June 29, 2023

White House, Office of Science and Technology Policy
Executive Office of the President
Attn: Alan Mislove, Assistant Director for Data and Democracy
Eisenhower Executive Office Building
1650 Pennsylvania Avenue
Washington, D.C. 20504

Re: Request for Information on Automated Worker Surveillance and Management

Submitted at: https://www.regulations.gov/commenton/OSTP_FRDOC_0001-0008

Dear Mr. Mislove:

On behalf of the Center for Law and Social Policy (CLASP), I submit these comments in response to the White House Office of Science and Technology Policy’s (OSTP) Request for Information (RFI) on Automated Worker Surveillance and Management, dated May 2, 2023. CLASP thanks the White House and OSTP for seeking comments on this fundamental and insidious issue of workers’ rights.

Importance of Worker Surveillance and Management to The Center for Law and Social Policy

The Center for Law and Social Policy (CLASP) is a national, nonpartisan nonprofit advancing anti-poverty policy solutions that disrupt structural, systemic racism and remove barriers blocking people from economic justice and opportunity. With deep expertise in a wide range of programs and policy ideas, longstanding relationships with anti-poverty, child and family, higher education, workforce development, and economic justice stakeholders, including labor unions and worker centers, and over 50 years of history, CLASP works to amplify the voices of directly impacted workers and families and help officials design and implement effective programs.

CLASP seeks to improve the quality of jobs for low-income workers, especially workers of color, women, immigrants, and youth. Our work includes working with policymakers to raise wages, increase access to benefits, implement and enforce new and existing labor standards and ensure workers can strengthen their voice through collective bargaining. Quality jobs enable workers to balance their work, school, and family responsibilities—promoting economic stability and security.

Our comments on the importance of worker surveillance and management will address the compounding ways that algorithmic management lower job quality, specifically focusing on:

1. Pace-of-work and surveillance’s increasing effect on workers’ physical and mental health
2. Algorithmic management’s effects on scheduling and employee misclassification
3. Algorithmic management’s obstruction of the right to organize.
4. Algorithmic management’s role in occupational segregation and workplace discrimination through hiring and discipline

These comments will describe the threats that algorithmic management and surveillance pose to the future of work, as well as propose some policy solutions from the local, state, and international level that policymakers can use to prevent or mitigate those harms.

A. Background

Technological innovation has always been a central determining factor of job quality. Technological innovation alters the scale of production, and since workers are an essential part of production, any change in scale necessarily impacts workers. Technology can be used to reduce labor costs, increase production, and otherwise control workflows and the workforce. Often, researchers and policymakers discuss automation as a looming threat we must tackle before it overwhelms us. In reality, harnessing new technologies to increase production has always been a central strategy of colonialism, shaping the very creation of the United States. We cannot untether economic progress from the brutality of slavery. The invention of the cotton gin allowed slave owners to expand their land and use slave labor to grow more cotton. This innovation was developed on the back of slaves who were pushed to pick more as crops expanded exponentially — in 1810, there were 87,000 cotton spindles, and by 1860, there were five million. What we consider “cutting-edge” technological revolutions and sleek management systems can oftentimes be traced back to techniques developed by plantation owners to increase profits.\(^1\) Slave owners relied on technological innovation coupled with brutal punishment and constant surveillance in an attempt to extract every ounce of labor possible.\(^2\) When historicized through racial capitalism, innovations like Henry Ford’s invention of the assembly line in 1913 come into view as potential tools of worker oppression. His invention, which allowed for work to be broken down into discrete tasks per employee, revolutionized manufacturing and took the time to assemble a Model T chassis from 12.5 hours to just 1 hour and 33 minutes.\(^3\) This scaling of production became widespread; soon most major companies were operating with some sort of assembly line, even if they weren’t manufacturing-based. And with it, the number of employees needed, the number of cars produced, and the pace of work were fundamentally changed.

This speeding up of production through automation cannot be considered in a vacuum. It is coupled with other fundamental changes in the structure of our labor—namely, the decline in unions and the rise in workplace fissuring and the platform economy. In the early 1900’s, union rates remained low—between 10 and 12 percent. In 1935 with the passage of the National Labor Relations Act, union membership rates began to skyrocket, from 10.8 percent in 1935 to 33.4 percent in 1945.\(^4\) With the rise of collective bargaining came an increase in higher quality jobs. But the passage of the Taft-Hartley Act in 1947 and its provision allowing states to pass right-to-work laws significantly stymied union power. In the decades since 1947’s high, union membership rates have continuously dropped, with current rates even lower than

