Essential jobs, remote work and digital surveillance:

addressing the COVID-19 pandemic panopticon

Antonio ALOISI[*] and Valerio DE STEFANO[†]

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Abstract. COVID-19-induced digital surveillance has ballooned in an unprecedented fashion, causing a reconfiguration of power relationships in professional settings. This article critically concentrates on the interplay between technology-enabled intrusive monitoring and the managerial prerogatives augmentation in physical and digital workplaces. It portrays excessive control as the common denominator for "essential" and "remotable" activities, besides discussing the various drawbacks of the two categories of workers during the pandemic. It also assesses the adequacy of the current EU legal framework in addressing the expansion of data-driven management. Social dialogue, empowerment and digital literacy are identified as effective solutions to promote organisational flexibility, well-being and competitiveness.

Key words. essential workers; work-from-home; digital surveillance; COVID-19 pandemic; electronic performance monitoring; managerial prerogatives; algorithmic management; collective bargaining

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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 March 11, 2020, the World Health Organization classified the novel coronavirus outbreak as a pandemic and advised governments to implement substantial measures to address the first global wave of this public health emergency. For months, activities such as in-person schooling, mass gatherings, in-presence team meetings, long-haul travels have been partially confined to the pre-coronavirus era. However, all these actions found a surrogate promptly offered by digital means, especially but not exclusively in the world of work. It is undisputed that new technologies have largely benefitted from forced isolation and are likely to play an ever more pervasive role in workplaces and society at large. An instant effect has been a powerful digital acceleration, which could have taken decades to occur. Predominantly described as a magnifier of pre-existing movements, the pandemic should be therefore regarded as a window into some possible futures of work, arrived sooner than anticipated and causing growing anxiety.

Responsively, several studies have mapped the policy initiatives taken to minimise 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 in stand-by, with little if any collective scrutiny, as rapidity was indicated as a sine qua non in order to flatten the curve. 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

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income relief measures (Mangan et al. 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 organisations and policy centres (ILO 2020b). 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 the disease containment efforts then reconverted to facilitate reopening. These developments are arguably here to stay longer than imagined, as demonstrated when the virus had a relatively smaller impact.

This emergency is increasing the possibility of unaccountable management and insidious self-regulation, which ought to be critically explored, exposed and addressed. We aim to look at what kinds of technologies are being integrated to track and monitor workers, to discuss 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 strong focus on the EU General Data Protection Regulation (GDPR). The two strands of research run intertwined. On the one hand, this paper grapples with the stark polarisation between "essential" and "remotable" jobs and briefly discusses the advantages and drawbacks faced by two broad categories of workers. On the other, this analysis focuses on the common denominator: a new wave of 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).

The 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 of the phenomenon, and is organised as follows. Section 2 presents the principal traits of two groups of workers, those working from home and those working on-site, to unpack the great bifurcation. Having mapped the broadening of the monitoring prerogatives in concrete, Section 3 seeks to make sense of the studied phenomenon by exploring the EU legal framework. After portraying the main dangers of the current developments on an individual

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[1] The expression "panopticon" has been firstly adopted by Foucault who borrowed it from Bentham. It was originally used to identify a prison design, where a watch tower is located in the centre of spherical prison and the wall-less cells face inwards, resulting in a regime of permanent visibility and coerced discipline.

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and organisational level, it also advocates for a more critical attitude to personal data sharing. Section 4 advances some solutions intended to deal with the challenges posed by this transformation, mostly based on social dialogue, digital literacy and workers' empowerment.

2. The new great polarisation: "essential" and "remotable" jobs

There is no blueprint on how to handle an epidemic of this scale and sensitiveness. 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 lockdown of larger areas and, second, of the entire nation. Only essential activities could be carried out (in some cases, the governments provided a detailed sectoral taxonomy, sometimes it was left to the businesses to decide whether they fell within the definition). Work-from-home plans were massively adopted by companies in the service sectors or for workers engaged in non-manual activities, this being the most prominent option to avoid business discontinuity, favour public transit decongestion and keep workers safe (ETUC 2020).

