

Rise of the Performance and Assessment Filter: Microsoft Viva “Bossware,” Presence Status, and the Power of Surveillance Machines— Sleepers Awake!

TOIJA CINQUE*
Deakin University, Australia

From public workplaces to private homes and worn intimately on the body, digital platforms and devices serve as vehicles for delivering information, performance data, and assessment of proficiencies. Each carries the potential to become a surveillance machine and acts as a manifestation of surveillance capitalism. For the purposes of this article, I conduct an in-depth analysis of the Microsoft e-mail services widely used in business and education settings where these tools are deployed as emerging exemplars. What follows is an empirical investigation of my recorded work habits captured from Microsoft Viva to evaluate workplace productivity and “identity construction.” I explore the recent trend in “bossware” or people analytics to critically assess the escalating collection of individual performance data and the implications of online “presence status” indicators. This study contributes to ongoing discussions about the evolving landscape of work and employment in digital, algorithm-driven societies and the role of data harvesting.

Keywords: performance and assessment filters, presence status, performance data, bossware, people analytics, Microsoft Viva, COVID-19, algorithms, artificial intelligence

The COVID-19 pandemic precipitated a rapid, worldwide transition to remote work and education, a seismic shift necessitated by government-mandated lockdowns and self-isolation due to illness (Aksoy et al., 2022). Notably, about half of the workforce in countries like Australia, France, and the United Kingdom, and 28% in Japan—a country without a nationwide lockdown—was working remotely by 2020 (Organization for Economic Co-operation and Development [OECD], 2021). In the United States, 50% of the pre-pandemic workforce transitioned to home-based work by April 2020 (Brynjolfsson et al., 2020; Teodorovicz, Sadun, Kun, & Shaer, 2022). Surveys indicate a significant desire to continue work-from-home practices post-pandemic (Abdullah, Rahmat, Zawawi, Khamsah, & Anuarsham, 2020; Barrero, Bloom, & Davis, 2021; Williamson, Colley, & Hanna-Osborne, 2020).

Emerging Surveillance and the Power of Data Collection in Remote Work and Education

This article scrutinizes the rise of pervasive digital analytics within remote work and education environments, highlighting the ethical dilemmas posed by automated monitoring and assessment

Tojia Cinque: Tojia.Cinque@deakin.edu.au

Date submitted: 2023-03-28

Copyright © 2024 (Tojia Cinque). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

technologies. It offers a critical review and update on my own machine-recorded work habits from 2020 to early 2023, focusing on the increased use of Microsoft's Viva for digital surveillance (find earlier work in Cinque, 2022). The analysis challenges the ostensible neutrality of digital communication technologies and their impact on individuals and communities (see Clough, 2016).

Reflecting on my experience with Microsoft Viva, I acknowledge initial optimism for potential productivity gains, which quickly subsided, resulting in my disabling nonessential applications. This autoethnographic study underscores the need for critical engagement with digital tools, beyond mere acceptance or resistance. A critical lens is applied steadfastly to the hegemony of digitally produced, stored, shared data and curated content (Cinque, 2023, 2015). The contemporary use of digital screens and communication technologies, which are not value neutral in society, carries both effects and affects for individuals and communities (Clough, 2016). I approached Microsoft Viva with a seasoned perspective, having witnessed myriad technology-driven solutions that herald promises of enhanced productivity and work-life balance. Initially, the platform piqued my curiosity, and I was hopeful that its algorithmic insights could lead to more efficient work patterns. There was indeed a transient phase during which I appreciated Viva's potential to allow me to work more efficiently. Yet, this sentiment was short-lived. Employing digital autoethnography for this exploration granted a unique depth of understanding. My position, informed by extensive research and diverse experiences, allowed me a dual role, first as an immersive participant in the digital realm and second as a critical observer. Since concluding the study, I have opted to disable nonessential applications, further underscoring the importance of critically analyzing our relationship with such digital tools, beyond a simple dichotomy of acceptance or resistance.

The Rise and Rise of "Bossware"

As stated above, the intention of this article is a critical assessment of personal, computationally derived communication toward the claim that a number of consequences stem from so-called quantitative improvements and the subsequent collection, storage, interpretation, and use of individuals' data from personal work patterns. Namely, "bossware" surveillance imposes an interpretive, illusory filter through which employees and students must correspond with each other, and work, to be simultaneously analyzed by their outputs—the specific focus here is on workers, but findings may be extrapolated to student experiences also. Bossware refers to technological surveillance of employees and students through their digital devices—specifically their computers, sometimes Web cameras, and the software and applications downloaded to perform workday tasks—such that data about our actions, behaviors, and feelings can be collected, collated, stored, and interpreted by these de facto arbiters of reality.

Tracing the Evolution of Computing and Its Impact on Labor: From Mainframes to Bossware

The narrative of computing technology, from the late 1940s' commercialization efforts through mainframe, desktop computing to the current cloud-based era, has profoundly impacted the labor market and employment structures (Ceruzzi, 2003). This progression toward "quantified workplaces" raises pivotal concerns regarding privacy, autonomy, and the essence of work (Moore, 2018). The transition from the centralized, hierarchical mainframe systems to the more accessible desktop and cloud computing has notably altered employment roles, expectations, and organizational dynamics. The introduction of bossware in this context

underscores a shift toward prioritizing productivity and managerial control, potentially at the cost of employee privacy and autonomy. An example of this era's impact on labor can be seen in how airlines used mainframe computers for reservations, not only streamlining operations but also centralizing control and decision making, affecting jobs in travel agencies and airline ticketing (Campbell-Kelly & Garcia-Swartz, 2013). The advent of desktop computing in the 1980s and 1990s afforded greater access to computing power, decentralizing the capabilities previously confined to mainframe systems. This shift had profound implications for labor as it allowed computing to become an integral part of the workflow across different levels of an organization. The proliferation of personal computers facilitated the automation of tasks, from word processing to financial analysis, transforming job roles and requirements. For example, the use of desktop publishing software significantly impacted the printing and publishing industries, reducing the need for typesetting and layout skills but increasing the demand for digital design skills (Kipphan, 2001). The current era of cloud-based computing, from the 2000s to the present, has further disrupted labor dynamics, enabling the rise of bossware. Cloud computing's hallmark is its ability to provide scalable, on-demand access to computing resources over the Internet, transcending the physical and geographical limitations of previous paradigms. This technological shift has not only facilitated remote work, the "gig" economy, and flexible work arrangements but also given rise to sophisticated forms of worker surveillance and management (Moore, 2018). Bossware tools leverage cloud computing to monitor employee activities, from keystrokes and screen time to physical locations, under the guise of productivity enhancement and security. A notable example is the use of such software by companies like Amazon to track the productivity of warehouse workers, leading to alienation and a heightened sense of exploitation (Vallas & Kronberg, 2023). The rise of bossware is particularly indicative of the tensions inherent in the latest paradigm, reflecting a push for greater productivity and control that often comes at the expense of worker privacy and autonomy. As computing technology and products such as generative artificial intelligence (AI) continue to evolve, it will be important to critically assess the impact on labor and ensure that advances in technology serve to enhance, rather than undermine, the dignity and rights of workers.

