## Surveillance & Society

# Algorithmic Performance Management in Higher Education: Viva! 365 Ways of Surveillance

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Résumé de l'article

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## Article

# Algorithmic Performance Management in Higher Education: Viva! 365 Ways of Surveillance

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## Abstract

This paper maps the emergence and consequences of automated Algorithmic Performance Management (APM) in the context of higher education. After reviewing the evolution of productivity management in academia, it argues that surveillance via APM shifts expectations not just about effectiveness at work but also about how work, and the good worker, come to be defined. In our paradigmatic case study of Office 365, we specify how the automated surveillance of workforce practices are deployed to redefine productivity in higher education: productive workers become good data subjects as well as producers of papers, grants, and other traditional outputs of success. Our analysis suggests *performing* well at work is managed in and by the platform via logics of the surveillance of wellness, time-regulation, and social connectivity to influence, manage, and control workers. We critique these automated performance measures in terms of platform capitalism, noting Office 365's Viva Insights function as a telematic device of surveillance. The final section of the paper places these trends in Australia's socio-legal context by showing how Viva is insufficient for considering performance given the range of practices that constitute "academic work," including but not limited to the need for unmonitored activity. Yet, we observe that currently little can be done about Office 365's surveillant presence given a regulatory regime that by and large excludes productivity surveillance from the scope of regulated surveillance activities.

## All Watched Over by Machines of Working Grace

*My workday starts and I open my email. "Have a great Thursday!" begins the first email. It is from my caring, hardworking PA (Productivity Assistant—every bit as efficient and caring as its now extinct predecessor—the Personal Assistant). While I was sleeping, my PA has scoured my emails and my calendar. It sets out my day for me— letting me know what work matters: who I need to follow up with, links to the files I'll need for my afternoon meeting, what my colleagues asked me last week, and whether I'll find some "me time" this week. I accept this offering of grace and get to work.*

## Introduction

This article analyses how corporate-entrepreneurial university performance has recently shifted to automated measures that algorithmically conceptualise performance in a context of surveillance capitalism. While our focus is on higher education, the analysis is applicable to knowledge work more generally. We argue that a synthesis of Electronic Performance Monitoring (EPM) with automated surveillance and computational analysis leads to forms of management and control that we term Algorithmic Performance Management (APM). APM enables knowledge work performance to be defined through (automated surveillance of patterns of) everyday practice in addition to outputs workers attain. APM extends and surpasses modes of technological panopticism and its affiliated algorithmic management techniques tuned to maintain labour efficiencies (see Al-Htaybat and von Alberti-Alhtaybat 2022; Duke 2022; Kellogg, Valentine, and Christin 2020). While productivity measures worker efficiency in producing goods, performance assesses academics' success in measures that shift as the definition of work itself shifts. Unlike digital forms of EPM, which can measure minutiae like keystrokes and bathroom breaks in the name of efficiency, APM creates a good (academic) knowledge worker via automated surveillance and computation of personal attributes. This includes metrics like an academic's connections to others, time management patterns, and wellness indicators. APM shifts expectations not just on efficiency at work but also of what work, and the good worker, actually are.

In this way, productive academics must—in addition to having outputs like publications and grants—be "good data subjects" (Bridges 2021). Good data subjects produce data and perform as workers in ways that enable them to reflexively understand themselves by what these data make legible, knowable, and thinkable. Our case study shows how the logics of surveillance capitalism work in APM: what is made legible, knowable, and thinkable remains in and only in the platform's terms of surveillance.

The academy has entered into contracts for APM platforms, including Office 365, and it is important to define what is at stake. These platforms perform telemetric surveillance on human subjects, discerning and guiding work practice for academic subjects. Telemetry's etymology of "remote" "measuring" is commonly defined as the automatic measurement from data wirelessly transmitted from remote sources. Telematic' governance (Bogart 1996) has been considered in surveillance terms that capture statistical properties of individuals and drive labour costs downward (O'Malley 2010). In this case, the telemetric subject is us, knowledge workers. The automatic measurement processes of Office 365 perform modes of surveillance that create the capacity to influence, manage, or control (Lyon 2004) digital knowledge workers. One way this telemetric management is noticeable at work is via the inversion of logics digital assistants[1] offer compared to productivity assistance that is offered in surveillant work platforms. Digital "AI" assistants were first controlled by users ("Hey Cortana, set up a meeting with…"). We are interested in more recent and complex "AI" assistance that seeks to control users ("Hey user, you should set up a meeting with…"). This inversion from a controllable digital productivity assistant to assistance in controlling platform-user-subjects within structures of surveillance capitalism has ramifications for knowledge worker productivity and performance. While extant literature does not yet make this distinction, the issue is becoming even more pertinent since submission of this article, with the introduction of CoPilot by Microsoft that relies on ChatGPT and further integrates forms of assistance around what the subject human should or might do to be a productive worker.

This paper considers these shifts in a paradigmatic case (Flyvbjerg 2006) at the forefront of corporate-academic surveillance: Microsoft Corporation's Office 365 "Viva" system. Viva uses automated surveillance of work practices to compute user patterns across the Office suite and nudge future work practices via "Insights." Data surveilled and analysed by Viva includes how users carry out common tasks in and across Office tools including Microsoft's Teams, Outlook Calendar, Outlook Email, and Word. Over a million companies use Office 365, while Microsoft claimed there were over 200 million active users in

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[1] Digital Productivity Assistant (DPA) signals diverse literatures and meanings, from nurses carrying devices that can search care protocols to "AI" systems commanded by user voice.

