Developmental Paper

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How organisational ICT practices shape the enactment of academics' work/non-work boundaries in the UK Higher Education: a sociomaterial approach

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Summary
The rapid development of information and communication technology (ICT) and its embeddedness in everyday academic practices have challenged the assumed separatedness between the work and the non-work domains of life. This paper aims to understand how organisational ICT practices shape the enactment of academics' work/non-work boundaries (WNwB) by addressing the entanglements between social and material entities in the performativity of work practices. The disruptions, challenges and opportunities triggered by the COVID-19 pandemic proved to be a great opportunity to understand the continual configurations of WNwB enactment in practice. Data for this study comprised semi-structured interviews with academics and members of the IT team at a UK university and relevant organisational policies. Through the use of thematic analysis, it was found that the ongoing transformations in work practices, policies, and academics' engagement with ICT have been either supporting the separation of WNwB in practice or facilitating their blurring.

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Introduction

The rapid development of ICT and its embeddedness in everyday academic practices have challenged the assumed separatedness between the work and the non-work domains of life. This paper aims to understand how organisational ICT practices shape the enactment of academics' WNwB taking a sociomaterial approach drawing on agential realism. It defends that WNwB is enacted through practices, that is, through intra-actions between social and material entities, with particular attention to the embeddedness of ICT into academic practices. The disruptions, challenges and opportunities triggered by the COVID-19 pandemic, which implicated a review of academic practices, organisational policies, and academics' engagement with ICT proved to be a great opportunity to understand the continual (re)configurations of WNwB enactment in practice. The next sections will introduce the theoretical approach of this study, followed by the contextual background of ICT embeddedness into academia. I then present the research methods and potential implications of this study for theory and practice.

WNwB: theoretical background

The investigation of WNwB has its origin in studies of work-life balance (WLB), and both issues are often brought together in recent research (Cousins and Robey, 2015). Most studies in this area take a deterministic approach, implying that technology is the main actor in the process of changes in work practices. They are mainly framed by *Boundary Theory* (Ashforth, Kreiner and Fugate, 2000) and *Border Theory* (Clark, 2000), which are highly similar in their conceptual nature (Gerlach, 2018). They claim that once individuals continually construct boundaries around pre-given work and non-work domains, the strength of boundaries differs according to each person (Ashforth, Kreiner and Fugate, 2000; Smith, 2014). Some individuals may set strong spatial, temporal and behavioural boundaries (Clark, 2000) to keep work and non-work separate, minimising permeation between them, whilst others might prefer to have weak WNwB, enabling interaction between work and non-work life (Nippert-Eng, 1996; Ashforth, Kreiner and Fugate, 2000). The individual's WNwB configuration will, therefore, depend on the level of permeability or flexibility that they choose to manage boundaries in a *segmentation-integration continuum* ranging from highly segmented to highly integrated (Uthpala *et al.*, 2013; Smith, 2014).

Research have asserted that the use of mobile and digital ICT (mdICT) (Currie and Eveline 2010) and the possibility of accessing virtual learning environments (Bauwens et al. 2020) have facilitated the extension of work hours and enhance work/nonwork conflict. These studies conclude that individuals' WNwB are predominantly integrated because flexible work arrangements and mdICT embeddedness in everyday practices allow work to take place anywhere and at any time. Thus, individuals who prefer to integrate work and non-work have the option to merge those activities, time, and space. Nonetheless, these studies take a domain-centric approach, not acknowledging the ongoing changes in the nature of work (Barley, Meyerson and Grodal, 2011) or that WNwB negotiation takes place in specific socio-temporal contexts, undergoing changes over time (McDowall and Kinman, 2017). These became more evident with the COVID-19 pandemic (Orlikowski and Scott, 2021). Therefore, to fill this gap in the extant literature, and remove the focus from treating technology as mere resources that enable or enhance everyday practices and from the investigation of WNwB in a *segmentation-integration continuum*, this study considers WNwB as a dynamic and sociomaterial phenomenon enacted in practice, (re)claiming the materiality present in everyday life, and (re)thinking the entanglements through which academic practices are unfolded.

