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Essential jobs, remote work and digital surveillance: Addressing the COVID-19 pandemic panopticon

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Abstract. *An unprecedented COVID-19-induced explosion in digital surveillance has reconfigured power relationships in professional settings. This article critically concentrates on the interplay between technology-enabled intrusive monitoring and the augmentation of*

managerial prerogatives in physical and digital workplaces. It identifies excessive supervision as the common denominator of “essential” and “remotable” activities, besides discussing the various drawbacks faced by the two categories of workers during (and after) the pandemic. It also assesses the adequacy of the current European Union legal framework in addressing the expansion of data-driven management. Social dialogue, workers’ empowerment and digital literacy are identified as effective solutions to promote organizational flexibility, well-being and competitiveness.

Keywords: *essential workers, telework, digital surveillance, COVID-19, algorithmic management, employee monitoring, managerial prerogatives, collective bargaining.*

1. Introduction

The first quarter of 2020 marked a traumatic hiatus between the past and the “new normality” – an uncharted territory whose contours are still largely unknown.

On 11 March 2020, the World Health Organization classified the outbreak of the coronavirus disease 2019 (COVID-19) as a pandemic and advised governments to implement substantial measures to address the first global wave of this public health emergency. This ushered in restrictions on activities such as in-person schooling and team meetings, mass gatherings and long-haul travel. However, all these activities were promptly offered surrogacy by digital means, especially but not exclusively in the world of work. It is undisputed that new technologies have largely benefited from these forced isolation measures and they are likely to be an ever more pervasive presence in workplaces and society at large as a result. The instant effects of the pandemic have led to a powerful digital acceleration, which could have otherwise

taken decades to come about. Predominantly described as a magnifier of pre-existing movements, the pandemic should therefore be regarded as a window into some possible futures of work that have arrived sooner than anticipated and are causing growing anxiety.

Acting responsively, several studies have mapped the policy initiatives taken to minimize the ever-present threat of infection and cushion the nefarious outcomes of the socioeconomic disruption brought about by the pandemic. In many cases, fundamental freedoms have been exceptionally put on stand-by, with little if any collective scrutiny, as rapidity has been given as a sine qua non condition of flattening the curve of infection. On a more positive note, extraordinary economic measures have been implemented to benefit all categories of workers, sometimes regardless of their contractual status, though in a temporary way (Lane 2020). Governments have taken unprecedented steps to aid workers, adopting a universalistic approach. Such a comprehensive paradigm could be a promising legacy of this unsought hardship, but it remains to be seen whether supranational and local regulators will use these lessons to reshape existing rules.

COVID-19-related regulatory schemes are worth examining as they amount to a “parallel” employment law system that replaces or, more accurately, complements the existing legal framework. They include paid sick and emergency leave, the anticipation of paid annual leave, expansion and amendment of short-time work schemes, dismissal freezes, unemployment allowance, bonuses for working parents, sick pay and assistance for the self-employed, various income relief measures (Mangan, Gramano and Kullmann 2020). However, this article strives to move beyond a mere compilation of labour market and social responses. This effort would prove titanic while adding very little to the comprehensive and updated research conducted by scholars, international organizations and policy centres (ILO 2020a). Moreover, subtly, many emergency provisions have already become structural, constituting the lifeblood of a new model of work relationships and regulatory paradigms. Accordingly, this

article will try to make sense of some consolidated trends. Its overarching goal is to analyse and discuss crucial developments in digital surveillance, originally justified by disease containment efforts and then reconverted to facilitate reopening. These developments are arguably here to stay for longer than imagined, as demonstrated when the virus had a relatively smaller impact.

This emergency has increased the scope for unaccountable management and insidious self-regulation, which ought to be critically explored, exposed and addressed. We will look at what kinds of technologies are being integrated into organizational processes to track and monitor workers, discussing how they are reconfiguring power relationships and the resulting positions of command and subjection. We also assess the suitability of the existing socio-legal and institutional frameworks, with a focus on the European Union's General Data Protection Regulation (GDPR) and on two more recent initiatives, namely the so-called AI Act and the proposed Directive on improving working conditions in platform work. These two strands of research are intertwined. On the one hand, this article grapples with the stark polarization between "essential" and "remotable" jobs and briefly discusses the advantages and drawbacks faced by two broad categories of workers (Mundlak and Fudge 2020). On the other, our analysis focuses on the common denominator: a COVID-induced panopticon.¹ We intend to demonstrate that managerial prerogatives have received a boost without the activation of the related mandatory or collectively negotiated counterweights (Deakin and Novitz 2020).

This article will adopt an inductive approach. It is based on an integrated methodology, both descriptive and analytical. It bridges academic and grey literature, given the novelty and the velocity at which the phenomenon has developed, and is organized as follows. The second section presents the principal traits of two groups of workers, those working from home and

¹ The term "panopticon" was adopted by Michel Foucault, who borrowed it from Jeremy Bentham (Foucault 1975). It was originally used to refer to a prison design consisting of a central watch tower surrounded by inward-facing cells. From the tower, a watchman could see into all the cells, but their occupants could not know if they were being observed, resulting in a regime based on permanent visibility and coerced discipline.

those working on-site, unpacking this great bifurcation. Having mapped the broadening of monitoring prerogatives specifically, the third section seeks to make sense of the phenomenon under study by exploring the legal framework of the European Union (EU). After presenting the main dangers of these developments on an individual and organizational level, this section also advocates for a more critical attitude to personal data sharing. In concluding, the fourth section advances some solutions to the challenges posed by this transformation, mostly based on social dialogue, digital literacy and workers' empowerment.

2. The new great polarization: "Essential" and "remotable" jobs

There was no blueprint for handling a health crisis on the scale and with the epidemiological characteristics of the COVID-19 pandemic. The early-stage debate on how to react was fierce, inundated with divided opinions. After initial bewilderment, the most common response consisted of imposing, first, the confinement of "red zones" or the lockdown of larger areas and, second, the lockdown of entire countries. Workers could only access their employers' or public workplaces to conduct "essential" activities (in some cases, governments provided a detailed sectoral taxonomy to determine what activities fell within this category, while in others the decision was left to the employers themselves). Work-from-home plans were massively adopted by companies in the service sectors and for workers engaged in non-manual activities, this being the main option to avoid business discontinuity, decongest public transit and keep workers safe (ETUC 2020).

