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# After-hours Connectivity Management Strategies in Academic Work

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#### Abstract

While the ubiquitous connectivity afforded by mobile technology offers unparalleled flexibility, it can also intensify connectivity to work and complicate its management. Emerging literature has identified a range of strategies professionals develop in their attempt to manage after-hours connectivity to work, but it has largely treated those strategies as being independent from each other. Existing research has not captured the dynamic nature of connectivity or how this may facilitate the redrawing of boundaries in practice. Here, we focus on academics as an occupational group that experiences connectivity to work, given their discretion to decide (to a degree) when to work outside their teaching duties. Drawing on two case studies, we first elicit three connectivity management strategies—segmentation, prioritisation, and distancing—and illustrate the practices that support them and their intertwining relationship, as academics try to maintain their professional identity. Second, we argue that technology does not necessarily contribute to a blurring of boundaries between work and non-work, but it can also be used as a 'boundary object' that separates the two domains.

*Keywords:* After-hours connectivity, Connectivity management strategies, Work-life boundaries, Academic work, Eastern context.

# Introduction

There is a growing, cross-disciplinary emphasis on connectivity and its management in work and nonwork settings. We define connectivity as connecting and/or having the potential to connect to work at any point (Kolb, 2008) and see connectivity management as the practice of making connectivity decisions, that is, if, when, how, and how much to connect (Dery *et al.*, 2014). Although connectivity management is often left to individual discretion and decision making, more recently governments have tried to regulate and govern connectivity, as we have seen with the after-hours work email ban in France (e.g., Wang, 2017). However, the problem of connectivity remains pertinent, given the range of mobile technologies readily available, offering the opportunity (Sayah, 2013) and, perhaps more worryingly in some cases, the expectation for constant connectivity (Dery *et al.*, 2014; Mazmanian *et al.*, 2013).

Literature in this area has two main characteristics. First, part of the literature emphasises the types of technology that afford connectivity, often at the expense of understanding how individuals together with technology work out their connectivity. The literature has explored, for example, emails and company-issued devices (Gold and Mustafa, 2013; Mazmanian, 2013; Russell and Woods, 2020; Schlosser, 2002); social media (Lee *et al.*, 2019; Siegert and Löwstedt, 2019; Zoonen and Rice, 2017); personal mobile devices and Instant Messaging (IM) in terms of their connectivity capacity (e.g., WhatsApp, Viber) (Cousins and Robey, 2015). Second, another stream of the literature takes a deterministic approach to the effects of technology on connectivity to work, focusing on how technology blurs boundaries between work and non-work (or life), thus colonising life outside work (Gold and Mustafa, 2013). Connectivity management strategies are thus predominantly approached as stand-alone defensive strategies or tactics coming from largely marginalised indivudals (Cavazotte *et al.*, 2014; Dery *et al.*, 2014; Mazmanian, 2013; Siegert and Löwstedt, 2019; Zoonen and Rice, 2017). Individuals are therefore often depicted as responding and reacting to the challenges of connectivity rather than as manipulating, strategising, manueuvring or working around those challenges (Harmon, 2015; Middleton, 2007; Prasopoulou *et al.*, 2006).

Our study enriches this last body of literature by focusing on academics whom we see as an occupational group that is emblematic of the issues facing numerous professionals across occupational groups in relation to after-hours connectivity management. These include conflicting work and life domains and a wide range of roles embedded in their job (Baruch, 2013; Dén-Nagy, 2014; Kinman and Jones, 2008). Consequently, we present the following research question:

How do academics manage connectivity to work after hours and what are the implications of their strategies for managing boundaries between work and non-work?

We define working hours as 7am to 3pm, Sunday to Thursday (the standard business hours in Saudi Arabia), which is when administrative staff are working. We elicit the practices that academics develop to manage connectivity with different groups, such as students, administrative staff, and other academics. We developed a case study design involving interviews with different groups of participants and document analysis at two academic institutions (research and teaching-orientated respectively) to gain understanding of after-hours connectivity across a range of institutional cultures (Seawright and Gerring, 2008). Our findings elicit three connectivity management strategies: segmentation; prioritisation; and distancing. Our study makes the following theoretical contributions: First, it enriches the literature on connectivity management by identifying strategies academics develop to respond to connectivity, whilst maintaining professional identity, and their accompanied intertwined practices. Second, although scholarly work has recognised the role of technology in blurring work and non-work boundaries, our study explains how technology can be conceptualised as a 'boundary-object' that keeps the work and non-work domains apart separate.

We begin by reviewing the literature in three areas: we start with the work-life literature and the concept of boundaries, we then present the strategies/practices that have been identified to manage connectivity, and we end our review of the literature by discussing connectivity in the context of academic work. We then present our research sites and the methods we adopted to collect and analyse data, followed by our analysis. Finally, we discuss the findings and our theoretical contributions.

## The work-life literature and the concept of boundaries

Research on the relationship between work and life can be traced back to the 1960s, including the work of Rapoport and Rapoport (1965) who investigated how the industrial revolution created divisions between work and life. Core to this research is the work of Nippert-Eng (1996) that suggests that some individuals establish boundaries between their work and their personal life to ensure the two domains remain segmented (separated), while others remove boundaries so that the domains can be integrated (interconnected). While people can theoretically have either complete separation or complete blurring between their work and life domains, most individuals fall somewhere between the two extremes (Nippert-Eng, 1996). Broadly known as 'boundary work', Nippert-Eng's (1996) theory was then elaborated by Ashforth, Kreiner and Fugate (2000) who focused on transitions between work and nonwork domains (e.g., church, neighborhoud), and Clark (2000) who introduced the (similar) concept of 'border theory' to refer to boundaries between the work and family domains in particular. The concept of 'boundary object' (Marheineke et al., 2016; Star and Griesemer, 1989) is useful for explaining the transitions across boundaries. A boundary object refers to any material or abstract object that is part of multiple social worlds and allows communication between them. This concept was coined by Star and Griesemer (1989) to indicate how objects can bridge intersecting practices and allow groups to work together. Boundary objects do not set up a consensual place between opposing and conflicting domains. Rather, they enable those conflicting spaces to coexist, whilst they set up a common ground that enables collaboration and allows synergies to emerge. Boundary objects thus have a degree of flexibility to accommodate a range of meanings within each boundary, whilst also being resilient so that a common ground can be set up (Marheineke et al., 2016). Although, according to these authors, conflicting boundaries usually emerge when different organisations, groups or individuals work together, conflicting boundaries might also emerge at an individual level when, for example, individuals juggle work and non-work commitments that contradict each other. The creation and management of boundary objects is key in developing and maintaining coherence across intersecting social worlds (Star and Griesemer, 1989), such as acting as a boundary between the work and non-work domains.