\(^4\) Heidi Shierholz, Economic Policy Institute, “Working people have been thwarted in their efforts to bargain for better wages by attacks on unions.” August 27, 2019. https://www.epi.org/publication/labor-day-2019-collective-bargaining/
they were before the 1935 passage of the NLRA.\(^5\) However, low unionization rates are not indicative of workers’ rejection of unions. Most recently, union support has been high. In 2022, union approval rates hit a peak of 71 percent, a high not seen since 1965, yet only 10.3 percent of US workers are represented by unions.\(^6\) This is due to aggressive union-busting on the side of employers, of which surveillance is often a main method. In 2022, the rate of employers charged with unfair labor practices rose 16 percent over the 2021 rate, and with the National Labor Relations Board facing underfunding and understaffing, workers have little recourse to fight back against oppressive working conditions.\(^7\)

Simultaneously, the workplace has fissured. Alongside technological innovation, fissuring occurs when companies attempt to shed costs by outsourcing and contracting non-central aspects of its work. Focusing on saving costs and increasing revenue, companies look to remain lean and use third-party contractors to drive costs down. This can look like outsourcing customer service, janitorial services, human resources, and communications. But, as David Weil explains, fissuring doesn’t just involve partnering with a secondary employer. Rather, fissuring utilizes subcontracting, franchising, third-party management, and employee misclassification to shed the main responsibilities of employment while remaining in control of profit, competition, and brand standards. By fissuring aspects of their company, lead companies are no longer responsible for maintaining labor standards, safety, offering benefits, or dealing with on-the-job issues. When competing for contracts for the outsourced business functions, contractors and subcontractors create a “race to the bottom” to win bids for the work, often on the backs of workers who see their wages and benefits slashed.\(^8\) The culmination of this new business model has solidified the gig economy as the expedient way to shed employment responsibility and increase profits.

Not having clear access to collective bargaining or having a good sense of who one’s employer is makes the employment relationship opaque; algorithmic management furthers this opacity by removing “humans from the loop” of decision-making, while simultaneously utilizing technological surveillance to create a constant feeling of monitoring (by what is now a shadowy boss). Algorithmic management affects all sectors, but low-wage and hourly workers across sectors—like the service industry, retail, warehouse and logistics, agriculture, hospitality, domestic work, healthcare, and the gig economy—are particularly primed for algorithmic management, as these jobs often involve more measurable tasks. Due to occupational segregation and systemic discrimination in our economy, marginalized workers such as workers of color, women, LGBTQIA+, and immigrant workers disproportionately hold these low-wage, low quality jobs prone to higher levels of surveillance.\(^9\) Algorithmic management in occupationally segregated industries can be traced back quite clearly to slavery; a lack of social power combined with constant surveillance; the extraction of one’s bodily data and autonomy for the sake of profit, are all standard practices in algorithmic management that make data “the new cotton.”\(^10\)

B. Defining Algorithmic Management and Surveillance

---

\(^5\) Ibid.


What makes algorithmic management unique—and what makes this moment one in which the United States must take particular action—is not the usage of technology in itself, but the way in which technology is increasingly used to make decisions. Algorithmic systems are now being used explicitly to make workforce and workplace decisions, oftentimes without human assistance.

In her October 2022 memorandum, National Labor Relations Board (NLRB) General Counsel Jennifer Abruzzo defined algorithmic management as “a diverse set of technological tools and techniques to remotely manage workforces, relying on data collection and surveillance of workers to enable automated or semi-automated decision-making.”

We use this definition in our assessment of algorithmic management, as it leaves room for the myriad ways management and surveillance show up in the workplace.

The age of closed-circuit television (CCTV) and using cameras to monitor workers on the job has long passed. Now, enormous amounts of data are collected from as many different sources as possible; this data is then processed into an algorithm that aggregates it, and then rates human performance and makes decision based on the data received. Because algorithms rely on as much data as possible, this has led to a proliferation of surveillance tools.

Workplace surveillance can be physical, mental, and digital. Physical surveillance intends to track both the physical location of workers, such as using GPS-based applications to track delivery vans or trains. Wearables can allow warehouse workers to be tracked as they move through a worksite. Amazon became notorious for its use of “time off task” (TOT) tracking to enforce draconian break policies within its warehouses. Sociometric badges can track workers’ proximity to other employees, tracking who interacts with whom. Additionally, not only the location of one’s body in a workplace, but the pace of work and its effect on the body can be tracked through biometric feedback, as well as using point-of-sale (POS) and QR-codes to tie employee identification to their product and how quickly it moves along.

In their effort to create as many data points as possible, employers have attempted to monitor employees’ mental status as well. This can take the form of using sociometric badges to track heart rate and its relation to stress, or tracking vocal speech patterns in an attempt to identify when workers are frustrated or calm in a service environment. While seemingly the stuff of science fiction, a booming industry of “neuro-surveillance” looks to use microprocessors to decode productivity via electrical signals in the brain.

Mental surveillance is very closely related to the third form of surveillance, digital surveillance. This involves tracking what employees do on the Internet in an attempt to not only monitor but predict their

---

14 Constant Boss, 13.
behavior. This practice had been used for decades for platform workers but became widely known as office workers became remote during the COVID-19 pandemic and found themselves being subjected to keystroke, camera, application, and browser history monitoring, and more to ensure that workers were staying on task.  

