

Article

Covid-19 and the Future of Work

From Emergency Conditions to Regimes of Surveillance,
Governance and Optimisation

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Abstract

This paper offers a critical reflection on the impact of Covid-19 and government public health measures on patterns of work in the UK. This paper will focus specifically on remote or home workers as this generates myriad questions about the future of work and employment, particularly in the context of advances in digital technology and the growing emphasis on environmental inequality, the spectre of climate change and a green revolution. If the *laptop class* work from home, they can help control the spread of Covid-19, tackle climate change and rebalance their lives – we were told. Reflecting on the pandemic, an *assumption of harmlessness* underpins home working. Then I look towards the future and raise questions about the role of digital technology, algorithmic governance and surveillance in our working lives. As more of us are encouraged to utilise the latest digital technologies in our working lives, it is crucial to look critically at these developments and their implications for workers. Working practices deemed necessary to tackle the pandemic are now part of a long-term future which requires further interrogation as to whether the short-term and long-term changes associated with digital technology, algorithmic governance and surveillance also make hidden assumptions of harmlessness.

Keywords

Covid-19, work, technology, surveillance, algorithmic governance, optimisation, harm

Two years into the Covid-19 pandemic, it is surely uncontroversial to suggest that patterns of work have changed significantly, even on a temporary basis. As countries around the world imposed various non-pharmaceutical interventions to control the spread of disease this included full and partial national lockdowns, social distancing measures, work from home orders, and business closures (Briggs et al 2021). In the UK, the government response to these measures included business loans, a furlough scheme to pay 80% of employees' salaries, a universal credit uplift, deferred VAT payments and a self-employment income support scheme (Hick and Murphy 2021). Other countries provided similar measures with

varying degrees of efficacy or success (Briggs et al 2021). Temporarily, at least, this changed where and how people worked and earned a living.

It is possible to divide the UK labour force into five distinct groups who experienced working through the pandemic in different ways: *key workers* such as health care staff, emergency services, transport workers and those working in food services who continued to work in-person albeit with some restrictions in place such as social distancing; *home workers* who transitioned their work online via digital technologies to work remotely; *furloughed workers* who were unable to work but were sent home and paid 80% of their salary until businesses reopened or they were laid off; *newly unemployed* who lost jobs due to business failure in the face of lockdown policies; and *self-employed* who had variable experiences depending on their business and government restrictions but were eligible for government support at the start of the pandemic. This distinction demonstrates the emergence of inequalities and diverse experiences of working through the pandemic. This paper intends to focus specifically on remote workers. Although I focus on the UK here, many of these themes are visible in other contexts. In the first part of the paper, I will reflect critically on the experience of home working and ask questions about work-life balance and the use of technology. In the second part of the paper, I look towards the future of work. The rapid expansion of digital technologies into our working lives accelerated processes already in motion (Lyon 2018, Susskind and Susskind 2017). It is necessary to think about the role of technology in our working lives, particularly as we emerge from the pandemic into new forms of ‘hybrid’ working, with some businesses signalling an intent to close physical office space and remain online indefinitely (Whitfield 2021). This section will discuss the role of digital technology at work as a tool of surveillance (Lyon 2018), of governance (Kalpokas 2019), and a broader neoliberal preoccupation with optimisation (Schildt 2020). Finally, the paper will reflect on the work-life balance issues of homeworking and look forwards to the technologically-driven future with a question about the *assumption of harmlessness* (Raymen 2021). Essentially, the *laptop class* was sent home in order to avoid the harms of Covid-19 but the experience of working remotely has not been adequately problematised in relation to harm. Zemiology and critical criminology have debated social harm for more than two decades (Hillyard and Tombs 2004; Kotzé 2018) and argued persuasively that a range of entirely legal processes can have harmful consequences for individuals, communities and beyond (Scott 2017; Pemberton 2016). Raymen (2021) has recently indicated an assumption of harmlessness present within our current socio-economic configuration. Much of the debate on technology and work focuses on how to improve processes, increase efficiency and optimise performance while seemingly assuming these developments are harmless. This negation allows various potentially harmful practices to go unchallenged. In exploring the literature from a critical perspective, this paper challenges that assumption of harmlessness. The future of work is set to be shaped by digital technology and key questions about harm remain to be asked. First, we turn to the impact of the pandemic on the UK workforce.