In this vein, this paper takes a sociomaterial approach drawing on agential realism, defending that the phenomenon of WNwB is enacted through practices, that is, through intra-actions between social (academics, policy-makers, managers, students, etc) and material (policies, buildings, ICT, etc) entities, with particular attention to the embeddedness of ICT into

academic practices: teaching, research and administration. The concept of intra-action entails the mutual constitution of entangled agencies in practice, where agency is understood as the ability to act (Barad, 2007). It differs from the concept of interaction because while the prefix inter- means among or in the midst of, intra- means from within (Three Minute Theory, 2014). Thus, when bodies intra-act, they do so in co-constitutive ways – individuals materialise through intra-actions and the ability to act emerges from within the relationship (Barad, 2007). From this perspective, relations, agency, and boundaries are not treated as pre-given or fixed but enacted in practice through sociomaterial intra-actions (Orlikowski and Scott, 2008). They are considered dynamic (re)arrangements, (re)articulations and (re)configurations of agential practices through which boundaries are constantly enacted (Barad, 2003).

The embeddedness of ICT in academic practices

In academia, ICT became an integrated part of academic practices by the end of the 1980s and the beginning of the 1990s (McPhee and Söderström, 2012; Sadeghi, 2019), empowering the process of teaching and learning (T&L) (Perkins, Spaeth and Trainor, 1992; McDougall and Jones, 2006) and (re)creating learning experiences and spaces (Lamb *et al.*, 2022). Technologically, online education systems became part of, and important resources for, both face-to-face and distance education (Rumble, 2001). Since then, academics started having access to desktops in their offices, laptops, tablets, smartphones (Gul *et al.*, 2016) and the use of digital communication resources such as e-mail, chat rooms and online discussion groups (Singh, O'Donoghue and Betts, 2002) strengthening the digitalisation in academia. In addition, the intra-actions between academics and ICT were woven into teaching, research and administrative activities, which could be performed virtually synchronous or asynchronously (Kaplan and Haenlein, 2016), facilitating work to pervade academics' homes (Currie and Eveline, 2010), providing access to information at any time (Harper, Chen and Yen, 2004) and, therefore, challenging academics' WNwB management.

With the emergence of the COVID-19, in 2020, and the enforcement of lockdowns all around the world (Chadee, Ren and Tang, 2021; Como, Hambley and Domene, 2021), academic work was taking place fully at home reinforcing the importance of mdICT that enable academic practices to be unfolded virtually while universities were physically inaccessible (Mahdy, 2020; Burk, Mausolf and Oakleaf, 2021). In the UK, the pandemic was a major catalyst for online and hybrid T&L (Lamb *et al.*, 2022). Over the first year of the pandemic, the rapid transformation and quality of online teaching improved, as students and academics have adapted to the new work practices and technologies (Weale and Adams, 2021). New mdICT resources such as e-books, Zoom, MS Teams, social media, and instant message apps were also called into question to accommodate those new arrangements (Mahdy, 2020), forming an entangled network of hyper-hybrid spaces that provide dynamism for work to take place entirely virtually through synchronous videocalls, presentations, and chats, and asynchronous forums, texts and messages (Nørgård and Hilli, 2022).

Research methods

According to Moura and Bispo (2020), empirical research framed by sociomateriality has adopted a qualitative methodology based on case studies. The authors also identified interviews, observations, and analysis of documents as appropriate methods of data collection for sociomaterial-based research as it provides in-depth information on the phenomenon investigated, considering the role of social and material in its enactment. Thus, thinking in a coherent system to link theory, methodology and methods, this study follows a qualitative approach based on a post-humanist philosophy and relational onto-epistemology in line with the roots of sociomateriality (Elbanna, 2016; Moura and Bispo, 2020), in which the data gathered allows in-depth, reflexive and open-ended answers according to individuals'

experiences and perceptions. In this vein, a longitudinal single case study has been used to investigate WNwB enactment of academics of a UK university, given that single case studies are particularly fruitful in deeply exploring specific phenomena or situations, and longitudinal research is beneficial in analysing changes over time (SAGE, 2010).