This much-needed policy resulted in a blunt divergence between the two categories of workers, partly redefining the traditional occupational cleavages. On the one hand, essential workers, divided into two subgroups (frontline and behind the scenes), 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, public officials, academic instructors, administrative and clerical occupations in all industries as well as managers and executives) were asked to emigrate to different milieux, mostly to their dining rooms abruptly reconverted in not-so-temporary offices. Crucially, not all tasks are amenable to remote working: this is due to the content of the duties, company culture, infrastructural and business readiness.[2] This dichotomy has also shown deep fault lines in a two-tier economy (Bonacini et al. 2020). On average, workers in the middle- or upper-income brackets were most likely allowed to work from home; concurrently, those in the lowest one had no alternative but to work regardless of the awful circumstances (Cetrulo et al. 2020), revealing a sheer difference in the treatment across occupational roles, even inside the same company.

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[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". 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 & Neiman 2020). Worryingly, remotable jobs may be easily amenable to "offshorability" (Lund et al. 2021).

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2.1. Essential and exposed, clapped and scrapped: the dangerous task of 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, among others, health care workers, protective service workers, agricultural, food production and processing, warehouse, construction, janitors and maintenance workers, cashiers in pharmacies or grocery and general merchandise stores, delivery couriers and truck drivers (Blau et al. 2020). Women,[4] disadvantaged minorities, less educated people and migrants (often at the fringes of labour markets) are overrepresented in sectors or occupations not amenable to remotisation.

While the pandemic has exacerbated insecurity for all "non-standard" workers, its impact has been disproportionate on precarious workers who always bear the most serious brunt of the socioeconomic crises. Some of the vulnerabilities associated with new forms of (casual) employment have also worsened, with delivery fleets particularly visible in empty streets. The same goes for migrants, "forced to accept precarious and unsafe working conditions, which are in turn amplified by the exceptionality of the situation" (Bender and Ulceluse 2020). The situation compelled indispensable workers to choose between economic adversity due to the absence of assistance schemes or the risk of infection to the detriment of their families and colleagues. Several reports detail a drop in unsteady incomes given the reduced demand or inability to work for multiple reasons (ILO 2020b). Many workers suffered a decrease in their already irregular working hours. The growth of the "e-commerce supply chain" risks coming at the expense of wages and working conditions: mass self-isolation is indeed 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 governmental agencies (Gamio 2020). Despite this, in many industries, workers typically come in close contact with colleagues (Benner et al. 2020), customers or other people as an indispensable part of their work. For many

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[3] The title refers to a popular hashtag used on Twitter.
[4] About 70% of jobs in health and social care sectors worldwide are held by women. See United Nations (2020).

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of them, working conditions reflected the pre-COVID-19 standard when they were faced with tyrannical managerial regimes. However, the situation was aggravated by concomitant causes. 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 main channels of spreading the virus, at risk of downplaying the effects of lockdown policies. In a preliminary phase, there were difficulties in purchasing and distributing an adequate quantity of personal protective equipment (PPE), even in critical sectors. Several workers experienced an *intensification* and an *extensification* of work, in some cases, were pushed to the unnecessary extreme to fulfil unrealistic expectations (Hodder 2020).

Importantly, both frontline and "invisible" workers had to follow new precautionary measures inside and outside the workplace. Consistently with a tech-solutionist narrative, there was an app for that. Most on-site workers were asked to install software or application on their personal devices to obtain "passports" to prove a "symptom-free" health condition, along with additional medical documentation (Bodie and McMahon 2020). They had to fill in "questionnaires" on self-reported medical information to be shown at the entrance of the firm. Several companies reinvented themself 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 a blue-collar worker in the UK automotive industry or a docker (in a Belgian port) were within virus catching distance of a co-worker and sensor communicating with the thermal scanner to release a green light in public offices. Other companies introduced alerts notifying about sanitation shifts around the clock, GPS-integrated applications tracking employees' every move and their whereabouts or enforcing hygiene guidelines, RFIDs measuring and optimising the occupancy rate of the spaces (scheduling software to gauge time attendance and ensure group rotation), SMSs urging compliance with hygienic good practices. The most dystopian solution is a microchip allowing workers to enter the factory or office facilities in a contactless fashion. Crucially, almost all tools also permit private contact tracing (Ponce 2020).