The inception and rise of bossware must also be understood within the wider historical continuum of enterprise software, reflecting shifts in organizational culture, technological capabilities, and the evolving relationship between employees and employers. Initially, enterprise resource planning systems such as systems, applications, and products in data processing heralded a new era of organizational cohesion and efficiency, centralizing business processes and paving the way for an integrated approach to management. Office suites, from early players like Lotus to giants like Microsoft and Google, expanded this cohesion, allowing seamless collaboration through shared documents and communication tools. Personal productivity tools and task managers emerged alongside these, placing emphasis on individual agency, task alignment, and goal setting within the enterprise environment. With the emergence of cloud computing, these disparate systems were given the ability to communicate, interact, and share data on an unprecedented scale, not just revolutionizing organizational capability but also transforming the very nature of work itself. In this rich tapestry of innovation and evolution, bossware emerges as a somewhat discordant note. Where previous software might be said to afford empowerment, intergradation, or alignment, bossware aims to surveil and control. It manifests a return to a more hierarchical and scrutinized model of work, deploying advanced monitoring technologies to track employee activities and productivity. This shift signifies not merely a technological advancement but also a sociocultural reorientation, underscoring a delicate balance between oversight and autonomy, trust, and control. The development of bossware thus embodies broader debates concerning privacy, consent, and the ethical boundaries of technological innovation. In an age where work is increasingly mediated by complex technological

interfaces, the phenomenon of bossware encapsulates a pivotal tension within the contemporary organizational landscape, representing a juncture where technological capability meets ethical deliberation and where the history of enterprise software turns to face an uncertain future.

The Microsoft Viva platform, embedded within the broader Microsoft ecosystem, serves as a digital overseer by providing daily activity summaries and briefings. This function aligns with Foucault's (1975/1977) concept that data embody power, thus creating a digital panopticon that affects both individual and collective power dynamics. The panopticon, conceptualized by Jeremy Bentham in 1787, is a pivotal theoretical framework for understanding modern surveillance and social control mechanisms. Bentham envisioned a facility where an unseen inspector could monitor all inmates, establishing an "unequal gaze" that regulated behavior through a dynamic of visible prisoners and invisible wardens (Božovič, 1995). Foucault (1975/1977) elaborated on this in *Surveiller et Punir: Naissance de la Prison (Discipline and Punish—The Birth of the Prison)*, highlighting the proliferation of social discipline under state surveillance, characterized by an impersonal gaze that transforms society into a field of perception. This dynamic, akin to the panopticon's ability to control and the police's surveillance powers, underscores the separation of power from individuals, making them passive actors in societal norms, leading to the internalization of roles dictated by pervasive surveillance (Foucault, 1975/1977). This analysis reveals a hierarchy of power relations fostered by such regulatory practices.

The panopticon's relevance persists in modern society, illustrating the ongoing interplay among surveillance, control, and normalization, which mirrors its original design. This concept offers a critical perspective on the dynamics of contemporary social interactions, particularly on how automated data collection and analysis influence our perception of reality, notably in remote work and study settings. Poster (1990) highlighted the interpretive bias inherent in electronic data gathering, a concern that remains pertinent decades later. The application of Microsoft Viva and similar platforms exemplifies Foucault's (1975/1977) surveillance theory, positioning employees in a "faceless gaze" of continuous monitoring. This surveillance dynamic, akin to the panopticon's "unequal gaze," fosters a power imbalance between unseen employers/managers and visible employees, impacting autonomy, privacy, and control within organizational frameworks. Such subtle monitoring encourages the normalization of behavior, echoing Foucault's (1975/1977) concept of "docile bodies"—individuals molded to conform to prescribed roles through persistent surveillance. This intersection of visibility, regulation, and power, facilitated by tools like Viva, prompts critical reflection on ethical considerations, individual agency, and the evolving dynamics of workplace culture in the digital surveillance era. These issues offer a fertile ground for examining contemporary employment practices and the changing nature of employer-employee relations.

Data assemblages, comprising multilevel, networked databases, generate analytics that reflect the behaviors and attitudes of employees or students. Pooley (2018) identifies the emergence of an "audit culture" within academic platforms like Academia.com, indicating a shift toward an analytics-driven mindset among scholars. Similarly, Zuboff (2019) discusses the normalization of corporate actions, highlighting the acceptance of trading "unclean" data—characterized by inconsistencies and inaccuracies—across platforms like Google, Facebook, and Instagram. These performance data, detailing user behaviors and preferences, are widely distributed to a range of third parties, including marketers, health-care providers, and governmental services, illustrating a broad spectrum of data commodification.

In examining surveillance practices, the panopticon analogy is relevant, particularly in the context of technologies like Viva, which are used for organizational monitoring. The discussion extends to the management of staff and students via Microsoft 365 tools (TEAMS, OneDrive, Outlook, Sharepoint), signifying a pervasive digital environment. Microsoft's rebranding to Microsoft 365 reflects its ambition to serve as a comprehensive daily platform, moving beyond its office-centric origins. This transition underscores the significance of datafication, commodification, and algorithm-driven content selection in Microsoft's business model, as outlined by van Dijck, Poell, and de Waal (2018). The concept of "stickiness" in Web development, aimed at enhancing user engagement within digital ecosystems, is pivotal to Microsoft's strategy, distinguishing it from competitors like Slack, Discord, or Meta's Business Suite by leveraging its extensive suite of services for data collection and user retention.

The contemporary digital landscape emphasizes the escalating significance of real-time and archived data, reconceptualizing user actions as commodities (Kant, 2020). With platforms diligently surveilling user activity to extract market insights (Kennedy, 2016), data have come to be metaphorically termed "the new oil" (Hirsch, 2014; Palmer, 2006, p. 1). For many, there is the additional element of "privacy fatigue" whereby the care toward protecting personal digital data is given up, which is consistent with the view that users are powerless to control the outcomes for where their data end up and the purposes to which they are ultimately put (Choi, Park, & Jung, 2018, p. 42). Utopian counter definitions for their part regard the capacity of interconnected IoT/cyber-physical systems—systems that are created by and rely on the seamless fusion of physical elements and computational algorithms—as being bound to future imaginings wherein new "panoptical systems," the Internet of all things, detail all subjects and can imagine a universal system of frictionless functioning. Intelligence passes to things communicating information about themselves. There are certainly varying affordances, however, that arise in "always-on" connections from smart grids to public safety being enhanced using data from, and to, social media for information about security alerts or local floods, bushfires, air/water quality, and the like, which can be gathered easily and shared quickly. In developed countries (and more unevenly in developing economies) are young people growing up in what Ohler (2010) adroitly describes as natural, human, and digital "ecosystems" with important complex implications for the futures of work, education, the environment, health, communication, and social connection.