This much-needed policy resulted in a blunt divergence between two categories of workers, partly redefining traditional occupational cleavages. On the one hand, essential workers, divided into two subgroups (frontline and behind-the-scenes or "invisible" workers), had to continue working in person, facing overwhelming complexities and putting their lives in danger. On the other, white-collar workers (consultants in the finance, insurance and real estate industries, public officials, academic instructors, administrative and clerical occupations in all

industries, managers and executives) were asked to move to different workplaces – mostly to their dining rooms abruptly reconverted into not-so-temporary offices. Crucially, not all tasks are amenable to remote working owing to the content of duties, company culture, and infrastructural and business readiness.² This dichotomy has also shown deep fault lines in a two-tier economy, like that of several EU countries such as Italy and Spain (Bonacini, Gallo and Scicchitano 2021). In general, workers in the middle- or upper-income brackets were the most likely groups to be allowed to work from home, whereas those in the lowest income bracket had no alternative but to work on-site regardless of the circumstances (Cetrulo, Guarascio and Virgillito 2020), revealing a stark difference in treatment across occupational roles, even inside the same company.

2.1. Essential and exposed, clapped and scrapped: The dangers facing on-site workers

Chronicled in major media outlets on the occasion of advocacy initiatives aimed at improving working conditions, workers praised (and applauded)³ as essential had to keep business and public services open, including during the peak of the outbreak. This group of place-dependent workers has been overshadowed by the prevalence of debates related to the perks and pitfalls of remote work, in turn spurring ferocious divisions. The group includes healthcare, security, agricultural, food production and processing, warehouse, construction, janitorial and maintenance workers, cashiers in pharmacies, grocery and general merchandise stores, delivery couriers and truck drivers (Blau, Koebe and Meyerhofer 2020). Women,⁴ disadvantaged

² A preliminary study has found that “37 percent of jobs in the United States can be performed entirely at home, with significant variation across cities and industries” (Dingel and Neiman 2020, 2). These jobs typically pay more than jobs that cannot be done at home. If applied to 85 countries in the world, the same occupational classification reveals that lower-income economies have a lower share of teleworkable jobs (Dingel and Neiman 2020). Worryingly, remotable jobs may be easily amenable to “offshorability” (Lund et al. 2021).

³ Referring to various popular hashtags on social media inviting people to clap frontline workers in organized public demonstrations of appreciation.

⁴ Worldwide, about 70 per cent of jobs in the health and social care sectors are held by women. See UN (2020).

minorities, less educated people and migrants (often at the fringes of labour markets) are overrepresented in sectors or occupations not amenable to remote working arrangements.

Although the pandemic has exacerbated insecurity for all “non-standard” workers, its impact has been disproportionate on precarious workers, who always bear the brunt of socioeconomic crises. Some of the vulnerabilities associated with new forms of (casual) employment have also worsened, delivery workers being particularly visible on empty streets during lockdowns. Migrants have likewise been “forced to accept precarious and unsafe working conditions, which are in turn amplified by the exceptionality of the situation” (Ristuccia 2020). The situation compelled indispensable workers to choose between economic adversity, due to the absence of assistance schemes, and the risk of infection, to the detriment of their families and colleagues (Bender and Ulceluse 2020). Several reports detail a drop in unsteady income amounts owing to reduced demand or inability to work for multiple reasons (ILO 2020a). Many workers suffered a decrease in their already irregular working hours. The growth of the “e-commerce supply chain” threatens wages and working conditions: mass self-isolation has indeed been made possible by legions of underpaid workers providing critical services (Benner et al. 2020).

Since the onset of the pandemic, social partners have negotiated specific protocols on safety and health in many countries, supported by local authorities and government agencies (Gamio 2020). Despite this, in many industries workers typically come into close contact with colleagues (Benner et al. 2020), customers or other people as an indispensable part of their work. For many of them, working conditions have remained at their pre-COVID-19 standard, under the same tyrannical managerial regimes. However, the situation was aggravated by concomitant factors. Commuters faced a reduction in public transportation and “on the go” services. Many blue-collar workers spent a long time inside poorly ventilated environments, for instance, in the food production sector and in fulfilment centres, where several outbreaks

started. The workplace has been one of the channels of contagion, at risk of downplaying the effects of lockdown policies. In a preliminary phase, there were difficulties in purchasing and distributing adequate quantities of personal protective equipment (PPE), even in critical sectors. Some workers experienced an *intensification* and an *extensification* of work and were, in some cases, pushed to unnecessary extremes in order to fulfil unrealistic expectations (Hodder 2020).

Importantly, both frontline and “invisible” workers had to follow new precautionary measures inside and outside the workplace. In line with a tech-solutionist narrative, “there was an app for that”.⁵ Most on-site workers were asked to install software or applications on their personal devices to obtain “passports” to prove a “symptom-free” state of health, along with additional medical documentation (Bodie and McMahon 2021). They had to fill in “questionnaires” on self-reported medical information to be shown at the entrance of their workplaces. Several companies reinvented themselves to offer what they advertised as new “biometric solutions for safer spaces” of questionable usefulness. The list of gadgets includes ultrasonic bracelets beeping every time blue-collar workers in the UK automotive industry or dockers (in a Belgian port) are within virus-catching distance of a co-worker, and a sensor communicating with a thermal scanner to activate a green light in public offices informing that the incoming worker does not have a temperature. Other companies introduced alerts notifying about sanitation shifts around the clock to indicate when offices have been cleaned, GPS-integrated applications tracking employees’ every move or enforcing hygiene guidelines, radio-frequency identification (RFID) measuring and optimizing the occupancy rate of spaces (scheduling software to gauge time attendance and ensure group rotation), and text messages urging compliance with hygienic good practices. The most dystopian solution is an under-the-skin microchip giving workers contactless access to factory or office facilities. Crucially, almost all tools also permit private contact tracing (Ponce Del Castillo 2020).

⁵ In reference to Apple Inc.’s slogan “There’s an app for that”.