2020. Consequently, the case offers a wide applicability to new forms of surveillance and productivity management for knowledge worker industries within larger logics of surveillance capitalism. This makes Viva's paradigmatic case study all the more important to help understand how shifts to algorithmic surveillance introduce new definitions to performance in knowledge work. Here our scope is limited to what Viva brands its self-described "AI" powered personalised daily "Insights" offered in emails and dashboards. However, we acknowledge that we write this article at the cusp of a new age of AI integrating into work. We hope this paradigmatic case study serves, if nothing else, as a reminder to how we were governed by machines at work at the cusp of what seems to be an acceleration away from discipline and control and into new forms of automated governing (of work).

We organise the remainder of the article in three sections. The first contextualises a history of techniques to surveil productivity in academia and details how concepts of productivity are constructed when performing as an "enterprising academic" (Ball 2021) in the context of digital surveillance capitalism (Zuboff 2019). The second section uses walkthrough methodology (Light, Burgess, and Duguay 2018) to consider how Office 365 presents governance of academic work. It foregrounds practices of surveillance constituted through nudging the user across surveillances of care (Nelson and Garey 2009), industrial time management (Sewell and Wilkinson 1992), and a networked capacity for influence, management, and control (Lyon 2001). We conclude with a third section that unpacks ethical and legal considerations of this APM case in the Australian jurisdictional context. In whole, the work critiques APMs right to "watch over us with loving grace" in ways not otherwise considered in the literature. We argue that APM makes a specific type of academic productivity visible to users, their organisations, and third parties interested in performative data.

## Shifting Conceptions of Academic Productivity and Shifting Technologies of Productivity Surveillance

This section first discusses how, in recent decades, academic productivity has become an object of interest in increasingly corporatized and entrepreneurial universities (Ball 2021). We examine the digitisation and distribution of productivity indicators like citations and impact, as well as their consequences on knowledge workers in academia, including the emergence of the entrepreneurial academic under the logics of surveillance capitalism (Zuboff 2019).

The pressure on academics to be more productive and to demonstrate their productivity can be seen in the context of the university itself coming under intense pressure in an era of rankings, marketisation, competition, and funding constraints. As universities bow under the pressures of exercises such as Australia's Excellence in Research for Australia (ERA) and the UK's Research Excellence Framework (REF), there are knock-on effects on individual researchers to be more purposeful and productive in spheres that count—and are countable. Increasingly detailed performance-based metrics have arisen under pressure for universities to be more efficient and accountable to their stakeholders (Stensaker, Frølich, and Aamodt 2020). However, despite a strong interest in tracking and increasing academic productivity, academic work is hard to describe, let alone standardise, measure, and track (Rowlands and Gale 2019). Outcomes of research in most disciplines are uncertain—whether an archaeological dig will yield results, policy recommendations get taken up, or a cure for cancer is found is not certain. Publication and citation practices also differ across disciplines, but null results (no artefacts, no policy uptake, no cure) are often not counted (Stern and Simes 1997).

Yet, indicators of grant money earned, papers published, and number of citations remain key productivity and performance measures and influence meta indicators such as global university rankings that are in turn tied to university executive performance KPIs (Lynch 2015). Such research-heavy global rankings are an act of surveillance: they systematically record and rank-order individuals' knowledge production in institutions to manage future capacities for individuals and institutions to produce knowledge in a "status economy" (Marginson 2017: 7).

However, the use of these measures is not without controversy. As Carnegie (2021) observes, the impact of this metricisation is to redirect the mission of a public university away from acting in the public interest and for the benefit of society and towards the notion of elitism and competition that sees the capitalistic goals of expansion and expenditure as ends. Further, as Hazelkorn (2019) argues, rankings do not measure or portray all that has been accomplished by a public university, but instead are devices of "measured performance" that create selective signals that are decided by ranking agencies under the guise of objective quanta.

### *Digitisation, Automated Surveillance, and the Entrepreneurial Academic*
Digitisation has led to a radical shift in demonstrating and tracking the quanta of academic productivity. The key components of this radical shift include the automated tracking of academic outputs, the decentralisation of surveillant power from institutions, and the rising visibility of the entrepreneurial academic.

Most journals and books are now digitised in a way that allows the automated tracking of publications, citations, and readership. Proprietary systems such as Google Scholar or Web of Science scrape and publish some of these data. Algorithms designed by publishing platforms take these data and transform them into measures of journal impact (Web of Science/Clarivate) or journal rankings (Scopus/SciMago).

The decentralisation of "surveillant" power is seen, in part, through the market of personalised scoring metrics that has emerged. It is currently customary to demand the number of citations and an h-index as indicators of an academic's publishing output in promotion or employment applications, provided by Elsevier (see Pure, SciVal, etc.) and other businesses. Enterprising academics leveraging these performative data marketplaces can add further value to publication data with software like "Publish or Perish" (Harzing 2007). This software allows users to quantify how much better their own citation patterns are to a journal's historical statistical impact. The systematic observation, monitoring, and collection of these outputs are almost never done by academics themselves but rather through labour and market systems that monitor academics' outputs collectively to provide new means to manage and control these subjects' individual futures.

Digitisation is also changing performance through how impact and engagement can be measured. For instance, academics' professional use of Twitter, LinkedIn, or Facebook can advertise their publications or projects, or amplify the signal of the projects and findings of others—disseminating research for personal reasons and career and network development (Chugh, Grose, and Macht 2021). Adventurous academics TikTok their way to public voice or experiment with pitching their work to The Conversation, a Creative Commons media outlet dependent on PhDs to create content, unpaid. Authors' work here may be republished or re-packaged in international subscription and ad-supported media in ways that multiply "impact" and "engagement." These engagements may be self-perpetuating: being seen enables further media or speaking invitations, and thus more countable opportunities—it signals a new sort of academic performance.

