



THE AMAZON PANOPTICON

A GUIDE FOR WORKERS,
ORGANIZERS & POLICYMAKERS



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INTRODUCTION

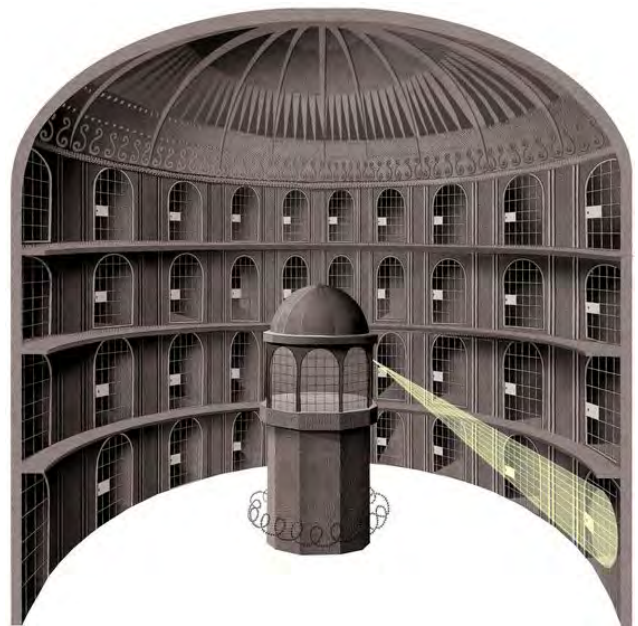
When a consumer clicks on an item on Amazon’s website, they experience a fast, smooth, and convenient purchasing and delivery process that enables them to have almost instant access to an infinite array of consumer goods. What they don’t see are the cascading effects set in motion by that click, which are governed by Amazon’s corporate algorithms and fall squarely on the real engine of the company’s one-click consumerism model: workers.

The workers who staff Amazon’s warehouses (or “fulfillment centers”) or deliver its packages experience a form of labour that is controlled and directed by algorithms, which translates into intense pressure to “make rate”—say, to retrieve 100 items per hour from the warehouse’s shelves or deliver 30 packages per hour in the streets of Berlin or Barcelona. To pressure its employees to work faster, monitor their compliance with corporate culture, or even spy on union activism, Amazon deploys one of the most intrusive and pervasive systems of workplace surveillance the world has ever known.

The Seattle-based multinational, with its annual revenue of US\$386B in 2020, is one of the world’s most powerful corporate entities.¹ And not just because of its financial size. With approximately 200 massive fulfilment centers, as well as a global network of smaller warehouses, Amazon is the second largest private employer in the world. Globally, about 1.3 million workers are employed directly by Amazon, of which over 100,000 are in the European Union. But these numbers don’t include the hundreds of thousands of employees who are hired through staffing agencies or misclassified as independent contractors. All are caught up in Amazon’s surveillance net.

“They stalk you by scanner.
Every single thing you do,
you are being watched!”

American Amazon Warehouse Picker.



WHY IS AMAZON A PANOPTICON?

In his 1975 book *Discipline and Punish*, philosopher Michel Foucault used Jeremy Bentham’s panopticon as a symbol of the new techniques of control that emerged with modernity. In the late 18th century, social reformist Bentham designed a circular prison with the cells built around a central tower. The architecture of the panopticon was designed to allow a single security guard to monitor all of the cells from the tower at any time, while the inmates could not tell whether or not they were being watched. In Foucault’s words, the prisoner of a panopticon could only assume they were under perpetual observation in this asymmetrical system of surveillance: “He is seen, but he does not see; he is an object of information, never a subject in communication. As a consequence, the inmate police himself for fear of punishment.”²

1 Kohan, S. (2021, February 2). Amazon’s net profit soars 84% with sales hitting \$386 billion. *Forbes*. <https://www.forbes.com/sites/shelleykohan/2021/02/02/amazons-net-profit-soars-84-with-sales-hitting-386-billion/?sa=D&sh%3D4e83f4891334&source=editors&usg=AOvVawOTEZtwopgyNI68cgVgyVqb&ust=1621550746203000&sh=201fb2da1334>

2 Foucault, M. (1975). *Discipline and punish: The birth of the prison*. Knopf Doubleday.

Amazon is developing and deploying digital technology that both extends and deepens Foucault's concept of the panopticon. In the warehouses where its commodities are stored, in the cars that deliver packages through its Flex app, in the trucks that move its products around, workers are constantly watched, recorded, their labour measured, and their activities monitored. Other digital companies, including Google and Facebook, have also created systems of pervasive data capture that target users. We all know that just carrying a smartphone in our purse or pocket makes us the unwilling subjects of surveillance systems that generate data from all of our activities—from our purchases to our location—to then analyse and use them, for instance, to target us with advertising. But the workplace is where such pervasive digital surveillance is applied to “captive populations of employees,” in the words of Harvard Business School scholar Shoshana Zuboff.³