Working Through the Pandemic

When the UK entered its first national lockdown on 26th March 2020, patterns of work and employment were fundamentally upended. The week prior to the lockdown announcement, Prime Minister Boris Johnson had already urged the curtailment of non-essential travel and contact while those who could work from home were encouraged to do so in order to prevent transmission of this novel coronavirus. From this point forward, one's experiences of work during the pandemic differed depending on job role, with different rules and restrictions in place according to labour market sector (Briggs, Telford, Lloyd and Ellis 2021). Broadly speaking, the closure of large sections of the UK economy had the effect of shrinking the overall size and output of the UK economy in ways that inevitably impacted upon jobs and livelihoods, regardless of how well-intentioned those policies may have been. GDP in the UK fell by 9.4% in 2020 as the economy contracted dramatically but grew by 7.5% in 2021 as the vaccination programme led to the curtailment of Covid-19 restrictions and the associated spend on support schemes (ONS 2022a). The UK employment rate going into the pandemic was a record 76.6%, falling to 75% in March 2021 before rising to 75.5% in December 2021 (ONS 2022b). These figures may seem small percentage-wise but they represent people and jobs and the dip in employment during the pandemic has a real impact on lives. The current unemployment rate, 3.6% in late 2022, is below pre-pandemic levels but the overall employment picture over the last two years has been turbulent.

If we examine our five distinct groups of workers, *key workers* were asked to continue working due to the 'essential' nature of their roles. Emergency services, health care workers, logistics, delivery, food services and retail, transport, and some teachers were asked to continue working in-person and were exempt from lockdown rules. Although some workplaces were reconfigured to comply with social distancing rules and face covering mandates, this group were able to continue working as close to 'normal' as possible. *Home workers* were subject to both lockdown and work-from-home mandates and asked to transition their work online where possible. This included much of what has now come to be termed the 'laptop class', comprising many working in education, legal, administrative and service occupations. Those who saw their sector closed due to Covid-19 restrictions and were unable to transition online were supported via the government introduction of a furlough scheme. The *furloughed worker* was sent home and paid 80% of their salary until either their employer – usually leisure, hospitality, retail, and cultural sectors – reopened or laid them off. The economic churn resulted in significant business failure which created the *newly unemployed*; those who were made redundant due to lockdown policies and low demand when the economy restarted. The final group, the *self-employed*, had variable experiences depending on the nature of their business. Some worked from home, some continued as normal, others were sent home and, eventually, supported with an

income support scheme of up to £7,500 and deferred VAT payments. Each group represents a different set of experiences of working through the pandemic and although these categories allow us to identify patterns, there will be many people who cut across categories or experienced cycles of work, furlough, unemployment, and so on. Two years into the pandemic and after repeated rounds of restrictions, lockdown and economic reopening, it is likely that some people have experienced more churn and turbulence than others.

It is beyond the scope of this paper to deliberate the rights and wrongs of government intervention at various stages of the pandemic. Instead, we should consider the impact and future implications of those decisions. The purpose of this paper is to focus on those who worked from home. The rationale for the work-from-home order is clear; transmission of a virus can be reduced if people reduce their number of daily contacts. Working from home reduced the risk of catching and transmitting Covid-19. The World Health Organization's (2019) guidance on 'non-pharmaceutical interventions' in the event of an influenza pandemic suggested that workplace safety measures or closures were extraordinary steps that could produce significant disruption and should only be considered once the costs of such measures were weighed against the impact. In the UK, the Office for National Statistics (2020) used an online Labour Force Survey to measure home working in the first months of the pandemic. 46.6% of those surveyed were in employment and did some work from home in April 2020, with 86% of those doing so as a result of Covid-19 and the government work from home order. Slightly more women than men worked from home (47.5% compared to 45.7%) with one-third working more hours than normal but one-third working fewer hours than normal. A year later, the ONS (2021) released further data that showed an overall 10% increase in homeworking compared to pre-pandemic working practice. 37% of working people worked from home in 2020, compared to 27% in 2019. Overall, a quarter of businesses that had been able to continue trading throughout the pandemic intended to use increased homeworking in the future although this varied by sector. For example, almost half (49%) of businesses in the Information and Communication industry expected to use increased homeworking in the future. 85% of workers wanted a 'hybrid' or flexible approach to working post-pandemic, combining home and office. In terms of job advertisements, three times as many adverts mentioned homeworking in May 2021, compared to February 2020.