Digital surveillance is also used to make hiring decisions. Data from personal social media accounts is regularly used to evaluate candidates; more recently, facial recognition and emotional monitoring is being used in interviews to judge candidates’ performance. Within the workplace, web history is being used in an attempt to predict when workers will take time off, organize, or consider finding new work.

1. Methods of Algorithmic Management & Their Consequences

A. Surveillance & Pace of Work

Algorithmic management is a continuation of past technological innovations that were aimed at increasing productivity. Historicizing recent technological developments in this way allows us to identify production standards as a driving force proliferating new surveillance methods. It is not simply that employers are monitoring their workers. In fact, an end to camera surveillance, wearables, and certain other physical tracking would not mean an end to surveillance altogether. This is because surveillance of the worker often occurs through acute surveillance of a product and the means of production. Across industries, QR codes, barcodes, point of sale (POS) and other product-tracking methods are being used in addition to surveillance of individual workers like the methods listed above. Workers are effectively tied to their products to promote productivity at the cost of worker well-being.

The ubiquitous business practice of surveilling production is based on the lean production model. Emerging out of auto manufacturing through Toyota in 1948, lean production is a system based on the philosophy of “achieving the complete elimination of all waste in the pursuit of the most efficient methods.” One of the biggest methods within the Toyota Production System is “just-in-time” manufacturing, which requires precise tracking of parts and inventory, as well as careful coordination of resources, including employees. It requires that only the minimum amount of anything should be on hand, essentially stripping the workforce down to its barest needs in what has since been described as “management-by-stress.” This model began in the auto industry but is now present in every conceivable industry and sector, rebranded as “six sigma” and making up a profitable business coaching industry. Now, only 23 percent of reported users of this form of management are within manufacturing; the majority (77 percent) come from the service industry.

While lean production has been the modus operandi of business for decades, algorithmic management has allowed lean production to grow exponentially, unchecked by human management. Algorithmic

---

management allows both the worker and their product to be consistently monitored, second-by-second. In fact, employers consistently use algorithmic data to inform just how many seconds a certain task should take. In talking to Starbucks workers located in Memphis, Tennessee, we discovered that drive-thru employees were expected to complete window interaction in 45 seconds or less. This was tracked through their login to the point-of-service (POS) register and was standardized through algorithmic monitoring of the fastest time recorded through aggregated POS data. Even if it took only an additional second, workers who did not hit this standard were disciplined.21 One worker said, “You’re not given the tools, but you gotta get these numbers, and then at the end of the month, they’re like ‘well, why didn’t you hit the numbers?’ How? It’s impossible!”22

Algorithmic management is present in warehouse and logistics as well. Both Amazon delivery drivers and Amazon warehouse workers have described the widespread use of productivity measures relying on algorithmic surveillance through wearables and GPS, which penalize them for time-off-task (TOT). If an employee’s TOT exceeds 15 minutes, or one’s rate of productivity falls below the prescribed speed for the task (often seconds), an Amazon worker will get an automatic write-up. Visits to the restroom, human interaction with other employees, or any sort of rest tracked through the wearables is counted as TOT. Ilya Geller, who worked at Amazon as a stower, said, “you’re being tracked by a computer the entire time. You don’t get reported or written up by managers. You get written up by an algorithm.”23

Pace of work surveillance threatens workers’ physical health and safety. Workplaces with higher levels of surveillance and lean production face higher rates of workplace injury. Amazon warehouse workers, for example, were found to suffer serious injuries at twice the rate of rival companies in 2021.24 Amazon’s “relentless push for e-commerce dominance” led to increased injuries both inside and outside the warehouses.25 Amazon delivery drivers, faced with GPS-tracking that significantly squeezed them to deliver packages faster, got into more than 60 accidents between 2015 and 2019, leading to 10 deaths.26

Pushing workers beyond reasonable limits to deliver as fast as possible often comes with deadly consequences. However, as many of these drivers were independent contractors—another cost-saving measure on Amazon’s part—Amazon was not found responsible for the accidents.

Algorithmic management’s pace of work also leads to intense mental duress. With an inhumane pace of work, as well as chronic understaffing to drive down costs and speed up production, workers find themselves overworked and isolated in traditionally underpaid industries. This effect has commonly been coined as job strain, which has been shown as strongly linked to depression, anxiety, and higher rates of suicidality. In 2019, suicide rates at the workplace rose to 307, a 39 percent increase since 2000.27 In our interview with Starbucks workers, one barista expressed to us the emotional toll this job strain took on

21 Kylie Throckmorton, Starbucks Worker, Interview 2022.
22 Nikki Taylor, Starbucks Worker, Interview 2022.
26 Ibid.
them: “I would come home, and throw stuff and cry, and scream . . . that was my struggle—between knowing that I deserved better and not being able to leave everyone else in the pits of hell.”