The above theories constitute the foundation of the work-life literature. What they have in common is the concept of boundaries that separate different types of work and non-work domains; the phrasing we adopt in our study. These boundaries can be physical, temporal, congitive and psychological (Ashforth *et al.*, 2000; Clark, 2000; Kreiner *et al.*, 2006), and they can also be permeable. Boundary permeability refers to the degree to which one domain can interfere with the other. For example, a boundary becomes permable when an individual decides to work on a day and time that is considered 'after-hours'. Permeability and flexibility of boundaries may result in *"a borderland which cannot be exclusively called either domain"* (Clark, 2000, p. 757). This suggests that there is lack of clarity and blurring of boundaries, which can complicate the management of activities across the two domains.

With the rise of digitlal technologies, researchers in this area have begun to explore the influence of digital technologies and connectivity on the management of boundaries, generally concluding that technology leads to more blurring of boundaries between work and non-work, thus making them more permeable. Discussed next, therefore, are the strategies and/or practices that have been identified in the relevant literature.

## **Connectivity Management Strategies**

Connectivity management refers to the practice of managing connective decisions (i.e., if, when, how, and how much to connect) (Dery *et al.*, 2014), including the timing and volume of communications. Such connective decisions are referred to in the literature as practices (e.g., Cousins and Robey, 2015), strategies (e.g., Ciolfi and Lockley, 2018) and tactics (e.g., Kreiner *et al.*, 2009), with some authors explicitly encouraging the development of such practices/strategies (Kossek, 2016). In our paper, we use the term 'strategies' to encompass this literature as well as other terms that have been used by scholars in the field, such as 'connective decisions' (e.g., Dery *et al.*, 2014).

Using an affordance perspective, seeing connectivity as resulting from both material and human agency, Cousins and Robey (2015) identify specific practices including space selection and configuration (to manage *spatial* boundaries), scheduling and multitasking (to manage *temporal* boundaries) and establishing rules about connection/disconnection and technology selection (to manage *psychological* boundaries). These practices are linked to individual strategies (e.g., individuals' efforts to manage certain types of boundaries, i.e., physical, temporal and psychological); and are enabled by specific affordances of technology: *mobility* (the potential for moving freely while engaging with a mobile device), *connectedness* (the potential for engaging and establishing communications), *interoperability* (the potential for synchronising data across devices and applications (or apps)), *identifiability* (the potential to establish a unique identity on different devices and apps), and *personalisation* (the potential to set mobile technology options to match user's preferences or needs). More recently, Lee *et al.* (2019) studied how employees utilise the affordances of technology to manage and survive the blurring of work-life boundaries. While they recognised employees' limited control of the functionality of technology, they identified employees as agentic when it comes to concealing their identities or engaging actively in work communications.

Part of this literature conceptualises connectivity management as having an element of continuity, departing from the duality of connections and disconnections (Kolb, 2008) and the integration/segmentation framework (Nippert-Eng, 1996). This leads to concepts such as that of the 'connective flow' (Dery et al., 2014) and 'buffering availability' (Mazmanian et al., 2013). In this literature, individuals are presented as having restricted autonomy to decide how, and when to connect. The literature offers contradictory findings in this respect; for example, Büchler et al. (2020) argue that, irrespective of strategy, constant connectivity has a negative effect on individuals' sense of well-being. On the other hand, and despite a general assumption that the blurring of boundaries may lead to unpleasant outcomes, such as that of sacrificing personal life over work, Ciolfi and Lockley (2018) have shown that dissolving boundaries between work and non-work may actually be a conscious strategy, enabling individuals to manage their work tasks, instead of overwhelming them. As they put it, "[d]issolving boundaries is, in other words, a resource as much as setting them, a possible way to cope with demands, and an enabler for practicing one's overall strategy" (Ciolfi and Lockley, 2018, p. 835). In a similar vein, and with a focus on after-hours connectivity, Chen and Casterella (2019) find that those expected to be less connected after hours (e.g., parents, those with segmentation preferences) end up being more connected after hours, and experience positive effects on their work-life balance. Such inconsistent views in terms of research findings in this area have been recently explained by Carreri's (2020) discourse analysis which argues that men see the flexibility and permeability resulting from connectivity as a tool for harmonisation of work and non-work activities, while, for women, connectivity leads to excessive work and less control.

In investigating connectivity *during* working hours (rather than after hours), Wajcman and Rose (2011) find that communication technologies neither fragment the work day nor do they cause interruptions, as they rarely result in a change of work activity. Connectivity management after hours, however, has been viewed as a collection of defensive strategies, with researchers, such as Siegert and Löwstedt (2019), identifying: *prevention* (prohibiting boundary transgressions), *diversion* (trying to remedy

temporarily permeable boundaries, such as delegating tasks), and *retaliation* (fighting back against expectations of constant connectivity). Similar approaches, phrased as 'coping strategies', include: invoking the idea of the autonomous self; trivialising work activities; and laughing about their excessiveness, viewing work connectivity as an inescapable external fact (Cavazotte *et al.*, 2014). Gold and Mustafa (2013) present self-discipline (such as leaving BlackBerry at home or ignoring its presence) as a key tactic for coping with the overbearing presence of mobile technology. In addition, Zoonen and Rice (2017) explore how lowering responsiveness to work connectivity can improve employees' sense of autonomy without reducing their workload fostered by anywhere/anytime connectivity. Studies, such as the ones discussed here, are insightful in terms of shedding light on actual strategies individuals develop to manage connectivity; however, they largely view these practices as stand-alone, independent from one another (Cavazotte *et al.*, 2014; Siegert and Löwstedt, 2019), which may not be representative of how connectivity is managed in practice.