In order to avoid breaching data protection laws, most of these monitoring activities were carried on the spot, accompanied by requests for responsible statements. Although they were voluntary, there was little if any room for negotiation, compounded by a sense of responsibility towards colleagues, which led to widespread acceptance. According to critics, this approach

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punitively shifted responsibility for safety onto workers themselves. Worryingly, the promise of touchless interaction fostered a large recourse to facial recognition instruments and even more sinister tools such as lasers to indicate proximity to a colleague or if too many employees are 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 aptly wearing PPE. Various hospitals experimentally tested *AdvanWash*, a system providing an "RFID-based hand sanitiser solution". 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 USA, hand-hygiene monitoring systems were soon turned into performance management devices to measure whether workers were meeting their expected "key performance indicators" (KPIs) (Bittle 2020). Drozdiak and Fouquet (2020) report several cases where arguably the need to ensure business continuity in order to revive crushed economies was an irresponsible opportunity to blend social distancing compliance and 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 converted into nefarious uses. Low-wage workers could end up treated as "guinea pigs" in sectors such as retail and distribution, where performance-enhancing tech is already in place. On closer inspection, tech tools are often used to reconfigure employer-worker relations within and across organisations (Kellogg et al. 2020). The volume, variety and velocity of data collected during the pandemic pose a serious threat, as it is likely that information gathered could be used in a post-emergency period to cover the company's capricious behaviours. In general, this uncritical acceptation opens the door to a new generation of employee monitoring widgets beyond the traditional (and currently regulated) roll-out (Eurofound 2020), contributing to the erosion of issues such as meaningful consent, collective involvement and prior administrative authorisations. What is chiefly problematic is their opaque nature which, combined with the hurried adoption, further limits workers' understanding of employers' strategies and objectives. This may undermine human agency, erode labour rights, and thwart productivity. Therefore, it is extremely urgent to challenge this unrestrained penetration of a culture of total surveillance (Whitaker and Whitaker 2020).

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Contrary to renewed interest in full automation, the pandemic made apparent the usually hidden human network (Ekbia and Nardi 2017). Robots and 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 was accompanied by the generally decreased level of access to unemployment benefits and a more general "take-it-or-leave-it" posture 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 are directly experiencing the situation of colleagues left unemployed or furloughed as businesses struggled to meet costs (Hodder 2020). Calamities indeed create a culture of uncertainty regarding redundancy risks and future employment prospects with shifting priorities for individuals, organisations and their wider communities, thus fragmenting the labour force. 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, several 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 due to the discontinuous nature of their engagements (The Fairwork Project 2020). Most measures to protect platform workers, from contactless delivery and cashless payments to PPE distribution (masks, gloves and sanitising wipes), were merely preventive. What is striking is that many principals avoided taking decisive action to minimise the potential risk of 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 actual reality of the relationship. The platforms instruct workers on good hygiene practices through strict orders, yet they displace all their responsibilities to them, as a decisive interference would point to the recognition of the existence of an employment relationship in court (Aloisi 2021). By shifting instead of reducing the risk, this vicious circle brings detrimental effects for public health and society at large.

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

The lockdown spurred "the most extensive mass teleworking experiment in history" (ILO 2020a): offices were left unoccupied all at once, almost overnight. Forty per cent of employees in the EU started working remotely full-time; for approximately one in four workers, it was the

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first time following this modality (Eurofound 2020).[5] Not surprisingly, this alternative working pattern 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 (and so far, niche) organisational policy. 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 *permanent availability* mode (DeFilippis et al. 2020). For white-collar occupations, paid work encroached on the time once spent for leisure or family affairs, with little capacity to switch off given the expectation of diuturnal devotion in the "home office".

Amid the pandemic, many commentators rushed to assess this flexible arrangement without considering that the mass test was profoundly influenced by the unusual circumstances in which it took place. Only collective and individual bargaining can unlock a genuinely emancipating version. Despite these special situations that removed the bureaucratic and contractual barriers, many workers and managers, forced to familiarise themselves with a modern organisational template whose adoption has been long-overdue, found it 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. They also had to carry out additional and unpaid education and caring duties (home-schooling was the norm) or face challenging or abusive household conditions (Powell 2020).