Interventions

Using algorithmic management to dictate an inhumane pace of work leads to eroding job quality while simultaneously producing higher profits for corporations. Despite, or perhaps because of its presence as a commonplace business tactic, algorithmic management and lean production are relatively unstudied as a topic for policy intervention. However, there are many useful avenues that the federal government can take to begin to combat the effects of pace of work issues enabled through surveillance:

Regulatory Recommendations:

- **Issuing OSHA Guidance:** Governing for Impact recently proposed action memos to OSHA outlining their statutory authority to address workers’ mental and physical health as they relate to ergonomic standards. We urge OSHA to issue rules regulating the use of surveillance in the workplace due to its risk of job strain on workers’ mental and physical health. In doing so, these regulations should comprehensively identify workplace injuries due to job strain and algorithmic surveillance practices on a sector-by-sector level, strategically focusing on industries that have a high rate of OSHA violations paired with a low rate of incident reporting.

- **Funding NIOSH Research:** We support the funding of NIOSH to pursue research related to job strain as it relates to electronic surveillance. This will allow legislators to act based on scientific research to complement worker narratives. Specifically, we consider the following questions as central:
  - How does job strain present itself across sectors and within specific types of work?
  - Across sectors, does job strain have a negative correlation with increases in wages and benefits?
  - What long-term physical and mental conditions arise in workers affected by surveillance and algorithmic management-based job strain?
  - Under what conditions does increased pace-of-work lead to more frequent workplace accidents?
  - Does the risk of workplace accidents suggest a clear limit on the “safe” pace of work for workers in particular industries or workplaces? What might the threshold be?
  - What criteria can be created to establish guidelines for when job strain due to surveillance, algorithmic management, and pace-of-work increases reaches said threshold?

- **Using an Inter-Agency Approach:** We support General Counsel Abruzzo’s 2022 memo on unlawful electronic surveillance and automated management practices and agree that an inter-agency approach that includes the Federal Trade Commission and Department of Justice in creating new standards is paramount.

---

28 Nikki Taylor, Starbucks Worker, Interview 2022.


Policy Recommendations:

- **Hold Corporations Accountable**: New corporate accountability legislation could require greater transparency over lean production and surveillance methods, as well as requirements that data-driven technology be continuously evaluated by outside legal entities, including impact assessments. Additionally, workers should have a role in impact assessments, as experts of their workplace who can speak to how algorithmic systems are affecting their work life.31

- **Protect Data Privacy**: Data privacy rights, like the Worker Privacy Act proposed by the Center on Privacy & Technology at Georgetown University Law Center, can limit the amount and types of data employers can collect.32 Currently, there are very few limits on data collection, and little to no privacy rights for workers. Experts suggest that a comprehensive federal data privacy law, similar to actions taken in California, could begin to bring transparency back to the workplace.33 Additionally, workers having knowledge of what data is being collected and how it informs things like quotas, productivity scores, and “time-off-task” rates can give them power to speak out against inhumane or retaliatory treatment.

B: Algorithmic Scheduling and Employee Misclassification

Combined with lean production methods, scheduling via algorithm creates a rigid workplace that offers little flexibility to workers. “Just-in-time” scheduling is increasingly automated thanks to a booming industry of automated human resource companies and scheduling apps like Kronos, WhenIWork, Legion, Clockify, and more, which promise to eliminate human decision-making bias and promote efficiency in scheduling. These apps—which make up what is estimated to be a $530 million dollar industry—automate scheduling by using forecasting models that are integrated with point-of-sale software.34 For example, a retailer can use software like 7shifts, which will aggregate data from previous months, years, seasons, and even by tracking where Square customers have swiped their cards nearby, to create a type of “staffing forecast.” The algorithm will then recommend the minimum number of employees needed to operate that shift based on that data-driven forecast.35 This method of scheduling, coined “refractive surveillance,” far exceeds the methods and capacity of manual scheduling and has brought “on-call” scheduling to virtually all industries.36

Scheduling practices are already a main concern of job quality policy. In 2020, new survey data revealed that over half of surveyed workers regularly “clopened,” meaning they consecutively closed and opened

---

33 Constant Boss, 27, and The California Consumer Privacy Act, as originally introduced, provided data privacy rights for employees, independent contractors, and job applicants but these categories will be exempted from the final legislation until 2022; see https://oag.ca.gov/privacy/ccpa.
the following day.\textsuperscript{37} Doing so leaves little rest time between shifts, and beyond exhausting workers, can make it difficult to find childcare, schedule shifts at other jobs, and otherwise plan one’s life. Workers in low-wage industries already have very little control over their schedules. A survey of Los Angeles retail workers found that 44 percent of workers experienced schedules fluctuating more than 10 hours between weeks.\textsuperscript{38}

By following “just-in-time” principles, workers are left with little time to plan their lives, including rest, childcare, commute, and oftentimes scheduling shifts for secondary jobs.\textsuperscript{39} This is especially difficult for part-time workers, many of whom are marginalized workers in low-wage sectors where full-time work is difficult to find. Part-time workers are more likely than full-time workers to have erratic hours, resulting in volatile incomes. Automating scheduling, while cutting costs and improving efficiency, allows an algorithm to change schedules on short notice, widely changing how many hours a worker can get per week, all in response to consumer forecasting data that is often hidden from workers.