Following, we explore what we know about connectivity management in the context of academic work.

## Academic Work: Pressures, Connectivity and Autonomy

We focus on academics as an example of an occupational group that experiences challenges in managing connectivity to work. Academics need to perform a wide range of roles (teaching, research, service), with a never-ending expectation for publications (Baruch, 2013; Beigi *et al.*, 2018; Kinman and Jones, 2008). Like other occupational groups, academics have traditionally benefited from increased levels of control over their work, specifically in terms of when and where to conduct their work; autonomy to set up their own priorities and exercise discretion and freedom to make decisions as to how, when and where to interact with other key stakeholders, such as academic peers, academic communities and student bodies (Baruch, 2013; Heijstra and Rafnsdottir, 2010; Kolsaker, 2008). Parker and Weik (2014) describe academics as 'super-mobile' and refer to this mobility as being a professional expectation subjected to managerial evaluations. In the context of the Middle East, Osmani *et al.* (2017) emphasise how teaching-related responsibilities—including high teaching evaluation scores and

expectations to equip students with the right employability skills—produce a pressurising work environment for academics.

Technology has led to a noticeable transformation in the academic teaching system and the nature of communications. This, for example, includes distance education, online discussion, and global research collaboration (Heijstra and Rafnsdottir, 2010; Menzies and Newson, 2007). Technologies have become *"essential 'tools of the trade' for doing academic work"* (Menzies and Newson, 2007: 86). The flexibility characterising academic work engenders modes of working that exceed traditional boundaries, e.g., from home, in the evenings, or on weekends (O'Laughlin and Bischoff, 2005). Technology adds more flexibility to the academic profession and, through the connectivity it affords, it allows academics to exercise discretion over when and where to work. This, at the same time, can intensify workload, and allow work to penetrate and threaten academics' lives outside work (Currie and Eveline, 2011).

The growing levels of connectivity experienced in academics' lives after hours, alongside their demanding workloads and altruistic duty of care for students, challenges the ways in which work-life boundaries can be managed (Kinman and Jones, 2008; Kolsaker, 2008). Eynon (2005) argues that academics are expected to embed connectivity in their lives due to numerous reasons, varying from enhancing students' learning experience, dealing with an ongoing rise in student numbers, and a general demand for flexible learning. However, although it acts as an enabler of flexible learning, connectivity has also been posited as a source of stress for academics (Kinman and Jones, 2008).

The literature on academic work has recognised the implications of technology for academics' autonomy and control over their work practices (Dén-Nagy, 2014). For example, Heijstra and Rafnsdottir (2010) recognise academics' difficulty to disengage from work obligations after hours. According to their study, academics are tempted to keep an eye on work even when on family holiday. Overall, this emerging literature illustrates academics' complexity of disconnecting from work despite the flexibility that technology offers (Boswell and Olson-Buchanan, 2007; Heijstra and Rafnsdottir, 2010; Mazmanian *et al.*, 2013; Middleton, 2007). Our study enriches this literature by showing how

academics can strategise and maneuvre technology by using it as a 'boundary object' that separates and clearly delineates work from non-work through strategies and a multitude of intertwining practices. We outline these practices in more detail following a discussion of our methodology.

# Springfield and Hudson: Our research sites

We followed a case study design (Cavaye, 1996) with academics from two Higher Education institutions in Saudi Arabia, referred to as Springfield University and Hudson College (pseudonyms). Both cases are representative (Seawright and Gerring, 2008) of the academic work environment in Saudi Arabia. Springfield is representative of a research-oriented academic institution, whereas Hudson is representative of a teaching-focused one. Table 1 provides an overview of the two research sites in terms of their age, size, and spatiotemporal arrangements. The two cases provide an in-depth understanding of academics' management of connectivity in the light of different possibilities and constraints their institutions offer. Academic responsibilities between the two sites are comparable, involving teaching, research, and community services (Baruch, 2013). By studying those academic groups, we aim to explore how participants' strategies to manage connectivity after hours are affected by factors other than the type or nature of professional responsibilities. For example, differences in organisational culture—e.g., in terms of institutional policy about presence in the office or opportunities for flexible work—may influence professionals' connectivity decisions in particular ways. Finally, academic work relies heavily on (oral and written) communications (Drucker, 1999; Menzies and Newson, 2007) with a range of groups including administrative staff, students, and other academics. Connectivy management strategies are therefore inter-subjective in the sense that they expand the dyadic relation between the professional and the mobile technology, affecting academics' broader social relations (Dén-Nagy, 2014).

#### INSERT TABLE 1

Research on work-family boundaries for the past 30 years has been conducted in largely anglophone contexts, such as the United States, the United Kingdom, Ireland, and Australia (Kengatharan, 2015).

This can limit our understanding of the topic under a different context, such as in Eastern countries that may differ in terms of technology use (Al-Gahtani *et al.*, 2007; Williams and Edge, 1996), and perceptions towards connectivity and the boundaries between work and life (Kengatharan, 2015). This research was conducted in Saudi Arabia, the largest market for telecommunications in the Middle East ('Euromonitor International - Analysis', 2010), known for its increased utilisation of technology ('Pingdom', 2011; Vallabhan, 2012). According to the Communications and Information Technology Commission, the rate of smartphone penetration in Saudi Arabia is almost double the international average (2017). While many studies illustrate the problematic management of work and life domains in the country, the role of technology in this debate remains underexplored (e.g., Al-Asfour *et al.*, 2017; Almalki *et al.*, 2012). Academics' use of technology has been especially encouraged, particularly after the country's declared shift from an oil-based economy toward an envisioned knowledge-based one, with a strong focus on the role of technology in the creation and spreading of knowledge (Ministry of Economy and Planning, 2017).

## Data collection and analysis process

In line with the case study apprpoach (Cavaye, 1996), we employed two qualitative data collection methods: interviews and document review. Interviews were semi-structured in nature, allowing participants to share how they manage connectivity in their lives with an emphasis on the role played by mobile technologies. Semi-structured interviews were conducted with different groups of participants, involving faculty members, departmental heads (who are involved in other administrative and supervisory responsibilities), and human resource (HR) practitioners. The lead author conducted a total of 41 interviews, 39 with academic professionals from different colleges and in various positions, and two with HR practitioners to complement and enrich the written documents focusing on formal (and informal) policies and practices. Following our interpretivist stance, the different datasets we collected aimed to paint a richer picture of our area of study. The specific methodological steps we have developed to analyse the data are presented in Table 2.