The transition to greater remote working raises several important questions. Homeworking existed in sectors long before the Covid-19 pandemic (Wheatley 2021) and research has often highlighted issues related to work-life balance (see Crosbie and Moore 2004, Wattis, Standing and Yerkes 2013). Work-life balance is a contested concept, but research suggests that inequalities in gender, class and professional status all create challenges in finding an appropriate balance (Gregg 2011); homeworking adds to that complexity as the transition from 'work' to 'home' becomes blurred. Certainly, during periods of lockdown the balance between work and home became more problematic, particularly in relation to

home-schooling and adequate physical space. As work encroached on personal time, gendered inequalities around caring responsibilities emerged as women juggled multiple roles and found the balance between work and home life difficult to negotiate (Crosbie and Moore 2004). Work-life balance is a fluctuating and intangible process that requires continuous negotiation between work and family and greater appreciation of differing needs (Yerkes, Standing, Wattis and Wain 2010). The differences in professional status and skill level are important in understanding the dynamics of homeworking. During Covid-19, that balance was often problematic, particularly in the case of working mothers (Clark et al 2021).

Furthermore, digital inequalities characterised the requirement to stay home during the pandemic (Van Lancker and Parolin 2020). Primarily this focused on educational opportunities (Van Lancker and Parolin 2020) and isolation or exclusion of the elderly (Xie et al 2020). However, digital inequality or the ‘digital divide’ is also linked to wider forms of inequality that include access to technology and, critically, adequate broadband connectivity (Cullinan et al 2021, Reddick et al 2020, Riddlesden and Singleton 2014). While much of the research on broadband access, speed and connectivity relates to students in higher education, the same issue stands for those working from home. Employers may have provided equipment and software to facilitate home working, but poor connectivity is connected to a range of socio-economic factors that impact on the ability to work remotely. Connectivity is also an issue in a different way: the connection felt between teams and co-workers. The ONS (2021) reported the biggest issue with remote working reported by workers during the pandemic was the challenge of collaboration when working remotely. Interactions in corridors, offices and ‘water cooler conversations’ disappeared. Although the technology facilitates interaction, the organic nature of office environments was missing which made teamwork and collaboration more difficult to navigate, particularly in those sectors unused to remote working. The risks posed by working remotely include a sense of isolation that employers must work hard to avoid. Indeed, in an Italian study, Toscana and Zappala (2020) found a relationship between increased stress and decreased productivity and work satisfaction. However, their analysis indicated that worry about the coronavirus was a mediating factor which seems to suggest that the absence of concern for the virus, and lockdown restrictions, may improve the relationship between remote work and productivity.

However, while we have highlighted work-life balance as a challenge, some reported that home working provided an opportunity to find a better balance (ONS 2021). Additionally, some firms reported that productivity increased when employees transitioned online at the start of the pandemic. Ozimek (2020) analysed surveys of hiring managers before and during the pandemic and reported that those directly responsible for decisions on remote working believed the ‘remote work experiment’ had gone better than expected and predicted businesses would significantly increase plans for remote work in the future. A McKinsey report by Andrea Alexander and colleagues (2021) found that productivity had increased significantly where remote working had been

implemented, but so had stress and risk of burnout. Productivity gains are likely to be offset by anxiety which reduces job satisfaction. However, studies in the sociology of work have routinely demonstrated the prioritisation of productivity over worker well-being or satisfaction (Wallace et al 2000, Lloyd 2013). When push comes to shove, will firms dismiss productivity gains in favour of employee well-being? Although ‘the great resignation’ appears to indicate workers voting with their feet in a labour market more favourable to the employee, the demands of capital have, under neoliberal conditions, always taken precedence (Harvey 2010, Streeck 2016). Indeed, some firms have begun long-term planning for post-pandemic conditions that include ‘hybrid’ ways of working (Alexander et al 2021) while others have started to downsize their office space in anticipation of the continued use of remote work (Whitfield 2021). It appears there have been positives and negatives to remote working during the pandemic, not least the belief that home working reduces the environmental pollution associated with the daily commute (Crowley et al 2021). However, it is arguable that lockdown and the shift to remote working would not have been possible without digital technology which had already begun to shape our working lives and promised alternative futures (Ford 2016). The pandemic may have accelerated trends already on the way. This section shows positive and negative factors associated with home working and while we could perhaps identify ways in which harm may manifest it is clear that, within the context of the pandemic, working remotely was seen as harmless and benign in comparison with the harm associated with coronavirus. We now turn to some key features of those technologies and begin to think critically about the implications for a technology-assisted remote work future.