Pervasive surveillance is much broader than Amazon, of course. In cities and towns everywhere, people are routinely monitored by security cameras, crime apps and biometric devices, so in a sense, the warehouse is just another place where workers encounter ubiquitous digital surveillance. But their relationships with surveillance technology are even more entangled: devices such as the barcode scanners used to retrieve

or record the position of an item on the shelves are key to Amazon's power and control over workers. Workers can't perform their jobs without these technologies, which renders them dependent on the very tools that monitor them. Other technologies used by Amazon only have surveillance purposes. For example, all warehouse workers must pass through full body scanners that monitor them for theft each time they exit the workplace, even for a lunch break, and AI-powered cameras now monitor them for proper social distancing in response to COVID-19 outbreaks in Amazon facilities. All of these technologies operate on a contractual form of power: workers must use, or at least accommodate, the technology or lose their job.

The result is that Amazon workers are unwilling subjects in a sophisticated and all-encompassing experiment in digital surveillance, one that is having disastrous impacts on their bodies and lives. Amazon facilities have industry-leading injury rates, and workers around the world report stress and anxiety as the rhythms of work required by the company force them to avoid hydrating to reduce bathroom breaks, pee in bottles,⁴ and take unsafe shortcuts.⁵ Widespread precarity in the company's warehouses and delivery networks makes many employees even more vulnerable to surveillance as they strive to get their next contract renewal.



3 Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. Profile Books, p. 178.

4 Gurley, L. K. (2021, March 25). Amazon denies workers pee in bottles. Here are the pee bottles. *Motherboard: Tech by Vice*. <https://www.vice.com/en/article/k7amyn/amazon-denies-workers-pee-in-bottles-here-are-the-pee-bottles>

5 Callahan, P. (2019, September 5). Amazon pushes fast shipping but avoids responsibility for the human cost. *New York Times*. <https://www.nytimes.com/2019/09/05/us/amazon-delivery-drivers-accidents.html>



Race is also deeply embedded in Amazon's algorithmic surveillance systems. The company employs a highly diverse workforce in many countries, which it subjects to an extreme version of the surveillance practices that have historically impacted Black people, Indigenous people, and people of colour to a disproportionate degree—and continue to do so. Anti-Blackness in particular is a key factor in the ways that “surveillance is practiced, narrated and enacted,” as theorist Simone Browne writes,⁶ and its techniques of monitoring and control prefigured contemporary surveillance regimes.

This positions Amazon at the forefront of innovation in digital surveillance technologies, which expand and hone the scientific management principles Frederick Taylor unleashed in 1911.⁷ The company has described itself as an “invention machine,” and indeed, it spends billions of dollars every year on research and development—over US\$40B in 2020.⁸ This spending has helped Amazon Web Services become the global leader in cloud computing; it has also helped build a laboratory where new surveillance technologies have been introduced and tested since the company's expansion in the mid-2000s: the Amazon workplace.

More recently, Amazon's surveillance strategies are expanding beyond its warehouses: delivery drivers are monitored through their phone apps as well as AI-powered cameras installed in their cars; customers are surveilled through Alexa, as the virtual assistant records and analyses their private conversations; data are collected every time they use the company's websites to buy something; and security service Ring monitors

their neighbors. Even unsuspecting citizens are subject to the surveillance technology Amazon sells to law enforcement and immigration agencies, such as its AI-driven facial recognition systems, or to consumers, such as the “smart” cameras they can use to surveil the space around their homes. Amazon is investing heavily in technological development to tighten its grip on workers by expanding its digital panopticon: patents it owns reveal the company's plans to introduce new surveillance technologies, from augmented reality goggles to digital wristbands that track employees' movements.

Technology makes Amazon's promises of increasingly fast delivery possible, but it also enables and maintains the company's control over workers. Workers are monitored not only to ensure they keep up with the unreasonable production rates required by their jobs, but also for the purpose of political control. Job ads posted to the corporate hiring website *www.amazon.jobs* in 2020 advertised positions for analysts with prior experience in the military or law enforcement to gather intelligence on “labour organizing threats against the company.”⁹ Warehouse managers are trained to watch for labour organizing: Amazon teaches them to keep tabs on employees who talk about “living wages,” for instance.¹⁰ Internal Amazon documents leaked to the press revealed that the company is monitoring the social media pages workers use to organize, and that management and private security guards are spying on unions. The constant deployment of ever more intrusive technologies sends a clear message to Amazon workers: you are being watched and dissent will not be tolerated.