As we navigate this digital era, the dichotomy between our lives online and offline becomes increasingly blurred. Authors Román, Bujanda, and Zerega (2017) liken this digital age to the "eyes of God" with the omnipotence and omnipresence given to everyone by recording our lives through digital means with inherent shareability resulting in us being the "protagonist and observer" at the same time (p. 85). But they discuss the next digital era as one where technology is automated and outside the realm of human control (Román, Bujanda, & Zerega, 2017). The authors make the claim, echoing prior arguments of Clough (2016), for the cyclic nature of the digital revolution such that society brings forth new technologies that embed themselves so deeply so as to become integral. While the prospect of fully automated workforces, powered by advanced machinery and algorithms, might be deemed unattainable in many industries at present, the role of human labor is indispensable (currently) as outlined by Munn (2022a, 2022b). Nonetheless, it is undeniable that generative AI tools, such as ChatGPT-4o, Midjourney, DALL-E 2, and Bing AI, are accelerating the "work flow" for tasks traditionally performed by humans and transforming the essence of the work itself (Mollick, & Euchner, 2023). Yet, the nature of "work" is still subject to variations, often exhibiting disparities across gender, age, race, and class (Moen, Flood, & Wang, 2022).

In essence, the data generated through our daily activities shape our digital identities. We are constantly creating and recreating our identities in the digital world, with implications for our perceived identities in our physical world. The manipulation of our digital identities through data-driven platforms like Microsoft Viva presents a digital future where our reality is shaped not only by our own experiences but by data collected from our digital interactions.

Presence Status and Performance Analytics: Methodology and Method

The focus of this article is on Microsoft Viva in the Microsoft “ecosystem,” an important communication tool for close analysis because it is where employees and students increasingly spend many work/study hours. Viva tools are aimed at enhancing communication and integration within Outlook as part of a broader suite designed to improve employee engagement and productivity across multiple Microsoft 365 applications (Microsoft Learn). Viva is declared to be an “employee experience platform that brings it all together” in its emailed “Your daily briefing” (or briefing e-mail sent directly to the user’s Outlook mailbox <viva-noreply@microsoft.com>). This point seems significant because noted on the Microsoft Web page is the statement that not only does Microsoft access the details of daily activities, but it also has access to internal connections and information across the company one works for (Microsoft, 2021). For its part, Microsoft Viva hosts and processes customer/worker data, and Microsoft Viva Topics “automatically organizes content and expertise across your organization.” (Microsoft, 2023, p. 1). What follows is a critical review of my own recorded work habits as captured from Microsoft’s Outlook e-mail through Viva (for daily briefing e-mails) and information from MyAnalytics. I used a digital autoethnographic approach (Pink et al., 2015) for a case study analysis of Microsoft’s current services to assess workplace performance as a form of “identity construction” for the wider points for consideration this might bring to bear. Taking the key methodological principle of “multiplicity” that stresses the importance of customizing digital ethnography to the research (Pink et al., 2015), I explored the recent trend in bossware or people analytics (Moore, 2018; Tursunbayeva, Pagliari, Di Lauro, & Antonelli, 2022). For Pink and colleagues (2015), understanding the wider implications of digital research is important such that research using digital tools, or taking place in a digital environment, likely has implications beyond the digital sphere alone.

My interaction with Microsoft Viva was not a journey into uncharted territory but rather a focused exploration of a familiar domain viewed through a fresh perspective. My initial observational stance toward Viva rapidly shifted to a more intricate engagement. Attracted by the platform’s promise of efficiency through algorithmic insights, I nonetheless soon discerned deeper implications beneath its surface. Engaging critically with Viva while also being its subject introduced a layered dynamic, evoking a sense of “I’m studying you while you’re studying me.” This dynamic was not just academic; it bore emotional weight. There was a palpable feeling of empowerment in actively examining a system that was designed to surveil. This act of “turning the lens” brought with it a sense of regained control. Yet, this sense of empowerment was contrasted by an underlying vulnerability, an acknowledgment of the omnipresence of such surveillance systems. The simultaneous feelings of empowerment and vulnerability highlight the intricate challenges of grappling with and opposing algorithmic governance in contemporary workplaces. This delicate balance underscores the emotional complexities arising from interactions with systems intended to shape and guide human behaviors.

This methodological approach has a number of advantages. It provides a rich source of data about user interactions with the platform as well as the sorts of data collected by the platform about work habits. The use of digital autoethnography provides a deep understanding of my experiences and perceptions of using the platform for how the findings may apply to others. This approach offers a balance between depth and detail that is particularly suited to the aim of exploring the implications of digital tools and platforms for identity construction and performance management. Compared with other methods, this approach provides a more nuanced understanding of user interactions with the platform. Quantitative methods alone, for example, might provide more objective data about the number and frequency of interactions but would not capture user experiences and perceptions in the same depth.

Method

This research employed digital autoethnography to examine the complex relationship between the user (me) and Microsoft Viva within a professional context. By critically analyzing quantitative data on work habits—including e-mail interactions and work-pattern analytics—the study illuminates issues of performance and productivity management. Key questions include how Microsoft Viva and MyAnalytics engage with users and the potential practices and implications arising therefrom. This analysis foregrounds identity perceptions, tracking, and performance monitoring in professional e-working spaces, spotlighting the prominence of bossware communications. The method comprised reviewing e-mail updates and visual data from my work-connected Outlook account, with frequency counts used to interpret and provide context to the findings, enhancing understanding of the phenomena.

Depending on the package, the Microsoft ecosystem comprises Viva and ancillary applications such as Viva Connections, Viva Engage, Viva Insights, Viva Learning, and Viva Topics with a view to individual and team empowerment because they can “bring it all together,” encouraging people and teams to “be their best from anywhere” (as described in Microsoft Viva’s personal “daily briefing” e-mail). There is an emphasis on people no longer needing to be physically located to work or study together. Viva is a daily briefing sent to Outlook e-mail with a summary of user activities outlining their individual commitments and follow-ups that might need a response, with attachments and documents related to meetings, and reminders. Viva suggests how one might improve performance and gain some “me time” and general “mindfulness” in the workday. For the purposes of this article, I focused on Microsoft Viva briefings sent to my Outlook mailbox and explored the associated Viva Insights.

Using my institution-leased machine with access via two-factor authentication supported by Duo Mobile, I recorded data from June 2020 during the COVID-19 pandemic at the time when I experienced a second “lockdown” restricting people’s movement from their homes by way of public policy to stop the spread of the virus. At this same time, the Office 365 MyAnalytics function began providing me with a personal “deep dive into [my] work patterns on Focus, Wellbeing, Network and Collaboration.” I continued collecting personal workday data through November 2020, when I received my first e-mail from Cortana, until May 2021 (Cinque, 2022). I then undertook this new round of data collection from January 2021 using MyAnalytics, then Viva from October 2021, when MyAnalytics was replaced, until January 2023 by way of comparative analysis of the data collected during the time that travel restrictions began to ease and going “back to work” (not from home) was possible. The focus was predominantly on the text and the number of

messages sent from the company to the user (me). Data collection involved recording the number and content of e-mails sent from the platform to me as well as the data collected by the platform about my work habits. This included data about focus, well-being, network, and collaboration. The recorded data allowed for a systematic categorization of information, enabling the quantification and comparison of patterns within the data, thereby facilitating a more structured and rigorous analysis of underlying themes and relationships. The study is a critical analysis of the qualitative and quantitative data collected by way of a review of my own experiences and perceptions of using the platform.