In order to avoid breaching data protection laws, most of these monitoring activities were carried out on the spot, accompanied by requests for workers to sign a statement of responsibility. Although submitting to monitoring was voluntary, there was little if any room for negotiation, compounded by a sense of responsibility towards colleagues, which led to widespread acceptance. This approach punitively shifted responsibility for safety onto workers themselves. Worryingly, the promise of contactless interaction fostered widespread recourse to facial recognition instruments and even more sinister tools such as lasers to indicate proximity between colleagues or if too many employees were congregating in warehouses and large malls (Browne 2020). In many cases, new mask detection systems were deployed, allowing the verification of whether people entering the company's premises were wearing PPE properly. Various hospitals experimentally tested *AdvanWash*, a system using RFID-equipped hand sanitizer dispensers, working in conjunction with RFID tags or badges worn by workers. Its principal goal was to ensure that healthcare workers washed their hands, preventing access to critical areas in case of non-conformity. Not surprisingly, the system was also able to store data for analytical or historical purposes. In the United States, hand-hygiene monitoring systems were soon turned into performance management devices to measure whether workers were meeting their expected key performance indicators (Bittle 2020). Drozdiak and Fouquet (2020) report several cases where the need to ensure business continuity in order to revive crushed economies was taken as an arguably irresponsible opportunity to blend social distancing compliance, handheld gadgets, health protocol enforcement and productivity tracking tools.

While the introduction of such pandemic panopticon technology was lawful, at least in an exception-to-rule scenario, recent history has demonstrated that seemingly innocuous data-gathering devices can be put to nefarious uses. Low-wage workers could end up being treated as “guinea pigs” in sectors such as retail and distribution, where performance-enhancing technology is already in place. On closer inspection, such tools are often used to reconfigure employer–worker relations within and across organizations (Kellogg, Valentine and Christin

2020). The volume, variety and velocity of data collected during the pandemic pose a serious threat, as it is likely that the data could be used in a post-emergency period to suit companies' capricious behaviours. In general, this uncritical acceptance opens the door to a new generation of employee monitoring widgets beyond those that are currently regulated (Eurofound 2020), contributing to the erosion of issues such as meaningful consent, collective involvement and prior administrative authorizations. What is chiefly problematic is the opaque nature of these monitoring tools which, combined with their hurried adoption, further limits workers' understanding of employers' strategies and objectives. This may undermine human agency, erode labour rights and thwart productivity. It is therefore extremely urgent to challenge this unrestrained penetration of a culture of total surveillance (Whitaker 1998).

Contrary to renewed interest in full automation, the pandemic shed light on usually hidden human networks (Ekbia and Nardi 2017). Robots and artificial intelligence (AI) are constantly maintained by the essential workers that make a quarantined world operate (Mateescu and Elish 2019). The very fact that the economic crisis triggered by the pandemic was accompanied by a generalized "take-it-or-leave-it" posture towards the latter may have played a role in curbing contestation and collective claims. Although flawed on many levels, the narrative of job-displacing technology has been used to freeze harsh reactions and facilitate the gradual yet inexorable erosion of protection. On-site workers have directly experienced the situation of colleagues left unemployed or furloughed as businesses struggle to meet costs (Hodder 2020). Calamities indeed create a culture of uncertainty regarding redundancy risks and future employment prospects with shifting priorities for individuals, organizations and their wider communities, thus fragmenting the labour force and hindering solidarity. In this respect, digital technology plays a far-from-neutral role, as it can lead to slow, deep and almost invisible attrition to the detriment of working conditions, including wages, accompanied by sluggish policy responses.

Generally speaking, many non-standard workers fell through the cracks of prominent emergency measures and had limited access to unemployment benefits, health insurance and sick leave, as they did not meet the eligibility criteria owing to the discontinuous nature of their employment (The Fairwork Project 2020). Most measures to protect platform workers, ranging from contactless delivery and cashless payments to distribution of PPE (masks, gloves and sanitizing wipes), were merely preventive. What is striking is that many principals avoided taking decisive action to minimize the potential risk of worker misclassification lawsuits. Non-standard workers in the so-called “grey area” face the paradoxical consequences of their debatable legal status, which does not often reflect the reality of their employment relationship. The platforms instruct workers on good hygiene practices through strict orders, yet they place all their own responsibilities in this regard on the workers because any decisive interference would point to the recognition of the existence of an employment relationship in court (Aloisi 2022). By shifting instead of reducing the risk, this vicious circle gives rise to detrimental effects on public health and society at large.

2.2. Working from home in exceptional times: Out of sight, mind the boss

The lockdown triggered “the most extensive mass teleworking experiment in history” (ILO 2020b): offices were left unoccupied all at once, almost overnight. Forty per cent of employees in the EU started working remotely full-time, this being the first time that approximately one in four workers had teleworked (ILO 2020b).⁶ Not surprisingly, this alternative working arrangement was mainly used as a measure to flatten the infection curve while saving a significant number of jobs (Adams-Prassl et al. 2020), rather than as a radical yet voluntary

⁶ According to Sostero et al. (2020), by June/July 2020, 34 per cent of EU27 employees were solely working from home and 14 per cent in conjunction with working from other locations including the employer’s premises. Just 3.2 per cent of employees in the EU-27 usually worked from home – a share that had remained relatively stable since 2008.

(and so far, niche) organizational policy. Thus, an unorthodox pattern conceived to enhance elasticity and agency was rebooted to allow continuity, resulting in an unexpected increase in workload. “Telecommuters” found themselves working longer hours in the absence of a dedicated office or desk space, and on *permanent availability* mode (DeFilippis et al. 2020). For white-collar occupations, paid work encroached on the time once spent on leisure or family affairs, with little capacity to switch off given the expectation of around-the-clock commitment in the “home office”.

Amid the pandemic, many commentators rushed to assess this flexible arrangement without considering that the mass remote working experiment was profoundly influenced by the unusual circumstances in which it took place. Only collective and individual bargaining can unlock a genuinely emancipating version of teleworking arrangements. Despite the special circumstances that removed certain bureaucratic and contractual barriers, many workers and managers, forced to familiarize themselves with a long-overdue modern organizational template, found remote work convenient and successful in terms of commitment and satisfaction. Preliminary statistics confirm that productivity has not dropped, although many workers were bound by the constraints resulting from confinement policies (Powell 2020). Many workers also had to carry out additional and unpaid education and caring duties (home-schooling for children was the norm) or face challenging or abusive household conditions.

Regrettably, remote work is an opportunity that not all managers were willing (or culturally prepared) to offer, including when public authorities strongly recommended it or made it compulsory. Small and medium-sized enterprises have hesitantly implemented and swiftly lifted remote working arrangements at the earliest opportunity. Towards the end of 2020, many local politicians, for instance, encouraged people to go “back to work” – by which they meant “back to the office” – to support economic activities in urban districts (*The*

Economist 2020). This reveals a widespread reluctance to extend unsupervised autonomy, as well as the inability to overcome a toxic version of presenteeism and workaholism.