There is no other way to put it: Amazon's digital surveillance panopticon is a grave threat to workplace democracy and workers' rights. Amazon workers around the world are well aware of this problem, and also well aware of the political control that is exerted over them by the omnipresent surveillance technology deployed by the company. And they are fighting back, including the struggle against employee monitoring in the demands raised in protests, strikes, and unionization campaigns across Amazon's global fulfillment network. We hope this guide will help workers, labour organizations and policymakers to better understand the technologies that comprise the Amazon panopticon so that they can be challenged through legislation, collective bargaining, and action.

6 Browne, S. (2015). *Dark matters: On the surveillance of Blackness*. Duke University Press, p. 9.

7 For a historical positioning of the phenomenon and its recent digitization see Rosenblat, A., Kneese, T., & Boyd, D. (2014). *Workplace Surveillance*. *Open Society Foundations' Future of Work Commissioned Research Papers*. <http://dx.doi.org/10.2139/ssrn.2536605>

8 Macrotrends. (2021). *Amazon research and development expenses 2006-2021 | AMZN*. <https://www.macrotrends.net/stocks/charts/AMZN/amazon/research-development-expenses>

9 The ad is still visible at <https://web.archive.org/web/20200901125940/https://www.amazon.jobs/en/jobs/1026060/intelligence-analyst>

10 Whole Worker. (2019, June 22). *Amazon's Union-Busting Training Video (LONG VERSION) [Video]*. YouTube. <https://www.youtube.com/watch?v=uRpwVwFxyk4>

IN THE WAREHOUSE

MONITORING PRODUCTIVITY: SCANNERS AND ADAPT

Workers' performance is continuously monitored in Amazon's warehouses. In order to fulfill its promise of fast and smooth delivery, the company uses surveillance to force its employees to work faster and harder.

Amazon's scanners and computers are at the core of the company's warehouse management system and serve as a surveillance interface between workers and management. At the start of every shift, employees in most fulfillment centers log into Amazon's algorithmic system with a handheld barcode scanner, or with a computer placed in their workstation. Tools like the scanner assign them tasks (go to aisle X and pick item Y), read the information encoded in the barcodes of the products Amazon sells, and are used to monitor workers' every move inside the warehouse.

Since each individual worker logs into the system through a specific device, Amazon's management can track their productivity rate. For example, devices like the barcode scanner feed data to the Associate Development and Performance Tracker (ADAPT), software that tracks workers' productivity and identifies how quickly they perform assigned tasks, such as locating, scanning, or packing. ADAPT tracks workers' ability to meet their quotas—the number of tasks they are supposed to perform per hour. The system also tracks ToT or "Time off Task," which means time when the worker is logged off their device for lunch or bathroom breaks. Exceeding a certain threshold of ToT generates "ToT points," and workers who accumulate too many are subject to warnings and, if precarious, risk non-renewal of their contracts. Workers have reported that the system has been used to automatically terminate workers through messages sent through the barcode scanner.

The monitoring of worker performance is one of the most problematic aspects of work in Amazon warehouses. Data generated by systems like ADAPT are used to push workers to increase their speed. This drives phenomena like the so-called "Amazon pace," that is, walking as fast as possible to retrieve or store more items. These unreasonable rhythms of work contribute to Amazon's injury rates, which are much higher than the industry average.¹¹ Women and pregnant people are disproportionately impacted by a system that counts bathroom breaks against ToT.¹² Precarious seasonal

workers hired by staffing agencies are especially vulnerable to this type of surveillance. Indeed, they know that their productivity may determine their ability to get their next contract renewal. Workers have also reported that management sometimes posts ToT scores for the entire warehouse to see, thus singling out workers and creating public pressure to perform faster.



"It's very simple, you see a line for stowing or picking [on the screen], and if there is a gap in the line you can see if the worker has gone to the bathroom or has taken a break. You can also see how many pieces per hour he's doing, in which hours he was faster."

Italian Amazon Warehouse Worker.¹³

11 Evans, W. (2020, September 29). How Amazon hid its safety crisis. *Reveal*. <https://revealnews.org/article/how-amazon-hid-its-safety-crisis/>
12 Gurley, L. K. (2020, October 7). Pregnant Amazon employees speak out about nightmare at Oklahoma warehouse. *Motherboard: Tech by Vice*. <https://www.vice.com/en/article/akzxpe/pregnant-amazon-employees-speak-out-about-nightmare-at-oklahoma-warehouse>
13 Quoted in Delfanti, A. (Forthcoming 2021). *The warehouse. Workers and robots at Amazon*. Pluto.

IDEOLOGICAL CONTROL: CONNECTIONS

Scanners and other devices aren't just used to quantify worker's output. They are also used by Amazon as tools for ideological control.

In 2018, Amazon launched Connections, a daily employee survey program that requires Amazon workers to respond to at least one question per day—allegedly confidentially—that appears on the screens of their devices. The program was developed by the company's Human Resources division to evaluate employees' job satisfaction, but many workers fear that it is also used for workplace surveillance.