In addressing the results of the study, I adopted a thematic approach to ensure a comprehensive and structured analysis. The findings are presented according to themes that emerged prominently during the research: (1) work patterns and performance data, highlighting how Viva delineates and measures the rhythms of work; (2) meetings and performance management, exploring the intersection of digital collaboration and evaluative criteria; and (3) presence status and the subtle construction of worker identity, delving into how surveillance tools shape and reflect perceptions of individual roles and contributions within the workplace.

New! Viva Daily E-Mail: Results

In the welcome e-mail from Viva, I received an update stating, "Your daily briefing now comes from Microsoft Viva," and an assurance that I would "continue to receive important reminders from Cortana, your personal productivity assistant, and will get new personalized insights to improve your wellbeing and employee experience." Viva's interface includes various work-related icons, such as notepads or pages of reports, which are color coded (in gentle shades such as pink, blue, or lime green), similar to Microsoft's My Analytics. Each is accompanied by messages intended to be inspirational such as "Make today count!" and "Have a great Thursday!" Viva's data analysis results are presented through visual reports and dashboards, seemingly simplifying intricate insights for both management and employees. This aligns with Negroponte's (1995) prediction concerning digital assistants; my experience with Viva was reminiscent of interaction with a personal coach. During my initial productivity session, an e-mail "surfaced by Cortana"—once conceived as a business and productivity assistant, comparable with Apple's Siri or Amazon's Alexa (Gralla, 2022)—offered a to-do list for my day. This list included the name and image of the sender, suggestions for action, and an option to mark tasks as completed (October 13, 2021). From an analytical standpoint, the platform's intent seems to be the identification of work patterns, allowing it to recommend optimal work schedules, meeting timings, breaks, and collaborative strategies. However, there is a nuanced concern that the platform's unsolicited, detailed personal analysis may border on excessive oversight with potentially significant implications to come.

Work Patterns and Performance Data

The monthly "Your digest email" claims its purpose is to aid users in identifying trends within their work habits. It promises an "in-depth examination of work patterns" and is available in daily, weekly, or monthly formats. Additionally, it may incorporate narratives or descriptions that interpret the data, situating it within the framework of organizational objectives and norms. This growing reliance on bossware underscores the establishment of evolving norms and assumptions surrounding workplace well-being and efficiency. Fundamentally, the adoption of such systems suggests a paradigm shift whereby continuous surveillance, meticulous data tracking, and algorithmic analysis are now considered the benchmarks for gauging productivity

and evaluating employee engagement and effectiveness. Such an approach intrinsically categorizes workers as primarily units of productivity, whose performance is amenable to quantification, measurement, and optimization via data analytics. The eventual outcome might be an environment where employees are perpetually self-monitoring and adjusting their behaviors—either overtly or covertly—to comply with the system's expectations, resulting in a form of ingrained habituation. From my perspective, I had simply sought a tool that facilitated the sending and receiving of e-mails and their attachments, based on my discretion, devoid of unsolicited commentary, counting, and oversight. At the core of this discussion is the need to balance the institution's justification for monitoring employee productivity through technological investments with the employees' rights to privacy and autonomy, which are often compromised. This dynamic raises questions about the actual benefits of such surveillance for institutional productivity, considering the mixed evidence regarding its effectiveness and the potential costs to employee morale and creativity. Moreover, the introduction of bossware and similar tools represents a "phenomenological strangeness," altering the human experience of work into something constantly monitored and quantified, thus challenging the essence of work itself. Furthermore, the deployment of these technologies often treats employees as un-consenting participants in a de facto research project between institutions and software manufacturers, highlighting ethical concerns around transparency and consent. This critical perspective invites a broader socio-ethical interrogation of workplace surveillance practices, emphasizing the need to balance organizational goals with the rights and dignity of employees in the evolving digital workspace.

The data below (Figure 1) from a summary briefing (January 2023) came with the banner "Hope you had time to recharge" and were accompanied by information that only three workdays of 28 days in the months (November–December 2022) saw me not in a meeting, not e-mailing or "chatting" with "collaborators" outside work hours, which were stated on the Microsoft platform by default as being 8:00 a.m. to 5:00 p.m. The data, however, seemed not to match my workday recorded as 3:30 a.m. to 11:00 p.m. (in December 2022)—elongated workdays indeed. The result of blurring where the home ends and the workspace begins meant that I was always "in the office" since COVID began (see Figure 1 below). Moreover, indicative data suggested that I had responded to some 310 e-mails a day (up from 31 per day in 2020) while reading some 2,170 (up from 655 in 2020; Figure 1).

A breakdown of your email, chat and call activity throughout the day.

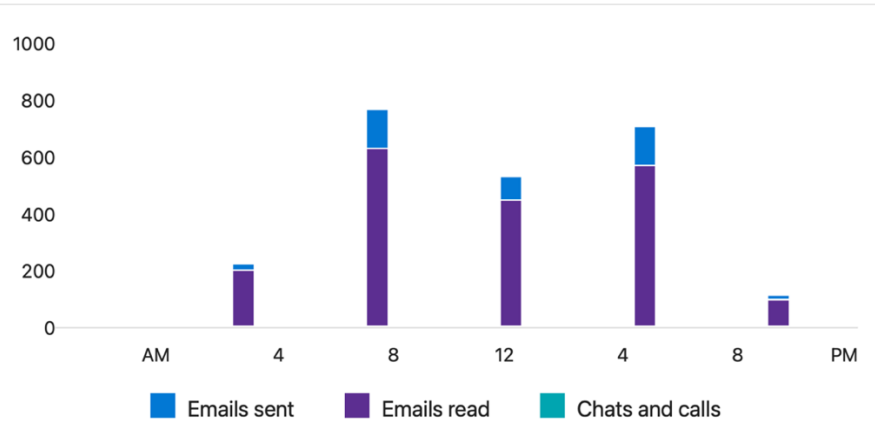


Figure 1. Breakdown of performance throughout my typical day.

On seeing such a breakdown of activities across their day, most workers might be moved to being concerned as such long workday hours are untenable—or new expectations might become the norm. That is, the insights and recommendations might inadvertently establish new standards for what is considered “normal” or “optimal” behavior within an organization, subtly influencing employees to conform to these new norms.

