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Reconfiguring Digital Work: A Socio-technical Reversal Perspective

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Reconfiguring Digital Work: A Socio-technical Reversal Perspective

Full research paper

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Abstract

With the acceleration of digital workplace transformation and adoption of hybrid work, organisations and employees adapted new practices that meet the challenges of this environment. Work technologies experienced a parallel evolution, integrating AI capabilities to support modern hybrid work that is largely digital. The foundation of the relationship between the human and technology that shapes the reconfiguration of digital work practices needs to be revisited. We adopt a qualitative case study to investigate factors that influence the reconfiguration of digital work practices in hybrid work. Based on a multinational IT organisation and an Employee Experience Management (EXM) platform technological tool, study findings indicate that employee wellbeing, engagement and visibility, AI-enabled EXM platforms, and an inclusive work culture have shaped the reconfiguration of digital work practices. These findings advance our understanding of the reciprocal relationship between the digital and human and inform practices that support employee engagement in digital hybrid work.

Keywords: Digital work, Socio-technical reversal, Hybrid work, Digital technologies, EXM platform.

1. Introduction

The accelerated digitalization of organizations and the after-effects of the pandemic are transforming the established archetype of office work routines towards more contemporary work arrangements. Employees across a range of organizations and industries today have the flexibility to work from anywhere but also to work asynchronously with their team under this model (Zamani et al. 2023). Along these opportunities, the shift to hybrid work has also brought about a range of new challenges to work engagement and productivity, maintaining of work-life balance, ensuring cybersecurity and privacy, and social isolation that can come with remote work (Panteli et al. 2022). It is likely that organizations and employees will need to continue to adapt and evolve to meet these challenges in the post-pandemic world that has experienced rapid digital workplace transformation. As employees and leaders experience this transformation, they are found to reconfigure their work practices by comprehending the materiality of the technology used in their hybrid work, and thus, adapting their digital work to maintain their engagement and enhance their productivity and wellbeing. In doing so, their work experiences are being shaped by using workplace technologies, contributing to further configuration and reconfiguration of digital work. In this study, the term 'digital work' is used to refer to any type of work or employment that is primarily done through digital technologies such as computers, the internet, or mobile devices, and is characterized by adaptability, flexibility, and dynamicity (Aroles et al. 2021). More formally defined, digital work refers to "work practices that are being reconfigured through the operation of digital platforms, algorithms, and the processing of multiple, diverse kinds of data" (Orlikowski and Scott 2016, p. 6). As digital tools and technologies continue to advance, digital work is becoming more increasingly common where organisations integrate digital technologies into the workplace and work practices.

A notable feature of today's digitalized workplaces is the use of digital technologies that integrate Artificial Intelligence (AI) capabilities to capture work patterns and produce actionable insights based on data captured in the flow of work. Conventional workplace technologies commonly used in organizations and in facilitating hybrid work include productivity software such as Microsoft Office or Google workspace, communication tools such as email, instant messaging, and video conferencing software, project management tools such as Trello and many other classes of technologies. Traditionally, these technologies were used to support office work and have since evolved to support social interaction and community building in organizations, but more recently, support managerial roles, to some extent, with the use of advanced AI capabilities. There is a progressive layering of workplace technologies within organizations (Kane 2017) from early workplace technologies based on first layer of individual office applications, second layer of collaboration platforms and social media, and third layer of advanced workplace technologies that add AI, cognitive knowledge, and collaboration systems to an integrated digital platform of work termed as intelligent augmentation layer (Baptista et al. 2020). Employee Experience Management (EXM) platforms are examples of this third layer of advanced workplace technologies that have been introduced within hybrid work settings and have proved to contribute to the emergence of work practices that support employee engagement in hybrid work (John et al. 2022).

The popularity of digitalized workplaces has raised researchers' interest in the relational association between human and technology and how to attend to unique ways of connecting the social and the technical pieces of the socio-technical puzzle (Lyytinen et al. 2021; Rai et al. 2019). The socio-technical theory suggests that the most effective and sustainable organizations are those that integrate technical and social aspects of their work systems, rather than treating them as separate and distinct elements (Scott and Briggs 2010). To this effect, the degree of success of a system depends on the nature of interactions between the social and technical components (Abbas and Michael 2023). Drawing upon these principles, configuration work involves shaping, adjusting, and redesigning the contexts within which technology is embedded, resulting in the reconfiguration of digital work. With the introduction of any technology in a workplace, it is to be expected that practices will be altered and will involve significant preparation work and cognitive labor. Individuals must be attentive to possibilities, anticipating potential avenues and options for practices in relation to the specific technology that is enabling new configurations between humans and technology (Suchman 2007; Suchman 2012). As noted by Klein and Watson-Manheim (2021, p. 20), "Digital configuration work requires human agency, innovation, and imagination in making sense of technologies and configuring (and reconfiguring) knowledge, discourses, and practices". Therefore, our examination of digital work reconfiguration is prompted by a general lack of understanding on how the association of the social and technical are shaping modern digital work. In particular, how users' actions and interactions in hybrid work shape how technology is used but also how technology is evolving in response to user actions in a hybrid work environment. This builds on the understanding of an 'open system' that interacts with its environment and is modified in response to its environmental changes (von Bertalanffy 1950 as cited by Abbas and Michael 2023).

