations, has contributed to making social mobility higher in contemporary Europe than in the United States (Isaacs, 2017). During the COVID-19 pandemic, some countries like Germany also did a far better job of keeping employees on payrolls, resulting in far fewer dislocations due to unemployment (Thelen, 2020). Given the

widening gaps among wealthier countries due to such realities, the lagging position of the United States in comparison to other regions seems likely to increase unless fundamental changes occur.

### BUT WHY TRY TO PRESERVE WORK AT ALL? AREN'T "WORKING CLASS" JOBS ALIENATING ANYWAY? WHY NOT SIMPLY GO TO UNIVERSAL BASIC INCOME?

Historically, there has been an assumption among many social critics that industrial workers experienced their work and their relationships to industrial technology as dehumanizing, as akin to being slaves to machinery. While industrial work *could* be horrific, mind-numbing, and dangerous, assumptions of alienated labor that can come from both the right and the left of the political spectrum need to take several things into account. Such assumptions are important to probe because they underlie the debate over whether it might be better to *eliminate* the need to work rather than *improve* working-class jobs as we know them.

Industrial ethnographies have shown that workers often found ways to take pride in even taxing work and that their relationship to technology was far from Luddite. In oral histories with former steelworkers, an industry where even deskilled labor required skill, many workers enjoyed discussing the technical aspects of their jobs. Since steel work might include brief periods of intensive dangerous work and then lulls between tasks, workers might also show their affinity to workplace skills by crafting items out of scrap metal in their downtime (see also Cherkaev, 2020, for an example from Russia). Assembly line workers are also recognized as taking pride in their work, at times finding ways to bring an artisan sensibility to seemingly mindless tasks. For example, anthropologist Kathryn Dudley (1994) noted how one woman who spray-painted cars on an assembly line imagined her work as a form of art. Others kept their minds engaged by "gamifying" assembly line tasks or linking tasks to fantasy play (Hamper, 1992).

While oral histories with older steelworkers were replete with stories of horrific accidents and the intensity of the work, it was striking (in a seemingly contradictory manner) how often the same workers would say that they had enjoyed their job. One former Southeast Chicago steelworker noted, "I enjoyed it. I looked forward to going to work." What was at the center of such enjoyment, however, was generally the social relationships forged on the job. The idea that co-workers were like family was a common refrain in industrial ethnographies, and this feeling could actually be compounded by dangerous situations in which workers had to trust and rely on co-workers for their safety. One woman noted, "I worked in a lot of factories before I got into the mill. I always liked it because the people take care of each other.... Right now, if I would see one of my friends or they would see me from there, I would do anything for them, and they would for me. Especially for the women.... We were like people who went through a war together." A male steelworker said, "I would joke with my wife that this [i.e., his coworkers] was my real family."<sup>10</sup>

In assembly line plants, camaraderie in which downtime could be earned by outthinking or working faster than the machines might be spent helping or joking with co-workers, resulting in attempts to make jobs "fun" while allowing an individual to be a respected and knowledgeable person on the shop floor (Dudley,

1994; Hamper, 1992). The perspective that social relationships were what made jobs valuable (or miserable if one didn't get along or was excluded) is common in these accounts.

An unusual longitudinal qualitative study of the closing of London's Guinness factory by sociologist Tim Strangleman (2019) noted that older workers who fondly remembered the sociality of mid-century work life and the pride taken in their jobs were often disillusioned and, ultimately, relieved when the factory finally closed. Worker attitudes had changed as the company morphed into a large conglomerate with highly automated work processes and a growing number of contract workers; in short, the workplace sociality and culture that had once made Guinness jobs highly valued had disappeared. As a female steelworker who worked at Chicago's South Works during the 1970s and 1980s argued, "To me, the joy in life is the relations with your co-workers, and so on. A lot of jobs now, it's been eliminated. Instead of two people driving a truck, there's only one. And everything is done to decrease the amount of people doing stuff with mechanization."