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 enterprises have hesitantly implemented and swiftly lifted it at the earliest occasion. Many local politicians, for instance, encouraged people to go "back to work" – by which they mean "back to the office" – to support economic activities in urban districts (The Economist 2020). This reveals a widespread reluctance to extend unsupervised autonomy, let alone the inability to overcome a toxic version of presenteeism and workaholism.

According to the solutionist approach, technology was depicted as a panacea that would allow overcoming the crisis. Very soon, many had to realise that there are no digital solutions for

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[5] According to Eurofound, in July 2020 34 per cent of respondents were solely working from home. Just 3.2% of employees in the EU-27 usually worked from home – a share that remained rather stable since 2008.

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organisational problems and structural gaps. In order to counter this narrative, it must be noted that many pilot programs were already in place. There is no lack of positive experiences but typically the result of far-sighted collective agreements and company protocols (Messenger et al. 2017). Understandably, only companies with 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 the lack of training. In order to be effective and authentic, remote work requires a qualitative managerial leap, shifting the evaluation of work performance to outputs rather than mere physical attendance or micromanagement.

Disregarding the nuances of the numerous popular definitions, it must be noted that, as far back as 2002, the European Framework Agreement on Teleworking (FAT)[6] was signed to regulate the terms and conditions of people working remotely by establishing a general principle of non-discrimination between teleworkers and comparable workers at the employer's premises in terms of workload and performance standards. Undeniably though, thanks to the rapid development of technologies, in recent years this arrangement has been widely adopted, particularly in large companies, to enhance wellbeing and fulfilment, as a family-friendly policy, and to boost productivity and efficiency (avoiding unnecessary interruptions, evading distractions and reducing idle times). Simultaneously, such formats have also been used to lower fixed costs associated with office spaces, mileage allowances and extra time payments. Following the FAT, this model has been regulated to increase competitiveness and uphold a viable work-life balance in several jurisdictions (Samek Lodovici et al. 2021). Notably, social partners have concurred to adopt this arrangement on both the national and company level.

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

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[6] ETUC, BusinessEurope, CEEP and UEAPME (2002), "Framework agreement on telework".

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The short-sightedness of personnel organisation policies was overwhelmingly evident during the pandemic. The first data shows that not much progress was made to foster mutual trust and result-based schemes. Less reassuringly, in the face of a mass exodus from corporate spaces, many managers and executives reacted with alarm, with more constraining management control. While traditional hierarchies were partially impacted, workers, especially junior ones, responded with overcommitment or engaging in voluntary visibilising practices (Delfino and van der Kolk 2021; Hafermalz 2020). 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, the list of websites visited). Among other things, the inability to modernise work patterns has slowed down the implementation of a "more trusting and more results-based" management (ILO 2020a).

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 promising to retain control have boomed at an unparalleled rate. Preliminary data shows that in April 2020, demand for tracking tools "surged by 87% and remained 71% above the pre-pandemic average in May" (Migliano 2020). Precautionary measures as regards cybersecurity were often skipped. The crisis has been a marketing chance as well as the opportunity to fine-tune existing applications.

The list of software grows by the day. *Activtrack* surveils the programs used and tells managers if the employee is distracted, wasting time on social media. *HubStaff* combines performance anxiety and control freaks, routinely taking snapshots of the personal computer screen every five minutes. *TimeDoctor* and *Teramind* keep track of every effort conducted online. *Interguard* compiles a minute-by-minute timeline that considers every data such as web history and bandwidth utilisation and sends a notification to the managers in caseworkers pick up anything suspicious. *Interguard* notifies when an employee completes a combination of flagged behaviours. *OccupEye* compulsively 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. *Pragli* synchronises professional calendars and music playlists to create a sense of community; it also features a facial recognition feature that could display a

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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 a sense of togetherness" (Harwell 2020).