In addition, the data consolidated from both Viva and MyAnalytics, covering the period from January 2021 to January 2023, offered a comprehensive overview of the alleged performance across several variables. These include focus time, which denotes the duration available for concentrated work within a typical week and is labeled as “Focus” in Figure 2; collaboration time, representing the time dedicated to e-mailing, attending meetings, or engaging with colleagues and collaborators, identified as “Collaboration” in Figure 2; days that were free from quiet-hours interruptions, referred to as “Quiet Days” in Figure 3; and active collaborators, indicating those individuals whom I engaged with via e-mails, meetings, or chats several times daily—and this is tagged as “Active Collaborators” in Figure 3. For clarity, in the figures referenced, the term “Microsoft Ecosystem” alludes to Microsoft’s MyAnalytics in 2021 and subsequently Microsoft Viva in 2022, with all data being sourced from these platforms.

In my evaluation of the MyAnalytics tool, I used it as an exemplar, leveraging my individual data. Notably, in 2020, I sustained an average of “73 percent Available to focus in a typical week” (Cinque, 2022). As delineated in Figure 2 and further expounded below, this metric exhibited an upward trajectory in the three succeeding years, as evidenced by samples from January 2021 (87%), January 2022 (84%), and January 2023 (86%). However, a decline was observed during the July–August mid-year interval. The metric Quiet Days, which reflects the absence of substantial meetings, e-mails, chats, and call activities outside the working hours set in Outlook, revealed that in 2020, I registered six quiet days in September, four in October, eight in November, and a mere three in December. A closer examination of select months from 2021 to 2023 indicated that on January 15, 2021—a date that typically falls within the extended summer vacation period in the southern hemisphere, where I was located—I had 87% Available time to focus, with

the remaining 13% of my work time allocated to Collaboration, as visualized in Figure 2. For the entirety of January 2021, there were five Quiet Days alongside 69 Active Collaborators (refer to Figure 3). By mid-year, on July 26, 2021, the Available time to focus had diminished to 56%, concurrent with a rise in Collaboration time, which reached 44% (as shown in Figure 2). This trend persisted into the subsequent month; on August 9, 2021, the Available time to focus had further decreased to 39%, while Collaboration time escalated to 61%. In a holistic view of both July and August 2021, there were five Quiet Days recorded in July, which reduced to three in August, matched by an upsurge in Active Collaborators from 155 in July to 174 in August, as presented in Figure 3.

In 2022, specifically on January 3, a workday pattern akin to that of 2021 surfaced. The beginning of the year saw me with 84% of my time available to Focus and the remaining 16% dedicated to Collaboration, as illustrated in Figure 2. Throughout January 2022, the number of Quiet Days increased to 14, and there was a corresponding rise in the number of Active Collaborators, reaching 78. This was a marked increase from the 69 collaborators in the analogous period of 2021, as noted in Figure 3. By mid-year, on July 18, 2022, the percentage of time available for focused work in a typical week increased slightly to 71% (a rise from 56% at the same juncture the previous year). Concurrently, there was a noted reduction in collaboration time to 29%, a decline from 44% in the prior year. This trend was relatively stable as of August 1, 2022, with available focus time at 70% and collaboration time reduced to 30%, a considerable decrease from the 61% observed in August 2021 (depicted in Figure 2). In an examination of July and August 2022, there was a solitary day without quiet-hours interruptions in July, which surged to 12 days in August. As the frequency of Quiet Days waned, there was a countervailing rise in the number of collaborators from the January 2022 count of 78 to 101 in July. However, this count receded to 97 in August, still below the previous year's tally of 174, as presented in Figure 3.

Patterns in January 2023 mirrored those of earlier years. The month showed an 86% allocation of time to focused work and a 14% dedication to collaboration, as charted in Figure 2. The data for this month registered 12 days without quiet-hours interruptions, coupled with a slightly reduced figure of 84 Active Collaborators with whom I had interactions, either through e-mails, meetings, or chats, as indicated in Figure 3.

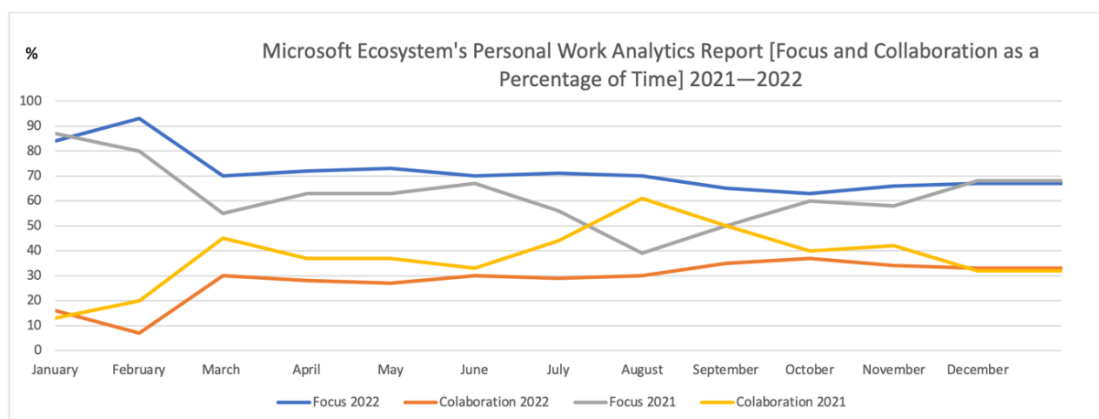


Figure 2. Microsoft ecosystem's personal work analytics report [Focus and Collaboration as a percentage of time] 2021–2022.

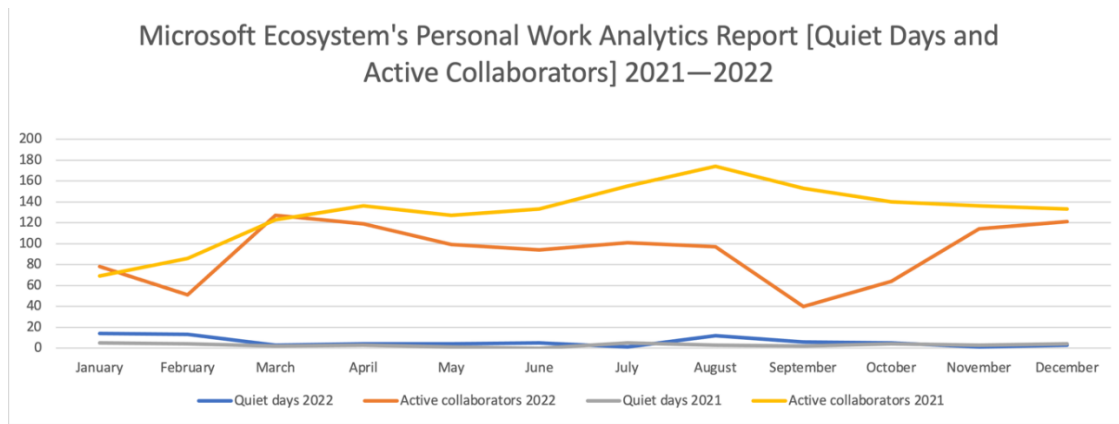


Figure 3. Microsoft ecosystem's personal work analytics report [Quiet Days and Active Collaborators] 2021–2022.