While it is crucial not to romanticize industrial work (or confuse people's ability to be resilient in tough situations with "good" jobs), there is no correlation between working with one's hands and "bad" jobs. Rather for workers, bad jobs (whether industrial, service, retail, or office) are ones that lack social camaraderie, lack ways to experience pride in work or input into work processes, or lack means to learn more and get ahead. The assumption that working selves are not valuable parts of self-identity in working-class occupations does not hold up in the literature.

In general, anthropological studies of unemployment suggest the broader social costs of job displacement and the loss of the structuring scaffolds that it provides for everyday life (Newman, 1991; Strauss, 2018; Kwon and Lane, 2017). (Indeed, during the COVID-19 lockdowns, many of us have viscerally experienced the impact of the loss of daily structures on adult and child mental health.) Experiences of unemployment, however, are not uniform. For example, some ethnographers note that young professionals on Wall Street and in Silicon Valley increasingly see job instability and periodic bouts of unemployment as expected and even positive, signs of being "flexible" in an economy that emphasizes flexibility (Lane, 2017; Ho, 2008). However, this experience of unemployment is vastly different from that experienced by working-class populations in that such professionals retained valuable social networks, educational credentials, and resources to weather periods of job loss, making it easier to find new and lucrative work in ways not available to displaced working-class and lower middle-class individuals (Chen, 2015; Dudley, 1994; Walley, 2013). Claudia Strauss (2018), in her research on unemployed workers from different classes in California in the wake of the 2008 financial crisis, noted that her interlocutors said they ideally preferred to work but wished they could work fewer hours in order to attend to family and other obligations and interests.



In the contemporary era, the gig economy, “ghost work,” and other forms of on-demand or contract labor have become increasingly prevalent (Gray and Suri, 2019; Rosenblat, 2019).<sup>11</sup> While discussion of this increasingly expansive literature is beyond the scope of this paper, the ethnographic work of Mary Gray and Siddharth Suri on “ghost work” in India and the United States (2019) is particularly helpful in bringing into view the hidden human labor that goes into making what appear to be automated online processes function as well as the extreme precarity of those forms of labor. Here, I will merely make the point that such trends are key, not only in terms of the different kinds of work arrangements they represent, but because such work makes it difficult to even know what unemployment rates are or how to respond to them. Gig economy and “ghost” workers may include many underemployed persons who are not counted in official unemployment statistics. Most crucially, such workers are also not afforded the protections of labor laws and are not eligible to receive unemployment compensation (Abraham, Houseman, and O’Leary, 2020). The pandemic (and U.S. policy responses that have sought to extend unemployment benefits rather than keep workers in jobs) have caused unemployment to spike to extreme levels. Despite some efforts to extend benefits during the pandemic to such workers, in general, these numbers fail to fully account for these underemployed and on-demand workers. When troubled times like the current pandemic remove the positive veneer of “flexibility” popularly associated with such jobs, it starkly reveals enhanced and unsustainable forms of precarity. Given what we know about the dislocating effects of unemployment, these realities should again give policymakers pause.

Predictions of future job loss due to automation and the alienated nature of working-class jobs have helped increase calls for Universal Basic Income (UBI). This hybrid vision binds together Silicon Valley models with older ideals on the political left of transcending paid labor (intensified by reactions against neoliberal cultural views that depict all aspects of life in terms of market rationalities). UBI models are positive in that they recognize the need to create a universal floor below which individuals cannot fall particularly in light of the potential for significant work disruption in the future. The most revealing anthropological discussion of UBI has explored the role of cash transfers in contexts like Southern Africa where widespread lack of formal waged labor is a long-term structural reality for most working-age adults; in such contexts, universal cash payments not only provide a floor but also an economic base which allows people to participate as economic actors in informal arenas. This model forms an alternative model of a welfare state to those common in OECD countries (Ferguson, 2015).