While there is an abundance of reports about "fringe software vendors", it is overlooked that all applications, including the seemingly innocuous ones such as Microsoft 365 (Silverman 2020), aggregate all sorts of data into simple charts or graphs that give managers 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 metrics risks narrowing an organisation's focus on simple activity rather than on decision making and accomplishments (Nguyen 2020a). For instance, they often measure pointless parameters or underestimate preparatory activities such as ideation and planning. Concomitantly, workers are lured to self-control their own performance thanks to self-tracking dashboards, thus fostering conformity. Consequently, the dirty "data collected of the various activities can then be fed into increasingly complex modelling systems and used to construct behavioural profiles, patterns and benchmarks" (Moore, 2020). In turn, these metrics can be manipulated and repurposed to infer unspecified characteristics or to predict unknown comportments (Tucker 2018). 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 where this bifurcation ends. The incomplete inventory of cases and applications sketched out in the previous paragraphs tells us that on-site and remote workers share the condition of subjection to a more pervasive pandemic panopticon. Despite the significant differences, all activities are mediated by digital gadgets and completed through infrastructure that creates "time-stamped logs" of activities (Leonardi 2020). All human resources management (HRM) functions (screening, interviewing, hiring, setting tasks, measuring productivity, evaluating performances and terminating contracts) have shifted

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online, often entrusted to automated decision-making systems (ADMs), "without an intuitive link between what is done when 'logged in' and how it is assessed" (Aloisi and Gramano 2019). 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 2020). Even worse, it may also give rise to an explosive atmosphere of hostility, deviation, and resistance (Burdin et al. 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. 2020), its most advanced aspects, such as the matching of individuals to tasks, a fine-grained imposition of schedules, 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 "informatisation" and "platformisation" of work (Zuboff 2015; Ajunwa et al. 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 normalisation of intrusive monitoring. The potential of these methods is unprecedented in terms of 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 the employee's monitor 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, it is likely that given this massive investment, tools and software adopted will not 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. Given the gigantic amount of "digital exhaust" used to retrace personality traits, this power could be used not only to anticipate but also to prescriptively shape comportments in a very individualised 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

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from ideal. What is worse, given their obscure nature, they end up limiting the understanding of employers' strategies, jeopardising contestation and freezing industrial action.

Undeniably, however, always-on surveillance is not a by-product of the pandemic. Even before coronavirus struck, devices for tracking, watching, storing, data mining have long colonised workplaces and private spaces, opening the door to an optimised 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 2016).

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 delivering on metrics is 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. The risk is they become habituated to these new devices. A combination of passive acquiescence and ostensibly participatory push encourages the sharing of information in exchange for little rewards in terms of self-conscious reputation management. The dominant ethos emphasises self-tracking and measurement, as habitually occurs with corporate wellbeing programs.

What is left out of the story is that the very same technologies that are adopted to monitor workers could be used applied to improve 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 recruits' cohorts, data can be exploited to increase diversity by promoting the de-marginalisation of vulnerable groups (Ajunwa and Gree 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. 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 mobilise existing regulation and launch a new round of bargaining on monitoring instruments, also at a decentralised level, with the aim of opening black boxes and reaping the good

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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 controlling, 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, optimising processes, enforcing policies on rest periods, complying with all OSHA requirements (including the need to avoid stress and psychosocial risk), preventing detrimental activities, hazards and frauds. A certain degree of control 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 organise, monitor and discipline human energies in exchange for economic security and stability, labour regulation is meant to "reconcile these almost 'seigniorial' prerogatives with the respect of the human dignity of workers" (De Stefano 2018, 15), thus enhancing operational proficiency. This contractual model pursues the paramount aims of rationalising managerial powers and containing the employers' juridical domination to protect human dignity (Deakin 2002).

This article contends that a genetic variation is occurring in terms of comprehensiveness and instantaneity of information collected and analysed. This mutation 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 control, while white-collar workers are experiencing aggrandisement of managerial prerogatives due to deceitful and rigid forms of control (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 and to working time: there is a change in the locus and in the temporal scope of control (Katsabian 2019). Such augmentation is not matched by the attendant counterweights defined by the supranational and local legislators or collectively negotiated by social partners.

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The nature of the new computerised tools involved and the possibility of developing predictive capabilities essentially "differ from the traditional management structures around which employment law has been designed" (Adams-Prassl 2019). This causes an enlargement of the managerial prerogative upon which labour regulation is premised. While it is true that large firms have already developed methods of organisations that are "more formalised and more consciously contrived than simple control" (Edwards 1979, 20), the canonical limits to managerial powers have been 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. As a result, the authoritarian nature of the contract of employment (Collins 2018) is exacerbated in an unprecedented fashion, while even the most effective traditional counterpowers may prove blunt instrument if not aptly adapted or updated in a timely manner (Estlund 2020).