**INSERT TABLE 2** 

During the interviews, the lead author took notes of the key points discussed by participants which later helped to frame the analysis. Two different interview guides were used: one for academic professionals, including faculty members and departmental heads, and another one for the HR practitioners. Interview questions focused on work communications after hours, including what mobile devices are used, how they are used, and why they are used in a particular way.

Documents helped us to identify existing policies related to connectivity after hours. They were collected prior to the interviews. Three types of documents were collected: policy documents, statistics, and newsletters. In total, over 35 documents were collected, either online or directly from the HR personnel, and analysed. Table 3 below summarises the collected documents.

## **INSERT TABLE 3**

Code identifiers were used for transcripts to ensure anonymity. Transcription took place in parallel with data collection, and continued thereafter. Interviews were transcribed by the lead author, while thoughts about interesting findings were noted down to guide the analysis. Data analysis was influenced by Giorgi (1997) and Braun and Clarke's (2006) thematic analysis and it was iterative involving revisiting and reframing the identified themes during disucssions between the co-authors. The data from each case were analysed independently. First, data were broken down into parts by creating initial codes relevant to connectivity management. Example codes include 'urgency of communications', and 'participants' preferences regarding the platform of communications'. These codes were then reviewed and grouped into specific themes, resulting in a deeper understanding as to how academics managed connectivity after hours. For instance, codes concerning professionals' management practices based on the source, time, content, and method of communications were grouped in a more general practice entitled, 'classification'. Specifically, each theme was reviewed to identify the rationale underpinning academics' connectivity management practices. Rationales of all themes were then reviewed, resulting in more critical themes that illustrated connectivity management strategies. For example, material segregation and grouping are practices to facilitate distancing. The findings from the two cases were then synthesised into broader categories. This type of cross-case analysis allows higher-level conclusions that capture the story told by both cases (Yin, 2013). Analysis of the interview data took

place on NVivo, while documents were analysed manually because many documents were in Arabic which NVivo does not support. Analysis of documents equipped us with information regarding the policies and work context of each site, enlightening and situating the findings emerging from the interview data.

# Managing After-hours Connectivity by Segmenting, Prioritising, and Distancing

The academics in our study were found to employ three different strategies when dealing with connectivity after hours: *segmentation*; *priortisation*; and *distancing*. These strategies constitute their professional response to connectivity, that challenges the boundaries between work and non-work. Each of these strategies was pursued and materialised through a range of practices. Table 4 provides a summary of these strategies along with their description and the associated practices.

## INSERT [NEW] TABLE 4

In relation to the latter, we found that participants within an institution pursue the three strategies through the development and employment of practices specific to their particular organisational context. Our analysis led to the identification of three practices illustrating connectivity management at Springfield (material segregation, grouping, and classification) and another three at Hudson (material segregation, the half-open-door strategy, and postponing action). Some practices are common across institutional contexts, but are enacted differently. For example, the practice of material segregation takes the form of physical segregation of devices at Springfield, and digital segregation of apps at Hudson. The practices we identified are presented in Table 5.

## INSERT [NEW] TABLE 5

For analytical purposes, we present the three strategies below separately, despite the fact that they complement each other. Thus, we sometimes also refer to other strategies. The strategy of segmentation, for example, was found to trigger and facilitate the strategies of prioritisation and distancing.

## Segmentation

Segmentation refers to the affordance of technology to create a (technological) boundary that keeps work and personal communications separate. This professional strategy is, as we explain in the discussion, an illustration of academics' control over the mode and time of their work. Segmentation occurs through the practice of material segregation, which represents physical or digital segregation between work and personal communications. It would occur, for instance, by maintaining a second mobile phone for work or using a different medium of communication (e.g., work email) for different purposes.

Keeping work and non-work communications separate was found to enable our participants to isolate work-related communications, and thus, manage them accordingly. The quote below illustrates how a departmental head at Hudson develops a technological boundary by determining which channels work connectivity may arise from. For example, the practice PB20 develops allows her to differentiate work communications from personal ones, facilitating her connectivity management.

"It's more convenient to separate personal things and official things. These days a smartphone allows you to do that most of the time. During invigilation I expect any supervisor or invigilator to call me, I am on call. I expect something from the college, but do not expect calls from family members... After office hours I don't check my [work] email, I do not check it after 3:30p.m. My phone is there for emergency issues to be addressed. During examination time, if my phone rang at 6:30 in the morning and it is my office phone, it is like an alarm for me that there is something in the college that I have to respond to. I cannot otherwise make a differentiation whether it's coming from a family member, a friend, or the college. I have two different ring tones for each number so that I can recognise where it is coming from". (PB20)

The strategy of segmentation is facilitated by the affordances of technology, such as the choice between different ring tones, allowing academics to separate and consequently somehow distinguish work

communications from personal ones. Through this type of segmentation, academics utilise some technological affordances to facilitate their connectivity to work.

In addition to technological affordances, academics' professional status was also found to play a role in how they manage connectivity to work. For example, our findings show how academics decide when to connect, at periods of time when they believe that their contribution might be needed the most. For instance, academics would prioritise work communications during exams to support students whilst distancing themselves from connectivity during routine workdays. PA11, an assistant professor at Springfield who delivers distance learning courses, illustrates how the segmentation of work and personal communications gives him the choice of when to engage with communications with distance learning students after hours:

"The work phone is completely closed [after hours]. I completely ignore it and don't even charge it... The work phone is for office hours only. If there is an emergency I can engage with the phone. For example, during the exams, I keep the phone with me 48 hours before the exam, and the students have good evaluation for me in regard to responding to their queries. I do this as an extra during exams; I can respond to WhatsApp. I check my phone daily every 6 or 8 hours. Other than that, I don't bother myself, they have office hours and I respond to all emails". (PA11)

Professional discretion was also evident when academics would decide periods of disconnection from work. In these cases, disconnection would go in tandem with a switching off of a device or would coincide with the non-use of work-related devices. For instance, PB5 achieves temporal disconnection from work connectivity through the utilisation of another device for the exchange of work emails. In this way, she maintain privacy of her personal mobile phones after hours:

"The one that is synced with me is my private email, I don't sync the Outlook that we have here, no... because we have also laptop at home, yeah they provided us with a laptop, and for me... no, that's only for private email. That's why I told you to contact me on my private email, because it's the only one that's synced to my phone". (PB5)

The strategy of segmentation facilitates academics' management of work connectivity through material sagregation. The latter affords academics the identification of channels through which they can manage work connectivity so that it works well with their professional priorities. Material segregation can also promote other strategies. For example, it enables academics to prioritise work or personal communications, and to temporarily distance themselves from work connectivity. The strategies of prioritisation and distancing will be introduced next.