However, calls to address potential shortages of employment opportunities through UBI do not always take into account the role that employment plays for many people in terms of identity, gaining confidence and skills, providing sociality and a structure to the day, fostering feelings of usefulness, and as a means to interact with others beyond one’s own class or ethnic and racial groups. Rather than reforming work and addressing the ways that the changing nature of corporations has affected employment, some formulations of UBI might be interpreted as giving up on work for non-professionals, even as “core” professionals

continue to have high-level opportunities despite increased use of AI. Alternative options might be found in those European countries where decreasing quality or numbers of jobs are being addressed by extending work protections once customary in older unionized industrial sectors to part-time, service sector, or professional workers, and by allowing workers increased flexibility in work hours (based on their rather than employers' choice) making family–work compatibility more possible. Making work better—through better protections and options for reduced working hours—also offsets tendencies for critics of welfare policies to decry those without work as being “lazy” or “social sponges,” which has been a profound source of inter-class hostility and resentment in the United States that has historically rebounded against working-class and poor individuals, including those of color.

#### IS THE BEST RESPONSE TO ROBOTS AND JOB DISLOCATION TO GAIN MORE EDUCATION AND SKILLS?

One common response to concerns about work displacement due to automation has been the call for greater emphasis on education and skills training in the future. This, of course, is key, particularly given that the shift to a fissured workplace has been paralleled by a decrease in public expenditure on education in the United States (rather than the increase seen in places like Finland [Osterman, 2020]). Such trends have particularly deleterious effects on working-class populations. In para-industrial communities, disinvestment in public schools has had an enormous impact on possibilities for the next generation. In Chicago, many middle-class students have exited the public school system, resulting in over three-quarters of those who remain having few enough resources that they qualify for free lunch programs. Such realities threaten to turn the system into holding spaces for the poor with fewer available paths toward upward mobility. In addition, job training that once happened on the job for manual work has become increasingly scarce. (Historically, unionized steelworkers bid on skilled positions based on seniority and entered intensive apprenticeship programs sponsored by the mills.)

However, given corporate reluctance to provide job training in settings with higher employee turnover and a greater reliance on contract and temporary workers, as well as the pull-back in public education funding, the question of who is to provide skills training for workers in an increasingly computerized workplace has re-emerged as a key issue in the United States. This reality has prompted renewed interest in vocational training, although such efforts lag far behind European counterparts.<sup>12</sup> For such efforts to benefit future holders of working-class jobs, it is also necessary, however, to challenge the now pervasive conflation between higher education and “skills” (contributing to a dynamic in which educated individuals often blame difficulties for working-class individuals on their presumed failures to acquire formal education; Dudley, 1994).

In my experience, contemporary university students regularly use education and skill as synonyms, often unaware that there are broad historic categories of skilled manual or industrial labor. By implication, less educated workers or those who work with their hands (with the exception of artisans with middle-class

social capital) become discursively defined as less knowledgeable, skilled, or deserving. Such language fits into that of technocratic meritocracy which disguises its underlying elitism by assuming that social inequalities emerge “naturally” from what people have earned or deserved. As Michael Sandel (2020) argues, “By telling workers that their inadequate education is the reason for their troubles, meritocrats moralize success and failure and unwittingly promote credentialism—an insidious prejudice against those who do not have college degrees.” Just as technology was historically used to deskill industrial workers, such contemporary assumptions conceptually “deskill” working-class occupations by assuming that such labor requires little in terms of brains or ability. Finding ways to rethink the introduction of new workplace technologies in ways that support workers—rather than displace, deskill, or harass them—requires more expansive understandings of skill and workplace knowledge and how it might be harnessed to support enhanced productivity for corporations as well as the well-being of workers.

In general, arguments for increasing formal education to counter future job displacement is key, but not enough. Within universities, a growing number of individuals with doctoral degrees find themselves precarious workers as adjunct faculty members, barely making more than minimum wage. Similarly, Silicon Valley, with its proliferation of tech workers on contract assignments, offers another example of “two-tier” workplaces for the highly educated. Such realities demonstrate that the issue is not simply lack of education or skills but the nature of how employment is treated by contemporary corporations (and other institutions that have tried to emulate them) as well as corporate disentanglement from responsibility for workers. In short, middle-class and even upper middle-class individuals do have reasons to be concerned about job security in ways that extend well beyond robots and automation. The solution, in part, as Ton (2020) suggests, must include a call for new kinds of education for managers—not just for workers. Business education needs to steer away from a monolithic focus on shareholder value and recognize other models for making profits that are less socially destructive and politically destabilizing. In short, there is a need not simply to educate those whose jobs might be displaced, but those who are doing the displacing.