The company describes its "Connections" program as a "real-time, company-wide employee feedback mechanism designed to listen to and learn from employees at scale to improve the employee experience. Each day Connections questions are delivered to every Amazon employee on a computer, a workstation device, or a hand scanner."¹⁴ In 2020, Amazon claimed to receive over half a million responses daily, in 21 languages, from employees in more than 50 countries.¹⁵



Testing is ubiquitous during warehouse shifts. The company states that Connections "analyzes response data and provides insights to managers and leaders to review and take actions as they uncover issues or see opportunities to improve."¹⁶ Many workers instead report feeling that what is tested is their compliance with Amazon's workplace culture, although the company frames Connections and similar programs as tools for worker empowerment. The use of polling systems like Connections through devices like the barcode scanner is also troubling in relation to privacy. Workers are polled after logging into the system; thus, they are not guaranteed that their feedback will not be made available to supervisors or associated with their identity.

"I'm stunned. 18% of the people did not give a positive response to an obviously loaded question that might threaten their company prospects? You respond to the question after logging in, so it's not like they don't know who you are."

American Amazon warehouse worker.¹⁷

14 *Employee Engagement*. (2021). Amazon Sustainability. Retrieved May 25, 2021, from <https://sustainability.aboutamazon.com/people/employees/engagement>

15 *Employee Engagement*. (2021). Amazon Sustainability. Retrieved May 25, 2021, from <https://sustainability.aboutamazon.com/people/employees/engagement>

16 *Employee Engagement*. (2021). Amazon Sustainability. Retrieved May 25, 2021, from <https://sustainability.aboutamazon.com/people/employees/engagement>

17 Anonymous. (2017). Working for Amazon: Better than sex, worse than hell (Part 1). *Naked Capitalism*.

AUTOMATING SOCIAL DISTANCING: DISTANCE ASSISTANT

The COVID-19 pandemic has prompted Amazon to introduce further surveillance in its warehouse. As it does with other health and safety issues, the company has proposed a technological solution to a social and political problem.

As the first wave of the COVID-19 pandemic waned in 2020, Amazon unveiled Distance Assistant: an open source, AI-driven system designed to monitor and enforce social distancing at its warehouses in the United States, and around the world. The system also generates data that Amazon can use to modify its workplaces or, more accurately, surveil the movements of its workers.

Inspired by radar speed check signs, Distance Assistant consists of a television screen, depth sensors and an AI-enabled camera, which are installed in high-traffic areas of Amazon warehouses. The cameras track the physical movements of workers in real time as they move through the warehouse. When they pass by the television screen, workers see themselves surrounded by green “augmented reality” circles when they maintain two meters of distance from each other and red when they do not, reminding them that literally their every move is being tracked and translated into data.



Amazon describes the Distance Assistant as a “magic mirror,” which is meant to give the device a playful if somewhat surreal quality. However, it is also a public relations strategy, which followed criticism of the company’s failure to protect workers from COVID-19 infection and a lawsuit filed by warehouse employees who alleged that Amazon in fact required them to violate social distancing protocols.¹⁸ The Distance Assistant is part of a “facade of compliance,” and a poor substitute for what Amazon workers have demanded since the start of the pandemic: reasonable work rates, decent wages and health benefits, adequate sick leave and full implementation of public health measures.¹⁹ Instead, the platform is a reminder that workers are subjected to continuous surveillance by a company that refuses to disclose how many of its employees have been infected with the coronavirus to date.²⁰

“Looking forward to getting barked at by a computer in the checkout line about standing too close.”

Reddit user, r/aws.²¹

18 Eidelson, J., & Soper, S. (2020, June 3). Amazon workers sue over virus brought home from warehouse. *Bloomberg*. <https://www.bloomberg.com/news/articles/2020-06-03/amazon-warehouse-employees-sue-over-virus-brought-home-from-work>

19 Statt, N. (2020, June 3). Amazon warehouse workers sue over risk of COVID-19 infection. *The Verge*. <https://www.theverge.com/2020/6/3/21279740/amazon-sued-nyc-warehouse-workers-covid-19-coronavirus-safety-measures>

20 O'Brien, S. A. (2020, October 1). Amazon said nearly 20,000 workers got coronavirus. *CNN Business*. <https://www.cnn.com/2020/10/01/tech/amazon-covid-cases/index.html>

21 lilhotdog. (2021, April). *Looking forward to getting barked at by a computer in the checkout line about standing too close* [Comment on the online forum r/aws]. Reddit. https://www.reddit.com/r/aws/comments/hdeaqy/amazon_introduces_distance_assistant_the_companys/

SELLING SURVEILLANCE: PANORAMA

Businesses everywhere are adopting Amazon’s panoptic surveillance strategies. Panorama is sold to companies across the globe, allowing them to transform their everyday surveillance tactics according to Amazon standards.