The aforementioned applications use what the railroad industry refers to as “precision-scheduling” to attempt to predict how lean a workspace can get while managing forecasted demand. This, coupled with the increased pace-of-work, increasingly leads to tragedies like those mentioned previously. In the railroad industry, for example, algorithmic models have seen trains become longer, sometimes up to 3 miles long, while railroad staff has drastically decreased to skeleton crews that work multiple-day shifts. Workers are essentially on call for days, and operate with little to no rest, waiting for trains to have enough cargo as determined by an algorithm to be deemed profitable.\textsuperscript{40} This has led to disastrous derailments—in 2019, there were 341 derailments on main lines, and of those, 24 were freight trains carrying over 159 cars of hazardous materials.\textsuperscript{41} This method of “Precision-Scheduled Railroading” (PRS) is used by almost all Class I railroad companies, up to 94 percent of the freight rail industry’s revenue.\textsuperscript{42}

Scheduling does not only mean shift-to-shift assignments. Rather, algorithmic scheduling allows employers to track not only a workday, but an individual employee’s work life second-by-second. Algorithmic systems allow for employers to track time off task and dock employee pay, so that workers often only get paid while they are actively working.\textsuperscript{43} Additionally, algorithmic scheduling often uses performance metrics and incentives for scheduling—such as with assigning rides or deliveries for Uber or Doordash—that are unclear to workers.\textsuperscript{44} This means that workers’ pay is often as unpredictable as their schedules themselves. Algorithmic scheduling makes compensable time unclear to workers and allows employers to maximize time spent working while minimizing pay.

\textsuperscript{38} LAANE & UCLA Labor Center, \textit{Hour Crisis: Unstable Schedules in the Los Angeles Retail Sector}, 2018.
\textsuperscript{41} Ibid.
The opacity of scheduling software is oftentimes compounded by an opacity in the employment relationship itself. With the rise of workplace fissuring and the gig economy, workers are often unaware not only of what information is being used to make decisions in their workplace, but who is making the decisions in the first place. Employers utilizing fissured structures oftentimes use technology to further distance themselves from their employees. Just like other fissuring methods—such as subcontracting, franchising, and third-party management—algorithmic management allows employers to maintain control over standards and productivity while creating an illusion of worker independence. This is often achieved through combining surveillance and automation with illegal misclassification. By misclassifying workers as independent contractors, federal labor protections no longer apply to these workers. Companies then create more murky layers of automation—like automated HR, algorithmic scheduling, and automated management decisions—to cement the illusion that the worker is in fact working independently, and that decisions are being made based solely on the individual worker’s performance metrics. In reality, the lead company is in control of how the work gets done, when it gets done, and all aspects of job quality—all while absolving themselves from responsibility for any of it.

The narrative of “worker flexibility” that often comes from algorithmic management software is another layer of removal from corporate accountability. And, with the lack of federal oversight, combining fissuring and surveillance is being applied beyond its platform origins—healthcare workers, childcare workers, retail, grocery, and fabrication workers have all seen attempts to misclassify workers while controlling them through surveillance.

**Interventions:**

**Regulatory Recommendations:**

- **Staffing Ratios:** Using algorithmic consumer forecasting can be tempered through stronger regulations on staffing ratios. Staffing ratios have long been the concern of nurses and teachers unions. Recently, the Centers for Medicare & Medicaid Services (CMS) launched a Request for Information and proposed rulemaking for guidance on safe staffing ratios for nursing homes. Incorporating algorithmic scheduling within our understanding of how staffing ratios get determined could help mitigate these issues. Additionally, safe staffing regulations should not only consider the length of hours and number of employees, but the way in which scheduling produces job strain as described above. For example: facing decreased staff, yet increased workloads, hotel workers organized to pass an ordinance in the City of Los Angeles not only requiring panic buttons for safety, but dictating the amount of square footage a hotel worker is expected to clean.