#### CONCLUSION: WHO WON THE COLD WAR? THE NORDIC COUNTRIES (IF NOT ALWAYS FOR REASONS ASSUMED)

If tearing down the Berlin Wall in 1989 was broadly read as communism losing the Cold War due both to a rejected political system and an economic collapse, recent years have suggested the more slow-burn collapse of neoliberal visions of the free market as capitalism triumphant. Vastly intensified inequalities within those wealthy countries that most championed neoliberalism have contributed to political instability and challenges to more democratic forms of governance. In the United States, one of the most extreme examples, an inadequate and politically battered government social safety net, coupled with a system of social support tied to workplace employment, an increasingly attenuated employer-employee relationship, and the job churn of the fissured workplace have made everyday realities increasingly untenable for a growing percentage of the population. Such trends are responsible for such now well-documented realities

as stagnant or decreasing social mobility, vastly escalating inequality, declining life expectancy rates for certain demographics, and decreased senses of well-being. While consumer goods are cheap, the key “goods” of healthcare and higher education are vastly more expensive and out of reach for many in the United States without assuming massive debt. The inequalities evident in such realities are further compounded along the lines of race as well as by class and region.

However, as Kathleen Thelen (2014) has painstakingly argued, the liberalization of economies has taken different paths among wealthier countries. The United States has been the most extreme in terms of growing inequality and the evisceration of social protections; some other countries have protected core groups of workers but have allowed a lower tier of work to emerge. Still others, however, have cobbled together policies that have resulted in what Thelen calls “embedded flexibilization.” These include the Nordic countries as well as the Netherlands. In general, the Nordic countries are associated with democratic governance and market-based economies and score high on indices of economic vitality, good governance, and social well-being. Many of these countries liberalized parts of their economy in the 1990s, a politically contentious path that made them “flexible” in ways that accorded with the changing nature of corporations. However, in strong contrast to the United States, these “flexicurity” policies have, for the most part, worked to collectivize, rather than individualize, the resulting risks (Thelen, 2014; Partenan, 2017). Despite some variations among countries, unionization rates continue to be strong throughout much of this region and cover both the declining manufacturing as well as the growing service sector, including occupations that have a preponderance of women and “outsider” groups, and there is a strong emphasis on worker retraining and education. In short, the region has forged new forms of universal social safety nets that provide ongoing support for workers that is not tied to increasingly unpredictable workplace employment (Thelen, 2014; Partanen, 2017).

Despite these clear successes, mentioning Nordic countries in political or policy discussions in the United States can sometimes be treated dismissively or said to hold little relevance for the United States because these countries are both smaller and more homogeneous.<sup>13</sup> There is also a tendency for this region, relatively little known within the United States, to be either romanticized by progressives or dismissed by conservatives. While it should go without saying that all regions of the world have their own problems (controversies over issues such as immigration, for example, are also on the rise in Nordic countries), it is striking how Nordic countries have found themselves the target of extreme right-wing disinformation campaigns, apparently in an effort to discredit recognition that viable policy alternatives might exist to the more neoliberal models that have held sway in recent decades (Rapacioli, 2018).<sup>14</sup>

In general, in a context of increasingly precarious employment and with AI and automation threatening increased job loss, governance models that tie social well-being to workplace benefits (as with healthcare in the United States) appear increasingly unworkable moving forward. Universal government-administered benefits may well be necessary to provide social support for “flexible” workplaces. While calls for

Universal Basic Income have been one response to such trends, another option is to enhance the social safety net in directions of “embedded flexibilization,” achieving similar ends while providing more support for the social importance of work itself. Most Nordic countries do so by providing such universal supports as childcare to allow people to work and free ongoing public education that allows for continual work retraining. Rather than giving up on waged labor, Nordic countries have found ways to support it and make it better (Partanen, 2017).