The Amazon Web Services (AWS) Panorama Appliance is a hardware device that adds machine learning capabilities to standard internet protocol (IP) connected cameras.²² Panorama is used to analyze videos within a company’s existing network, in real time, without the data ever leaving the premises. This is a convenient workaround in organizations—and countries—that have adopted stricter data governance regulations.

AWS is marketing Panorama for industrial applications and workplace safety and promotes the device as a way for companies to automate the surveillance of COVID-19 related infractions such as failure to wear personal protective equipment or maintain social distancing. However, the computer vision models the device uses can be trained to monitor video feeds for any unusual activity. And, when paired with the Panorama Software Development Kit, third-party device manufacturers can build all manner of Panorama-enabled devices and train them for virtually any purpose.



Like other Amazon devices aimed at the wider market, Panorama has already been tested in the company’s warehouses. As labour organizers and other critics have noted, Amazon’s workers can easily be monitored for “unusual” activities like leaning in to speak to each other privately or distributing pamphlets and other organizing materials.²³ Further, marketing Panorama as a device that is intended to promote workplace safety and prevent the transmission of COVID-19 provides the company with moral cover for other deeply unethical uses of the technology. By automating the already ubiquitous surveillance of workers, Amazon extends the reach of traditional video surveillance—and its own panopticon—in ways that are now transmissible to other workplaces, and their workers.

“Walmart did get a lot of heat for its labor practices, but I think it has been supplanted by Amazon. Amazon has taken spying on workers and trying to understand workforce behavioural trends or predictions to the next level.”

Iain Gold, a director with the Teamsters.²⁴

22 Shieber, J. (2020, December 1). AWS announces Panorama, a device that adds machine learning technology to any camera. *Tech Crunch*. <https://techcrunch.com/2020/12/01/aws-announces-panorama-a-device-adds-machine-learning-technology-to-any-camera/>

23 Schreiber, E. (2020, December 11). Amazon Web Services offers companies new tools for spying on workers. *World Socialist Web Site*. <https://www.wsws.org/en/articles/2020/12/12/awsm-d12.html>

24 Palmer, A. (2020, October 24). How Amazon keeps a close eye on employee activism to head off unions. *CNBC*. <https://www.cnn.com/2020/10/24/how-amazon-prevents-unions-by-surveilling-employee-activism.html>

IN TRANSIT

NAVIGATING SURVEILLANCE: DELIVERY APPS

The couriers and truckers who deliver packages for Amazon aren't exempt from its digital panopticon. While Amazon promotes its "gig economy" delivery jobs as being flexible and easy, what the company doesn't advertise are the widespread surveillance tactics that are embedded in delivery apps.

Amazon's delivery workers must download either the Flex or Relay apps, which function as the primary interface between them and the company. Flex is used by the gig economy drivers whom Amazon misclassifies as independent contractors. Relay is a similar app used by truckers who work for subcontracted parcel delivery firms that are part of Amazon's Delivery Service Partner (DSP) program. All drivers are expected to install and use a third app called Mentor, which monitors and rates their driving behaviours.

Used for last mile delivery, Flex is how the drivers who bring packages to customers' doors do everything from sign up to work for Amazon to receive their earnings. The app schedules 2–6-hour delivery blocks and provides pick-up location and navigation information. Flex and Mentor work in tandem to ensure that workers are surveilled throughout their shifts, for example, by tracking their location and the time they spend on each delivery. Drivers are also pitted against each other, as the apps show them how they stack up against other workers. Mentor even monitors the worker's phone usage, tracking calls made or texts sent. Workers have reported that whether they receive or reject an incoming call, Mentor logs it as an infraction.²⁵

Like Uber or Deliveroo, gig economy apps like Flex enable Amazon to use an army of precarious workers to provide delivery services to its customers, while offloading the costs of vehicles, maintenance, gas, insurance, moving equipment and health care. It also facilitates the continuous surveillance of drivers and increases the tempo of their work shift to unreasonable levels, while often paying them less than minimum wage for their labour.



“[The app] stresses me out. I’m constantly staring at it and thinking someone at Amazon is constantly watching me drive.”

American Amazon Driver.²⁶

25 Palmer, A. (2021, February 12). Amazon uses an app called Mentor to track and discipline delivery drivers. CNBC. <https://www.cnn.com/2021/02/12/amazon-mentor-app-tracks-and-disciplines-delivery-drivers.html>

26 Alimahomed-Wilson, J. (2021, February 9). Surveillance, stress, and no bathrooms: Life as an Amazon driver. Labor Notes. <https://labornotes.org/2021/02/surveillance-stress-and-no-bathrooms-life-amazon-driver>

EYES ON THE ROAD: DRIVERI CAMERAS

If the apps that track their position and speed were not enough, drivers working for Amazon are surveilled visually too.