Technological Futures

Technology companies have done well from the pandemic. Amazon, Apple, Microsoft, Google and Facebook increased their market share by over 50% in 2020 (Calcea 2021). Zoom’s pre-tax profits increased by 4,000% during the pandemic (Massie 2021). Technology allowed us to stay in touch, entertain ourselves and work in ways that, for many, eased the burden of lockdown (Briggs et al 2020) whilst enriching the companies that provided us with platforms and streaming services. However, a significant stream of critical literature had, pre-pandemic, raised crucial questions about digital technology and its impact on our lives, culture and relations (Lyon 2018, Susskind and Susskind 2017, Schildt 2020, York 2021, Kalpokas 2019, Flyverbom 2019, Benanav 2021, Pasquale 2015, Zuboff 2019). Of particular interest here are the use of technologies to monitor workers (Pasquale 2015, Lyon 2021, Brayne 2021), new forms of governance informed by algorithms (Kalpokas 2019) and the use of data to ‘optimise’ the individual worker (Schildt 2020).

Workplace surveillance is not new. From physical surveillance and monitoring on the assembly line using Taylorist principles of scientific management (Lloyd 2013) to the use of digital technology to monitor performance in the call centre (Bain and Taylor 2000, Townsend 2005), the nature of workplace surveillance has

evolved. Lyon (2021) points out that electronic monitoring of workers grew dramatically from the end of the 20th century through software that is often hidden and susceptible to abuse. However, with the rapid expansion of a ‘distributed workforce’ as the pandemic and government restrictions kicked in, many companies sought additional controls to ensure that workers remained productive (Blum 2022). Woodcock (2022) indicates a 58% increase in demand for employee surveillance software such as Teramind or Hubstaff while Blum (2022) notes 60% of companies with 1,000 or more employees responded to an unpublished survey with confirmation that they had adopted these technologies by 2021. Lyon (2021) suggests that US managers using forms of ‘bossware’ for remote monitoring had increased from 10% to 30%. Although the figures indicate differences in survey methodologies, what is clear is the overall increase in use of intrusive and non-intrusive employee monitoring software (Drapkin 2022). Electronic surveillance software can track the time one takes to complete a task but, more invasively, can remotely monitor emails, website use, keystrokes and mouse movement, take randomised screenshots, as well as tracking location and recording biometric data (Ball 2010). Managers may make parallels between in-person surveillance or monitoring in the office; supervisors could see workers making calls, performing tasks, and so on. The difference with intelligent surveillance systems is one of potential overreach: is there a difference between looking over an employee’s shoulder while they complete a task and being able to trawl through millions of data points to retrospectively see which website someone was browsing at 11:23 on Thursday last week?

David Lyon’s (2018) ‘culture of surveillance’ is useful here. Lyon argues that surveillance capitalism is not simply a ‘top down’ imposition of surveillance onto an unsuspecting public. We actively participate in our own surveillance. First, user generated content represents value to technology companies who have commodified metadata as a revenue stream. Our active engagement online creates value for companies who can use that data in whatever way they want. We never read the terms and conditions. We often simply accept cookies when we log onto websites. As Lyon points out, the familiarity and ease of use that we find online, along with the fun that comes from our engagement, often trumps questions of digital justice or ethics. More crucially, we have become a society of watchers (Lyon 2018) where we actively participate in surveillance ourselves. We reproduce surveillance through our compliance with, for example, airport security, but we also use smartphone GPS technology to locate others, we check on friends and neighbours’ activities through social media, we install nanny-cams and doorbell cams, we check our children’s browsing histories, and we Google potential colleagues or partners. Surveillance is a part of our lives.