These engagement activities are also captured and computed through and as social media productivity by firms and entrepreneurial universities and academics. We argue that altmetrics arose via the ability to automate the surveillance of social networks—"now, we can listen in"—as Priem et al. (2010) suggest in their Altmetric manifesto. The reasons that academics utilise social media and related measures of impact vary. However, when researchers' own institutions create real-time dashboards that track and display the altmetric unit-worth for each research output, the equation and economy of social media engagement shifts to one accurately understood through surveillance logics.

Specifically, the automated definition of impact from digital social surveillance produces new forms of visibility with which to manage and control the subjects created by them. An example is Altmetric, a data firm that offers institutions and publishers tools and services to monitor specific engagement activity. Altmetric badges on institutional websites surveil and disclose the extent to which a certain article was

picked up by social media users, Wikipedia, mainstream media, and policy documents, among other sources (Altmetric 2023). This institutional capacity—monitoring everyday conversations on social media and traditional media and then publicly ranking these on professional pages—results in a novel if subtle means to influence, manage, and control what should published. "Will this research cause a Twitter storm?" the enterprising academic might ask.

Altmetric's profit is derived from these measures being meaningful. Thus, Altmetric's surveillance of and contracts with academic institutions create a set of incentives where academics are increasingly enticed into becoming complicit in their own surveillance—to grow the esteem of their work by growing the surveillant assemblage that promotes the surveillance of their work. The systematic surveillance and digital metricisation of academic work promises an algorithmic gaze of measurable productivity by constructing a performative nature of what might be called dividual academics (Deleuze 2017). The dividual nature breaks academics apart from their metrics and outputs, and guides the performance not of individuals, but the potential of their metrics.

We also note that the access to means for greater self-promotion or visibility is uneven. Importantly, the algorithms that produce many of these productivity measures are functionally opaque for many—while those who do understand them can game the system to their advantage or question its relevance (Cozma and Dimitrova 2021).

The automated nature of surveillance capitalism tends to influence, manage, and control academic performance by nudging towards future work choices that enable growth up the chain of productivity for the academic's dividual metrics, the university's prestige, and the surveillance platform itself. Despite the array of issues that arise from surveilling academic productivity in the ways detailed above, our concern centres on the next transition of surveillance emerging through automated and algorithmic performance management of knowledge workers. Here we observe a shift in the control and influence leveraged from surveilling and guiding productive outputs and their impact (publications, grants, etc.) to a focus on the everyday practice of academic work itself. Systems of work surveillance increasingly pay attention to how you perform work.

### Shifts to Automated and Algorithmic Performance Management

This section examines how performance is changed when expectations are expanded beyond outputs (such as publications, media appearances, etc.) to relational data about work practice itself. Within economies of surveillance capitalism, knowledge work—including our focus here, academic work—is being transformed by the automated monitoring and management of worker practices in ways that, in line with Lyon's (2001) view of surveillance, create the capacity for influence and control. We thus write Algorithmic Performance Management (APM) as a way to show how automated surveillance tools that might be initially understood as productivity assistants (see Winikoff et al. 2021) actually offer *assistance* to manage workers towards being good data subjects that increase their dividual, individual, and organisational worth to platform capital.

For clarity, on the one hand, we have trends of automated decision making and their associated oppressions (Noble 2018). On the other hand, we have an expansion in the measurements of academics from output metrics to electronic monitoring, including analysis of their *processes*. Unlike Electronic Performance Monitoring (EPM) systems that *monitor* tempos of keystrokes and other mechanical interpretations of work productivity, automated and algorithmic performance management systems *manage* a good productive data citizen, watching over their workers with a cybernetic loving grace (Brautigan 1967).

Dieuaide and Azaïs (2020) consider how automated *monitoring* tools draw together the digital traces from user practice with machine learning or other analytic approaches to produce anticipatory nudges intended to *manage* user behaviour at the border between information and manipulation. Studies focused on "nudge management" highlight the benefit of automated workplace nudges as an inexpensive and effective method to improve "productivity, decision-making, and perceived freedom" of knowledge workers (Ebert and Freibichler 2017: 2). While these nudges suggest computational "decision support" tools —as per Sunstein

and Thaler (2003)—their ways to control "choice architecture" can be critiqued as limiting creativity and autonomy when "libertarian paternalism" innovation techniques are applied in practice (see Dieuaide and Azaïs 2020).

APM shows a unique feature of surveillance capitalism, its telematic nature that renders subjects "as information even when they believed themselves to be free" of surveillance (Zuboff 2019: 205). Put another way, as workers go about writing emails and setting up meetings, this information is being automatically monitored and transmitted to other entities that shape worker potential and measure performance. This ability invites an ethical criticism of telematic logic as it tries to define work and workers: the automated academic becomes a good data subject, even if they don't know it, or don't know how the surveillance of their everyday work routines will be used and by whom. The question, then, is what structures of surveillance are being produced for the automated academic, and what subjects are being constructed in these structures?

The reasons for subjecting employees to automated surveillance are varied but have a well-developed literature within a larger subset of electronic performance monitoring (EPM) approaches or Electronic Monitoring and Surveillance (EMS) in the workplace (Holland, Cooper, and Hecker 2015). Ravid et al. (2020) extend the work of Ajunwa, Crawford, and Schultz (2017) to emphasise that employers who use EPM can not only track individual employees continuously but also randomly or intermittently, discreetly or intrusively, and with or without warning or consent. They observe that the result of these techniques is that EPM captures behaviour in great detail, generating rich, permanent records that managers can quickly access—even if these records may not relate directly to previously agreed measures of performance (Montealegre and Cascio 2017).