In February 2021, Amazon announced their partnership with Netradyne, a fleet management software company that produces video telematics systems. Amazon plans to install one of these systems, called Driveri, in their fleet of Amazon-branded delivery vans.

Driveri uses AI-equipped cameras to surveil the driving habits of delivery workers from the moment they turn on their engines until they finish their shifts. The camera, which is mounted near the rearview mirror, monitors both the road and the inside of the vehicle, and can only be disabled when the engine is turned off. The system doesn't record audio or have a live view option but will issue audio alerts that accuse drivers of "distracted driving," for example, when it catches the worker picking up their phone (even if they are picking it up to use Flex). It then rates the driver on their driving behaviours in real time and submits the data to fleet managers.

Both Amazon and Netradyne describe Driveri as a "fleet safety platform," but it is also a harvester of biometric data. In fact, a recent Twitter leak²⁷ revealed that drivers would have to consent, in writing, to the use of Driveri for this purpose or risk losing their jobs.²⁸ The announcement, sent out via the Flex app, indicates that the internal and external cameras operate while the ignition is on and for up to 20 minutes after it is switched off. The consent form also states that Driveri may be used to confirm driver identity and connect to their account. Workers and journalists alike, however, have stressed that in-cab surveillance systems are about far more than driver identity and account functionality: the AI-equipped technology surveils workers constantly, as if they weren't already under immense pressure to work faster. For instance, some workers report that they feel obligated to break traffic laws in order to meet targets.²⁹ Other workers have stated online that they plan to cover the camera with duct tape in a desperate attempt at resisting this form of surveillance.



"[Driveri] raises important privacy and worker oversight questions that Amazon must answer."

Five U.S. Senators in a letter addressed to Amazon.³⁰

27 Gurley, L. K. [@LaurelKGurley]. (2021, March 22). Amazon delivery drivers in the US have until tonight to sign this consent form for Amazon to collect their biometric info and use AI-cameras that monitor their location and movement. If they don't sign, they lose their jobs [Tweet]. Twitter. <https://twitter.com/LaurelKGurley/status/1374114988391022606>

28 Gurley, L. K. (2021, March 23). Amazon Delivery Drivers Forced to Sign 'Biometric Consent' Form or Lose Job. *Motherboard: Tech by Vice*. <https://www.vice.com/en/article/dy8n3j/amazon-delivery-drivers-forced-to-sign-biometric-consent-form-or-lose-job>

29 Callahan, P. (2019, September 5). Amazon Pushes Fast Shipping but Avoids Responsibility for the Human Cost. *New York Times*. <https://www.nytimes.com/2019/09/05/us/amazon-delivery-drivers-accidents.html>

30 Palmer, A. (2021, March 3). Senators question Amazon about using cameras to monitor delivery drivers. *CNBC*. <https://www.cnn.com/2021/03/03/senators-question-amazon-about-cameras-monitoring-delivery-drivers.html>

EXTENDING CONTROL

MAPPING LABOUR ORGANIZING: SPOC

After acquiring organic food chain Whole Foods in 2017, Amazon introduced a new surveillance technology to its workplaces. To keep workers in check, it generates “heat” maps and other types of data visualization that highlight problematic workplaces, such as those at risk of union activity.

Amazon’s GeoSPatial Operating Console (SPOC) is a software system that consolidates and visually maps data collected by Amazon’s Human Resources department, Global Intelligence Unit and Global Intelligence Program. A February 2020 internal company memo requesting funding and staff for the system was leaked to Vox Media’s Recode,³¹ and SPOC appears to have been in operation by April 2020, when it was used to create heat maps of labour organizing activity at Amazon’s subsidiary Whole Foods.³² In October 2020, Amnesty International released a public statement expressing alarm at Amazon’s surveillance of labour organizers using SPOC and other union-busting methods.³³

SPOC is designed to help Amazon monitor a wide range of potential threats to its operations, including severe weather events, local crime rates, opioid usage and, especially, labour organizing.³⁴ According to Recode, about half of the data sets referenced in the February 2020 memo are related to unions: e.g., “Whole Foods Market Activism/ Unionization Efforts,” “union grant money flow patterns,” and “Presence of Local Union Chapters and Alt labour Groups.” A company whistleblower has since linked SPOC to the targeted surveillance of Amazon employee listservs dedicated to Black and Muslim networking and climate change activism.³⁵

Apparently in operation at hundreds of Whole Foods and Amazon warehouse locations across the United States, SPOC focuses on external risks (e.g., the number of charges filed with the National Labour Relations Board and the percentage of families within the store’s zip code that live below the poverty line³⁶), store risks (a “diversity index” that indicates the racial and ethnic identity of employees³⁷), and team member sentiment (results from surveys and monitored listservs, including whether employees feel respected at work³⁸). The system ultimately assigns each store a unionization risk score based on these factors, an unsurprising tactic considering Amazon’s aggressive anti-union history.