Looking beyond wealthier countries raises a host of additional questions outside the scope of this brief. Most centrally, how, we might ask, is the fissured workplace (based on corporations as brands rather than as producers of products and which rely upon the externalization of workers and production) linked to a form of global supply chain capitalism that seeks to displace risks and costs down the chain to other parts of the world? A growing number of anthropologists have explored such questions, ranging from Anna Tsing’s ethnographic study of mushrooms as a global supply chain phenomenon (2015) to studies of corporate disentanglement among international firms in Africa and India (Appel, 2019; Besky, 2013). A companion piece to this brief might explore how technological transformation will affect work throughout the totality of supply chain capitalism as well as how it is being conceptualized at various points along that chain.

In conclusion, if the robot has become symbolic of anxiety about growing job insecurity in the United States, the way to address such anxieties is to bring the submerged to the surface and openly grapple, not simply with technological change, but with complex social, political, and economic realities in which such change is embedded as well as the policies needed to offset potential harms. Histories and ethnographies of work and job displacement are helpful adjuncts on this path as they offer intimate insight into the value and meaning assigned to work and technology, the cumulative impacts of displacement, and the need to critique assumptions built into terms like class, skill, and knowledge. We also need to look to other regions for models of what is working in facing contemporary workplace challenges. Through this kind of expansive conversation and analysis, we may gain a clearer sense of how to forge a direction forward that addresses the overlapping crises of the current era and alternative ways to envision shared collective futures.

## References

- Abraham, Katharine G., Susan N. Houseman, and Christopher J. O’Leary (2020). *Technological Change, Job Loss, and the Adequacy of Unemployment Insurance: Extending Benefits to Workers in Precarious and Non-Standard Arrangements*. Brief, MIT Task Force on the Work of the Future.
- Appel, Hannah (2012). Walls and White Elephants: Oil Extraction, Responsibility, and Infrastructural Violence in Equatorial Guinea. *Ethnography*: 13:439.
- Appel, Hannah (2019). *The Licit Life of Capitalism: US Oil in Equatorial Guinea*. Durham: Duke University Press.
- Autor, David H., David Dorn, and Gordon H. Hanson (2013). The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review* 103(6): 2121–2168.
- Bensman, David and Roberta Lynch (1987). *Rusted Dreams: Hard Times in a Steel Community*. Berkeley: University of California Press.
- Bergsvik Robert (1989). Rally Marks 9th Anniversary of Wisconsin Steel’s Closing. *Daily Calumet*. March 29.
- Berlant, Lauren (2007). Nearly Utopian, Nearly Normal: Post-Fordist Affect n La Promessa and Rosetta. *Public Culture* 19(2): 273-301.
- Bernhardt, Annette (2018). Making Sense of the New Government Data on Contingent Work. UC – Berkeley Labor Center.
- Besky, Sarah (2013). *The Darjeeling Distinction: Labor and Justice on Fair-Trade Tea Plantations in India*. Berkeley: University of California Press.
- Bluestone, Barry and Bennett Harrison (1984). *The Deindustrialization of America*. Basic Books.
- Boebel, Chris and Christine Walley (2017). *Exit Zero: An Industrial Family Story*. 90 mins. Documentary film.
- Bose, Nandita (2020). Amazon’s Surveillance Can Boost Output and Possibly Limit Unions. *Reuters*. Sep. 1.
- Bright, Geoff (2015). ‘The Lady is Not Returning!’: Educational Precarity and a Social Haunting in the UK Coalfields, *Ethnography and Education*, Nov. 18.
- Brody, David (1960). *Steelworkers in America: The Nonunion Era*. Cambridge: Harvard University Press.
- Case, Anne and Angus Deaton (2015). Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century. *Proceedings of the National Academy of Sciences* 112(49): 15079-84.
- Case, Anne and Angus Deaton (2020). *Deaths of Despair and the Future of Capitalism*. Princeton: Princeton University Press.
- Chen, Victor (2015). *Cut Loose: Jobless and Hopeless in an Unfair Economy*. Berkeley: University of California Press.
- Cherkaev, Xenia (2018). Self-Made Boats and Social Self-Management. *Cahiers du Monde Russe*, 59/2-3: 289-310.
- DeSilver, Drew (2018). Most Americans View Unions Favorably, Though Few Workers Belong to One. *Pew Foundation Research*. Aug. 30.
- Doussard, Marc, Jamie Peck, and Nik Theodore (2009). After Deindustrialization: Uneven Growth and Economic Inequality in “Postindustrial” Chicago. *Economic Geography* 85(2):183–207.
- Dudley, Kathryn (1994). *The End of the Line: Lost Jobs, New Lives in Postindustrial America*, Chicago, University of Chicago Press.
- Eavis, Peter (2020). While Millions Lose Jobs, Some Executives Made Millions in Company Stock. October 8<sup>th</sup>. *New York Times*.
- Federal Reserve Bank of St. Louis (2019). *The White Working Class: National Trends, Then and Now*. Sep. 24.
- Ferguson, James (2015). *Give a Man a Fish: Reflections on the New Politics of Distribution*. Durham: Duke University Press.
- Finkelstein, Maura (2019). *The Archive of Loss: Lively Ruination in Mill Land Mumbai*. Durham: Duke University Press.
- Finkelstein, Maura (forthcoming). Deindustrialization and Its Consequences. *Working Class Studies Handbook*. Routledge.