We note that critiques of performance management are not new. Brayfield and Crockett (1955) pointed out that performance is the management of individuals' work intensification, whereas surveilling productivity is based on the direct economic value to industry and society that increased productivity brings. For the digital age, Montealegre and Cascio (2017) frame surveillance in business as either control-based or developmental. Instead of surveillance for control, the developmental model is tied to quantified understandings of self-worth in work that reflects desirable data (Charitsis 2019). Yet this performative approach to surveillant self-action is juxtaposed with arguments for privacy in the academic-professional space. West and Bowman (2016: 637) argue that the capacity to establish one's professional role in an authentic way is based upon the assumption of freedom and independence from continual observation. Positioning privacy as not just an individual right but also a societal good, they argue that there must be compelling justification for monitoring staff (West and Bowman 2016).

We question whether the introduction of surveillant capitalistic systems in academia has been accompanied by critical interrogation of what work is and what good workers do. As such, we now explore our paradigmatic case study to describes how the words we are typing right now are part of a surveillance system that nudges how workers are managed into the logics of surveillance capitalism.

## Viva!, Office Assistance

This section introduces Office 365's surveillant functions as users experience them and in light of significant developments in automated productivity management more generally. It reflects on Viva's functionality in terms that juxtapose digital productivity *assistants* to *assistance* to show how Office 365 is performant for surveillance capitalism in higher education. Winikoff et al. (2021) have considered the barriers for successfully integrating Viva's analytics features into academic organisations, describing it as a "digital productivity *assistant"* (emphasis added). We add to this by using Walkthrough method (Light, Burgess, and Duguay 2018) to systematically determine the expected usage environment by outlining the app's vision, economic model, and governance from a user's perspective. Two of the researchers used Viva to systematically engage with the platform, documenting our experiences and observations to understand the platform's affordances and constraints and consider the ways it might shape user behaviour. We then

discussed our findings amongst authors to allow reflective interaction and exploration of what is presented to the user. This approach then drew in the wider environmental consideration as to why such interactions occur, and who they impact. Platforms mediate history and power (Yang, Heemsbergen, and Marshall 2022) and our method considers this in terms of working as a knowledge worker on the Microsoft platform in the age of surveillance capitalism. The work suggests that Microsoft Office uses its monopoly of mediated connectivity *at* work to surveil work activities, compute their patterns, and then define what *is* good work.

*Experiences of Office Work: Assistants and Assistance*
Office 365 is described by its publisher Microsoft as a suite of apps that include the operating system (Windows) and content production apps (Word, Excel, PowerPoint, etc.). These apps exist in corporate settings in a connectivity and surveillance platform through interfaces that include Teams, OneDrive, Sharepoint, and Viva. These connections interface between the productivity applications in a design that keeps many types of work practice (write, store, share) within the Office-Microsoft ecosystem.

Notably, the data that are given off by users while working in and between Office 365's apps are now analysed by one of Office 365's component apps, Viva. Viva analyses these data towards specific measures of performance shared with users, their organisations, and potentially Microsoft. Viva's full monitoring potential is proprietary and continues to evolve, but its data include monitoring how often receivers actually open emails that users send and noting with whom users communicate most inside and outside of "work hours" or how much time is spent in each app or project file. This information is computed by Viva and offered to users as "Insights," as we detail below. The aim is to measure and define how users perform in the processes of work so as to advise them on how to be more productive. An Insight might question whether emailing a colleague so late at night, so often, is "healthy," attempting to nudge users towards becoming a "well-adjusted" worker/data subject.

The insights gained from data surveilled from the everyday practices of work on the platform would otherwise be unthinkable by workers. As Microsoft (2022) explains in its marketing material: "Viva Insights converts data into personal insights by doing calculations on information that you generate just by going about your workday. Most of the data that you see in Personal Insights from Viva Insights is simply an aggregation of information to which you already have access, but that you wouldn't be able to quickly perform calculations on without some support." The point is that Viva tracks knowledge workers' everyday activity, compiles it in ways that are both opaque and otherwise unknowable to the employee, and then infers their meaning. This fits the lay definition of telemetry—remotely gaining data from animals in their natural environment. We acknowledge the telemetry metaphor is not without fault: even though human workers don't know exactly what is being tracked, awareness of being tracked changes behaviour. While Bentham designed presumed observation into social control centuries ago, in corporate terms it is the Hawthorne effect that might explain the value of Viva to business goals—regardless of whether any of its "Insights" are valid or if management actually observes them.

Users may have noticed this surveillance during Microsoft's shift in branding from assisting knowledge workers by completing tasks (e.g., booking a meeting at the time commanded by the user) to watching over them with productivity assistance. Viva was formerly branded as Cortana, a homage to the helpful AI assistant within the Halo video game franchise that Microsoft acquired in 2000. We note that such digital assistants were employed to perform routinised tasks on users' command. Paradoxically, Viva suggests new routines for users to perform.

Digital assistants like Cortana tended to either contain gender-based stereotypes (Strengers and Kennedy 2020) or were situated in the master/servant trope most clearly articulated in the digital butler (and AI knowledge base) in Neal Stephenson's 1992 science fiction novel, *Snow Crash*. Cortana's original branding in the Halo game effectively mixed these two tropes. Halo's Cortana AI was a highly sexualised, glowing blue, semi-naked robotic female that supported the main character with tactical advice, instant-access information, and calculations that far exceed the capabilities of even a super-human protagonist soldier. A

de-sexualised Cortana retained its speech patterns and was released in 2014 for workers, instead of gamers, as a digital assistant in Microsoft's mobile OS.