The tech-solutionist approach depicted technology as a panacea that would help overcome the crisis. Very soon, many were forced to realize that there are no digital solutions for organizational problems and structural gaps. However, it should be noted that many pilot programmes were already in place to counter this narrative. There is no lack of positive experiences but they are typically the result of far-sighted collective agreements and company protocols (ILO and Eurofound 2017). Understandably, only companies that had previously designed alternative workflows and equipped their employees with laptops, phones and secure software benefited from this abrupt shift. Conversely, those companies that suddenly had to coordinate teams of scattered workers without a predefined plan greatly suffered from a lack of training. In order to be effective and authentic, remote work requires a qualitative managerial leap, moving away from micromanagement and shifting the evaluation of work performance from mere physical attendance towards outputs..

Disregarding the nuances of the numerous popular definitions of remote work, it must be noted that, as far back as 2002, the European Framework Agreement on Telework⁷ was signed to regulate the terms and conditions of people working remotely. It established a general principle of non-discrimination between teleworkers and comparable workers at the employer's premises in terms of workload and performance standards. Following the signature of the Framework Agreement on Telework, this model has been regulated to increase competitiveness and uphold a viable work–life balance in several jurisdictions (Samek Lodovici 2021). Notably, social partners have agreed to adopt this arrangement at both the national and company levels.

⁷ Signed by the European Trade Union Confederation (ETUC), BusinessEurope, the European Centre of Employers and Enterprises providing Public Services and Services of General Interest (CEEP) and the European Association of Craft, Small and Medium-Sized Enterprises (UEAPME) in Brussels on 16 July 2002.

It is undeniable that, thanks to the rapid development of technologies, in recent years this arrangement has been widely adopted, particularly in large companies, to enhance well-being and fulfilment, establish family-friendly policies, and boost productivity and efficiency (avoiding unnecessary interruptions and distractions and reducing idle times). Simultaneously, such formats have also been used to lower fixed costs associated with office spaces, employee mileage allowances and extra-time payments.

The quest for flexibility has played an important role, too. The underlying assumption is that workers are not tempted by rigid organizational models in highly vertical and constrained structures that do not allow them to pursue autonomy, project-based arrangements and time sovereignty; workers are keen on using technology in a liberating way to better adapt workloads to individual needs and preferences. Remote work arrangements have also been considered a factor in the attractiveness of companies striving to entice and retain talent or even a deliberate strategy to improve the diversity of teams by leveraging a potentially global pool of candidates.

The short-sightedness of personnel organization policies was overwhelmingly evident during the pandemic. Preliminary data show that little progress was made to foster mutual trust and results-based schemes (Fana et al. 2020). Less reassuringly, in the face of a mass exodus from corporate spaces, many managers and executives reacted with alarm and imposed stricter management control. While traditional hierarchies were partially impacted, workers – especially junior ones – responded with overcommitment or by engaging in voluntary “visibilizing” practices (Delfino and van der Kolk 2021; Hafermalz 2021). Many firms and institutions, unable to draw up work plans based on objectives, verifiable deliverables and multilateral accountability, increased the number of online meetings and hastened to implement surveillance software (to measure the time spent online, the number of keystrokes on the keyboard or the list of websites visited). Among other things, the inability to modernize work

arrangements has slowed down the implementation of a “more trusting and more results-based” form of management (ILO 2020b, 4).

Those who work from home risk finding anxious line managers obsessively looking over their shoulders to reduce “cyberslacking” under the erroneous assumption that employees do not stay motivated on their own (Eurofound 2020). Monitoring software that promise to allow managers to retain control over their workers have experienced an unparalleled boom. Data show that in April 2020, demand for tracking tools surged by 54 per cent and was on average 58 per cent higher in 2021 than it was before the pandemic (Migliano and O’Donnell, 2022). Precautionary measures as regards cybersecurity were often skipped. The crisis has been a marketing windfall as well as the opportunity to fine-tune existing applications.

The list of software grows by the day. *ActivTrack* monitors the programs used and tells managers if the employee is distracted, wasting time on social media. *HubStaff* takes screenshots of employees’ computers every five minutes. *Time Doctor* and *Teramind* keep track of every action conducted online. *Interguard* compiles a minute-by-minute timeline that considers every piece of data, such as web history and bandwidth utilization, and sends a notification to managers if workers pick up on anything suspicious and when they exhibit a combination of flagged behaviours. *OccupEye* records when and for how long someone is away from their workstation (TUC 2020). *Sneek* continuously takes photos of colleagues to generate a timecard and circulates them to keep the team’s mood up. *Afiniti* pairs customers with agents according to demographic data. *Pesto* synchronizes professional calendars and music playlists to create a sense of community; it also features a facial recognition feature that could display a worker’s real-world emotion on their virtual avatar’s face. More mundane applications are used to replicate the experience of “corporate camaraderie” online with gossip rooms, watercoolers or “not-so optional happy hours” to “create that sense of togetherness” (Harwell 2020).

While there is an abundance of reports about “fringe software vendors”, it is often overlooked that all applications, including the seemingly innocuous ones like Microsoft 365 (Silverman 2020), aggregate all sorts of data into simple charts or graphs that give managers a high-level view of what workers are doing (Cyphers and Gullo 2020). The same goes for collaborative ecosystems, cloud spaces and shared repositories, which are now more indispensable than ever before but are too expensive to be developed internally or through proprietary technologies.

Overreliance on standardized metrics risks narrowing an organization’s focus on simple activity rather than on decision-making and accomplishments (Nguyen 2020a). For instance, metrics often measure pointless parameters or underestimate preparatory activities such as ideation and planning. Concomitantly, workers are lured into self-monitoring their own performance through self-tracking dashboards, thus fostering conformity. As a result, “the raw data collected of the various activities can then be fed into increasingly complex modelling systems and used to construct behavioural profiles, patterns and benchmarks” (European Parliament 2020). In turn, these metrics can be manipulated and repurposed to infer unspecified characteristics or to predict unknown behaviours (Tucker 2019). Yet, data may be accidental, inaccurate and erroneous. Transparency about productivity scores and the extent of monitoring is far from granted. Moreover, there is no evidence that metrics used to determine productivity are closely correlated with the outcome. As a result, they raise concerns about their accuracy and interpretation, particularly in inexperienced hands and without consulting with the workforce.