A standard response is often, ‘well, if you are doing your job properly, what does it matter?’ which is similar to the broader surveillance riposte: ‘well, if you have nothing to hide then what does it matter?’ In relation to work, employees are often unaware that they are the subject of remote management surveillance (Pasquale 2015). Since the commodification of metadata, user generated content is collected

by companies and used to generate revenue without the generator of that metadata knowing what is collected, who it is sold to and how it is used. This leads to what Flyverbom (2019) calls a ‘digital prism’ and Pasquale (2015) refers to as a ‘black box society’. The use of our data is opaque and often collected without our knowledge or permission. It is also used in ways we do not understand with potential consequences we cannot foresee. This is what Zuboff (2019) refers to as ‘surveillance capitalism’ and in the expansion of remote working and employee monitoring software, it appears to be a significant element in disciplining a distributed workforce spread further afield due to the pandemic. The accumulation of data on workers – keystrokes, screen shots, website visits, task completion times, downloads, and more – provides a wealth of information with which to both monitor performance in real time but also retroactively piece together a digital narrative about a worker. The critical questions, crucial for ideas of workplace democracy and employer-employee relations, are whether or not workers are aware of the systems of surveillance in place; how this data is stored and used; and its potential impact on the worker. When we translate this into a discussion of remote working and working from home, workers encouraged to work remotely for a variety of reasons now invite surveillance and monitoring mechanisms into their own private spaces (Lyon 2021). Laptops, tablets, and smartphones provided by an employer are likely to come with surveillance software already embedded but workers using their own equipment – a home PC or laptop, for example – often have to download different software packages in order to complete their work and this could result in personal files, photographs and documents being subject to an employer’s ‘bossware’. Remote working potentially involves the increased surveillance of home lives by management, further blurring the lines between work and non-work.

The employer will make a simple claim at this point: intelligent surveillance is associated with workplace governance and effective performance, particularly in an era where a distributed workforce is more commonplace. We turn to governance first as this increasingly centres around the use of algorithms, data analytics and machine learning. More broadly, automation has been identified as a threat to a range of job roles and labour market sectors (Ford 2016, Mueller 2021). However, it is also true to say that machine learning and automation changes job roles, organisational logic, and leadership. Bullock (2019) suggests that bureaucracy and discretion within organisations change via technology. ‘Street-level’ bureaucracy sees discretion rest with people who dealt with others face-to-face. This shifts towards ‘screen-level’ bureaucracy where ICT becomes more prominent and while discretion is still a human decision, it is more impersonal. The final phase – ‘systems-level’ bureaucracy – utilises ICT not just to register and store data but also to execute and control the whole process. Cases and issues are now often handled without human input or interference so expert systems replace professional workers. Gusterson notes,

The operators of the system, supposedly its masters, are disempowered, and it becomes hard to find anyone who has

the authority to override the system's flaws. The algorithmic processes that underlie it take on a life of their own, and the distribution of responsibility between actors who do not coordinate with each other obstructs adjustment of the apparatus to instances that do not conform to stereotyped scenarios. The common sense and situational logic of humans is displaced by and subordinated to the logic of automation and bureaucracy (Gusterson 2019, 2)

Algorithmic governance, the capacity to collect as much data as possible in order to establish robust connections, moves towards a society of control whereby code and data determine what is measurable and predictable (Kalpokas 2019). In general, algorithmic governance can lead to what Pasquale (2015) calls 'cascading disadvantages' whereby digital data points are connected by non-human actors, the intelligent machine, to create a 'digital double' that has analogue reality. If an algorithm produces a negative credit score, the cascading disadvantages across other digital systems can reproduce those inequalities. In the workplace, algorithms are increasingly making decisions on hiring and firing, on performance and other aspects of working life such as shift patterns (Schildt 2020). As Schildt identifies, more and more people are working in 'Uberfied' jobs without a human supervisor or manager to report to. According to Medwell (2022), algorithmic HRM systems have resulted in underpayment of workers, arbitrary terminations, and in-built biases in hiring yet the 'black box' technology remains opaque. Algorithms are proprietary technology and therefore transparency on how algorithms are programmed or deployed is often denied (Pasquale 2015, Flyverbom 2019). Decisions on people's working lives are often delegated to algorithms in the name of efficiency without oversight, scrutiny or, at times, even the ability of a human manager to override.