---

45 *The Fissured Workplace.*


per shift.\textsuperscript{49} Similarly, California’s AB 701 prohibits excessive work pace in warehouses and distribution centers and requires transparency for quotas used to determine pace.\textsuperscript{50}

- **Employer Status Guidance**: The Department of Labor’s proposed rule on independent contractor classification under the Fair Labor Standards Act (FLSA) from October 2022 should clarify within the rule’s economic reality test that algorithmic management and supervision is evidence of employer control and employee status.\textsuperscript{51}

- **Compensable Time Guidance**: DOL’s Wage and Hour Division can release guidance on how compensable time is determined for algorithmically managed workers. By updating guidance to reflect the way that algorithms separate out different tasks, DOL can not only help ensure that workers are being paid for all time spent working but can ensure that workers who are under algorithmic management have more transparency around how their pay is actually calculated.

**Policy Recommendations:**

- **Include Algorithmic Scheduling in Fair Scheduling Laws**: Fair scheduling laws have been passed in multiple localities such as Chicago, IL; New York City, NY; Seattle, WA; San Francisco, CA; Philadelphia, PA; and Emeryville, CA, to name a few. These laws have seen markedly beneficial results: a two-year study of Seattle’s Secure Scheduling Ordinance found that workers’ knowledge of their schedule at least 2 weeks in advance increased by 11 percent; there was also an 11 percent increase in reports of good sleep quality and a 10 percent decrease in the likelihood of experience material hardship.\textsuperscript{52} Supplementing these gains by including algorithmic scheduling in these laws will lead to more positive benefits for workers. On the federal level, the Schedules That Work Act and Part-Time Workers Bill of Rights can consider algorithmic scheduling as a major part of their bills.

- **Protect Workers’ Rights to Organize**: Ultimately, issues of scheduling have most traditionally been dealt with at the industry level through collective bargaining. As we will detail in the next section, supporting legislation like the Protecting the Right to Organize (PRO) Act and funding the NLRB to strengthen worker’s ability to organize is one of the main ways to help address algorithmic management and shift the balance of power.

C. Algorithmic Management and the Right to Organize

Workplace surveillance fundamentally interferes with workers' right to organize in two major ways. First, surveillance is overtly used to identify organizers and workplace leaders, surveil union-planning, and use information to union-bust any attempt at an organizing effort. Secondly, the algorithmic methods listed above create unsustainable workplace conditions that lead to low morale, high-turnover, and isolation by pitting workers against each other. These conditions prevent workers from being able to come together to collectively organize.


\textsuperscript{51} U.S. Department of Labor, Wage and Hour Division, Employee or Independent Contractor Classification Under the Fair Labor Standards Act, 87 FR 62218, Oct. 13, 2022.

\textsuperscript{52} Kristen Harknett, Daniel Schneider, and Véronique Irwin, “Improving health and economic security by reducing work schedule uncertainty,” *Proceedings of the National Academy of Sciences*, vol. 118, no. 42, 2021.
Without having to hire union-busting detectives, new technology allows constant surveillance of workplace organizing, whether or not workers are actively seeking to unionize. Location tracking through wearables, keycards, and other biometrics have become sophisticated enough that employers can surveil interactions between coworkers, including with whom, where, how long, and sometimes even what was said.53 Additionally, employers can use “sentiment analysis,” personality assessments, and the tracking of personal social media profiles outside of the workplace in order to identify workers who may be sympathetic to unionization, and then target surveillance or retaliatory actions toward these workers.54 Whole Foods has already used this sort of surveillance to create a “heat map” of over two dozen metrics that may predict which stores might unionize.55 Secondly, once workers who are sympathetic to unionization are identified, algorithmic management through rigid production quotas, “time-off-task” penalization, and overwork can either put strain on these workers to get them to quit, or punish them into silence.

As Aiha Nguyen describes in an interview with an Amazon worker, Rina, algorithmic surveillance is a practice that affects not only individual workers, but all workers in a workplace collectively, because data on a single individual is meaningless. It is when data is aggregated across workers to set a standard for activity that it becomes meaningful. In Rina’s case at Amazon, “time-off-task” (TOT) was a metric used not to judge a single individual, but the standard by which all workers were judged:

“Rina mentioned that [TOT] is an important metric in her job. This metric can determine whether a worker keeps her job or not. At the same time, workers are not given clear direction on how to respond to TOT. According to Rina, one co-worker was fired because he didn’t take it upon himself to find more work when operations were slow. Thus, TOT serves not as a productivity measure, but as a means of creating insecurity so workers hustle or face the threat of termination.”56

Targeted surveillance against union sympathies, or in retaliation to information received about unionization efforts, becomes compounded with just-in-time lean production methods and algorithmic management and scheduling to create workplaces where workers are overworked, stretched thin, and often fighting for hours, for quotas, and for their sanity on the job. This creates not only personal job strain, but a collective sort of job strain that can ensure low morale and high turnover—a union-busting situation in and of itself.