3. The pandemic panopticon and what to do about it

There is a crossroad at which the bifurcation between essential and remotable workers ends. The incomplete inventory of cases and applications sketched out in the previous paragraphs tells us that on-site and remote workers share their subjection to a more pervasive pandemic-

triggered panopticon. Despite the significant differences, across the divide, activities are mediated by digital tools and completed through infrastructure that creates “time-stamped logs” of activities (Leonardi 2021). All human resources management (HRM) functions (screening, interviewing, hiring, setting tasks, measuring productivity, evaluating performances and terminating contracts) have shifted online, often entrusted to automated decision-making systems, “without an intuitive link between what is done when ‘logged-in’ and how it is assessed” (Aloisi and Gramano 2019, 98). This makes it difficult for workers to provide justifications, object to a decision or ask for an explanation. Moreover, the simple existence of these evaluative practices signals a lack of trust – the cornerstone of a fruitful relationship – which may result in disengagement and have a suboptimal or negative impact on productivity (Migliano and O’Donnell, 2022). Even worse, it may also give rise to an explosive atmosphere of hostility, deviation and resistance (Burdin, Hallida and Landini 2020).

Given the situation of information asymmetries and unbalanced powers (Rogers 2020), modern workplaces are critical arenas for testing issues such as privacy rights and how the benefits of technology are shared (Pakes 2020). While platform work in all its ramification has been a site of experimentation (Ivanova et al. 2018), its most advanced aspects, such as the matching of individuals to tasks, a fine-grained imposition of schedules, and the automatic adoption of reward and disciplinary measures, are spreading much more extensively to larger segments of the labour market. Leveraging a sense of inevitability, the pandemic has magnified the trends of “informatization” and “platformization” of work (Zuboff 2015; Ajunwa, Crawford and Schultz 2017).

Although some of these devices have facilitated compliance with the rules of conduct imposed for anti-contagion purposes, they have also contributed to the hasty normalization of intrusive monitoring. The potential of employer surveillance is unprecedented in terms of its severity, methodology, frequency and precision (Hanley and Hubbard 2020). The pandemic has

amplified the use of tools capable of scanning emails, counting the hours spent in collaborative environments, capturing screenshots of employees' monitors to prevent distractions, or even keeping the cameras permanently on. In physical environments, digital monitoring has been deemed justified in the name of safety and public health (Putzier and Kutter 2020). However, given the massive investments that have been made in such tools and software, it is unlikely that they will simply be deactivated when the crisis finally passes. Concomitantly, such ample adoption could increase competition and lead to declining costs, in turn encouraging an ever-wider implementation. And the gigantic amount of "digital exhaust" that such activities produce and can be used to retrace personality traits, could be turned towards not only anticipating but also shaping behaviours prescriptively, in a very individualized and detailed manner (Bodie et al. 2017). The foreseeable consequence is the total erosion of autonomy, self-government and agency, impairing abstract thinking and creative contribution in favour of diligent homogeneity. Game-changing technologies reflect business preferences that can be far from ideal. What is worse, given their obscure nature, they end up limiting the transparency of employers' strategies, jeopardizing contestation and freezing industrial action.

Undeniably, though, always-on surveillance is not a by-product of the pandemic (Aloisi and De Stefano 2022). Even before this coronavirus struck, devices for tracking, watching, storing and data mining had long colonized workplaces and private spaces, opening the door to an optimized combination of workforce analytics and algorithmic governance (Otto 2019; Mateescu and Nguyen 2019), techniques that let algorithms extrapolate correlations with minimal supervision. In this inflexible environment, there are no alternatives to performing the work as prescribed (Aneesh 2002).

The emphasis on command rather than on emancipation constitutes a failure. First, the emerging panopticon shows serious backwardness in terms of corporate culture, which is reflected in the levels of satisfaction and well-being. For both essential and remote workers,

monitoring may end up lowering productivity, as it makes delivering on metrics more urgent than generating tangible results (Hanley and Hubbard 2020). The adverse effect of this mindset, whereby workers are treated as uncooperative and untrustworthy children, is evident (Sarpong and Rees 2014). Second, employees have been accepting monitoring as a necessary price to pay to protect their health and job security. The risk is that they become habituated to these new devices. A combination of passive acquiescence and an ostensibly participatory push encourages the sharing of information in exchange for little reward in terms of self-conscious reputation management. The dominant ethos emphasizes self-tracking and measurement, as habitually occurs with corporate well-being programmes.

What is left out of the story is that the very same technologies that are adopted to monitor workers could be repurposed to improve the transparency, verifiability and objectivity of managerial decisions, thus advancing inclusion of underrepresented populations and reducing socio-economic gaps. Instead of contributing to replica-building of previous cohorts of recruits, data can be exploited to increase diversity by promoting the de-marginalization of vulnerable groups (Ajunwa and Greene 2019). Once again, rule-makers must be aware that, far from being impartial and bias-free by definition, tech-driven innovation is ambivalent, as its impacts are dependent on political and managerial choices (Hare 2022). Democratic debate and civic resistance are possible and necessary. As discussed in the following paragraph, the solutions lie in a critical approach to personal data sharing. It is equally important that institutions and social partners mobilize existing regulations and launch a new round of bargaining on monitoring instruments, also at a decentralized level, with the aim of challenging “black boxes” and reaping the good opportunities offered by technology. Beyond the conventional compromise logic, it is urgent to make sure that technologies serve up workers and not the other way around.

3.1. Omnipresent surveillance turning workers into data and the expansion of managerial powers

There is little exposure concerning how remote monitoring, management by algorithms and micro-assessment are altering power relationships in the workplace, which already have a built-in layer of (legitimate) surveillance. The main question confronting theoretical analysis around employee monitoring is whether we are “dealing simply with quantitative changes, changes in the *extent* of surveillance, or with qualitative changes that affect the very *nature* of employee surveillance” (Manokha 2019). Is authority today the same as authority in the past?