In 2020, data revealed that I engaged with more than 700 individuals, precisely 705, through e-mails, chats, or meetings (Cinque, 2022). There was a marked escalation in the number of Active Collaborators in 2021 and 2022, with projections suggesting a similar trend for 2023 (see Figure 3). While the mechanism determining my collaborator count adhered to the stipulations of the General Data Protection Regulation, for example, it provided detailed usage statistics. For instance, the report indicated, "Over the past 4 weeks, you have integrated [X number of] new individuals into your network," which also encompassed the visual representation of contacts' photographs if the staff, student or external collaborator had one uploaded to Microsoft for the purpose of "personalization." Moreover, the data outlined "Your top collaborators," specifying those with whom I had most extensively interacted over the previous month. This delineation presents the collaborators' photographs, names, e-mail addresses, and the aggregate duration of our interactions. To illustrate, Collaborator A demanded 4.8 hours of my attention, while Collaborator B required slightly less, at 3.8 hours, within the past month. Further insights were offered in the form of a "read rate" which represented the percentage of e-mails I had opened from each collaborator, accompanied by my average response time.

Meetings and Performance Management

From the perspective of the system, there is a distinct emphasis on guiding user activity. The platform actively directs user activities, often undermining independent critical judgment, by sending prompts such as "Prepare for today's meetings," along with actionable links and document suggestions for meeting preparation. Users can categorize the relevance of these documents, with options like "Done" or "Not Related," and confirm meeting attendance directly through the system. In contrast with my preference for arranging meetings via direct communication and logging them in a traditional diary, Viva employs AI to manage reminders and collect data on user engagement. This approach implicitly shapes both individual and collective standards of productivity and success.

Viva Insights offers a detailed monthly evaluation of professional conduct and performance. It assesses my workday efficiency by tracking meeting-related metrics, color-coded to indicate positive or negative behaviors. Key performance indicators include meeting attendance, advance notice provided, meeting duration,

overlap with other meetings, scheduling within work hours, timely conclusion, and RSVP adherence. Particularly concerning are the metrics for "Joined on time" and "Did not multitask," which reflect on behavior modification and professional identity. These metrics, along with others, are tabulated and visualized to nudge workers toward preferred behaviors, with red crosses penalizing multitasking or inadequate advance notice and green ticks rewarding compliance with expected practices. However, it is important to note that the guiding algorithms may contain biases, potentially skewing performance assessments.

Presence Status and the Subtle Construction of Worker Identity

In the Microsoft ecosystem, data-filtering processes highlight periods of inactivity. For instance, when disseminating a group e-mail through Outlook, the system displays each recipient's "activity" or presence status, accompanied by their respective image, if stored within the system. Microsoft defines presence status as a measure of an individual's "availability and willingness to communicate." A green status signifies a contact's availability, while an orange one denotes that the contact is engaged in another task. A red status suggests that the contact is occupied and might prefer not to be interrupted—a claim that can be corroborated through the Microsoft Office Outlook calendar. Conversely, a yellow status insinuates potential unavailability. Such a determination arises when a contact's computer remains inactive beyond the default idle time of 15 minutes. Initially, after 5 minutes of inactivity, the status transitions from Available to Inactive. A subsequent 15 minutes of inactivity shifts the status to "Away" (Microsoft, n.d.). Notably, these automated updates may overlook the specific requirements, preferences, or well-being of employees, concentrating predominantly on optimizing productivity and efficiency. It is worth noting that users can modify their Presence Status, but this is an opt-in option and needs to be done manually.

However, this color-coded portrayal provides managerial staff with a swift synopsis of workforce activity, raising potential concerns if observed activity levels misalign with official periods of Leave or respective Outlook Calendars. Over an extended time frame, discernible patterns of performance may surface. Some employees might consistently exhibit an "Active" status, whereas others could frequently register as "Inactive," "Engaged," or "Busy," potentially implying non-productiveness rather than intentional focus periods. Amid the pandemic, with a surge in remote work, the conventional workday paradigm, however, evolved. Numerous employees began to operate beyond the default hours of 8:00 a.m. to 5:00 p.m., encompassing weekends and post-business hours. Introducing such "insights" may instigate a transformative shift in organizational culture, favoring quantitative data over qualitative human understanding or intuition.

The digital apparatus of Microsoft's Viva, with its status updates, color codings, and monthly self-reviews, subtly engineers a new phenomenology of labor. At the surface, these tools might seem innocuous, merely digital markers indicating one's availability or productivity. However, they also have the capacity to transmute the very essence of work, transforming labor from a series of human actions into quantifiable, observable data points (Floridi, 2014; Jones, 2020). The color-coded statuses are not just indicators of presence but also become digital badges of performance, allegiance, and even compliance. This silent chromatic language, wherein a green or red dot holds tacit implications about an employee's engagement or distractions, reconfigures the traditional metrics of performance evaluation. Meanwhile, monthly self-reviews further perpetuate this shift, prompting workers to perceive and present themselves not through the prism of their skills, experiences, or contributions but through the lens of data metrics and digital

footprints. This emergent phenomenology subtly but profoundly reshapes the worker's sense of self, making them both the object of surveillance and a participant in their own digital monitoring. In essence, the modern workplace, aided by products like Viva, evolves into a panoptic space where labor is not just about tasks completed but about constantly being visible, quantified, and assessed on a digitized continuum.

In terms of trading personal data for these new norms, employees may accept this trade-off as a necessary aspect of modern work. For my part, I am intimately bound by necessity to Outlook and Teams for my everyday work. Many might perceive that providing access to their personal data, such as work habits, or communication patterns, will help them fit into the corporate culture and contribute to their success within the organization. This may lead to a sort of "datafication" of the self, where employees view their value and their identity in terms of the data they generate. It is a shift from viewing work as a holistic, human experience to seeing it as a series of data points that can be tracked, analyzed, and improved. While this perspective might yield benefits in terms of productivity, it could also have profound implications for worker identity, autonomy, and well-being in the long term.

Bossware's Impact on Surveillance, Labor, and the Future of Management: A Discussion

This study investigated the emergence and impact of digital surveillance technologies, specifically focusing on Microsoft's Viva as an exemplar of bossware within the workplace. It aimed to underscore the critical need for a sophisticated understanding of these technologies' effects on labor dynamics, management practices, and potential resistance mechanisms in an environment increasingly dominated by digitalization and algorithmic control. Central to this inquiry was the concern over how the implementation of these surveillance systems reshapes the landscape of work, suggesting a trend toward a more monitored, data-centric, and regulated work setting. These developments have profound implications for labor, potentially enhancing efficiency and precision in performance evaluation, yet simultaneously raising significant issues regarding employee privacy, autonomy, and the stress of continuous scrutiny. The study highlights the risk of these systems amplifying workplace inequalities by valuing certain types of productivity over others, particularly disadvantaging those who deviate from predefined norms.