With the growing popularity of both hybrid work and new workplace technologies like EXM platforms, there is a need to explore the foundation of the relationship between humans and technology in shaping modern digital work. There remains a lack of understanding of how human actions and interactions with technology can shape how technology is used and vice versa in hybrid work, where regardless of the time and place of work, employees' work is inseparable of digital tools, therefore, is primarily digital. There is further lack of understanding of how technological tools are shaping human actions and practices in a hybrid work setting— a form of socio-technical reversal perspective. This further requires an understanding of the shifts leading to modern digital work following the pandemic where work arrangements evolved from in-person, to fully remote, and to the now hybrid work model and the impact this has had on employee experience, work patterns, and the deep structure of organizations, resulting in the reimagination of digital work (Baptista et al. 2022; Carroll et al. 2022). Hence, the aim of this study is to *identify the socio-technical dimensions that influence the reconfiguration of digital work practices in the evolving hybrid work model.*

In what follows, we review literature on socio-technical reversal and the role of one class of technologies, the Employee Experience Management (EXM) platform, in shaping new workplace practices and reconfiguring digital hybrid work. The adopted methodology and case study details will be presented next, followed by a discussion and proposal of a conceptualisation of the reconfiguration of digital work. The paper concludes with the implications of our study.

2. Literature Review

2.1 Socio-technical Reversal

During the early days of Information Systems research, the socio-technical perspective emerged as a new way of thinking and a nexus between social side of problem-solving approaches and the technical solutions to the problem (Davis and Olson 1985). Within the socio-technical perspective, the technical artifacts and the human agents collectively develop and use the artifacts in a social context (Briggs et al. 2010). Alter (2013) conceptualizes the social and the technical as two mutually interacting components. A joint optimization between the social and the technical is expected to result in better technical outcomes such as productivity and better humanistic outcomes such as wellbeing (Wallace et al. 2004). With the advent of ubiquitous work technologies in the hybrid work environment, studies are now exploring the possibility of role reversal of humans and technological artifacts and the reversal of the socio-technical perspective. Recent studies on socio-technical reversal reinforce the relational association between digital and human (Lyytinen et al. 2021) leading to techno-social perspective. Techno-social perspective is where technological systems are indispensable mediators of reality and human agency's actions are only feasible with this mediation (Baskerville et al. 2020).

Our examination of digital work configuration is prompted by a general lack of understanding of how users' actions and interactions shape how technology is used and vice versa in the new and evolving hybrid work. We draw on Suchman's (2007; 2012) notion of configuration to investigate more deeply the phenomenon of emergent configuration of hybrid work. Suchman (2012) argued that configuration is necessary due to the incompleteness and contingency of the technological artifacts. Configuration work is conceptualized as "how humans and machines are figured together— or configured—in contemporary technological discourses and practices and how they might be reconfigured, or figured together, differently" (Suchman 2012, p. 49). Configuration work involves both analyzing the materiality of the technology in its specific setting and configuring and reconfiguring the practices in that context. The notion of digital-human configuration work designates design-in-use practices as critical human work. The human worker puts the technology in place, makes sense of it in the context of their practices and in doing so, their work and identity are shaped by the use of technology. Configuration thus denotes both the dynamics of arranging human-technology work and the mutual shaping of humans and technology (Richter et al. 2018). The configuration and reconfiguration of work leads to new and expanded competencies, skills, and expertise, which all rely on human agency (Neff and Nagy 2018; Suchman 2012). However, despite its dynamic role, configuration work is often unrecognized and invisible to stakeholders, including human actors (Klein and Watson-Manheim 2019).

With the perspective of socio-technical reversal, we capture the digital-human configurations based on one class of technologies, an EXM platform, which serves as a digital tool that supports the continuity of employee productivity, engagement, learning, and wellbeing during remote work and in hybrid work. We argue that since an EXM platform is a new generation of workplace technology, it can dynamically anticipate and respond to the needs and intention of workers (Lyytinen et al. 2021; Schuetz and Venkatesh 2020). Hybrid work results in joint optimization of in-person work and remote digital work and EXM platforms need to record both. Employee engagement and communication have dual reality

where a digital reality is constructed first, and the living reality is created as a reflection of the digital (Baskerville et al. 2020). Thus, calculating employee experience in hybrid work aligns with computing human experiences in a digital-first world (Baskerville et al. 2020) and depends on four dimensions of lived human experiences captured by digital technology including time, place, artifacts, and actors. The emerging complex human and technology collaborations in a digital workplace is merely beyond task substitution, augmentation, and assemblage (Rai et al. 2019). Rather, the real time datafication of digital work captured by EXM platforms has the capacity to transform the role and nature of workplace technologies beyond merely having an instrumental or supporting role, to being more agile and adaptive. There is therefore a need to explore the influence of EXM platforms in hybrid work towards reconfiguration of digital work.