## **Prioritisation**

The strategy of prioritisation refers to an evaluation of the significance of work communications in relation to academics' workload in given periods of time. It consistutes an example of professionals' 'bounded autonomy', whereby academics make decisions freely, albeit within the limits set by institutional parametres/pressures (e.g., auditing, student examinations) or professional norms (e.g., responsiveness, caring). Academics' perception of a need for communications often renders them accepting connectivity, rather than rejecting it. For example, academics may prioritise and be more likely to accept work connectivity during periods they generally recognise as important, such as when answering students' enquiries during exams, or while finalising documentation during the audit period. Material segregation through two phones facilitates the prioritisation of personal or work communications and so do the practices of classification, postponing action, and the half-open door practice.

PB20 explains how IM allows her to postpone non-urgent communications until the next working day:

"If it's important I would reply, but otherwise I wouldn't. This lets them know that this should be done during office hours. Most of the time my replies would be ok send me an email, remind me, or something like that, but I don't answer them because this is [after hours]. If I don't feel that this should be addressed immediately, I will ask them to contact me during office hours". (PB20)

Prioritisation enables academics to minimise the disturbance of work communications during downtime. It can be facilitated through academics' classification of communications, which is often based on their perceived importance of the content. This allows academics to filter and consequently accept and respond to urgent communications, or ignore those which can wait till the next working day. Academics' classification of communications can also be attributed to the source of the message, or the perceived value of their response. For example, PB12, a lecturer who has been working at Hudson for less than one year, shared her personal number with her supervisees in order to facilitate communications:

"Sometimes this literally takes me away from my family time at my free time. But sometimes I think it is helpful for clarifying issues for my students and colleagues. So, it is helpful in a way and also stressful. For example, one student called me on Friday evening. I was sitting with my family and I excuse them and replied to her. She was asking if she can postpone her weekly report because her Co-op supervisor is on leave. This was on the weekend but receiving a call from a Co-op student I thought she might have a problem, so I had to answer. But she could have sent an email to ask whether she can postpone her weekly report". (PB12)

Many academics recognise the implications of work communications for their personal time. Therefore, they engage with selected communications only when they deem this is necessary. They do so by postponing required action or by leaving the door half-open. We introduce the metaphor of the half-opened door as an illustration of (a) maintaining personal time after hours, while (b) welcoming and accepting urgent communications. For example, as the quote above illustrates, PB12 intentionally responded at the weekend. Her response was justified by the source and method of communication, which she used to assess the importance of the message. She shared her preference for non-urgent communications to be conducted via other platforms, specifically email, which she does not monitor regularly after hours.

Through the strategy of prioritisation, academics exercise professional judgment that minimises interuptions from work communications during personal time. This is accomplished by prioritising communications based on the perceived importance or urgency of the communication. They are less likely to respond to a message when they perceive it to be of low importance. This enables them to adhere to their professional responsibilities while also protecting their social and personal time.

# Distancing

Distancing refers to the strategy of varying exposure to—and/or engagement with—existing connectivity. It constitutes an example of professional freedom in this specific context as it offers academics the opportunity to completely switch off from work. We have found that grouping and material segregation are the two practices that academics use in order to control their connectivity. They sometimes manoeuvre vast possibilities for connectivity by temporarily placing connectivity in the background (e.g., by turning off Wi-Fi), or by taking a longer-term approach and dimming certain possibilities of connectivity with a specific network, such as assigning a student as a mediator for the academic's communications. For instance, some might assign a student as a mediator for the academic's communications. Dimming connectivity is a way of distancing oneself from the possibility of receiving communications via certain platforms. The term dimming is used here to represent a reduced possibility for communications to take place via a specific platform. PB17 is a lecturer who perceives such communications to be easier than one-to-one conversations:

"With groups, it is easier to communicate, because if one student asks a question, the answer or the reply would be shared with everybody, and everybody will get the same message". (PB17)

Distancing oneself from connectivity can minimise the negative implications of excessive connectivity. Distancing can also be achieved by placing connectivity in the background. This can minimise distractions of work connectivity and enforce academics' sense of management in a given period of time. For example, some apps, such as email and IM, require an Internet connection. Academics may therefore obstruct connectivity by turning off Wi-Fi on their devices. By obstructing these communications, academics can temporarily distance themselves from routine connectivity. PA3, a lecturer and a mother of five, shares:

"If I want to write an exam and wanted to be focused without distractions, I turn Wi-Fi off. And if I feel that the phone is causing me distractions, I put it on silent as well so that I can finish my work ... When the babies are sleeping, I close the Wi-Fi and go to sleep". (PA3)

The strategy of distancing is in many cases afforded by properties of mobile phones. As the quote above illustrates, this includes the ability to adjust the phone's settings by turning off Wi-Fi to create some distance from email and IM communications. Mobile phones also afford the possibility to silence notifications for communications, such as when receiving a phone call, which many academics perceive as useful for overcoming distractions. For example, PB15 is an expatriate who shares one phone with members of her family and has another number for work communications. She maintains distance from work communications by infrequently monitoring her work phone after hours:

"I have my own time when I check my phone. It's not like I keep it with me 24 hours a day. They can approach me, and regardless of the time, I will see it when I want to. This is for the work phone because for all other personal communication I have a second phone". (PB15)

Distancing can reinforce academics' sense of management regarding when to engage with work communications. This can be facilitated by the segmentation of work and personal communications through material segregation, allowing academics to distance themselves from connectivity emanating from work devices or apps. Distancing can also be afforded by mobile technologies. This includes the ability to block or reduce certain possibilities for connectivity, for instance by minimising one-to-one communications or by turning off Wi-Fi.