- Finkelstein, Maura (forthcoming). Precarity's Effects: The Trauma of Deindustrialization. *Working Class Studies Handbook*. Routledge.
- Goodman, Peter S. (2017). The Robots are Coming, and Sweden is Fine. *New York Times*. Dec. 27.
- Gray, Mary and Siddharth Suri (2019). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*. Houghton Mifflin.
- Greenhouse, Steven (2019). *Beaten Down, Worked Up: The Past, Present, and Future of American Labor*. Albert A. Knopf.
- Halle, David (1987). *America's Working Man: Work, Home, and Politics Among Blue Collar Property Owners*. Chicago: University of Chicago Press.
- Hamper, Ben (1992). *Rivthead*. New York: Warner Books.
- Harris, Melissa (2015). Chicago Gets New Method Soap Factory, Glimpse of Future with Fewer Workers, *Chicago Tribune*, April 28.
- High, Steven (2003). *Industrial Sunset: The Making of North America's Rust Belt, 1969–1984*. Toronto: University of Toronto Press.
- High, Steven, Lachlan MacKinnon, and Andrew Perchard, eds. (2017). *The Deindustrialized World: Confronting Ruination in Postindustrial Places*. Vancouver: University of British Columbia Press.
- Hirsch, Eric L. (1990). *Urban Revolt: Ethnic Politics in Nineteenth-Century Chicago Labor Movement*. Berkeley: University of California Press.
- Ho, Karen (2008). *Liquidated: An Ethnography of Wall Street*. Durham: Duke University Press.
- Ibsen, Christian and Kathleen Thelen (2020). *Growing Apart: Efficiency and Equality in the German and Danish VET Systems*. Brief, MIT Task Force on the Work of the Future.
- Isaacs, Julia B. (2017). International Comparisons of Economic Mobility, chapter 3 in *Getting Ahead or Losing Ground: Economic Mobility in America*. The Brookings Institution.
- Kochan, Thomas A. and Lee Dyer (2017). Robots Won't Steal Our Jobs if We Put Workers at Center of AI Revolution. *The Conversation*, August 30<sup>th</sup>.
- Kwon, Jong Bum and Carrie M. Lane, eds. (2016). *Anthropologies of Unemployment*. Ithaca: Cornell University Press.
- Lane, Carrie (2016). The Limits of Liminality. In: *Anthropologies of Unemployment*, eds. Jong Bum Kwon and Carrie M. Lane, Ithaca: Cornell University Press.
- Linkon, Sherry (2018). *The Half-Life of Deindustrialization*. Ann Arbor: University of Michigan Press.
- Marotti, Ally (2017). S.C. Johnson Plans to Acquire Method, which has a Pullman Soap Factory, *Chicago Tribune*, Sep. 15.
- Metzgar, Jack (2016). Misrepresenting the White Working Class: What the Narrating Class Gets Wrong. *Working Class Perspectives*, March 14.
- Mclvor, Arthur (2019a). Blighted Lives: Deindustrialization, Health and Well-Being in the Clydeside Region, Working-Class Studies Conference, University of Kent, Sep. 3–6.
- Mclvor, Arthur (2019b). Scrap Heap Stories: Oral Narratives of Labor and Loss in Scottish Mining and Manufacturing. *Bios* 31(20), Autumn.
- Muehlebach, Andrea and Nitzan Shoshan (2012). Post-Fordist Affect. *Anthropological Quarterly* 85(2):317–343.
- Newman, Katherine S. (1991). *Falling from Grace: Downward Mobility in the Age of Affluence*. Berkeley: University of California Press.
- Osterman, Paul (2020). *Skill Training for Adults*. Brief: MIT Task Force on the Work of the Future.
- Partanen, Anu (2017). *The Nordic Theory of Everything: In Search of a Better Life*. Harper Books.
- Rapacioli, Paul (2018). *Good Sweden, Bad Sweden: The Use and Abuse of Swedish Values in a Post-Truth World*. Volante.
- Read, Simon (2020). Billionaires See Futures Rise by 27% during Pandemic. Oct. 7. BBC Business.
- Rosenblat, Alex (2019). *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley: University of California Press.
- Rothstein, Bo and Lars Tragardh (2007). The State and Civil Society in an Historical Perspective: The Swedish Case in *State and Civil Society in Northern Europe: The Swedish Model Reconsidered*, ed., Lars Tragardh. Berghahn Books.
- Rowe, Daniel (2016). Lessons from the Steel Crisis of the 1980s. *The Conversation*.