2.2 EXM Platform and its Role in Digital Work

An Employee Experience Management (EXM) platform is a digital platform and constitute a notable example of workplace technologies with intelligent augmentation – a form of ‘algorithmic phenomenon’ that can transform how work is done (Orlikowski and Scott 2016). EXM provide a centralized place where employees can access relevant information, connect with colleagues, receive feedback and recognition, and access learning and development resources (Malik et al. 2023), therefore, improving the overall employee experience. AI is playing an increasingly important role in modern EXM platforms and is being integrated for improving the tool’s capabilities, and overall employee experience. EXM platforms use machine learning algorithms to analyze employee data, apply predictive modeling on the data, and provide actionable insights to managers and employees that can help them optimize their work practices, productivity, and wellbeing. They are also believed to enhance employer-employee relationships, monitor employees’ sentiment, and facilitate employees’ personal and professional development (Abhari et al. 2021; Carroll et al. 2022; John et al. 2022). The platform provides digital assistance using Natural Language Processing (NLP) to help employees find information and resources quickly such as answering common questions, providing reminders, and recommending actions to help employees improve their work experience. Other forms of assistance include AI-enabled training where personalized training recommendations are suggested based on an employee's learning history, skills, and job role. These capabilities help employees improve their skills and performance, increased job satisfaction, and improved productivity.

For managers, one of the main benefits of EXM platforms is the automation of repetitive tasks that can reduce the workload. For example, algorithms can be used to create optimized work schedules, considering employee preferences, availability, and workload. This can reduce the time and effort required by managers to manually create schedules and reduce the risk of errors and conflicts (Janssen and Van Yperen 2019). While such AI-enabled technologies are facilitating new ways of work, their implementation requires careful planning, a strategy and is not without challenges. Companies need to consider their employees' needs, the specific features and functionalities required, and how the platform will integrate with existing systems and processes. Another challenge is the need for effective communication and engagement with employees about the benefits and opportunities of using EXM platforms such as access to a range of tools and resources, supporting training and development opportunities, health and wellness, and employee recognition programs. This requires an investment from organizations in communication and engagement strategies to ensure that employees are aware of the benefits of the EXM platforms and empowered to use them to reconfigure their digital work and improve their productivity and wellbeing (Gartner 2021). EXM platforms rely on sensitive employee data such as employee work patterns, personal data and performance metrics to provide insights and recommendations. Therefore, organizations need to ensure that this data is protected, and appropriate security measures are in place to prevent unauthorized access or breaches that would create risks but also a negative sentiment towards these platforms.

Thus, considering the new role played by AI-enabled EXM platforms in the new hybrid work, there is a need to understand the role played by these tools in reconfiguring digital work and emerging work practices. To address this gap, our research conducts a case study in a multinational organization that uses EXM platform in hybrid work setting. In doing so, we explore how technology supports employees in digital and hybrid work but also how the tool influences emerging practices – through human actions and interactions – that are adaptive to the work environment.

3. Methodology

As the study aims to investigate the relationship between humans and technology in shaping modern digital work in hybrid settings and identify the dimensions that influence the reconfiguration of digital work practices, we adopted a qualitative exploratory approach, with a single in-depth case study design.

The case study is based on a multinational organization, which we anonymously refer to as 'Zeta', where hybrid work became popular amongst employees following the pandemic. Zeta introduced an EXM platform as a technological tool to enhance employee experience in hybrid work. The platform was introduced in November 2021 and one of its key principles is bringing and enhancing employee experiences into the flow of work regardless of where work is performed. Being powered by AI, the tool integrates with Microsoft Teams, Outlook, and SharePoint to capture digital work data and offer a range of features including communication tools, employee wellness resources, learning and development resources, and others. The platform consists of modules for learning, tagging resources with topics, connecting with experts, and for providing insights about work patterns and wellbeing. Within this platform, the learning module aims to facilitate a culture of learning across the organization and enhances social learning while the topics module connects related content and targets harnessing knowledge and expertise. Further, the connections module of the platform amplifies communications within an organization, while the insights module helps employees maintain effective collaboration, follow up on their commitments, and help employees keep track of their wellbeing. Given this platform integrated many of the previously siloed technological tools traditionally be used in digital work (e.g., emails, intranets, meeting tools, etc.), it served as a suitable subject to explore the socio-technical reversal as it plays a key role in shaping digital work in a hybrid workplace.