There are two factors to consider here. First, algorithms are not unbiased but are instead created by humans with their own biases, prejudices and class positions (Pasquale 2015, Lyon 2018). Algorithms are deployed by companies engaged within a capitalist political economy and therefore work towards a particular set of interests (Timcke 2021). The subject at the end of an algorithmic equation may be disadvantaged, fired, denied credit, evicted from their home, and the response is a technocratic one – we need to improve the technology – rather than a political question – in whose favour do these technologies work? (Timcke 2021). Secondly, the algorithm can only support by processing vast amounts of data and therefore the type of information fed into this process is crucial. In workplaces, what is measured becomes a critical question of management and governance (Schildt 2020). As Gusterson (2019) notes, job roles change through 'robotprocesses' that can automate tasks in ways that require workers change to suit the algorithm, rather than the other way round. Banks and call centres reconfigure the labour process around digital prompts provided by algorithms. The more predictable a work routine or process, the easier it is to apply an algorithm and measure that

task. The more autonomy and variance in a role, the harder it is to measure or predict an outcome; workplaces keen on performance, productivity and efficiency must rationalise work processes to fit the forms of algorithmic governance on offer,

Digitalization, understood from a sociological perspective, involves the deliberate shift in the organization, where managers seek to replace the reliance on human knowledge, intuition, and skilful actions with the use of digital data, algorithmic processing, and automated control of the 'programmable world'. (Schildt 2020,179)

This leads us to consider efficiency, optimisation, and performance. Ultimately, algorithmic governance and intelligent surveillance software provide organisations with the tools to ensure greater performance and efficiency (Schildt 2020, Lyon 2018). If this requires the reconfiguration of both organisational leadership, employer-employee relations, and the practicalities of job roles and tasks, so be it. Performance management and the achievement of targets has a long history in the sociology of work and organisations (Braverman 1998, Lloyd 2013) and the crucial input into those metrics is data with which management can measure performance and determine success or failure. The quest for efficiency through performance management and targets is a key feature of neoliberal governance (Power 1999, Lloyd 2018). We assume that we just need more data with which to make the right decisions, that data doesn't lie and that we can make objective, rational calculations on the back of a robust evidence base. So, organisations install processes and systems of monitoring designed to collect the data required to optimise performance (Schildt 2020). In previous work, I have outlined how this works in call centres (Lloyd 2013, 2016). The call centre acts as a good example where 'traditional' regimes of physical workplace surveillance exist alongside more recent technological forms of optimisation and surveillance through digital monitoring and performance metrics. However, this technocratic form of management extends to a wide range of sectors including health care, education, retail, accountancy, government services and more (Susskind and Susskind 2017). For example, teachers will worry about test scores as the metrics or targets are the 'key performance indicators' that matter, rather than the support and progress that each pupil requires; as Engle Merry (2019) points out, numbers can provide a distorted picture due to limited or inaccurate data, trying to count things that are not easily quantifiable and the inability to include wider contextual factors. Instead, the data paints a picture, and the algorithm increasingly makes a judgement or decision on the worker.

The 'digital double' created by the various metrics that measure performance presents a picture of a worker that managers can then use to either discipline or improve. Workplaces that increasingly rely on data to demonstrate 'value' become 'optimal performance centres' (Besteman 2019) and reflect the neoliberal belief in

efficiency and productivity. Ultimately, managers seek the optimisation of the worker in the same way that the neoliberal belief in individual advancement compels each of us to be the best version of ourselves: is this not also a process of subjective optimisation? Schildt (2020) demonstrates that algorithmic management geared towards worker optimisation can be problematic: companies that use Percolata's advanced algorithmic management system find that higher performance results in workers being awarded more hours whereas failure to sell enough products in store results in the algorithm cutting hours. Performance is measured based on factors identified by management and algorithms are created based on the needs of the employer; a 'good' worker is therefore dispassionately identified according to certain metrics and rewarded on those terms alone. Percolata, for example, takes into account a range of variables to optimise work schedules, pairing sales personnel for maximum output. The entire system is set up to make maximise the worker's performance in service of the employer without considering workers' needs. That much of this is increasingly automated raises questions about governance and accountability that should be considered further if organisations are going to increasingly rely on machine learning to monitor and optimise an increasingly distributed workforce.