Cortana's evolution from task assistance to decision assistance was first developed through the Outlook "Cortana Briefing email" designed to "connect you to personal productivity and wellbeing insights [including] outstanding commitments, requests, and follow-ups that might have fallen through the cracks" (Microsoft 2021). That Cortana delivered an email "to do" list seems mundane. Yet, the algorithmic assessment of what was to be done to stay productive was based on deep, wide, and automated surveillance of work practices. It shows a new type of productivity monitoring that might lead to new types of managing performative knowledge work.

To help brand these opportunities to monitor, manage, and define work, Cortana was rebranded as "Viva" in 2021. During Viva's rebranding, there was a visible shift to self-care and away from the personified digital assistant Cortana. Microsoft's explanatory material and language to users in their "Insights" explains this new business model, which is akin to the developmental model of surveillance by Montealegre and Cascio (2017). It became clear in use that instead of a specific digital assistant there was now an "employee experience platform that brings together communications, knowledge, learning, resources, and insights in the flow of work" (Microsoft 2022). The personified digital assistant had disaggregated into an invisible surveillant system for working better, as measured in Office 365 applications.

User experience of Viva continues to evolve. The email bulletin has evolved into Viva's 2022 offering of a dashboard interface of "Insights" from surveilled user data that measure and display new forms of productivity performance. At the time of writing, the Insights' dashboard is designed to "Improve productivity and wellbeing" by monitoring patterns of work across multiple Microsoft applications for key performance indicators labelled focus, network, collaboration, and wellbeing (see Figure 1, or you can view your own at myanalytics.microsoft.com).
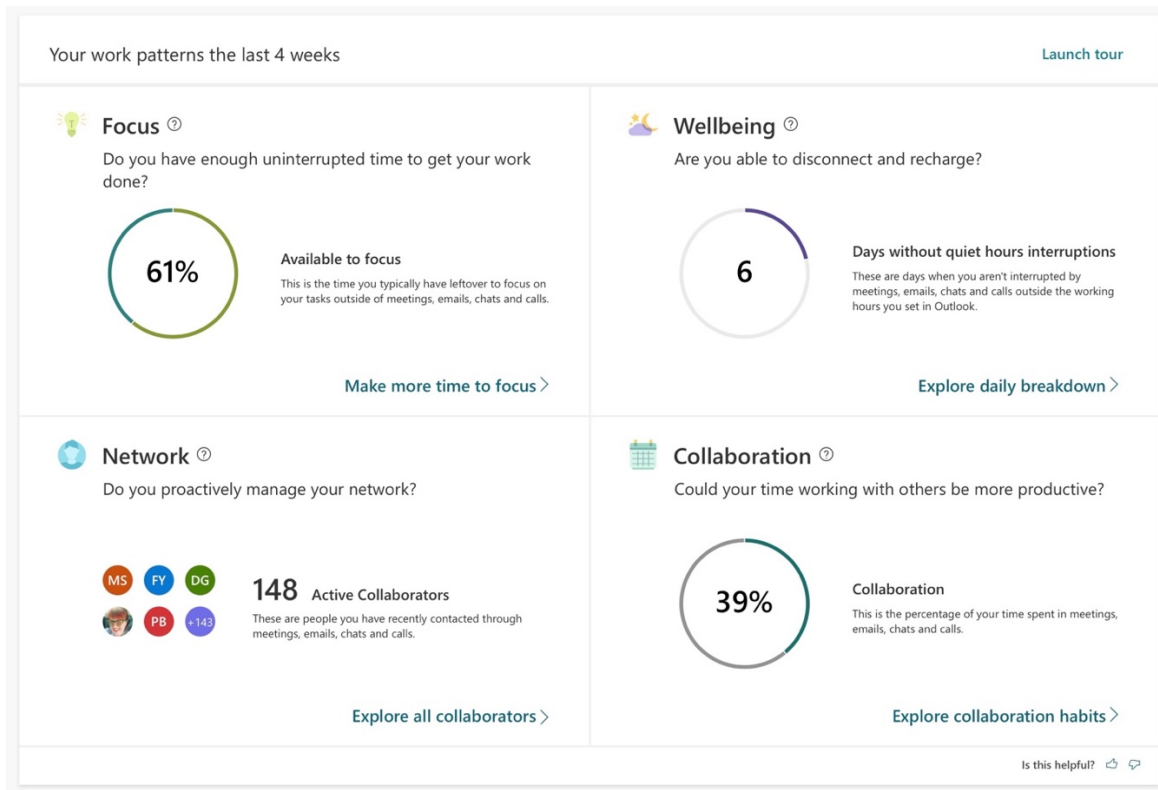


**Figure 1**: *Typical analytics landing page for "Viva Insights" circa 2022.*

Each of the four dashboard widgets presents a distinct logic of surveillance. A logic of surveillance as care (Nelson and Garey 2009) in the "Wellbeing" widget measures work activity outside working hours and suggests alternative practice to avoid burnout. Surveillance as industrial time management (Sewell and Wilkinson 1992) is shown in the "Focus" and "Collaboration" widgets that delineate how work hours are spent in meetings, emails, chats, and Team calls, comparing this to time "focussed" on one's own tasks.

Finally, surveillance in terms more redolent for discourses of the digital age and knowledge workers is present in the "Network" widget, where Social Network Analysis (SNA) maps and records your network worth: Viva displays nodes of whom you connect with, edges of how often, and how this compares to others in your organisation. "Do you proactively manage your network?" asks Viva as it manages the visibility of your work network. "Are you growing your network?" is the follow-up if you drill down to see whom the algorithm thinks you should connect with.