Data collection took place through a series of semi-structured interviews with managers and employees at Zeta. Interviews averaged an hour in duration and were audio recorded. A total number of 29 participants, 15 females and 14 males, participated in the interviewing process including 9 managers and 20 employees. Participant roles varied from engineers, networking specialists, solution architects, experience product manager and others. For reporting purposes, a reference code has been assigned to each participant based on whether the participant is in a business team (ICB), in an IT team (ICT), or a people leader (P). Study participants also varied in terms of how long they have been with the organization at the time of their interview, ranging from those who have been with Zeta as little as one month such as newly onboarded employees to others who have been with the organization nearly twenty-eight years. This variety in employment time at Zeta has been an important factor for providing the evolutionary perspective of how the nature of work and work practices changed over time and the role played by EXM platforms in contributing to the development of hybrid work as we know it today.

Interviews focused on understanding changes in relation to the participants' work arrangements and shifts in their individual as well as organizational practices to maintain employee engagement, productivity, and social connection. Participants were also prompted to comment on their experience using the EXM platform at their organisation, with particular focus on how the tool enhanced their experience as they transitioned from remote to a fully hybrid work arrangements. Participants were also asked about their understanding of the notion of digital workplace transformation and other questions that aimed to elicit their experiences in relation to engagement with their team members and managers, reporting, collaboration, socialization, meetings, attendance of corporate events, learning and other aspects of their work. Participants were further asked about other initiatives that supported their engagement and overall experience, including technological tools as well as leadership practices.

The interviews were transcribed and imported into the NVivo qualitative data analysis software for the coding process. Data analysis adopted an inductive approach and followed a thematic analysis method which is widely used in qualitative studies (Nowell et al. 2017). Data analysis was guided by the work of Gioia et al. (2012) to derive the aggregate themes. Raw data from our interviews was coded with NVivo by applying researchers' assigned codes to the sentence and paragraph level where appropriate, resulting in over 110 initial codes. Codes were then re-grouped and classified by a common connection such as data relating to the pre-pandemic time (flexible work phase), pandemic time (remote work phase), and after pandemic (hybrid work phase), resulting in 1st-order concepts. Next, 1st-order concepts were further coded and analysed to identify the 2nd-order themes which related to aspects of work such as challenges faced during these three periods of time. These challenges related to engagement, wellbeing, work-life balance, social connection, use of technological tools – particularly the EXM, leadership behaviours, as well as any emerging norms and work practices. Finally, and based on the 2nd-order themes, aggregate dimensions were derived to inform the factors contributing to the reconfiguration of digital work in hybrid setting, including both social as well as the technological aspects. As will be presented next, these include themes relating to challenges of hybrid work, the human element – both at the employee as well as at the leadership level, notable and emerging work practices, and finally, the EXM platform and its role in reconfiguring digital work.

4. Findings

In this section, we present the four contributing factors that influence the reconfiguration of digital work within Zeta and are a byproduct of the human and technological association in hybrid work. These include employee wellbeing, engagement and visibility, AI-enabled EXM platform, and inclusive work culture. These will be presented next.

4.1 Employee Wellbeing

At Zeta, the work model prior to the pandemic was mostly based on conventional physical office or in-person work, with few roles reported involving national and international travel. Hybrid work arrangements were reported but at a very small scale, and on a case-by-case basis. However, the evidence of some hybrid work practices at Zeta pre-pandemic indicates that there is an organizational and cultural readiness to support hybrid work, largely due to the highly digitized nature of the organization. With the wake of the pandemic in 2020 and as employees around the globe went into enforced remote work, the study participants reported this period being a highly challenging time where they experienced new shifts in their work that impacted their ability to manage their work and continue to be engaged with their team, managers, and clients. Aside from the impact of the unprecedented change and the need to rapidly recreate a working space from home, employees reported experiencing an increase in digital fatigue and burnout from the prolonged use of technological tools, the increased number of meetings, the longer working hours across different time zones, and the lack of a space to mentally unwind after a working day. Most participants reported feeling of burnout which impacted their physical as well as mental wellbeing.

A second challenge relates to the blurring of divide between work and personal life, resulting in a shift in the work-life balance for most employees.

“When you're in the same space as you work and your rest it begins actually to impact you over time, you feel a lot more demotivated ... I just felt like I was always staring at a screen ... I feel a little bit burnt out.” – ICB2

Following the pandemic, Zeta implemented a staged return to the office and in-person work. Employees at Zeta officially returned to the office in March 2022 while also maintaining some remote work arrangement – resulting in the post pandemic hybrid work model. Some employees returned to the office, while many continued to work from home for the most part. With this mix in the workforce, Zeta witnessed another shift in the nature of work whereby the organization had to manage employees who continue to work from home but also those who choose to work in-person so that no one is disadvantaged or excluded due to their work preference. Participants reported that they continued to experience – to some degree – the challenges of remote time, particularly those related to wellbeing, management of self, work-life balance, socialization, and engagement even when their work arrangements changed from fully remote to hybrid work. As organisations and leaders learn from the challenges experienced by their employees, in the case of Zeta, findings confirm that factors of employees' wellbeing and work-life balance contribute to shaping the reconfiguration of digital work. As organisations and managers support a hybrid work model, the scope of digital work is further reconfigured to capture indicators of in addition to productivity. In particular, our findings indicate that the reconfiguration of digital work depends on the way employees and managers reflect on their work patterns, and accordingly, respond with new work behaviours that improve their digital wellbeing and work-life balance.