The research further elucidates the nuanced challenges within creative sectors, where productivity does not conform to traditional metrics. It illustrates how designers, writers, and artists dedicate substantial periods to ideation, drafting, and inspiration—activities not directly measurable through simplistic digital productivity tools like performance and assessment filters (PAFs). Such reliance on quantitative measures risks overlooking the actual contributions of creative professionals, promoting a homogenized approach to work that could stifle diversity and innovation in creative practices.

In examining the pervasive surveillance that characterizes surveillance capitalism, as posited by Zuboff (2019), bossware emerges as a critical tool. It integrates into work processes through "habituation," becoming a fundamental part of employees' daily routines. This integration allows for continuous data collection, with the "stickiness" of these tools ensuring prolonged engagement and thus, a richer data pool. These data contribute to a "platform ecosystem," creating comprehensive profiles of employee behavior, performance, and productivity. The spectrum of surveillance tools ranges from subtle mechanisms, such as Microsoft Viva, designed to enhance productivity through continuous monitoring, to more overt measures

like automated license plate readers in the United States, which demonstrate the capacity for detailed vehicle and individual tracking. The United Kingdom is often cited as having one of the highest numbers of CCTV cameras per capita in the world founded on principles of surveillance and control, aiming to understand, predict, and influence behavior (Porter, 2015). These examples underline a broader trend of surveillance normalization, where habitual use of tools like Viva or 360-degree assessments may lead to societal desensitization to more invasive privacy intrusions. Both subtle and overt surveillance tools, underpinned by sophisticated data analytics, aim to predict and influence behavior, situating them on a continuum of surveillance. This normalization process can increase the acceptance of more intrusive surveillance forms, underscoring the intertwined nature of these technologies and their societal implications.

With regard to bossware, it is reasonable to question what becomes of the role of the organizational "manager," when all kinds of nudges, carrots, and sticks are integrated into the worker or "user experience" of productivity tools. With the rise of bossware, the traditional role of a manager could undergo significant changes, becoming more data-driven, using the metrics provided by these tools to manage their teams. Moreover, it could lead to an erosion of the human element in management, with more decisions being based on algorithmically determined performance metrics rather than personal judgment or relationships. The role of the manager in this scenario becomes more akin to a data analyst, interpreting and actioning the data provided by the platforms. Moreover, there could also be a backlash against this, leading to a reemphasizing of the importance of human connection, empathy, and understanding in management.

The proliferation of bossware raises multiple concerns. Persistent surveillance can inflict psychological stress, potentially eroding trust and jeopardizing team dynamics. Such systems might unintentionally introduce bias, favoring specific work styles and inadvertently marginalizing certain employees. Furthermore, as performance metrics become increasingly tied to job retention, the risk of job insecurity intensifies. Additionally, the extensive data collected by these tools present challenges related to data security and personal privacy. Such challenges can lead to both legal and ethical dilemmas.

Beyond the always fluctuating and coarse-grained regulatory proscriptions issued by various nation-states arises the question regarding what possible strategies exist for resistance against the automated "boss." There are several potential strategies for resistance against the rise of automated bossware. One is the use of "counter-surveillance" tools or practices, which can help protect privacy and autonomy in the digital workplace. For instance, workers could use encryption, anonymization tools, or simply find ways to "game" the system to maintain some control over their work lives. Another potential strategy is collective bargaining and worker organization. Unions and other worker organizations could push for regulations limiting the use of the products or for more transparency and fairness in how these platforms are used. Finally, fostering a workplace culture that values trust, autonomy, and respect could help push back against the overreliance on surveillance tools. Employers who recognize the value of these principles and their link to worker well-being and productivity might be less likely to embrace bossware in the first place.

Conclusion

This article has critically examined the intersection of workplace analytics and software surveillance within the Microsoft Ecosystem, particularly focusing on Viva as a PAF. It highlights a crucial dichotomy between the promised optimization of employee performance and the reality of surveillance mechanisms that may not align with actual work tasks, particularly in creative domains. The analysis raises ethical concerns regarding the reduction of workers to data points by Microsoft's ecosystem, which ostensibly aims to improve workplace well-being. Moreover, Viva data auditing introduces risks of misinterpretation and inequalities, underscoring the challenges of integrating such digital agents into professional practices. Through this lens, the article scrutinized a form of bossware surveillance, where daily analytics not only serve as performance snapshots but may also act as regulatory mechanisms. Microsoft's ecosystem, which promises to enhance workplace well-being, potentially reduces workers to mere aggregations of pixelated information, raising significant ethical concerns. The Viva application, with its data auditing, poses additional challenges, including the risk of erroneous interpretations and inequalities as workers become data sources within a systemic, artificial construct housed in our everyday devices.

The discussion reflects on the premature integration of digital assistants like Viva, noting a dissonance between their promised efficiency and their current operational effectiveness, which may infringe on professional autonomy. The findings caution against the psychological, social, and ethical implications of widespread digital surveillance, including stress, mistrust, discrimination, job insecurity, and a blurring of personal-professional boundaries, advocating for a balanced approach that respects employee rights.

The COVID-19 pandemic catalyzed a profound transformation in the traditional demarcation between home and work/study environments, a shift that occurred concomitantly with significant advancements in text mining through AI integration within the framework of algorithmic governance in professional settings. These dual phenomena necessitate a meticulous and critical examination of technocratic structures, with an emphasis on the urgent need for comprehensive digital privacy safeguards. This analytical contemplation is not solely related to the evolving mechanics of occupational practice. Rather, it further invokes a call for a compassionate and ethical methodology in the application and evaluation of digital technologies within organizational paradigms. Such an approach recognizes the multidimensional aspects of technology, aligning them with broader humanistic values and societal considerations, thereby positioning technological development within a responsible and reflective ethical framework.

References

- Abdullah, N. A. A., Rahmat, N. H., Zawawi, F. Z., Khamsah, M. A. N., & Anuarsham, A. H. (2020). Coping with post COVID-19: Can work from home be a new norm? *European Journal of Social Sciences Studies*, 5(6), 61–81. doi:10.46827/ejsss.v5i6.933
- Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., Dolls, M., & Zarate, P. (2022). *Working from home around the world* (Working Paper No. 30446). Cambridge, MA: National Bureau of Economic Research. doi:10.3386/w30446