This last widget allows us to see nudges of surveillant capitalist expansion twofold. The entrepreneurial academic is nudged to increase their SNA measures of centrality and reach. Yet this is accomplished in ways that also nudge expanded uses of the platform itself, creating new datapoints to increase the platform's own worth. The entrepreneurial academic is nudged by Viva to self-help, increasing influence and self-regulation for wellness and efficiencies—while growing the platform in ways that speak to platform capitalism (Srnicek 2017). Put another way, Viva's insights afford Viva Insights. There are clear problems with defining work practice through a capitalistic platform that hopes to use its own virality to show work performance.

The experiences of Viva Insights described above show Office 365's connectivity and surveillance platform follow Srnicek's (2017) consideration of platform capitalism. Platform capitalism has platforms acting as intermediary digital infrastructure, thriving on network effects, and deploying the strategy of constant user engagement with the end purpose of extracting more data from their (academic) users. Office's connectivity-surveillance interface (Teams, Outlook, and Viva monitoring of patterns there and in productivity apps) shows how surveillance capitalism is combining with automated and algorithmic modes of governing what work is.

## Viva! The Wider Political Economic Context of Platform Capitalism

Another characteristic of platform capitalism related to constant user engagement is cross-subsidisation in which free products and services are offered to accumulate more users and, therefore, more activities on the network (Srnicek 2017). This characteristic was witnessed by the authors when we recently received an email in Outlook that declared telephony is now Teams. More broadly, we see gateway strategies for students having to manage Sharepoint, Outlook, and Powerpoint over coding Wikis, using in-house webmail, and presenting in Canva. This is a strong illustration of how far platform capitalism has come since the monopoly trial *United States v. Microsoft Corp* (2001) over embedding and favouring a native browser to the World Wide Web in an operating system.

Srnicek (2017) argues that, through the interactions of these characteristics, platform businesses create a product that, once built and established, provides them with the monopolistic ability to continually exploit and benefit from their users and their activities. Thus, while universities pay for Office 365, the affordances of the platform's surveillance not only define the good worker but also *become* work itself: Teams regulates the potential for new projects, Sharepoint the capacity for institutional voice, and, of course, Outlook the communication of ways for scheduling other ways to communicate. As Herrman (2017) points out, with enough success, these platform businesses go from enabling transactions to controlling economies, and we argue that Office 365 is capable of such a transition. We note Microsoft continues to extend the structures that map and control social aspects of work through "Viva Engage" (Sitaram 2022), a product launched at the time of writing that seems to provide a clone of Facebook "at work." Thus, the notion of platform capitalism helps contextualise Office 365 and its use as enterprise software within higher education. Performing well in work is defined in the platform, with the platform, and for the platform, framed through managing wellness, time-regulation, and social connectivity, all via Microsoft's linked applications.

*Viva la Resistance?*

There is little opportunity to evade tracking or challenge its uses in the platformisation of work if your university uses Teams to communicate, Outlook to calendar, and so on. There is no assistant to turn off when performance assistance is pervasive and invisible within platform workflows. This can create distrust between university governance and its employees as it brings them into relations of mutual suspicion over what is and is not relevant performative data, and where these data might end up.

It follows that workers might interpret their Viva Insights in line with the spectrum Bridges (2021) considered in terms of the good data subject. Are workers to understand themselves by what is legible, knowable, and thinkable in Viva's terms of surveillance? Or on the other end of the spectrum, should they engage in a process of unbecoming a "good data subject by pushing past the margins of legibility, knowability, and thinkability" and live past "data's seeing eye" (Bridges 2021: 1)? The autonomy of privacy is powerful and productive.

Simply put, all work doesn't happen on Office 365. Viva is an instance of tools developed for deployment in business-focussed corporations entering the neoliberal university, bringing with them assumptions about how academics function and what constitutes "productivity" and "wellbeing." Much academic work requires reading and thinking—(un)recorded writing may be scrapped. In other words, Viva is insufficient as a productivity tracking tool for the range of multi-sited and multi-modal practices that constitute "academic work." As a management platform, it creates and manages a dividual residue of the academy's embodiment of learning and scholarship.

A different performance risk concerns the internal and external contextual integrity of Viva's surveilled data. Consider that email, traditionally seen as a communication tool between senders and receivers, is now subject to Viva's algorithmic analysis, potentially breaching intra-organizational contextual integrity. Further concerns arise from the potential of third-party data sharing. Office 365 users can view their performance indicators, but it is unclear how Microsoft or third parties use aggregated data now or can in the future. Knowledge workers, aware of the telemetric device they've "swallowed," remain in the dark about its signal reach and the potential consequences of future analyses. This opacity stems from proprietary code, non-transparent reporting, and insufficient legislation despite repeated data industry privacy violations (Schaub et al. 2015).