4.2 Engagement and Visibility

From a socialisation point of view, participants reported missing out on the incidental connections that typically happen in the workplace, often through water cooler conversation, attending corporate events, and other opportunities for socialisation. These challenges were not limited to aspects of connection, but also to being able perform innovative knowledge work that requires face-to-face contact and co-location of team members where teamwork takes place in a physical space.

Despite these challenges, employees showed how they accepted and embraced hybrid work and adapted to its challenges, and as they do, they indirectly reconfigure their digital work – *“I think the hybrid work environment allows people to work out how they can bring their best, so instead of being task driven, being outcome driven, I think is the biggest change for me that I'm starting to see.” – ICT23*. The notion of a social digital fabric was also reported, as a form of reconfiguration that compensates for the social fabric of a physical workplace. For instance, interactions in hybrid meetings, check-ins, and regular catchups contribute to the creation of a digital social space where not only work is conducted, but also

where socialization takes place – *“So for example, you know I would say in the chat good morning and thank God it’s Friday or like you know, I’ve just got a coffee or like we would share gifts. We would build some social fabric digitally”* – P15. While these interactions contribute to re-instating the social aspects of the workplace, they also result in the generation of new digital content and footprint. This data is consequently captured by AI-enabled EXM platforms and reveals insights into emerging work and engagement patterns and habits that can be difficult to realize without this data and the visibility it creates.

Managers and team leaders at Zeta demonstrated the necessity for additional efforts to ensure that their employees are supported and can work seamlessly in the hybrid work – *“If you think about the transformation that workplaces or organizations are now reconciling today, I would say that’s about hybrid, and how to bridge the digital and physical worlds, or workplaces and how to make that seamless and how to ensure that work can be productive, can be meaningful, can deliver outcomes, can create joy across both dimensions.”* – P25. Our study showed evidence that managers implemented strategies to better engage with their teams and other employees while also taking initiatives to maintain their own work-life balance – *“what we really wanted to understand for us is how can we support and empower our employees to be more engaged to be more productive to have that wellness to be connected with things that make their job easier.”* – ICB14.

In the digital work environment, EXM platforms can also support algorithmic management, enabling managers and leaders to implement data-driven leadership practice, informed by the created visibility over their team’s working habits and routines. This is facilitated by the aggregate team data (insights) that nudges or reminds managers on due one-on-one connections with their reports and teams but also flags work patterns that could impact engagement and lead to potential burnout – all of which calls for intervention. These insights empowered managers to be able to support their employees regardless of their work location. To this end, managers and leaders are using data-driven insights to drive significant changes in the digital workplace by fostering better engagement and creating a collaborative work environment – *“the manager Insights is very powerful. It’s not personal but you know there are ways we can see the trends. If people are disengaging, not individual, but teams, it’ll say to me ... like you haven’t had a one-on-one with this direct report for two weeks.”* – P15

It follows from the above that while empowered employees and managers play an important role in reconfiguring digital work, the findings clearly evidence how digital technologies like EXM platforms mediate and capture all aspects of their digital work practices, resulting in improving employee engagement and creating visibility of their work. This further reveals insights about the changing nature of digital work in a hybrid work model.

4.3 AI-enabled EXM Platform

The reconfiguration of digital work occurs in response to the cognitive, emotional, social, sensorial, and practical needs of employees. Malik et al. (2022) states that there are a multitude of stimuli employees receive from their work environment. This presents difficulty for employees and their managers to process and analyze all their experiences because measuring reactions, recalling instances, and overcoming various organizational and individual constraints complicates the process. The EXM platform captures these multitude of stimuli by integrating them into the flow of digital work through tools like MS Teams, Microsoft 365 and others, identifies employees’ work patterns, creates visibility through insights around work patterns, resulting in employees reconfiguring their digital work. While employees use multiple tools such as MS Teams for chat and videoconferencing and Microsoft 365 for email communications and file sharing, the EXM platform integrates all these tools and supports employee experience in evolving ways.