There are several legitimate grounds justifying lawful monitoring of the workforce: protecting the assets, optimizing processes, enforcing policies on rest periods, complying with all the safety and health requirements (including the need to avoid stress and psychosocial risk), preventing detrimental activities, hazards and frauds. A certain degree of supervision is embedded in the employment relationship, conceived as an “infrastructure” where contractual forces are in equilibrium (Landes 1969). While providing management with ample unilateral power to organize, monitor and discipline human energies in exchange for economic security and stability, thus enhancing operational proficiency, labour regulation is meant to “reconcile these almost ‘seigniorial’ prerogatives with the respect of the human dignity of workers” (De Stefano 2018, 15). This contractual model pursues the paramount aims of rationalizing managerial powers and containing the employers’ juridical domination to protect human dignity (Deakin 2002).

This article contends that a “genetic mutation” is occurring in terms of the comprehensiveness and instantaneity of information collected and analysed. This change also affects the nature of monitoring power, which now exceeds the capacity of any human gaze or analogue supervision. Essential workers are witnessing a shift from direct observation to technocratic monitoring, while white-collar workers are experiencing an aggrandizement of managerial prerogatives through deceitful and rigid forms of power (Allen and Masters 2021).

Both groups are exposed to a form of omnipresent, real-time and relentless surveillance that is not confined to the workplace or to working time: there is a change in its locus and in the temporal scope (Katsabian 2019). Such augmentation is not matched by the attendant counterweights defined by the supranational and local legislators or collectively negotiated by social partners.

The nature of the new computerized tools involved and the possibility of developing predictive capabilities essentially “differ fundamentally from the traditional management structures around which employment law has been designed” (Adams-Prassl 2019, 134). This causes an enlargement of the managerial prerogative upon which labour regulation is premised. Although it is true that large firms have already developed methods of organizations that are “more formalized and more consciously contrived than simple control” (Edwards 1979, 20), the canonical limits to managerial powers were conceived when the potential of new techniques was admittedly unthinkable, at a time when supervision was exercised by humans in a more direct, physical manner. This has resulted in an unprecedented intensification of the authoritarian nature of the contract of employment (Collins 2018) and even the most effective traditional counterpowers may prove blunt instruments if not aptly adapted or updated in a timely manner (Estlund 2017).

Worse still, technology-coded authority is far less open-minded than human hierarchies, as it optimizes previous and current disparities, stratified in a wealth of granular data sets (based on age, sex, race and educational backgrounds), bringing them to a level of non-verifiability, which may also nullify the operability of existing legal remedies and dilute responsibilities on the part of the employer (or the service provider/technology deployer). Although it is indisputable that human decision-makers may also have the same systemic flaws, a digital tool embedding biases is less controllable when it reflects developers’ explicit or implicit preconceptions. Algorithmic management is too rigid to diverge from predetermined solutions,

not to mention machine learning spiralling out of programmers' control and becoming able to learn how to ascribe positive or negative weight to attributes which are then used as "proxies" for the protected characteristics, thus infringing equal treatment rules (Kelly-Lyth 2021).

For instance, when women are underrepresented in some sectors, an efficient AI system sifting through candidates in hiring processes might exclude female workers in the recruitment phase to match the patterns observed in previous cohorts. The same is true for software trained to promote employees with consistent career paths, which could penalize those who had taken maternity or sick leaves. According to an Italian court order,⁸ the "blindness" of the algorithm in question was discriminatory because the system was not designed to distinguish if a food-delivery rider's absence was due to sickness or to lawful strike action. Software drawing heat maps, which could potentially be used to track (and avert) "unionization" risk has sparked outrage (Palmer 2020). Hence, assumptions regarding the objective or neutral nature of AI-driven governance are largely mistaken.

3.2. Without collective scrutiny, privacy law could not be enough

All around the world, the near horizon is populated by a breadth of new practices, some of which look very extreme. If deployed indiscriminately and irresponsibly, they are likely to infringe on workers' privacy rights and on a long list of other fundamental rights (Hendrickx 2019). A contact tracing app can inform managers of all exchanges between co-workers and even record minute details of these encounters, including of with whom and where they happened, how long they lasted and – if equipped with access to microphones or cameras – the subject of conversations (or at least the tone of voice). In the case of work from home, cameras can record a worker's surroundings and infer information about private matters and sensitive details. Even worse, such tools may defer, interfere with, and ultimately have "a chilling effect

⁸ Tribunale di Bologna, Order No. 2949/2019 of 31 December 2019.

on the fundamental rights of employees to organise, set up workers' meetings, and to communicate confidentially" (Article 29 Data Protection Working Party 2017).

The boom in productivity and biometric technologies is raising new privacy questions. In addition, the existing legal framework is often accused of failing to keep pace with the ongoing shift towards despotic attitudes. What is worse, the scope of application of certain provisions on monitoring and privacy – based on a static understanding of information and communications technologies – may fall short in providing an up-to-date model capable of addressing disruptive developments (Aloisi and Gramano 2019). As surveillance is being replicated by imposing the most basic tenets of Taylorism at a relatively low cost (hyper-standardization and micro-measurement through the calibration and tailoring of each task), stakeholders should revive the key principles of inviolability of private and professional lives to limit abuses against workers' human dignity.

EU and US law differ in this regard, the latter giving employers ampler surveillance powers (Kidwell and Sprague 2009). In US workplaces, the expectation of privacy on the part of the employees is "reasonably" limited on the rationale that they are using equipment owned by the employers and fulfilling business needs. In an excessively pragmatic manner, "there is no legal protection against surveillance *per se*" (Bodie et al. 2017, 988). However, it must be noted that some forms of surveillance used in certain places or at certain times are subject to potentially multi-dimensional legal constraints (Sachs 2014; Otto 2016). EU countries have a different tradition, but some US states, such as California and Illinois, have recently legislated specific pockets of protection with a view to updating the most anachronistic provisions (Finkin 2017).

In the EU, several GDPR provisions have been used to legitimize data processing.⁹ Among others, Article 9(2) offers the bases on which health data that are normally non-processable (Article 4, GDPR) can be lawfully treated by adopting measures to avoid the identification of individuals, in line with the relevant jurisprudence of the Court of Justice of the European Union. This has been made possible under letter (b), which provides for data processing for the purpose of “exercising specific rights of the controller or of the data subject in the field of employment and social security”; letter (i), which provides an exception for “reasons of public interest in the area of public health, such as protecting against serious cross-border threats to health” (with recital 46 referring to the control of epidemic as a circumstance in which the processing may serve both the public interest and the vital interests of the data subject); and letter (j), which allows for processing “for purposes in the public interest, scientific or historical research purposes or statistical purposes”. The case of the COVID-19 outbreak falls under the scope of the GDPR provisions but suitable and specific safeguards for the fundamental rights and interests of the data subject must be put in place. The same importance must be given to the paramount principles of proportionality, purpose limitation, lawfulness, fairness and transparency to ensure that the exercise of surveillance power is well founded and respects the legal requirements (Article 5, GDPR). The GDPR should be read in conjunction with the guidelines adopted by the European Data Protection Board (EDPB),¹⁰ whose approach is praiseworthy, as it advocates reinforced levels of meaningful consent in unbalanced situations. In this respect, domestic data protection authorities have also proved themselves to be vigilant and proactive (Suder 2021).