While Viva tries to build a good data subject, is the smart data subject one that offers the most desirable data at work or the most noise and autonomy? In whose interest are these subjects being created? And has the organisation given thought to balancing its own goals—let alone those of its employees—against those of the surveillant capital systems to which it is contracted? These are critical questions that need to be addressed but cannot be in the current scope. To illustrate a facet of this, we will explore the regulation of APM; our final section turns to the socio-legal context of our Australian case study. We hope the considerations below offer a relevant venture into the practical, legal, and ethical issues that arise as Office 365 is taken up more widely in knowledge work

## Privacy, Autonomy, and APM

This section takes a legal lens to the context of APM in Australia. The notion that data mined from workers is a legitimate (and even desired) part of workplace management and worker-care frameworks, leading to increased productivity and wellbeing, means that such surveillance activities per se are not perceived as harming or concerning. The result is that these surveillance methods are only minimally (if at all) regulated through legal means in Australia. Despite having significant implications for various legal fields, including labour law, privacy law, and human rights law, productivity assistant applications are considered, to a large extent, beyond the desired scope of these regulatory regimes. Therefore, this section first reviews the legal protections afforded to knowledge workers in Australia against privacy injuries. It then identifies four particular challenges to existing regulation triggered by the rise in APM. Finally, it proposes structural and

conceptual changes required to reimagine the regulation of privacy, autonomy, and freedoms of knowledge workers in Australia.

*Knowledge Workers' Privacy Protections in Australia*

There is no general right to privacy in Australia. The Commonwealth privacy legislation—the Privacy Act (1988)—protects data privacy to some extent through the development of principles for the handling of personal information of individuals (Lindsay 2005). However, no Commonwealth legislation directly addresses or regulates workplace surveillance. As the Australian Constitution is silent on the subject, the regulation of information or data privacy lies within the domains of both the Commonwealth and state and territory governments. As a result, while the Privacy Act (1988) applies mainly to Australian Government entities (and some private sector organisations), Australian state and territory governments have separately enacted laws governing collection, holding, use, correction, and disclosure of personal information by state government entities.

Other Commonwealth laws that could have potentially protected some aspects of knowledge workers' privacy against surveillance are the Telecommunications (Interception and Access) Act (1979) and the Fair Work Act (2009). However, both these Acts are too narrow to meaningfully protect employees against the harms of APM discussed above. The Telecommunications Act (1979) only protects employees' "private communications." APM challenges both parts of this legal definition, as, being focused on work patterns, it is not considered "private" and includes broader data than what can be considered "communication." Similarly, the Fair Work Act (2009) provides limited protections against APM. Reviewing relevant case law, Brown and Witzleb (2021: 182) conclude that "placing an employee under surveillance does not amount to adverse action capable of supporting a general protections claim under Part 3–1 of the FW Act." Some knowledge workers may be protected against particular forms of surveillance through their enterprise agreements; but these protections are limited to particular workers and work contexts, and to the best of our knowledge, are yet to include limitations on surveillance generated through APM.

Both data privacy and electronic surveillance are regulated, at least to some extent, under most states' and territories' legislation. The regulation of data privacy under state and territory law, which applies to public sector entities within these jurisdictions—including universities—is similar in nature to the Privacy Act (1988). While some aspects of electronic surveillance are regulated in most Australian jurisdictions, only New South Wales (NSW), the Australian Capital Territory (ACT), and, to a lesser extent, Victoria, have specific workplace surveillance laws: Workplace Surveillance Act (2005; NSW); Surveillance Devices (Workplace Privacy) Act (2006; Victoria); Workplace Privacy Act (2011; ACT). Brown and Witzleb (2021) review these laws in detail, providing a comprehensive description of the applicable legal frameworks in these jurisdictions. Additionally, in Victoria, the right to privacy is further protected through the State's Human Rights Charter.

While these laws protect knowledge workers against some level or methods of surveillance, we doubt whether the definition of surveillance in these laws extends to tracking employees' work patterns through productivity applications. For example, the NSW Workplace Surveillance Act (2005: 7) defines computer surveillance as "surveillance by means of software or other equipment that monitors or records the information input or output, or other use, of a computer (including, but not limited to, the sending and receipt of emails and the accessing of Internet websites)." While the law prohibits computer surveillance of employees "when the employee is not at work for the employer," the law specifies that this prohibited surveillance during off-work times does not include surveillance carried out by "equipment or resources provided by or at the expense of the employer" (Workplace Surveillance Act 2005: Section 16[1]). Finally, as Brown and Witzleb (2021) note, it is unlikely that employees that are under some type of surveillance (APM or otherwise) would take legal action against their employer. This is because litigation is costly and risky, as outcomes are often unpredictable. Moreover, litigation is typically an option only once the employment relations terminate and not while employment relations (and surveillance) continue. The reason is that such legal action can induce retaliation or otherwise harm ongoing employment relationships. The

result is that any of these routes—privacy invasion, breach of confidence, or failure to act in good faith—are not likely to be viable or effective protection against the harms associated with APM.

### Challenges to the Regulation of APM

The proliferation of digital productivity applications creates new challenges from a regulatory perspective. In particular, four factors make current legal constraints insufficient to protect Australian knowledge workers from privacy and autonomy harms: First, the productivity narrative, together with the rapid changes in technological capabilities and possibilities, poses a challenge to existing legal definitions of surveillance, leaving productivity monitoring (including APM) outside of existing regulation of surveillance methods and practices. Second, the invasive nature of productivity apps critically erodes workers' privacy and autonomy. Third, the lack of transparency regarding the scope, use, and technical aspects of digital productivity tools makes it difficult, if not impossible, for workers to reclaim their privacy and autonomy and to fully comprehend the level of intervention in their decision-making practices. Fourth, data from productivity apps may result in workers' discrimination and implicit bias, through erroneous interpretation of such data. Each of these challenges is elaborated below.

### The "Productivity" Narrative

Disguised through a positive narrative of productivity and workers' wellbeing, productivity surveillance tools reinforce employers' power through invisible enforcement mechanisms, as well as by legitimising and bureaucratising employers' power (Sempill 2001). This invisibility is enhanced through a particular political economy ideology that constructs such surveillance activities as public goods, generating economic growth and efficiency. As Ajunwa, Crawford, and Schultz (2017: 771) observe, "If the only remarkable consequence of this data mining of workers' daily lives is economic growth, then there is nothing left for the political economy to concern itself with, apart from encouraging and enabling such data mining."