With its core modules, the EXM platform adopted at Zeta enables training, growth, and building of a culture of learning across the organization (Learning module), connects relevant content and supports harnessing of knowledge and expertise (Topics module), facilitates internal communication and access to corporate intranet and resources (Connections module), and reveal individualised and aggregated insights into team work patterns and routines that could potentially lead to burnout (Insights module) (John et al. 2022). Using aggregation and de-identification mechanisms, data privacy and security is ensured. The platform resulted in capturing the work patterns that employees demonstrated in their digital work, whether they work from home or from the office, as long as their work is done using digital means. This AI capability of this tool enabled the datafication of work patterns in digital work, and to demonstrate this capability, we note the following quote:

“So essentially what [EXM platform] is it’s a four-module system, that are all about learning and skilling insights and wellbeing. We’ve got knowledge surfacing ...as well as a connectivity

platform as well ... where corporate communications and communications teams can reach employees on a broader scale with personalized feeds ... Insights ... is intelligent insights about the way you work and collaborate with people across the organization and it sort of sits as your personal assistant and makes recommendations to remind you of things which I think is a great point when you're in an office environment or particularly working in the same office as your manager. You have those almost water cooler conversations, hey, how are you tracking with someone so it will just be reminding you of this.” – ICB6

Our study reveals that the EXM is configured by the nature of digital work and how it enables the reconfiguration of new work practices in hybrid work as an instantiation of the socio-technical reversal theory. While employees worked digitally from different locations, the EXM platform provided insights that inform behaviours to better manage their work. Based on the concerning work habits and recommendations from the EXM platform, employees started to dedicate some time towards maintaining or improving their wellbeing. The platform provided several features that support wellbeing such as mindfulness activities, breathing, yoga, records daily rating of one's feelings, and flagging of excessive work habits that lead to burnout. In responding to these insights, booking focus time was reported as a new practice adopted by employees where the EXM platform prompts users with suitable times based on their calendar. This is an example where employees respond to the insights revealed by the AI and analytics supported platform. Employees also found the daily briefings feature provided by the EXM platform which mines emails and outlook calendar and aggregate work-related data to be highly useful, more like a personal telemetry. The briefing included summary of collaborations, commitments, overdue catchups, and upcoming meetings that can be challenging to keep track off.

Reconfiguration of workplace practices driven by the EXM platform include practices relating to connection and engagement, productivity, data-driven leadership, digital social learning, and knowledge sharing culture. Zeta integrates work related systems into one place where the EXM platform connects them together. For instance, the EXM platform integrates Sharepoint and MS Teams to bring workgroup teams or socialising teams together and enable multiple team connections and collaboration. The platform has also been configured as a real time point of connection for employees in the organization and where the organization can reach out through company announcements, news, and corporate related information. This capability enables connection and engagement mechanisms where employees get a sense of being part of the organization regardless of their work location. With respect to productivity, employees can incorporate online learning, professional development, and career planning activities in the flow of work. This is where employees no longer need to go off the corporate intranet to external sites such as LinkedIn Learning, Coursera, edX or others. Rather, the EXM platform integrates these capabilities in the flow of work, enabling employees to learn without distraction.

Digital social learning and knowledge sharing culture is another area where reconfiguration is observed at Zeta. For instance, the EXM platform supports building connections with subject matter experts, using AI technology to mine Microsoft 365 and other work environments to highlight topics and point towards subject matter experts. This is facilitated as employees use Office 365 applications like SharePoint or search in Word, PowerPoint, Outlook, or Excel.

Finally, insights revealing data captured through digital work resulted in the reconfiguration of a digital work culture where leaders are adaptive, agile, and work towards improving the work environment for their employees. Participants reflected on their work patterns as captured by the EXM platform and took actions to implement changes. Such shifts in behaviour help shape a new work culture.

4.4 Inclusive Work Culture

The work culture at Zeta is highly influenced by digital work as the majority of the teams are globally dispersed – *“We are a virtual team. We span across the whole time zone”* – ICT21. To accommodate this arrangement, digital work with various technologies play an important role. Employees highlighted that – *“Digital workplace is the blending of how we actually work together, and so you're still utilizing those skills being now collaborating in a very different and purposeful kind of way. You're now less reliant on what we have less on the travel time, and now I'm having this highly interconnected, almost always on. And so that's been that blend that we've seen like it's actually been a considerable amount of more time, we can get things done because you've got less kind of travel and so I kind of do delineate between the two because, yeah, one when I see from assistance first to active and then two is from the actual people that are utilizing and how do we work together to solve a problem where we might not necessarily be physically in a room to use a whiteboard, what are the tools we might use to facilitate through that”* – ICT22. Tools like MS Teams, Whiteboard, and SharePoint facilitate collaborative digital work in a hybrid work model but also capture the teamwork in the form of digital content or digital

conversation. The EXM platform analyses this digital content and provides insights about the number of hours worked outside office hours for instance and nudges employees to take breaks.

As the nature of work ubiquitously transforms into digital work, the study reported practices from managers that are setting new norms for their teams. For instance, managers set ways to prioritize work hours, request their team members to have their cameras on for meetings and leading by example, requesting members who are attending meetings in-person to also join the virtual meeting platform MS Teams to be present in the online environment as well irrespective of being in the room or attending from home. Finally, leaders' perception of a workplace has also changed as they started to think of the workplace as a space that brings all employees together in a digital space, irrespective of where they are. Thus, employees and leaders configure their work culture to be more adaptive to the hybrid work model, one that maintains levels of productivity, is inclusive, and effectively engages teams in diverse work arrangements. The engagement initiatives at Zeta demonstrate an organisational inclusion of their employees and accommodation of diversity across the temporal and spatial dimensions.