- Sandel, Michael J. (2020). Disdain for the Less Educated is the Last Acceptable Prejudice. *New York Times*, Sep. 2.
- Stout, Noelle (2019). *Dispossessed: How Predatory Bureaucracy Foreclosed on the American Middle Class*. Berkeley: University of California Press.
- Strangleman, Tim (2019). *Voices of Guinness: An Oral History of the Park Royal Brewery*. Oxford: Oxford University Press.
- Strauss, Claudia (2018). On Work, Unemployment, and American Culture. Lecture given in MIT Anthropology. Oct. 10.
- Thelen, Kathleen (2014). *Varieties of Liberalization and New Politics of Social Solidarity*. Cambridge: Cambridge University Press.
- Thelen, Kathleen (2020). Europe Has Kept Down Pandemic Unemployment – and the U.S. Hasn't. Here's Why. *The Washington Post*. April 24.
- Ton, Zeynep (2014). *The Good Jobs Strategy: How the Smartest Companies Invest in Employees to Lower Costs and Boost Profits*. New York: Houghton Mifflin.
- Ton, Zeynep (2020). Talk presented to the MIT Task Force on the Work of the Future. May 2.
- Tsing, Anna (2015). *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press.
- U.S. Bureau of Labor Statistics (2020). Union Members Summary: Economic News Release. Jan. 22.
- U.S. Census Bureau (2020) Educational Attainment in the United States.
- Walley, Christine J. (2013). *Exit Zero: Family and Class in Postindustrial Chicago*. Chicago: University of Chicago Press.
- Walley, Christine J. (2015). Transmedia as Experimental Ethnography: The Exit Zero Project Deindustrialization and the Politics of Nostalgia, *American Ethnologist* 42(4):624–639.
- Walley, Christine J. (2017). Trump's Election and the "White Working Class: What We Missed," *American Ethnologist* 44(2):231–236.
- Walley et al. (2020). Southeast Chicago Archive and Storytelling Project, a collaboration with the Southeast Chicago Historical Museum. Official launch November 15<sup>th</sup>, 2020 at <http://sechicagohistory.org>.
- Walley, Christine and Sara Wylie (n.d). Reclaiming the Public: Mapping 'Para-Industrial' Pollution in the Midwestern "Rust Belt."
- Weil, David (2014). *The Fissured Workplace*. Cambridge: Harvard University Press.
- White, Ahmed (2016). *The Last Great Strike*. Berkeley: University of California Press.
- Wilson, William Julius (1996). *When Work Disappears: The World of the New Urban Poor*, New York, Vintage Books.
- Xie, Wen (2019). The Making of the Chinese Rust Belt: Work, Welfare, and Industrial Transformation in Northeast China, 1949–2015, Dissertation, Sociology, University of Chicago.