Overall, in this section we have provided a detailed account of how the three connectivity management strategies that emerged in our analysis play out at the two institutions. Our findings reveal that

academics do not exclusively employ one strategy over another one, but are continuously managing connectivity through combinations of these practices.

## Discussion

We explored academics' management of after-hours work connectivity, which led to the identification of three key connectivity management strategies: *segmentation*; *prioritisation*; and *distancing*; illustrating how they became materialised and enacted through varied and intertwining practices. We explored the role of technology in both intensifying connectivity whilst also affording the means for its management.

We use the notion of 'boundary objects' (Marheineke et al., 2016; Star and Griesemer, 1989) to conceptualise the role of technology in connectivity management. Our findings identify technology as a 'boundary object' that maintains-through its material (e.g., device) and digital (e.g., apps) properties—work and non-work activities apart. Technology allows permeability by enabling professionals to transition between work and non-work domains whilst allowing them to maintain their professional identity as they address institutional pressures, such as expectations to reply to student questions round the clock when there is an exam (Clark, 2000; Lee et al., 2019). This boundary is specifically evident in the strategy of segmentation. Academics established a technological boundary by physically segregating communications in two devices (e.g., at Springfield). In this case, the material properties of the technology i.e., the mobile device was the means that facilitated control over work communications. Academics would also segregate communications on the same device digitally (e.g., at Hudson where work communications are usually email-based). In this case, it is the digital apps embedded in a mobile device that facilitate segregation over how communications are conducted. The segmentation of work and non-work can mitigate the implications of blurred boundaries (Gold and Mustafa, 2013; Nippert-Eng, 1996). We found that many academics utilise the technological boundary to limit their engagement with work connectivity, and to separate work communications from personal ones. They may only monitor segregated work devices or apps when they seek to remain connected to work, such as during specific hours of the day or specific periods of the semester.

Viewing technology as a facilitator for the management of work-life boundaries is comparable to Cousins and Robey's (2015) findings which focus on the affordances of technology and their role for connectivity management. These authors identify the affordance of personalisation (i.e., setting mobile technology options to match the user's preferences or needs), which we also found useful for designating devices and apps to specific domains, and thus enabling a technological boundary. However, their study approaches 'connectedness' as an affordance that supports working anytime/anywhere. We extend their findings by focusing on the affordance of connectedness to separate, rather than blur, work and life domains. This approach to technology also allows academics to reproduce their professional freedom and exercise discretion and control over where and when to work (Baruch, 2013; Heijstra and Rafnsdottir, 2010; Kolsaker, 2008), whilst also meeting a range of rising professional expectations such as student enquiries during stressful study periods (Osmani *et al.*, 2017).

Connectivity management strategies have been described as 'defensive tactics' (Siegert and Löwstedt, 2019) or 'coping strategies', assuming individuals' larlgely passive role in handling connectivity to work (Cavazotte *et al.*, 2014; Gold and Mustafa, 2013; Lee *et al.*, 2019). Our findings reveal individuals' desire and strategising to disconnect from work such as through the segmentation of work and personal communication, or by setting a work device on silent mode, turning it off, or by not regularly monitoring the work email app. Our study also points to cases where connectivity to work after hours was not an outcome of professional choice and was often inescapable (Cavazotte *et al.*, 2014). Academics reported, for example, how they would interact with students and peers through IM communications whilst completing home chores or running errands. Compared to email, IM engendered group-based forms of communication, often replacing one-to-one communications (Mazmanian et al., 2013; Russell and Woods, 2020). Academics sharing their phone numbers with students and allowing students to IM them appears to be a common practice in our research context, unlike practices in many anglophone countries. Such practices were based on academics' assumptions about the priority of the communication in specific temporal periods, such as during exams or during periods with escalated work responsibilities.

Our findings further extend current literature on connectivity management in two ways. First, existing literature identifies standalone connectivity management strategies which are independent from one another (Cavazotte et al., 2014; Dery et al., 2014; Lee et al., 2019; Siegert and Löwstedt, 2019; Zoonen and Rice, 2017). For example, Dery et al. (2014) describe the management of connectivity through the concept of the 'connective flow', i.e., managing connectivity by switching between work and personal devices based on the situation. Mazmanian et al. (2013) further argue that connectivity is managed through buffering availability, i.e., keeping an eye on the flow of communications on company-issued email devices while deciding when, how, and if to engage with work communications. Our findings indicate that these practices do not work separately, but in combination, and that connectivity management is achieved through intertwining strategies and their accompanied practices. Managing the 'connective flow' (Dery et al., 2014) and 'buffering availability' (Mazmanian et al., 2013) may only be feasible when intertwined with other practices, such as the strategy of segmentation to allow separation, and thus switching, between work and personal sources of communications. Similarly, Lee et al. (2019) indicate that employees improve their sense of autonomy in managing work communications through low responsiveness. While our findings are consistent with their finding, we highlight the intertwining character of connectivity management and we elicit other strategies, such as prioritisation, which can set the parameters for when distancing oneself from work communication is effective.

We identified the strategies of segmentation, prioritisation, and distancing as distinct strategies for analytical purposes, while acknowledging that, in practice, they work in combination to meet academics' needs in different cirucmstances. For example, the strategy of distancing facilitates a temporary distance from connectivity, after which the academic will eventually reach out to communications that have not been addressed or have been missed. Their response to these communications may then be facilitated by the strategy of prioritisation, through which academics evaluate each message, e.g., according to the sender or the urgency of the requested task. The strategy of segmentation can also come into play if the academic technologically separates work communications from personal ones to facilitate the identification and the management of work connectivity. At the same time, although each streatgy is linked to certain practices, the latter can also be related to other strategies. Material segregation, for instance, was evident in all strategies, indicating the significant role that physical and digital properties of technology play in managing boundaries.