Interventions:

**Regulatory Recommendations:**

- **Surveillance as an Unfair Labor Practice (ULP):** The NLRB already has the power to protect workers who wish to engage in concerted activity, such as discussing their employment situation and raising work-related complaints under the National Labor Relations Act. General Counsel

---

53 The Constant Boss, 28
56 The Constant Boss, 27-8.
Abruzzo’s memo on electronic surveillance already warned of the chilling effect that surveillance can have on organizing efforts. By classifying these practices as unfair labor practices, and/or requiring employers to prove that they are necessary to accomplish a legitimate business purpose, the NLRB could confront these effects within the statutory power they already possess.

- **Requiring Data Transparency in Labor-Management Relations:** In Spain, new legislation requires platform companies such as Uber to provide labor unions with access to the algorithms used to manage their workforce. Allowing unions access to the same data that employers have will help level the playing field for building collective bargaining agreements that include limitations on algorithmic management.\(^{57}\) Doing so is critical to remaining in line with federal law which requires employers to bargain with workers and their representatives over “terms and conditions of employment.” Unions need the ability to fully understand the “nature, scope, and effects of data-driven technologies” in order to properly bargain over them.\(^{58}\)

**Policy Recommendations:**

- **Protecting the Right to Organize:** Ultimately, outside of large-scale policy changes, the ability to collectively organize to negotiate better working conditions is one of the best ways for workers to challenge electronic surveillance and algorithmic management.\(^{59}\) Passing legislation like the Protecting the Right to Organize (PRO) Act can ensure that all workers can respond to the ways in which technology is affecting their working lives.

- **Promoting Sectoral Bargaining:** Internationally, trade unionism has been at the forefront of mitigating the harms of algorithmic management and electronic surveillance. Trade unions in the United Kingdom, for example, have negotiated with the government to form sub-committees to research algorithmic management; in Italy, trade unions negotiated on behalf of food-delivery platform workers to address algorithmic management.\(^{60}\)

- **Investing in the NLRB:** NLRB guidance on the use of electronic surveillance and algorithmic management will only be useful if the Board is proactively funded to be able to handle investigations into these practices. The federal government should proactively invest in funding capacity for not only responsive investigations, but to build out systems by which employers can be held accountable for demonstrating legitimate business purposes for their practices.

**D. Algorithmic Discrimination:**

Algorithmic management also allows for employers to outsource hiring, discipline, and promotions. When it was first introduced, technological methods promised to remove human bias from decision-making through “fully automated decision-making.”\(^{61}\) But as algorithms are trained based on human decisions and human history, they are bound to replicate the discriminatory systems that already shape our

---


59 De Stefano 2020, 442.

60 Foresight Brief.

labor market. In hiring, algorithms are now being used to make decisions and screen hiring pools and resumes; on the job, algorithmic management and the increasing use of ratings and review systems can further impact who gets promoted or disciplined.\(^{62}\) Furthermore, an algorithm does not operate within a vacuum. Workers of color, women, immigrant, and LGBTQIA+ workers are already surveilled and discriminated against; algorithmic decision-making replicates structural biases and leads workers to continue to only be hired for jobs in low-wage industries where they will be further surveilled, perpetuating occupational segregation. As the algorithmic management industry booms, more and more companies are promoting tech with “predictive abilities,” claiming to be able to predict trustworthiness, responsibility, and other soft skills.\(^{63}\)

Algorithmic management’s lean production ethos can create job strain that is particularly difficult for workers with disabilities to keep pace with. Pregnant workers or workers with disabilities often need to adapt working conditions for their health, including taking more frequent breaks. One-fifth of pregnant workers reported having experienced pregnancy discrimination in the workplace.\(^{64}\) This potential discrimination is also not confined to the shop floor—digital surveillance allows employers to attempt to predict when workers are planning on taking leave for pregnancy; biometric surveillance can even allow employers access to fertility information. Speeding up pace-of-work through algorithms comes from aggregate information about the speed of an entire workplace. This means that workers with disabilities are being given productivity goals to fit the physicality of the aggregate, non-disabled workplace. Increasing the pace of work and eliminating breaks is also well-documented as negatively affecting mental health, further exacerbating stress felt by workers who may be neurodivergent, have anxiety disorders, depression, and other cognitive conditions.\(^{65}\) And because increased pace-of-work is often tied to automated discipline, promotions, and gamified rewards, workers with disabilities can end up being punished disproportionately.\(^{66}\) Furthermore, these management decisions are often being made by an algorithm that is using criteria unknown to the workers themselves.\(^{67}\)

Increasingly, an algorithm’s management decisions are being supplemented with customer reviews. Customer evaluations have long been a trend within delivery systems but are increasingly being used in other customer-facing industries and are now being used to make job quality decisions. For example, Amazon Flex delivery workers with higher ratings get preferred scheduling based not only on their delivery time, but also customer reviews. A report by Data & Society highlighted how drivers of color felt surveilled on the job not only by their employer, but by the community that they were delivering packages to. Often, this occurred through further technology systems, like the prevalence of Ring doorbell cameras in white communities.\(^{68}\) By allowing for community ratings to determine employee performance, employers replicate societal norms and can further racial discrimination.\(^{69}\) Additionally, because potential

---

\(^{62}\) *Algorithmic Management Explainer*, 14.