The result is, as shown above, a limited and toothless regulatory regime, that, by and large, excludes productivity surveillance from the scope of regulated surveillance activities. As demonstrated above, the legal definitions of "surveillance" are limited to specific contexts (for example, off work), methods (including workers' personal devices), and data (such as private communications). This means that, in order to properly address the harms of APM, the law must adapt and expand its definition of surveillance to include productivity tracking and monitoring.

### Workers' Autonomy

APM harms knowledge workers' privacy in various ways, leading Ajunwa, Crawford, and Schultz (2017: 769) to conclude that "the invasive nature of productivity apps might permanently erode worker privacy." As Citron and Solove (2022) demonstrate, privacy harms, including those inflicted through APM, are wider and deeper than what is typically acknowledged and protected by law. Among other types of privacy harms, the range of costs and injuries associated with limitations or restrictions on individuals' privacy include a variety of "autonomy harms." Citron and Solove (2022: 845) explain that the class of privacy-related autonomy harms involve "restricting, undermining, inhibiting, or unduly influencing people's choices…. People are either directly denied the freedom to decide or are tricked into thinking that they are freely making choices when they are not."

Building on Citron and Solove's (2022) theoretical framework, we identify three ways through which APM impairs knowledge workers' autonomy. First, it manipulates knowledge workers' work habits or decision-making through nudges based on invisible algorithmic processes. Second, it skews knowledge workers' decisions and affects their preferences by failing to provide them with relevant information to make their decisions. Third, it generates chilling effects through making it known that tracking occurs while keeping the details of the extent of the tracking and the use and exposure of the data invisible. The result is that the extent of the privacy harms inflicted by APM is not fully acknowledged and is not legally regulated.

*Transparency*

Lack of transparency regarding the technical aspects of digital productivity assistants makes it difficult, if not impossible, for knowledge workers to understand the scope of data gathered and those who have access to it. This information asymmetry also means that employees may not actually be consenting to the surveillance activities even though they give permission (Ajunwa, Crawford, and Schultz 2017). This lack of transparency extends to knowledge of when productivity apps are switched on and their ability to track workers' activities outside of work. This lack of transparency empowers employers at the expense of their employees, and it generates considerable autonomy harms. We note that this is not just a problem for employees and employers. The economic relationships between third party trackers and "user" firms detailed above disincentivize transparency at the structural level.

*Discrimination*

Social science research, including behavioural insights, shows that data from productivity apps could be manipulated or wrongly interpreted in a way that may drive or enable implicit bias and discrimination within work environments (Ajunwa, Crawford, and Schultz 2017). Moreover, studies in behavioural economics demonstrate that behavioural nudges, such as those inflicted through productivity assistants, do not increase workers' productivity. For example, Uzunca and Kas (2022) found that Uber's nudges directed at their drivers do not make drivers more productive and do not increase their earnings. As such, APM's claims to increase productivity need to be more critically interrogated as precarious workers are vulnerable to the privacy incursions of APM without the financial compensation often linked to performance. To make a stronger claim, we argue that the balance between the benefits of these tools and the harms they inflict must be re-evaluated.

*Restoring Knowledge Workers' Autonomy*

The law cannot catch up with the rapidly developing technology. In an environment where third-party developers continuously develop new digital tools to increase "productivity," we must re-establish knowledge workers' autonomy as a central value that cannot be separated from performance frameworks. As Ajunwa, Crawford, and Schultz (2017: 772) observe, "as long as work-related information remains in the domain of the employer—be it one's wellness, location, or conduct away from the office—few laws or regulations will survive the accelerating technological advances in sensors and surveillance." The solution must therefore include an element of restructuring the power balance between employers and employees through increasing the transparency of and controlling access to productivity data and productivity data collection methods.

## Conclusions

This paper introduced Algorithmic Performance Management (APM) to describe how Electronic Performance Monitoring (EPM) has shifted into an automated age of control of knowledge workers. It found logics of surveillance and platformisation at work within the Office 365 Viva Insights application based on wide and deep telematic capture of user data. We showed how platform capitalism in higher education means that productive workers become good data subjects, required to offer up their work practice data in ways that enable them to be monitored for wellness, time-regulation, and social connectivity. This surveillance enabled the platform to influence, manage, and control them as it afforded its own growth.

Pressures to be productive that preceded the algorithmic ones discussed have already changed the academic subject and the nature of academic work, with academics demonstrating their productivity in newly visible ways, to the detriment, arguably, of what academics might consider true quality. Viva's "performance" impact could be similarly performative—i.e., it could well change how academics perceive and present themselves, focusing on what is measured in Office 365 rather than work that is invisible to Viva's algorithmic gaze and grace. University administrations could well be tempted to use the cache of data being generated in this telematic work to recognise what academic performance is. The platform's agenda could thus mistakenly become that of the public university.

This article set out to frame the issue and develop its debates within the context of our initial Walkthrough. We identify, however, that there is a clear and present need for future research in this space—including into worker perceptions of Viva's insights, organisational uptake, algorithmic Fairness, Accountability, and Transparency (FAccT) analysis, and third party data sharing. Future research should consider how to avoid designing, contributing to, and performing such a system. Future work should also chart how APM should govern and be governed within and outside of organisations as generative models of how our labour is defined to good work. We hope our limited introduction to these issues will spur such research into the shifts of governance in academia and the subjectivities of academic work. In other words, the productive effects of Viva itself require surveillance.

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