Additionally, our findings link connectivity management strategies with the characteristics of academic work, e.g., academics' ability to control when, where and how to work; their autonomy to make decisions and prioritise responsibilities; and their freedom to decide whether (or not), and in what way, they can retain their connective self (Baruch, 2013; Heijstra and Rafnsdottir, 2010; Kolsaker, 2008). While Ciolfi and Lockley (2018) have shown that individuals may choose to dissolve boundaries in their effort to manage their workloads better, our study extends these findings by exploring why academics may choose to do this. For example, as Table 4 illustrates, we approach segmentation as a professional strategy of control whereby academics exercise control over how and when they are connected to work after hours. Material segregation is the main practice they follow, whereby, through the use of a technological (material or digital) boundary, such as a second device or app, academics choose to separate work from non-work. The strategy of prioritisation illustrates the 'bounded autonomy' that academics have to prioritise connectivity to work as they see fit through classification; postponing action; having the door half open; and through material segregation. This is bounded autonomy as it indicates both how academics get subjected to external pressures to connect to work after hours (without choosing to do so), for instance, to respond to student queries before exams, whilst having a sense of freedom to choose whom they connect to, when and how. Finally, distancing is a strategy that illustrates academics' freedom to disengage from connectivity to work in full (e.g., disconnecting from the Internet) or in part (substituting one-to-one interaction for one-to-many) and achieve this through grouping and material saggregation.

Our findings also problematise academics' autonomy over the management of their connectivity (Heijstra and Rafnsdottir, 2010; Kolsaker, 2008). In many cases, connectivity was not subject to 'actor agency', as Kolb (2008) refers to it, but subject to aspects beyond an academic's control. For instance, institutional characteristics—specifically in relation to universities' orientation towards research or teaching—set up the field within which professional agency rose. Institutional pressures engender practices of 'acceptance' that minimise strategising and attempts to separate work from personal time.

In those cases, the role of technology as a boundary object would make the work versus non-work domains more permeable (Brown *et al.*, 2011).

In closing, our study points to directions for future research. Studies of different occupational groups, institutional settings and cultural contexts may lead to the identification of different strategies/practices that were absent from the eastern context we studied here. Further research on how connectivity management practices are collectively negotiated within a specific context can also further our understanding in this area.

# Data availability statement

Research data are not shared.

## References

- Al-Asfour, A., Tlaiss, H. A., Khan, S. A. and Rajasekar, J. (2017). Saudi women's work challenges and barriers to career advancement, *Career Development International* 22(2): 184–199.
- Al-Gahtani, S. S., Hubona, G. S. and Wang, J. (2007). Information technology (IT) in Saudi Arabia: Culture and the acceptance and use of IT, *Information & Management* 44(8): 681–691.
- Almalki, M. J., FitzGerald, G. and Clark, M. (2012). Quality of work life among primary health care nurses in the Jazan region, Saudi Arabia: a cross-sectional study, *Human Resources for Health* 10: 30.
- Ashforth, B. E., Kreiner, G. E. and Fugate, M. (2000). All in a Day's Work: Boundaries and Micro Role Transitions, *The Academy of Management Review* 25(3): 472–491.
- Baruch, Y. (2013). Careers in academic the academic labour market as an eco-system, *Career Development International* 18(2): 196–210.
- Beigi, M., Shirmohammadi, M. and Stewart, J. (2018). Flexible Work Arrangements and Work– Family Conflict: A Metasynthesis of Qualitative Studies Among Academics, *Human Resource Development Review* 17(3): 314–336.
- Boswell, W. R. and Olson-Buchanan, J. B. (2007). The Use of Communication Technologies After Hours: The Role of Work Attitudes and Work-Life Conflict, *Journal of Management* 33(4): 592–610.

- Braun, V. and Clarke, V. (2006). Using thematic analysis in psychology, *Qualitative Research in Psychology* 3(2): 77–101.
- Brown, J. B., Fluit, M., Lent, B. and Herbert, C. (2011). Seeking Balance: The Complexity of Choice-Making Among Academic Surgeons:, *Academic Medicine* 86(10): 1288–1292.
- Büchler, N., ter Hoeven, C. L. and van Zoonen, W. (2020). Understanding constant connectivity to work: How and for whom is constant connectivity related to employee well-being?, *Information and Organization* 30(3): 100302.
- Carreri, A. (2020). Control on the 'Boundary-Work' in Work-Life Articulation for Flexible Knowledge Workers. Insights into Gender Asymmetries, *Social Sciences* 9(6): 107.
- Cavaye, A. L. M. (1996). Case study research: a multi-faceted research approach for IS, *Information Systems Journal* 6(3): 227–242.
- Cavazotte, F., Heloisa Lemos, A. and Villadsen, K. (2014). Corporate smart phones: professionals' conscious engagement in escalating work connectivity, *New Technology, Work & Employment* 29(1): 72–87.
- Chen, A. and Casterella, G. I. (2019). After-Hours Work Connectivity: Technological Antecedents and Implications, *IEEE Transactions on Professional Communication* 62(1): 75–93.
- Ciolfi, L. and Lockley, E. (2018). From Work to Life and Back Again: Examining the Digitally-Mediated Work/Life Practices of a Group of Knowledge Workers, *Computer Supported Cooperative Work (CSCW)* 27(3–6): 803–839.
- Clark, S. C. (2000). Work/Family Border Theory: A New Theory of Work/Family Balance, *Human Relations* 53(6): 747–770.
- Cousins, K. and Robey, D. (2015). Managing work-life boundaries with mobile technologies: An interpretive study of mobile work practices, *Information Technology & People* 28(1): 34–71.
- Currie, J. and Eveline, J. (2011). E-technology and work/life balance for academics with young children, *Higher Education* 62(4): 533–550.
- Dén-Nagy, I. (2014). A double-edged sword?: a critical evaluation of the mobile phone in creating work–life balance, *New Technology, Work and Employment* 29(2): 193–211.
- Dery, K., Kolb, D. and MacCormick, J. (2014). Working with connective flow: how smartphone use is evolving in practice, *European Journal of Information Systems* 23(5): 558–570.
- Drucker, P. F. (1999). Knowledge-Worker Productivity: THE BIGGEST CHALLENGE, *California Management Review* 41(2): 79–94.
- Euromonitor International Analysis. (2010). . Retrieved October 1, 2017, from http://www.portal.euromonitor.com/portal/analysis/tab
- Eynon, R. (2005). The use of the internet in higher education, Aslib Proceedings 57(2): 168–180.
- Giorgi, A. (1997). The Theory, Practice, and Evaluation of the Phenomenological Method as a Qualitative Research Procedure, *Journal of Phenomenological Psychology* 28(2): 235–260.
- Gold, M. and Mustafa, M. (2013). 'Work always wins': client colonisation, time management and the anxieties of connected freelancers, *New Technology, Work and Employment* 28(3): 197–211.