⁹ EDPB (European Data Protection Board), Statement on the Processing of Personal Data in the Context of the COVID-19 Outbreak, adopted 19 March 2020.

¹⁰ EDPB, Guidelines 03/2020 on the Processing of Data concerning Health for the Purpose of Scientific Research in the Context of the COVID-19 Outbreak, adopted 21 April 2020.

Although the importance of these rules is not to be underestimated, we argue that the effectiveness of the GDPR has been profoundly undermined by a long list of specific derogations, found in its Articles 6 and 9. Moreover, Article 89(2) of the GDPR allows domestic lawmakers to restrict (some) of the data subject's rights as set out in Chapter 3 of the Regulation. This creates a rather heterogeneous situation depending on the Member State and national data protection authority. Moreover, in the context of the pandemic, employers' responses "have mirrored state policies meant to track and monitor the spread of the disease" (Nguyen 2020b, 11). Yet, the conditions for data processing permissibility applying to public institutions are not necessarily available to private employers. While panoptic tools have been adopted on a strictly voluntary basis, fears and threats of adverse consequences may have led to submissive acceptance.

The GDPR's ban on automated individual decision-making processes aims at providing a counterweight to the automatization of organizational procedures (Article 22, GDPR). Decisions in the human resources management department, such as e-screening and performance appraisal, could fall into the scope of exceptions allowed by Article 22(2), being "necessary for entering into, or performance of, a contract". However, since workers are rarely "in a position to freely give, refuse, or revoke consent", according to the EDPB, "lawful basis [for data processing at work] cannot and should not be the consent of the employees".¹¹ Moreover, appropriate measures must be adopted by the employer "to safeguard the [worker]'s rights and freedoms and legitimate interests, at least the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision" (Article 22, GDPR).

¹¹ EDPB, Guidelines 05/2020 on Consent under Regulation 2016/679, Version 1.1, adopted 4 May 2020.

In order to avoid the ambitious purpose of Article 22 risks being confined to statutes on the books,¹² at the local level, legislation and collective bargaining are the most convincing response to the widening of managerial prerogatives, boosted by new surveillance equipment and more informed day-to-day decision-making. Legislation and collective agreements could, for instance, “lay down specific limits to data collection and processes, to ensure that decision-making complies with transparent criteria and that human agents retain final control and accountability for any decision affecting workers” (De Stefano 2020, 441). This solution is backed up by the GDPR, stating that Member States may introduce, by law or by collective agreements, “specific rules to ensure the protection of the rights and freedoms in respect of the processing of employees’ personal data in the employment context, in particular for the purposes of the recruitment, the performance of the contract of employment, ... management, planning and organisation of work, equality and diversity in the workplace, health and safety at work, ... and for the purpose of the termination of the employment relationship”. Such rules shall “include suitable and specific measures to safeguard the data subject’s human dignity, legitimate interests and fundamental rights” (Article 88, GDPR).

To give a concrete example, in June 2020, the European social partners signed a landmark framework agreement on digitalization.¹³ While acknowledging the significant contributions of digitalization in terms of security, health and safety and efficiency, the agreement stresses the risk of deterioration of working conditions and well-being of workers and calls for “data minimisation and transparency along with clear rules on the processing of personal data limits the risk of intrusive monitoring and misuse of personal data”. Interestingly,

¹² Concerning the right not to be subject to automated decision-making without human intervention, see also Article 9 of the revised Council of Europe’s Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data.

¹³ ETUC, Business Europe, CEEP and SMEUnited, *European Social Partners Framework Agreement on Digitalisation*, 2020.

it advocates for worker representative's involvement to address issues related to consent, privacy protection and surveillance.

The GDPR, which remains the overarching framework for data protection law in the EU, does not operate in a watertight compartment; rather, it is a cornerstone element of a very complex, perhaps patchy, multi-source regulatory architecture with various institutional settings. Member States are competent to introduce specific internal measures with regard to employee monitoring and data processing at work. Moreover, data protection authorities' hands-on role is also crucial to ensuring that workers' private sphere is not invaded when it comes to the electronic surveillance of their activities. According to a solid legal tradition, in most EU jurisdictions, a prior consultation phase with, or authorization from, workers' representatives are essential preconditions for the introduction of surveillance equipment. Domestic legislation and case law ensure that workers' representatives are involved through information, discussion and co-determination (Aloisi and Gramano 2019). The failure to comply with these requirements may result in the prohibition of remote employee monitoring, as well as the impossibility of using data and information that have been unlawfully collected. Thus, should these passages have been skipped due to urgency, now is the time to carry out a large oversight, enforcement and re-negotiation procedure, with the aim of implementing more privacy-friendly measures.

Unfortunately, recent policymaking at the EU level does not seem to address the risks of abusive remote monitoring adequately. In April 2021, the EU Commission presented a proposal for a Regulation on AI (AI Act).¹⁴ AI-systems "used in employment, workers management and access to self-employment, notably for the recruitment and selection of

¹⁴ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts COM/2021/206 final.

persons, for making decisions on promotion and termination and for task allocation, monitoring or evaluation of persons in work-related contractual relationships” are classified as high-risk (Recital 36, AI Act). They shall be subject to specific transparency and oversight requirements toward the users of the systems. However, under the proposal, the assessment of the conformity of these systems to existing rules will only be subject to an ex-ante self-evaluation by the very same provider, with no “involvement of a notified body” – and, thus, no external control. Moreover, the draft Regulation seems to take for granted that if AI systems used at work comply with the procedural requirements it sets forth, these systems should be allowed.