Managers can use data to discipline workers but also to coach or improve employees. AI also provides firms with coaching capacity (Amar et al 2022). One utility firm found that behavioural nudges through smart AI coaching improved performance results, including an 8-10% increase in productivity and a 20-30% reduction in rework (Amar et al 2022). Ultimately, the technology is geared towards optimisation of worker output and while the recommendation was for the technology to work alongside traditional coaching and mentoring, it is worth asking whether or not managers rely solely on the metrics and not in combination with their own judgement. This trend towards subjective optimisation through 'metric power' (Beer 2016) and machine learning reflects the neoliberal imperative towards maximisation of one's potential; now we have the tools and data to monitor ourselves. While some firms utilise wearable technologies to monitor employee performance (Lyon 2018) this has also become a routine part of our lives through fitness trackers, GPS watches and so on. We monitor our activity, calorie intake, and sleep with the underlying aim of self-improvement. We identify optimal performance, for example, 8 hours of sleep per day, 10,000 steps, or burning 2,000 calories and we track our progress through these devices. Individual optimisation based on performance normalises the use of data, tracking, metrics and monitoring in our lives, revealing David Lyon's 'culture of surveillance'. Furthermore, Kalpokas (2019) argues that optimisation creates new hierarchies and subjects individuals to a process of relentless self-improvement, status work and competition; striving for quantifiable perfection is ultimately ideological in the sense that ultimate human emancipation comes not from being more perfect than everyone else but precisely in our imperfections. We have the right to be imperfect but in a work context being suboptimal or non-fully efficient can be hugely problematic. These trends in workplace governance and technological development raise significant questions that will intensify in a future labour market

characterised by greater use of distributed workforces, home or remote working, and algorithmic management. This leads us to consider the utility of a social harm perspective.

Assumptions of Harmlessness

Raymen (2021) suggests that liberal capitalism operates under an *assumption of harmlessness*. Yes, we regularly cite the iniquities associated with the worst excesses of our system – rampant inequality, hunger, and so on – but we often act, individually and collectively, in ways that dismiss or ignore many of the harms endemic to our political economic system. We can acknowledge that a certain degree of harm is necessary within our system but that is often wrapped up in sentiments such as ‘the price of freedom’ or ‘it was worse under different regimes’. Dupuy (2014) notes that the violence of capitalism is somewhat ‘necessary’ in that it prevents greater harms such as economic collapse. The ‘good’ harms keep the ‘worse’ harms at bay. In a sense, this allows us to disavow knowledge of a range of harms that occur on a daily basis; we *know* these things happen, but we *act as if they do not* (see Fisher 2009; Pfaller 2017; Kuldova 2019; Žižek 1989). This assumption of harmlessness is embedded in our everyday language and subjectivities and is visible in commonplace assertions such as ‘what’s the harm?’ or ‘there’s no harm in that’ (Raymen 2021). Framed negatively, ‘why shouldn’t managers use intelligent surveillance to monitor their workers at home?’ There is a fundamental assumption within liberal capitalism that certain practices or processes are harmless and therefore should be allowed to continue without any critical questioning in relation to whether these practices are reflective of social roles oriented towards individual and collective notions of a ‘good life’ (Raymen 2019).

When we consider remote working from this assumption of harmlessness, it raises questions about what happened during the pandemic and where we are going post-pandemic. Without reiterating the ‘balance of harm’ argument (see Briggs et al 2021) in relation to work from home orders, there is an assumption of harmlessness that underpins the injunction to work remotely. Effectively, the risk of Covid-19 was so significant that working from home is less harmful and therefore the right thing to do. That may indeed be the case. However, we must interrogate the assumption of harmlessness in relation to remote working during the pandemic; work-life balance, as noted above, is a significant challenge for remote workers in normal circumstances, without adding lockdown rules, caring responsibilities, home schooling, the existential threat of a global pandemic and, at times, hysterical media commentary. No doubt, many people have adapted to working from home and have found many positives. This will not be the case for everyone, and it is important to recognise that fact. When we look ahead to the future of work, this assumption of harmlessness persists. As discussed above, the pandemic has created greater calls for the use of remote work and distributed workforces *at the same time as* organisations imposed heightened systems of intelligent surveillance, algorithmic governance, and data-driven worker optimisation. In whose interests and to whose benefit is worker optimisation and

data-driven performance management? If algorithmic governance and intelligent surveillance are created and utilised by organisations, rather than a benign set of tools deployed by managers, are they shaped by existing inequalities and biases, opaque in terms of how they operate, and able to create cascading disadvantage, either intentionally or unintentionally? It is problematic to simply assume they are harmless processes.