“They spend all this time spying on us, but don’t address our complaints.”

American Amazon Flex Driver.³⁹

- 31 Del Rey, J. & Ghaffary, S. (2020, October 6). Leaked: Confidential Amazon memo reveals new software to track unions. *Vox Recode*. <https://www.vox.com/recode/2020/10/6/21502639/amazon-union-busting-tracking-memo-spoc>
- 32 Peterson, H. (2020). Amazon owned Whole Foods is quietly tracking its employees with a heat map tool that ranks which stores are most at risk of unionizing. *Business Insider*. <https://www.businessinsider.com/whole-foods-tracks-unionization-risk-with-heat-map-2020-1>
- 33 Amnesty International. (2020, October 13). *Public statement: it is time for Amazon to respect workers’ right to unionize*. Amnesty.org. <https://www.amnesty.org/en/latest/research/2020/10/time-for-amazon-to-respect-workers-right-to-unionize/>
- 34 Gurley, L. K. (2020, February 10). Why Is Amazon tracking opioid use all over the United States? *Motherboard: Tech by Vice*. <https://www.vice.com/en/article/qj47b7/amazon-tracks-opioid-use-to-see-how-it-could-threaten-business>
- 35 Ghaffary, S. & Del Rey, J. (2020, September 24). Amazon employees fear HR is targeting minority and activism groups in email monitoring program. *Vox Recode*. <https://www.vox.com/recode/2020/9/24/21455196/amazon-employees-listservs-minorities-underrepresented-groups-worker-dissent-unionization>
- 36 Peters, J. (2020, April 20). Whole Foods is reportedly using a heat map to track stores at risk of unionization. *The Verge*. <https://www.theverge.com/2020/4/20/21228324/amazon-whole-foods-unionization-heat-map-union>
- 37 Peters, J. (2020, April 20). Whole Foods is reportedly using a heat map to track stores at risk of unionization. *The Verge*. <https://www.theverge.com/2020/4/20/21228324/amazon-whole-foods-unionization-heat-map-union>
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THE PANOPTICON BEYOND THE WORKPLACE: REKOGNITION, RING

Amazon’s digital panopticon is not limited to its workers. The company sells a number of surveillance technologies to consumers, and even to law enforcement agencies.

Take Rekognition, for example. Unsuspecting citizens are tracked, identified, and catalogued using this AI-powered facial recognition technology created by Amazon and based on machine learning techniques. Law enforcement agencies across the United States use Rekognition to scan mugshots and cross-reference them with surveillance footage.⁴⁰ However, in response to Black Lives Matter protests, Amazon has enacted a voluntary—and temporary—moratorium on the use of Rekognition by American police forces.⁴¹

For consumers, Amazon offers Ring, a “smart” surveillance system that consists of a video doorbell and other wi-fi enabled products that surveil the area around one’s home. Ring is used in hundreds of thousands of American homes and is expanding its presence in Europe and other countries.⁴² Homeowners who install Ring are able to access the information it produces through a social media app called Neighbors, which aggregates the data collected by all Ring systems and allows users to view information about suspicious activity within a 1.5 km radius of their homes. Like the Citizen app (formerly Vigilante), Neighbors uses this data to visualize the appearance of crime.⁴³ In the United States, more than 700 local police departments have partnered with Ring in order to access the video content generated by users. And now consumers can use Ring and other Amazon devices to share parts of their internet bandwidth with other device owners, as part of a network Amazon calls Sidewalk.⁴⁴

Race-based surveillance is one of the most serious outcomes of the extension of Amazon’s digital panopticon beyond the workplace. The American Civil Liberties Union (ACLU) and the U.S. Congress have found that false matches from Rekognition disproportionately affect people of colour. And although the technology is not directly used by the Immigration and Customs Enforcement (ICE) Agency, it was originally pitched to ICE⁴⁵ and Amazon now provides the web hosting infrastructure for databases ICE uses to organize the detention and deportation of immigrants. In 2019, Amazon engineers protested this collaboration under the slogan “No Tech for ICE.” Similarly, critics of the Ring technology have found that Ring functions within a “market of purchased safety”⁴⁶ that raises concerns because it fuels the over-policing of communities of color. Yet Amazon plans to develop new forms of marketable surveillance. In a patent for a product defined as “surveillance as a service,” Amazon describes a fleet of drones aimed at monitoring (paying) customer’s homes for break-ins.⁴⁷

“Amazon must fully commit to a blanket moratorium on law enforcement use of face recognition [...]. They should also commit to stop selling surveillance systems like Ring that fuel the over-policing of communities of color.”