This approach is extremely problematic. As mentioned above, several EU national legislations ban or severely limit the use of tech tools to monitor workers. The draft Regulation risks prevailing over these more protective frameworks and triggering a deregulating landslide in labour and industrial relations systems around Europe. While national rules often require involving the trade unions and works councils before introducing tools allowing any form of tech-enabled surveillance, the draft Regulation, instead, never specifically mentions any role of the social partners in co-regulating AI systems at work. Since the legal basis of the proposed Regulation is a “liberalising” one,¹⁵ aimed at harmonising governance standards across the EU, the more protective national legislation risks being overruled by this instrument that, concretely, risks functioning as a “ceiling” rather than a “floor” for labour protection.

This regulatory approach seems questionable also because, in December 2021, the EU Commission proposed a draft “Directive on improving working conditions in platform work” that acknowledges the role of the social partners and regulates algorithmic monitoring of platform workers.¹⁶ If both the proposed Regulation and draft Directive were adopted without

¹⁵ Article 114 of the Treaty on the Functioning of the European Union (TFEU).

¹⁶ Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work COM(2021) 762 final 2021/0414 (COD).

amendments, EU law would afford protection to platform workers while weakening protective standards against the same forms of abusive monitoring for all other workers, something which seems hardly justifiable (De Stefano and Wouters 2022).

4. Concluding remarks: Shaping the post-Covid world of work

Besides aggressively turning all aspects of our private and professional lives upside down, the COVID-19 pandemic also represents an unprecedented shock to labour markets, entrenching social inequalities and stratifications. Many governments reacted with contingency plans aimed at both mitigating the risk of contagion and supporting distressed economic sectors. We have witnessed the concomitant adoption of exceptional rules, defining a parallel legal order that often strains paramount legal principles, and new experiments of self- or even de-regulation by companies to maintain service levels. In line with the new divide between frontline jobs and remotable activities (Sostero et al. 2020), we have described the key elements of this reality from the perspective of two groups of workers, conceding that the distinction between them is not necessarily clear-cut. The ambiguity is evident when considering that employees whose tasks could plausibly be completed remotely were also called back to work on-site after restrictions were relaxed.

From an economic perspective, apart from one-time thank-you bonuses, very little has been done for essential workers. Regrettably, the public attention, as well as the debate about their contractual and working conditions, soon started to fade through a depressing habituation to the harsh realities. On the other side of the fence, office spaces are not doomed to disappear because of work-from-anywhere schemes; they are rather destined to be used to develop new projects, generating innovative ideas, stimulating exchanges and cultivating social bonds. The extent to which remote work remains popular depends on a strong bargaining initiative between social partners. There are several aspects that need to be discussed and negotiated, including time dominion and “no-online zones”; the digital tools to be used and the related costs for utility

expenses; supervisory mechanisms; and arrangements for reporting on results achieved. The goal must be to enable authentic spatial, temporal and decision-making autonomy for all, thus allowing businesses and workers to reap the full benefits of a more sustainable work environment.

Indeed, in an “autonomy-supportive context” (Rigby and Ryan 2018), allowing more discretion in selecting meaningful outcomes and the means of attaining them positively correlates with successful performances (Manganelli et al. 2018). If accompanied by significant feedback and guidance, intrinsic motivation is key to engagement and efficiency, and facilitates learning new skills. It is now crucial to guarantee that social partners have a genuine voice and play a decisive role in discussions about the availability of flexible working templates, the implementation of new monitoring devices and the transparency of processing. This should not be regarded as a mere bureaucratic box-ticking exercise but rather as a design journey into all stages of all tracking activities (Rubinstein 2011), from the selection of tools to their roll-out, seeking the least-intrusive arrangement in a privacy-by-default modality.

The pandemic is a perfect storm that has put socio-legal foundations under extreme pressure, urging policymakers to test the suitability of regulative instruments (OECD 2020). Admittedly, this event is also serving as a landmark opportunity for experimentation in the adoption of technologies aimed at amplifying managers’ capabilities in a full range of functions, including the recruitment process, monitoring activities, workload allocation and reward-payment-setting for all categories of workers, regardless of their legal status, and in all industries. This tailspin could be irreversible; hence, policymakers should be wary of tolerating a prolonged state of exception. The transformative legacy of this barely controlled surveillance hinges on how the (power) relationship between contractual parties is redefined. This will be strongly affected by enforcement or the lack thereof, especially in a moment of economic downturn. Since this tectonic shift is causing rising discontent, it will be important to ensure a

fair transition, striking a more sustainable balance among seemingly conflicting tensions that are too often presented as exclusionary options (lives and livelihoods, privacy and well-being, occupational safety and health and business continuity, flexibility and work–life balance) (Ponce Del Castillo 2020).

The aim of this article was to gain a better grasp of longer-term, technology-enabled shifts, which portend to become the new normal after the pandemic has abated. As we hope to have demonstrated, companies now seem to have additional leeway in monitoring a scattered workforce. In most cases, managers and employers, both public and private, were left to decide whether their activity was essential, whether to allow or impose remote work and the use of annual leave, and whether to discontinue the employment of precarious and non-standard workers. Surveillance has been heightened for all categories of workers. This has resulted in the dismaying expansion of monitoring prerogatives and prompted a severe reaction from the EU and national data protection authorities (Drozdiak and Fouquet 2020). As management by algorithms and AI-driven performance insights have become commonplace, massive amount of quantitative data have been collected and stored. This seemingly unrestrainable phenomenon urges us to reconsider how labour regulation will uphold unilateral managerial powers. There are two perils that we need to escape: normalizing the emergency and seeking solace in digital solutions (Chesler 2020).

To address the long-term consequences of this shift, people-centred organizational policies are advantageous and much needed. Since AI and algorithms are substituting managers in various processes, solutions must be systemic and wide-ranging, encompassing complementary tools from different legal domains, such as data protection, anti-discrimination law and occupational health and safety, based on their final effects. Given the rapidity of this transformation and despite the gradual decline in trade union density, in order to realize an alternative “new normal” paradigm, collective bargaining agreements are among the most

successful tools in accomplishing the goal of comprehensible, verifiable and fair organizational practices in a swift and bespoke fashion. Co-determination is a way to enhance workers' agency and build trust in professional communities. More comprehensive agreements should also aim at including provisions covering workers regardless of their contractual classification to avoid furthering labour market segmentation. Similarly, critical digital literacy and firm-sponsored training must be used to guide data rights, exposing and challenging the logic behind excessive surveillance. As with any upsetting crisis, a high degree of inventiveness is required.

The COVID-19 pandemic panopticon

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