Worse still, technology-coded authority is far less open-minded than human hierarchies, as it optimises previous and current disparities stratified in a wealth of granular datasets (based on age, gender, race, 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 side of the employer (or the service provider). If it is undeniable that also human decision-makers may have the same systemic flaws, a digital tool embedding those 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 "ascribe positive or negative weight to attributes which serve as proxies for the protected characteristics" (Kelly-Lyth 2020).

For instance, when women are underrepresented in some sectors, an efficient AI system sifting through candidates in hiring processes would exclude female workers in the recruitment phase. The same is true for software trained to promote employees with consistent career paths, thus ending up penalising those who had taken maternity or sick leaves. According to an Italian order,[7] the algorithm "blindness" was discriminatory as the system was not designed to distinguish if a food-delivery rider's absence was due to sickness or to lawful strike action. Very recently, software drawing heat maps in order to track (and avert) "unionisation" risk has

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[7] Tribunale di Bologna, Ordinanza 31/12/2020 No. 2949/2019.

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sparked outrage (Lee 2020). Hence, assuming the objective or neutral nature of AI-driven governance is largely misleading.

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

All around the world, a breadth of new practices is on the near horizon, 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 with whom, where, how long 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 on the fundamental rights of employees to organise, set up workers' meetings, and to communicate confidentially" (WP29 2017).

The boom in productivity and biometric technologies is bringing up new privacy questions. In addition, the existing legal framework is often accused of an inability 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 ICT – may fall short in providing an up-to-date model capable of addressing disruptive advances (Aloisi and Gramano 2019). As control is being replicated by imposing the most basic tenets of Taylorism at a relatively low cost (hyper-standardisation and micro-measurement through the calibrating 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, the latter giving an ampler surveillance power to employers (Kidwell and Sprague 2009). In American workplaces, the expectation of privacy on the part of the employees is "reasonably" limited as 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, 26). 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 of updating the most anachronistic provisions (Finkin 2017).

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In the EU, several GDPR provisions have been used to legitimise data processing.[8] Among others, Art. 9(2) offers the bases on which health data (Art. 4) that are normally non-processable 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 by letters (b) "exercising specific rights of the controller or the data subject in the field of employment and social security" and (i) and (j) 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 public interest and the vital interest of the data subject). The coronavirus's case falls under the scope of the GDPR provision. Still, suitable and specific safeguards for the fundamental rights and the 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 funded and respects the legal requirements (Art. 5). The GDPR should be read in conjunction with the documents released by the European Data Protection Board,[9] whose approach is praiseworthy, as it advocates reinforced levels of meaningful consent in unbalanced situations. In this respect, domestic Data Protection Authorities proved vigilant and proactive, too (Suder 2020).

While the importance of these rules is not to be underestimated, we argue that the effectiveness of the Regulation has been profoundly undermined by a long list of specific derogations. They can be found respectively in Art. 6 and Art. 9 GDPR for the lawful processing of this special category of personal data. Moreover, Art. 89 (2) GDPR allows the domestic lawmaker to restrict (some) of the data subject's rights as set in Chapter 3 of the Regulation. This creates a rather heterogeneous situation depending on the MS and national data protection authorities. Employers' responses "have mirrored state policies meant to track and monitor the spread of the disease" (Nguyen 2020b). 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 adhesions.

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[8] Statement on the processing of personal data in the context of the COVID-19 outbreak.
[9] Guidelines 03/2020 on the processing of data concerning health for the purpose of scientific research in the context of the COVID-19 outbreak.

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The ban on automated individual decision-making processes aims at providing a counterweight to the automatisation of organisational procedures (Art. 22 GDPR). Still, it does not apply straightforwardly in the employment context. Most likely, decisions in the HRM department, such as e-screening and performance appraisal, will fall into the scope of exceptions allowed by Art. 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 European Data Protection Board (EDPB), "lawful basis [for data processing at work] cannot and should not be consent"[10]. 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".

In order to avoid that the ambitious purpose of Art. 22 remains on paper[11], 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. They 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). This solution is backed up by the GDPR, stating that MS 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" (Art. 88 GDPR).