American Civil Liberties Union.⁴⁸

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SHAPING THE FUTURE OF WORKPLACE SURVEILLANCE: AMAZON'S FUTURE AS SEEN THROUGH PATENTS

Surveillance by Amazon is set to become even more pervasive, as evidenced by patents for technologies the company may introduce in future to monitor workers' movements or to make them more transparent to management.

One patent owned by Amazon describes an “enhanced interaction system” between workers and supervisors.⁴⁹ In the patent, a supervisor wears an augmented reality headset equipped with facial, clothing, or gait recognition. When the supervisor looks at a worker, the system recognizes them and then projects relevant information onto the natural visual field of the supervisor. According to the patent, this system will provide real-time information about the worker, such as “demographic data about the user, location data within the facility, relationships with other users, messages for the user, navigation paths through the facility, access permissions.” Drawings in the patent show other kinds of information, such as the worker’s “status”.

Another patent that was the subject of news stories in 2018 describes a wristband or bracelet—or any wearable item that allows for sensors to be “positioned on the body of human operator”—that analyzes the position of the worker’s hand in space and provides haptic feedback to speed up their labour. By vibrating in specific ways, the bracelet signals to the worker that they have placed an item in the correct bin on the shelf, thus reducing the time needed to complete the task. The main goal, as stated by the patent, is “to monitor performance of assigned tasks.”⁵⁰

A third patent, titled “Using Gestures and Expressions to Assist Users,” targets both fulfillment centres and the automation of grocery store services. It is designed to detect expressions of emotions like frustration as workers perform their assigned tasks. If frustration is detected, or perhaps we could say algorithmically calculated, Amazon’s system generates an intervention in the form of haptic, vocal, or visual feedback from an assistant, who in the patent is presented as asking, “How can I help you?” The patent leaves the nature of such an assistant open: “an associate may be dispatched to the location of the user to provide assistance. The associate may be a human or robotic system.”

There is no guarantee that patents like these will be developed or deployed in Amazon warehouses. Yet they signal that Amazon invests part of its immense technological capabilities in the development of ever more sophisticated and intrusive surveillance systems.⁵¹ The augmented reality headset, the bracelet and the emotion assistant anticipate a future in which Amazon’s digital panopticon further enhances management’s ability to track and monitor employees in the service of boosting productivity. Amazon owns many other patents for surveillance technology. For instance, one for a miniature voice-controlled drone assistant, potentially for law enforcement applications, or wearable technologies that turn the worker into a carrier of sensors used to capture data to be fed to algorithmic systems.⁵²

“At this point they may as well hire actual robots.”

American Amazon Associate.⁵³

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CONCLUSIONS

The suite of surveillance technologies Amazon has already developed, or is developing, has grown to encompass all facets of its global operations. The oceans of data Amazon collects about its workers—their productivity rates, location, driving habits, personal opinions, and health status, among others—provide the company with unparalleled amounts of information that it uses to undermine attempts by workers to unionize to improve their working conditions.

Since at least 2000, when Amazon crushed a Communication Workers of America campaign to unionize 400 customer service employees, Amazon has deployed its increasingly sophisticated data gathering arsenal against similar efforts. In addition to hiring union-busting law firms and intelligence analysts, the company marshals a constant employee surveillance and data analytics program to predict which Amazon workplaces, and individual workers, are likely to organize. It's impossible to overstate the threat such tactics pose to workers and the 21st century labour movement. By continuously designing and deploying new surveillance technologies, and by pushing the boundaries of privacy and data collection regulation, the company lowers the bar for workers, consumers, and the wider public.

While union-busting is by no means new—in fact, Amazon works with the notorious Pinkerton Agency, which has surveilled labour organizers since the late 19th century—AI-driven forms of surveillance intrude on workers' privacy and autonomy to an extent that was previously unimaginable. The exponential growth of Amazon's surveillance regime must be addressed by increasing the power of workers, collective bargaining, and new regulations if we want the workforce of the future to have any dignity at the workplace. Amazon has the power to shape how people work well beyond its warehouse walls. In fact, the model it has developed is being adopted by other firms, in logistics and in other sectors of the economy. Workplace democracy, workers' privacy, and even workers' health and safety are at stake.

New policy choices that are strong enough to counter the challenges generated by Amazon are needed if we are to stop the harms the company inflicts on workers across the globe. This report has highlighted the most problematic effects of workplace surveillance at Amazon. Now it is up to workers, their unions and policy makers to make the changes necessary to build a more just and sustainable future.

This report was authored by Alessandro Delfanti, Lilian Radovac, and Taylor Walker in June 2021.⁵⁴

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