## Endnotes

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- 1 As a discipline, anthropology is positioned between the humanities and social sciences. It seeks to express the richness of everyday experiences from the point of view of individuals themselves, while also recognizing the shifting hierarchies that structure our collective social worlds. In short, it offers a bottom-up look at the kinds of structural dynamics that political scientists or economists might study, while insisting that people's interpretive understandings of the world are crucial to understanding their actions as well as the institutions they build.
- 2 Discussion during the MIT Task Force on the Work of the Future meeting, October 9, 2018 (get cite from David Autor).
- 3 Ethnography is the form of fieldwork-based research conducted by anthropologists and often involves intensive participation in the social worlds of our informants.
- 4 For example, see Case and Deaton (2020) on the impact of employee healthcare costs on employers and its links to economic displacement and "deaths of despair."
- 5 For example, see the 2019 statement of the Business Roundtable (Gelles and Yaffe-Bellany, 2019).
- 6 According to Steven High (2020), in severely affected Britain, manufacturing jobs went from 6.8 million in 1979 to 2.5 million in 2010. Older industrial regions in Europe were also hard hit although social impacts have varied depending upon other kinds of social policies in place, with effects most extreme in more liberalized Anglo countries. Industrial regions in the former Soviet sphere, including Eastern Europe, have also been hard hit. Deindustrialization has also occurred in other regions not generally associated with large-scale industrial job loss, including India and China (Finkelstein, 2020; Xie, 2019). Among wealthier countries, the impacts depend greatly on other government policies, including the availability of universal healthcare coverage and opportunities for re-training.
- 7 The Brookings Institute has suggested that nearly 7 million manufacturing jobs were lost between 1980 and 2014, from 18.9 million to 12.2 million or more than a third (Muro and Kulkarni, 2016).
- 8 Case and Deaton (2020) note that the trends preceded and cannot be reduced to the U.S. opioid crisis, even while it exacerbated it.
- 9 Such realities were one of the most striking takeaways from discussion during the first international symposium on deindustrialization, *Deindustrialization and Its Aftermath*, hosted at Concordia University in Montreal in 2014, as well as from the numerous panels on deindustrialization at the Working Class Studies Association meetings at Kent University in England in 2019.
- 10 Oral histories are from the Southeast Chicago Archive and Storytelling Project <http://sechicagohistory.org> which will launch online on November 15th 2020.
- 11 There has been some debate over whether contract work is increasing. Annette Bernhardt (2018) provides a useful overview of the controversy. While a U.S. Bureau of Labor Statistics report did not note the anticipated increase, she argues it is necessary to note three things. Overall, temporary work has not increased but the industries in which temporary workers were hired had, including a large increase in hiring temporary workers within manufacturing. Shifts to on-demand jobs like Uber were not always showing up in the statistics because in many instances these jobs were secondary rather than primary forms of employment. And third, the statistics failed to account for sub-contracting and other hallmarks of a fissured workplace.
- 12 See Thelen (2014) for in-depth discussion of how vocational and ongoing work training is provided in different settings from United States to Germany to Scandinavian countries, with the least emphasis on training evident in the United States despite the increasingly rapid turnover in skills. See also Ibsen and Thelen, 2020.
- 13 While the United States is larger and more diverse, the Nordic countries, as Finnish journalist Anu Partanen (2017) argues, are also increasingly diverse. In addition, numerous states in the United States that administer key social programs are smaller than Nordic countries and could serve as test models.
- 14 One recent account by a Swedish journalist tracked obscure and innocuous local Swedish news stories on topics ranging from Christmas tree lights to immigrants that were then taken out of context (often by internal right-wing parties), mischaracterized, circulated, and amplified by Russian state-sponsored sites interested in information destabilization, and, subsequently, by alt-right news sources in the United States and Great Britain, reaching millions of people worldwide in the process (Rapacioli, 2018). The result has been the kind of rampant social media disinformation campaigns with which we have become all too familiar.