\(^{67}\) *Algorithmic Management Explainer*, 14.


bias in these cases originates not from the company, but from the customer, employers cannot as easily be held responsible for the bias that occurs, which happens often — facial recognition systems in the workplace are well-documented to have high error rates and racial biases.\(^70\) Ultimately, algorithmic management cannot escape the societal structures that create it.

Interventions:

**Regulatory Recommendations:**

- **Title VII Guidance:** The EEOC’s recent Title VII guidance on algorithmic practices in selection procedures is a critical first step for beginning to determine how technological surveillance and decision-making can have a disparate impact.\(^71\) Federal agencies should supplement existing guidance by outlining how algorithmic technologies can be used in ways that result in “disparate treatment” and intentional discrimination. Agencies should also outline ways that employers can take affirmative steps to apply a sociotechnical evaluation of their systems to assess for disparate treatment and/or disparate impact across the algorithmic lifecycle.

- **Title VII Enforcement:** Agencies should also prioritize enforcement actions against employers that engage in algorithmic discrimination. The EEOC and the Department of Justice should use innovative enforcement techniques such as algorithmic disgorgement to ensure that discriminatory models, and the data that they rely upon, are not accessible for further commercial use. Similarly, federal agencies must develop enforcement strategies that promote algorithmic transparency and affirmative notice to jobseekers that mitigate the impact of “black box” algorithmic opacity. Agencies must also consider rulemaking and other regulatory approaches that create heightened protections for the use of biometric data in algorithmic hiring platforms and related management systems.

- **Restricting or Banning Sentiment Monitoring and Pre-Hire Tests:** The EEOC requires employers to demonstrate the validity of pre-hire tests to defend against discrimination claims. The NLRB could similarly require that employers demonstrate legitimate business reasons for using monitoring, sentiment analysis, and tracking of workers’ social media.\(^72\) Technologies that fail to meet scientific validation or compliance with Title VII obligations should be treated as presumptively unlawful.

- **Regulating Customer Evaluations:** Title VII’s recent guidance clarifies that employers should often be responsible for algorithmic decision-making tools even when designed or administered by a third-party, like a software vendor. Similarly, the EEOC should consider the effects of customer reviews and evaluations as an employer responsibility. The means by which employers evaluate their employees should be their responsibility, no matter where the data is sourced from.\(^73\)

- **Clarifying Employer Compliance:** Currently, the ADA prohibits “standards, criteria, or methods of administration . . . that have the effect of discrimination on the basis of disability.”\(^74\) Pace of work standards should be considered a part of these “methods of administration” and should fall under

---


\(^72\) Data and Algorithms.

\(^73\) EEOC Select Issues, Question 3.

\(^74\) 42 U.S.C. § 12112(b)(3)(A)
the ADA’s protection of disabled workers not being penalized for taking breaks or needing accommodations.

**Legislative Recommendations:**

- **The Black Worker Bill of Rights** outlines a set of rights necessary to combat racism in the workplace. One of the fundamental 10 rights is the “Right to Privacy and Freedom from Surveillance, Monitoring, Automated Management, and Control.”

- **Targeting Information Privacy:** Algorithmic management systems make decisions based on criteria unknown to the workers affected. Stronger data privacy laws could require that employers demonstrate reasonable business purposes for certain monitoring and demonstrate a lack of harm in data collection, similar to the Massachusetts Information Privacy Act. Legislation could also require data transparency so that workers are aware of what data is being used to make decisions, such as California’s 2018 consumer privacy legislation. These protections must apply with equal force to public-sector employers as they do private entities covered under federal antidiscrimination law.

- **The American Data Privacy Protection Act:** is a bipartisan legislative proposal that would create a comprehensive national data privacy legal framework for the United States. Key to the ADDPA are civil rights protections that prevent covered entities from collecting, processing or transferring data in ways that either discriminates against, or otherwise limits economic opportunities, for protected classes in select domains in addition to requiring algorithmic impact assessments. Similar strong legislative approaches to algorithmic discrimination include the District of Columbia’s Stop Discrimination by Algorithms Act.

**Conclusion**

The Center for Law and Social Policy encourages OSTP and the Biden-Harris Administration broadly to adapt current regulations and invest in new solutions to our rapidly changing work lives. Algorithmic management and surveillance are no longer novel forms of management or workplace experiments—they are rapidly becoming the standard way of structuring businesses and shaping workers’ lives. The federal government has a responsibility to summon its existing statutory power to create standards and practices around algorithmic management and surveillance, particularly for marginalized workers.

Respectfully submitted,

Nat Baldino, Policy Analyst

The Center for Law and Social Policy

---