- Barrero, J. M., Bloom, N., & Davis, S. J. (2021). *Why working from home will stick* (Working Paper No. 28731). Cambridge, MA: National Bureau of Economic Research. doi:10.3386/w28731
- Božovič, M. (Ed.). (1995). *The panopticon writings*. New York, NY: Verso.
- Brynjolfsson, E., Horton, J., Ozimek, A., Rock, D., Sharma, G., & TuYe, H.-Y. (2020). *COVID-19 and remote work: An early look at US data* (Working Paper No. 27344). Cambridge, MA: National Bureau of Economic Research. doi:10.3386/w27344
- Campbell-Kelly, M., & Garcia-Swartz, D. D. (2013). The history of the Internet: The missing narratives. *Journal of Information Technology*, 28(1), 18–33. doi:10.1057/jit.2013.4
- Ceruzzi, P. E. (2003). *A history of modern computing* (2nd ed.). Cambridge, MA: MIT Press.
- Choi, H., Park, J., & Jung, Y. (2018). The role of privacy fatigue in online privacy behavior. *Computers in Human Behavior*, 81, 42–51. doi:10.1016/j.chb.2017.12.001
- Cinque, T. (2015). *Changing media landscapes: Visual networking*. South Melbourne, Australia: Oxford University Press.
- Cinque, T. (2022). Quantified me, curatorial lives, and the pixelated spectre of self. In T. Cinque & J. B. Vincent (Eds.), *Materializing digital futures: Touch, movement, sound, and vision* (pp. 87–106). New York, NY: Bloomsbury Academic.
- Cinque, T. (2023). A study of Mastodon, Galaxy3, and 8kun as post-social media in dark webs: The darker turn of our intimate machines. In T. Cinque, A. Maddox, & R. W. Gehl (Eds.), *The dark social: Online practices of resistance, motility, and power* (pp. 19–31). London, UK: Routledge.
- Clough, P. T. (2016). Rethinking race, calculation, quantification, and measure. *Cultural Studies ↔ Critical Methodologies*, 16(5), 435–441. doi:10.1177/1532708616655760
- Floridi, L. (2014). *The fourth revolution: How the infosphere is reshaping human reality*. Oxford, UK: Oxford University Press.
- Foucault, M. (1977). *Discipline and punish: The birth of the prison* (A. Sheridan, Trans.). New York, NY: Vintage Books. (Original work published 1975)
- Gralla, P. (2022, March 2). Cortana explained: Rocky past, promising future for Microsoft's digital assistant. *ComputerWorld*. Retrieved from <https://www.computerworld.com/article/3252218/cortana-explained-why-microsofts-virtual-assistant-is-wired-for-business.html>

Hirsch, D. D. (2014). The glass house effect: Big Data, the new oil, and the power of analogy. *Maine Law Review*, 66(2), 373–395.

Jones, P. (2020). *Bodies, technologies, and methods*. London, UK: Routledge.

Kant, T. (2020). *Making it personal: Algorithmic personalization, identity, and everyday life*. New York, NY: Oxford University Press.

Kennedy, H. (2016). *Post, mine, repeat: Social media data mining becomes ordinary*. London, UK: Springer Nature.

Kipphan, H. (2001). "Electronic" books, "electronic" ink, "electronic" paper. In H. Kipphan (Ed.), *Handbook of print media: Technologies and production methods* (pp. 1013–1026). Berlin, Germany: Springer.

Palmer, M. (2006, November 3). *Data is the new oil*. ANA Marketing Maestros. Retrieved from http://ana.blogs.com/maestros/2006/11/data_is_the_new.html

Microsoft. (n.d.). *Change presence status or start an IM conversation in Lync group chat*. Retrieved from <https://support.microsoft.com/en-us/office/change-presence-status-or-start-an-im-conversation-in-lync-group-chat-311996a4-e202-4ef7-bdbe-0e14814e7ee0>

Microsoft. (2021, October 19). *Microsoft Viva Topics—automatically organize content/expertise across your organization improving ease of information discovery/use*. Retrieved from <https://techcommunity.microsoft.com/t5/healthcare-and-life-sciences/update-microsoft-hls-viva-four-part-webinar-series-topics-and/ba-p/2861975>

Microsoft. (2023, June 12). *Viva Topics: Updated adoption guide and a new pilot guides*. Retrieved from <https://techcommunity.microsoft.com/t5/viva-topics-blog/viva-topics-updated-adoption-guide-and-a-new-pilot-guides/ba-p/3845758>

Microsoft Learn. (2024). *Microsoft Viva*. Retrieved from <https://learn.microsoft.com/en-us/viva/>

Moen, P., Flood, S. M., & Wang, J. (2022). The uneven later work course: Intersectional gender, age, race, and class disparities. *The Journals of Gerontology Series B*, 77(1), 170–180. doi:10.1093/geronb/gbab039

Mollick, E., & Euchner, J. (2023). The transformative potential of generative AI. *Research-Technology Management*, 66(4), 11–16. doi:10.1080/08956308.2023.2213102

Moore, P. V. (2018). *The quantified self in precarity: Work, technology and what counts*. New York, NY: Routledge.

Munn, L. (2022a). *Automation is a myth*. Stanford, CA: Stanford University Press.

- Munn, L. (2022b). Automation is a myth. In T. Cinque & J. B. Vincent (Eds.), *Materializing digital futures: Touch, movement, sound, and vision* (pp. 289–304). New York, NY: Bloomsbury.
<https://doi.org/10.5040/9781501361289.ch-015>
- Negroponete, N. (1995). *Being digital*. New York, NY: Knopf.
- Ohler, J. B. (2010). *Digital community, digital citizen*. Thousand Oaks, CA: Corwin.
- Organization for Economic Co-operation and Development. (2021). *Policy responses to coronavirus (COVID-19): Teleworking in the COVID-19 pandemic: Trends and prospects*. Retrieved from <https://www.oecd.org/coronavirus/policy-responses/teleworking-in-the-covid-19-pandemic-trends-and-prospects-72a416b6/>
- Pink, S., Horst, H., Postill, J., Hjorth, L., Lewis, T., & Tacchi, J. (2015). *Digital ethnography: Principles and practice*. London, UK: SAGE.
- Pooley, J. (2018). Metrics mania: The case against Academia.edu. *Chronicle of Higher Education*, 1–4.
doi:10.17613/M64P08
- Porter, T. (2015, January 26). *CCTV: Too many cameras useless, warns surveillance watchdog Tony Porter*. BBC News. Retrieved from <https://www.bbc.co.uk/news/uk-30932902>
- Poster, M. (1990). Foucault and databases. *Discourse*, 12(2), 110–127.
- Román, C. T., Bujanda, H., & Garaycoa, M. M. (2017). The future is broken: Heterotopic readings of Black Mirror. *Nómadas*, 47, 81–95.
- Teodorovicz, T., Sadun, R., Kun, A. L., & Shaer, O. (2022). How does working from home during COVID-19 affect what managers do? Evidence from time-use studies. *Human-Computer Interaction*, 37(6), 532–557. doi:10.1080/07370024.2021.1987908
- Tursunbayeva, A., Pagliari, C., Di Lauro, S., & Antonelli, G. (2022). The ethics of people analytics: Risks, opportunities, and recommendations. *Personnel Review*, 51(3), 900–921. doi:10.1108/PR-12-2019-0680
- Vallas, S. P., & Kronberg, A.-K. (2023). Coercion, consent, and class consciousness: How workers respond to Amazon's production regime. *Socius*, 9, 1–16. doi:10.1177/23780231231216286
- van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society: Public values in a connective world*. New York, NY: Oxford University Press.

Williamson, S., Colley, L., & Hanna-Osborne, S. (2020). Will working from home become the "new normal" in the public sector? *Australian Journal of Public Administration*, 79(4), 601–607.
doi:10.1111/1467-8500.12444

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. New York, NY: Public Affairs.