5. Discussion

Drawing on the case of a large multinational IT organization, Zeta, we sought to examine *the factors that influence the reconfiguration of digital work practices in the evolving hybrid work model*. Findings show that digital work technologies used by employees and digital work cultural practices incorporated in organizations are captured by AI-enabled tools such as EXM platforms. As the platform in our study provides insights about work patterns, connections, employee development activities, and employee and organization reflection, we argue that this is where socio-technical reversal happens, and ultimately, results in changing organizational strategies, work arrangements and leadership initiatives. These changes are initiated based on the feedback obtained from the EXM platform, further influencing the reconfiguration of digital work. The new hybrid work model that evolved due to the pandemic, the new work culture, and the emerging work practices have come about from the use of digital work technologies. The AI-enabled digital work technologies that improved not only productivity, but also wellbeing of employees, reflect this reconfiguration.

This study contributes to the current literature on digital-human configurations and socio-technical reversal. Technologies like EXM platforms are not only embedded in hybrid work settings but also contribute towards continuously configuring and reconfiguring employee experience in terms of engagement and wellbeing in hybrid work. As quoted by Baskerville et al. (2020, p. 23) "With the ontological reversal in our digital world, the focus shifts from users who consume information to the co-creation of computed human experiences. People are now active creators of digital content, digital conversations, and digital objects." This is realistic in the context where AI-enabled EXM platforms are embedded in the digital work as it transforms from a platform that helps employees consume information to a tool that enables the co-creation of the employee experience in the organization. Every employee who uses technologies in hybrid work is playing an active role in creating digital content, digital conversations, and digital objects that capture work practices, leading to the reconfiguration of their digital work.

Configuration of work involves both analyzing the materiality of the technology in its specific setting and configuring and reconfiguring the practices in that context. Socio-technical reversal as suggested by Lyytinen et al. (2021) reinforces the relational association between digital and human. With the perspective of socio-technical reversal, as we capture the digital-human configurations of EXM platform, we emphasize that since an EXM platform is a new generation workplace technology, it can dynamically anticipate and respond to the needs and intention of workers (Lyytinen et al. 2021; Schuetz and Venkatesh 2020). Hybrid work results in a joint optimization of office work and remote work from home where the EXM platforms captures both in the form of digital work. Employee engagements and communication have dual reality where a digital reality is constructed first, and the living reality is created as a reflection of the digital in the hybrid work model (Baskerville et al. 2020). Thus, reconfiguration of digital work aligns with computing human experiences in a digital-first world as presented by Baskerville et al. (2020). Computing human experiences in a digital-first world depends on four dimensions of lived human experiences listed as time, place, artifacts, and actors. In parallel to the socio-technical reversal, our study identified four dimensions that influence the reconfiguration of digital work. These include: one, employee wellbeing constantly shapes and benefits from the nature of hybrid work where any restrictions to the time and place of work are no longer significant issues; two, the lived and learned experience of employees and leaders in the evolving hybrid work that enhances employee engagement and visibility of work; three, an inclusive hybrid work culture; and four, AI-enabled EXM platforms that bridge the digital work technologies and the human agency. The four dimensions and the reconfiguration of digital work phenomenon is illustrated in Figure 1.