Data for the research was collected from four sources: semi-structured, in-depth interviews with academics of the case study university before (2019) and during (2021) the COVID-19, a group semi-structured interview with senior members of the IT management team (including policy-makers), and analysis of relevant organisational policies. Thematic analysis following the *Framework method* (Ritchie and Spencer, 1994) was used to identify relevant themes emerged from interview transcriptions and university policies. The rigorousness of the research relied on a coherent system that connects the theoretical framework, research design, interpretations and conclusions proposed by Oliver (2011), providing a solid foundation to conduct an in-depth sociomaterial analysis of academics' WNwB.

Potential theoretical and practical implications

The findings show that, during the lockdown, there was an intensification of the embodiment of mdICT in academic practices, since it became essential to the accomplishment of work tasks remotely. An increase in academics' engagement with personal mdICT (especially laptops and smartphones) to perform work-related activities was also noted. While those mdICT made it possible for academic work to continue during the COVID-19 pandemic, it also facilitated the permeation of work into the non-work environment and vice-versa. Academics also faced challenges in managing their work and non-work domains of life within the limitations of being isolated. Working remotely from home required much juggling between work and non-work tasks, distractions, and caring responsibilities from academics along the day, as noted by r14:

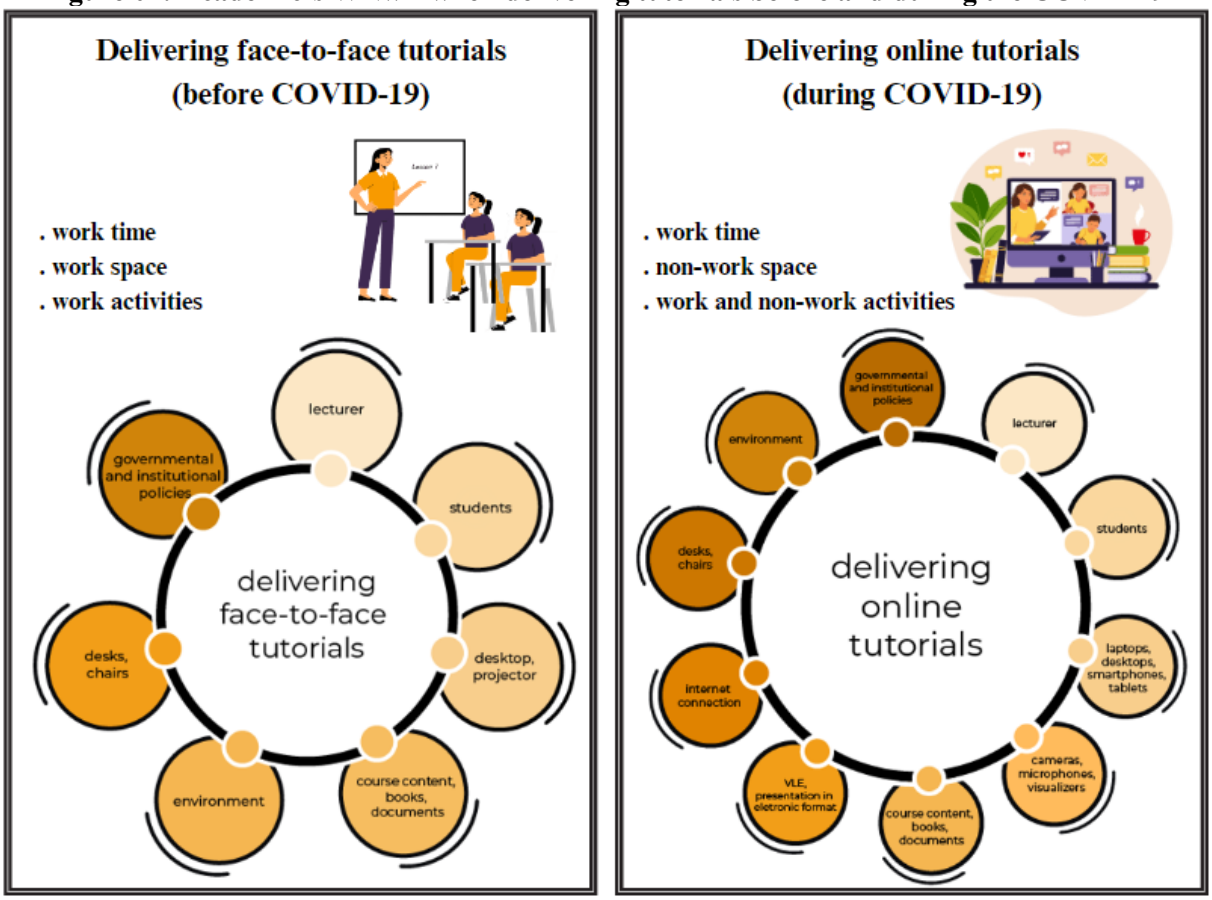
> because being [working] in the house, things happen, right? And you find yourself responding to things that are domestic which are left far away when you're at work, or at university (r14).