To give a concrete example, in June 2020, the European social partners signed a landmark framework agreement[12]. While acknowledging the significant contribution in terms of security, health and safety and efficiency, the agreement stresses the risk of deterioration of working

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[10] Guidelines 05/2020 on consent under Regulation 2016/679.
[11] See also Art. 9 of the revised Council of Europe's Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data concerning the right not to be subject to automated decision-making without human intervention.
[12] European Social Partners (2020), Framework Agreement on Digitalisation.

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, 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 have the competence to introduce specific internal measures with regards to employee monitoring and data processing at work. Moreover, data protection authorities' hands-on role is also crucial to ensure that the private sphere of workers is not invaded when it comes to electronic watching of their activities. According to a solid legal tradition, in most EU jurisdictions, a prior consultation phase with workers' representatives or their authorisation are inescapable preconditions for the introduction of surveillance equipment. Domestic legislation and case law ensure that workers' representatives are involved through information, discussion and codetermination (Aloisi and Gramano 2019). The failure to comply with these requirements may result in the prohibition of remote employee monitoring, let alone the impossibility of using data and information unlawfully captured. Thus, should these passages have been skipped due to urgency, now is the time to carry out a large oversight, enforcement and re-negotiation, with the aim of implementing more privacy-friendly measures.

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 both at mitigating the risk of contagion and supporting distressed economic sectors. We have witnessed the concomitant adoption of exceptional rules, defining a parallel legal order often straining 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), the previous paragraphs described the key elements of this reality from the perspective of two groups of workers, conceding that the distinction is not necessarily clear-cut as also those employees whose tasks could plausibly be completed remotely were called back to work on-site (in a hybrid mode) after restrictions were relaxed.

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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 due to a depressing accustomisation 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 developing 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, namely effective time dominion, comprising "no-online zones", the digital tools to be used and related costs for utility expenses, the supervisory mechanisms, and the 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.

Indeed, in an "autonomy-supportive context" (Rigby and Ryan 2018), allowing more discretion in selecting meaningful outcomes and the means to attain 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 exercise of compliance with listed bureaucratic requirements but rather as a design journey into all stages of all tracking activities (Rubinstein 2011), from the selection of tools to their roll-out, in search of the least-intrusive arrangement in a privacy-by-default modality.

The pandemic is a "perfect storm", putting socio-legal foundations under extreme pressure, urging policymakers to test the suitability of the 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, from recruiting process to monitoring activities, from workload allocation to 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 the barely controlled surveillance hinges on how the (power) relationship between contractual parties is redefined. This will be

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strongly affected by enforcement or lack of, especially in a moment of economic downturn. Since the tectonic shift is causing rising discontent, it will be important to ensure a fair transition, striking a more sustainable balance among seemingly conflicting tensions 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 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 seem to have additional leeway in monitoring a scattered workforce. In most cases, it was left to managers and employers, both public and private, to decide whether their activity was essential, whether to allow or impose remote work and usage of annual leave, whether to discontinue precarious and non-standard workers. Surveillance has heightened for all categories of workers. This 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). While management by algorithms and AI-driven performance insights became commonplace, the amount of quantitative data collected and stored has been massive. This seemingly unrestrainable phenomenon urges us to reconsider how labour regulation will uphold unilateral managerial powers. There are two perils that must be escaped: normalising the emergency and seeking solace in digital solutions (Chesler 2020).

To address the long-term consequences of this shift, organisational policies putting people at the centre are advantageous and much needed. Since AI and algorithms are substituting bosses in various actions, solutions must systemic and wide-ranging, encompassing complementary tools coming from different legal domains, such as anti-discrimination law and occupational health and safety, based on the final use. Given the rapidity of this transformation and despite the gradual decline in trade union density, to realise an alternative "new normal" paradigm, collective bargaining agreements are among the most successful tools to accomplish the goal of comprehensible, verifiable and fair organisational practices in a swift and bespoke fashion. Codetermination is a way to enhance workers' agency and build trust in professional communities. More encompassing 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

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guide data rights, exposing and challenging the logic behind excessive surveillance. As with any upsetting crisis, a high degree of inventiveness is required.

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