The assumptions of harmlessness extend further. Living space was hastily reconfigured to accommodate remote working during the pandemic but emergency conditions may not be workable as a long-term normality. Also, as noted earlier, broadband connectivity represents infrastructural inequalities that may impact upon the sustainability of consistent patterns of remote work. While managers may see productivity increases as a driver for downsizing office space and moving online, it may lead to scenarios where some workers are disadvantaged. This does not stop with the ‘laptop class’ either but instead represents the wider labour market inequalities highlighted by the pandemic. Businesses may choose to transition online because it is more efficient and cost-effective but only workers in those roles will make that transition. What happens to support staff such as cleaners, catering, security, and those other roles that cannot be done online? Finally, the wider economic effects of shrinking office space is a significant issue for town and city centres seeking to recover from the pandemic; reduced footfall through absent office workers has a knock-on effect for a range of retail, leisure, hospitality, and transport sectors as workers are not present to buy lunch, go for a drink after work or commute home (Hambleton 2020).

Remote work is also increasingly tied to the development of green technologies and the challenge of environmental harm. Working from home during the pandemic reduced daily commutes for millions of workers, with apparent benefits to the environment (Crowley et al 2021). The green revolution, now linked to various governments’ ‘build back better’ strategies, assumes that digital technology has a significant part to play in the future of work. This may be the case. However, we must bear in mind that the digital technologies that allow many of us to work remotely are dependent on the microchips, processors and nanotechnologies that rely on Rare Earth Elements (REE) that need to be extracted from the ground in energy intensive processes that are not ‘clean’ (Pitron 2020). Pitron argues that we are swapping one pollution-creating process for another and that the clean energy is a fallacy. The shift towards a digital revolution requires a huge material infrastructure which will further contribute to environmental pollution. Are we again making assumptions of harmlessness? Most REE are extracted overseas and the Chinese control much of this market. The energy and digital transformation means trading oilfields for rare metal deposits and would still require mining and refinement processes; a technological world is not necessarily a greener world (Pitron 2020, Raymen and Smith 2021).

Conclusion

This paper has, hopefully, raised several critical issues in relation to remote working. Although remote working predates the pandemic, it became an increasing necessity for millions as government-imposed work from home orders as part of a suite of public health measures to tackle Covid-19. The rapid transition online and the movement of work into living spaces and the home environment raise questions about work-life balance and well-being that must be considered. Meanwhile, the pandemic could be seen to accelerate trends already developing in relation to work and technology. Here, this paper has considered intelligent surveillance, algorithmic governance and data-driven optimisation that preceded the pandemic which have implications for employer-employee relations, workplace democracy, and the balance between work and home life. If employee surveillance software, performance metrics, datafication and algorithmic forms of management and governance are increasingly central to the operation of workplaces – either in person or remote – there are questions that we must ask about the impact on the worker. If the shift towards more remote working and distributed workforces is part of the future of work, we can anticipate the continuation of trends towards surveillance, machine learning and optimisation. As Schildt (2020) notes, algorithmic management does not have to be a blind force that dehumanizes workers. Yet, in an age of ‘surveillance capitalism’ (Zuboff 2019), optimistic notes on the future of work may require a touch of caution. While social harm is a contested field (see Canning and Tombs 2021, Pemberton 2016, Kotzé 2018), it does provide a useful perspective from which to consider many of the issues noted above. However, Raymen (2022) asks a fundamental question that we must consider in relation to remote work and the future of work: how can we know, with confidence, that someone or something is harmed or that someone or something is harmful? This paper does not necessarily offer an answer but as we continue to exit the pandemic and consider how patterns of work and employment will change in our digital future, we must come back to this question instead of assuming that these developments are harmless.

Author Bio

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