On the other hand, the deployment of IT systems, the use of different backgrounds during online sessions and the development of university policies that guide academics to manage WNwB when facing challenges and distractions in the home environment have contributed to structuring work and (re)establishing a separation between work and non-work to a certain extent, as exemplified by r25:

> Okay, this is the office [shows the office] but I might have some books on the sofa, clothes, whatever, plates. And you don't want to show these things when you teach, so I just put the blurred background. I guess if I was in my office [on-campus], I wouldn't have to put the blur but because of my home, and I'm using the room for multiple purposes, it saves time (r25).

The finds also show that work practices that used to take place at a specific work time and space, enacting very clear separate WNwB, such as "delivering lectures", "delivering tutorials", "meeting with students", and "attending meetings" have now taken place virtually as work has been performed remotely from home (non-work space), facilitating the blurring between work and non-work as demonstrated in Figure 01.

Figure 01: Academic's WNwB when delivering tutorials before and during the COVID-19



Before the COVID-19, strong WNwB were enacted when the practice delivering tutorials used to take place in a work space and time. During the COVID-19, however, although strong temporal boundaries remained in place, work was performed from a non-work space. Multitasking between work and non-work was also facilitated by the virtual distance between academics and students. Additionally, different material entities were added to the entangled network of entities that constitute the practice "delivering online tutorials" – VLE, internet connection, electronic devices, cameras, microphones –, reflecting how ICT became essential to the performativity of academic practices. Each one of them is an intrinsic part of the unfolding of practice, not by revolutionising or impacting how practice is accomplished but by contributing to the enactment of different spaces where T&L is unfolded, further enhancing academics' WNwB fluidity. Other academic practices, especially related to communication ("dealing with emails") and research ("writing academic papers", "reading academic papers") can also be accomplished from anywhere, at any time due to the flexibility provided by the academic career. In this case, different spaces emerge as opportunities for practices to unfold according to how social and material arrange themselves at a particular space and time, enacting different WNwB configurations.

When fully developed, this paper will present how different elements at play in the intra-actions between social and material entities shape the enactment of academics' WNwB. In particular, the focus is on how elements related to the environment, work arrangements and ICT availability shaped the transformation of rigid practices (such as "delivering lectures") in to flexible practices. In doing so, this paper will go beyond considering that boundaries are impacted by ICT usage or enacted according to individuals' preferences. Therefore, this study can mainly contribute to theory by connecting a sociomaterial approach with research on WNwB by revealing new possibilities for alternative enactments of the ongoing interplay

between university management and policies, work practices, and academics' engagement with ICT, through which academics' WNwB are constantly shaped, as briefly presented in Figure 01. It can also potentially contribute to practice by providing valuable information to academics and managers on theoretical foundations of WNwB enactment, supporting them to reconcile WNwB and engage with ICT in a manner that minimises work/non-work conflict, thereby leading to better staff and student experience.

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