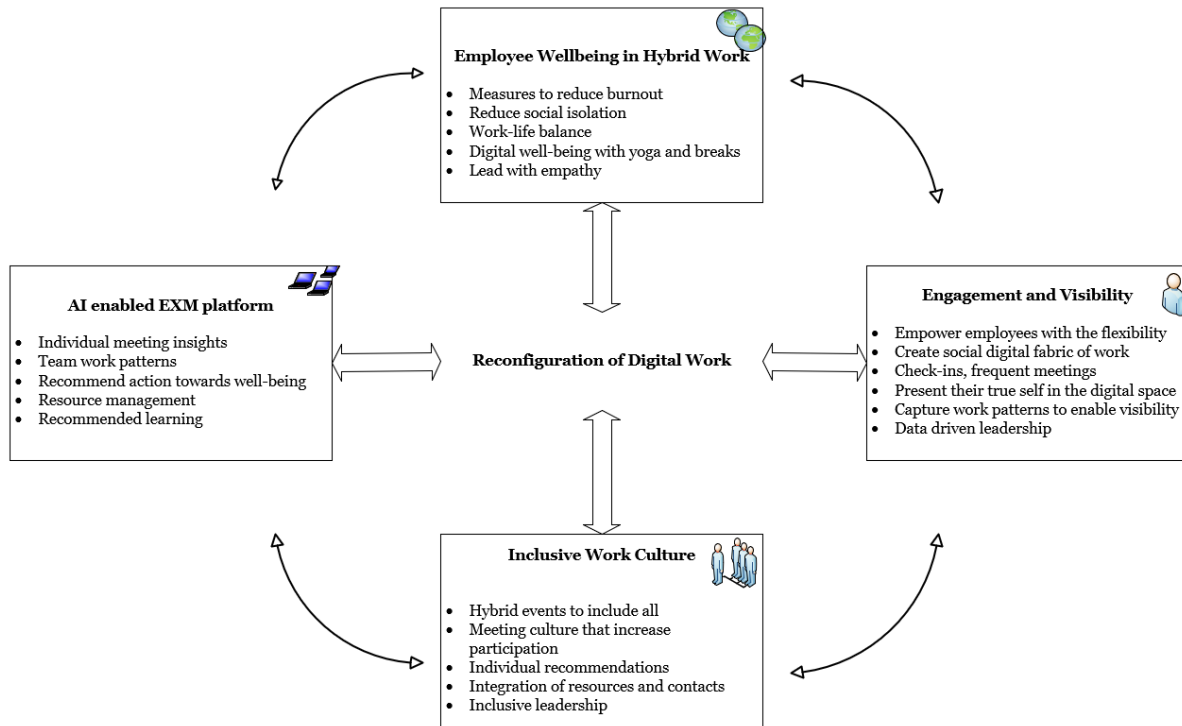


Figure 1. Reconfiguration of digital work in a digital first world

Second, the study advances an understanding that hybrid work itself is a dynamic phenomenon. Similar to previous studies (Haubrich and Hafermalz 2022; Zamani and Spanaki 2023), our study shows that the enforced remote work resulting from the Covid-19 pandemic has contributed to the popularity of hybrid work and increased preference among employees across different sectors for this work model. We expand our understanding of hybrid work by showing that with the increased use of digital technologies themselves lead to new work norms, where hybrid work is being reconfigured and re-imagined by both employees and managers. Reconfiguration of hybrid work results in modifications to the digital work ecosystem, making it more fit for improving employee experience. As employees and leaders experience the benefits and challenges of different phases leading up to the evolution of hybrid work, the emergence of new technologies in digital work has contributed to reconfiguring digital hybrid work.

Third, we contribute to developing an understanding of the role of EXM platforms in supporting leaders and enabling them to enrich the employee experience in the hybrid work context. Datafication of digital work by EXM platforms decreases work complexity for employees as they learn from it, while algorithms are more agile by adapting to changing environments through generative and live data (Fisher et al. 2023). Earlier studies have evidenced in varying degrees how the human privilege of work autonomy becomes altered by the degree and causal direction of algorithmic agency (Benlian et al. 2022; Schuetz and Venkatesh 2020). With the datafication of digital work, employees adapt reactively to their datafied work environment. Datafication of individual and teamwork resulted in giving visibility for team leaders into teams whose work patterns may lead to burnout and stress. This information can help team leaders to take necessary steps to nudge and assist their teams so that they rethink their work habits and pay attention to their wellbeing. Studies showed how team leaders need to listen to their employees in different ways to help them manage their work habits, overcome the digital fatigue, but also remain productive (Wiener et al. 2021). We highlight that burnout signals flagged by the EMX platforms embedded in the workplace can help leaders to work out strategies to support employee wellbeing without any misinterpretations on productivity. Ultimately, EXM platforms can act as the means through which leaders gain renewed knowledge about their employees and insights about their work patterns. Leaders can therefore use these platforms to take actions centred around supporting their employees and enabling them to develop a stronger identification with each other and the organization.

6. Conclusion

The study opens the agenda for further research in the field of hybrid work, and especially on effective leadership behaviours and practices within this emerging workspace. In addition, we see opportunities for researchers in the field of work analytics to carry out longitudinal studies on the configurations of employee experience platforms in emerging workspaces such as hybrid work. Further research is also needed to examine the new and emerging work culture and the transformation in hybrid work resulting in change in employees 'worth-it' work and leaders being data driven and inclusive in hybrid workplace. Finally, this study also provides a pathway into socio-technical design research, looking into hybrid workplace technologies where employees' wellbeing and engagement can become incorporated into the design process of such technologies. This direction provides another avenue for integrating the social and technical aspects of a work system and exploring socio-technical design approaches and models.

From a practical stance, there are implications for practitioners. In particular, it is important to recognise that EXM platforms go beyond the provision of metrics and analytics on employees' work performance. They provide opportunities for adopting a human-centered leadership approach, one that encompasses attention to employee learning and development, wellbeing, and work-life balance. Leaders need to take initiatives that focus on the development and continuous improvement of employee experience in the organization. Leaders now listen to the work analytics from real-time behavioural and geo-spatial data in the digital work environment, enabled by context-ware and personalized learning algorithms that provide insights about how to improve productivity and wellbeing of employees. Data driven leadership is the new trend in digital workplace transformation. Finally, it is important to recognise that EXM platforms are not a panacea, and though they can provide solutions for overcoming some of the hybrid work challenges, organizational leaders and managers should maintain an active role in fostering employee engagement.

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