- Harmon, M. E. (2015). Computing as Context: Experiences of Dis/Connection Beyond the Moment of Non/Use. Retrieved from http://escholarship.org/uc/item/1dx9060p.pdf
- Heijstra, T. M. and Rafnsdottir, G. L. (2010). The Internet and academics' workload and work–family balance, *The Internet and Higher Education* 13(3): 158–163.
- Kengatharan, N. (2015). The nature of work family conflict: A review and agenda for future research, *International Journal of Human Resource Studies* 5(2). Retrieved from http://www.macrothink.org/journal/index.php/ijhrs/article/view/7630
- Kinman, G. and Jones, F. (2008). A Life Beyond Work? Job Demands, Work-Life Balance, and Wellbeing in UK Academics, *Journal of Human Behavior in the Social Environment* 17(1–2): 41–60.
- Kolb, D. G. (2008). Exploring the Metaphor of Connectivity: Attributes, Dimensions and Duality, *Organization Studies* 29(1): 127–144.
- Kolsaker, A. (2008). Academic professionalism in the managerialist era: A study of English universities, *Studies in Higher Education* 33(5): 513–525.
- Kossek, E. E. (2016). Managing work-life boundaries in the digital age, *Organizational Dynamics* 45(3): 258–270.
- Kreiner, G.E., Hollensbe, E. C. and Sheep, M. L. (2009). Balancing borders and bridges: negotiating the work-home interface via boundary work tactics, *Academy of Management Journal* 52(4): 704–730.
- Kreiner, Glen E., Hollensbe, E. C. and Sheep, M. L. (2006). On the edge of identity: Boundary dynamics at the interface of individual and *Relations* 59(10): 1315–1341.
- Lee, S. K., Kramer, M. W. and Guo, Y. (2019). Social media affordances in entry-level employees' socialization: employee agency in the management of their professional impressions and vulnerability during early stages of socialization, *New Technology, Work & Employment* 34(3): 244–261.
- Marheineke, M., Velamuri, V. K. and Möslein, K. M. (2016). On the importance of boundary objects for virtual collaboration: a review of the literature, *Technology Analysis & Strategic Management* 28(9): 1108–1122.
- Mazmanian, M. (2013). Avoiding the Trap of Constant Connectivity: When Congruent Frames Allow for Heterogeneous Practices, *Academy of Management Journal* 56(5): 1225–1250.
- Mazmanian, M., Orlikowski, W. J. and Yates, J. (2013). The Autonomy Paradox: The Implications of Mobile Email Devices for Knowledge Professionals, *Organization Science* 24(5): 1337–1357.
- Menzies, H. and Newson, J. (2007). No Time to Think: Academics' life in the globally wired university, *Time & Society* 16(1): 83–98.
- Middleton, C. A. (2007). Illusions of Balance and Control in an Always-on Environment: a Case Study of BlackBerry Users, *Continuum: Journal of Media & Cultural Studies* 21(2): 165– 178.
- Ministry of Economy and Planning. (2017). Ninth Development Plan, *Ninth Development Plan*. Retrieved November 4, 2019, from http://www.mep.gov.sa/en/Knowledge-

Center/Pages/Knowledge-Base-

Details.aspx?FolderID=48&FolderName=Ninth+Development+Plan&TermStoreId=8a58c0bc-1794-47f0-9947-24189ac2df6e&TermSetId=088310a7-b2ef-4767-994d-7df45e6f0471&TermId=4aa913e9-8578-4e9a-98b4-05ff852aa3f5

- Nippert-Eng, C. (1996). Calendars and keys: The classification of "home" and "work", *Sociological Forum* 11(3): 563–582.
- O'Laughlin, E. M. and Bischoff, L. G. (2005). Balancing Parenthood and Academia: Work/Family Stress as Influenced by Gender and Tenure Status, *Journal of Family Issues* 26(1): 79–106.
- Osmani, M., Weerakkody, V. and Hindi, N. (2017). Graduate attributes in higher education: Examining academics' perception in the Middle East, *Journal of Education for Business* 92(2): 53–64.
- Parker, M. and Weik, E. (2014). Free spirits? The academic on the aeroplane, *Management Learning* 45(2): 167–181.
- Pingdom. (2011, November 30). *Smartphone Boom Predicted in the Middle East*. Retrieved February 10, 2017, from http://royal.pingdom.com/2011/11/30/smartphone-boom-predicted-in-the-middle-east/
- Prasopoulou, E., Pouloudi, A. and Panteli, N. (2006). Enacting new temporal boundaries: the role of mobile phones, *European Journal of Information Systems* 15(3): 277–284.
- Rapoport, R. and Rapoport, R. (1965). Work and Family in Contemporary Society, *American* Sociological Review 30(3): 381–394.
- Russell, E. and Woods, S. A. (2020). Personality differences as predictors of action-goal relationships in work-email activity, *Computers in Human Behavior* 103: 67–79.
- Saudi Arabia has almost double international rate of smartphones. (2017, December 20). *Arab News*. Retrieved from http://www.arabnews.com/node/1211721/saudi-arabia
- Sayah, S. (2013). Managing work-life boundaries with information and communication technologies, *New Technology, Work and Employment* 28(3): 179–196.
- Schlosser, F. K. (2002). So, how do people really use their handheld devices? An interactive study of wireless technology use, *Journal of Organizational Behavior* 23(4): 401–423.
- Seawright, J. and Gerring, J. (2008). Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options, *Political Research Quarterly* 61(2): 294–308.
- Siegert, S. and Löwstedt, J. (2019). Online boundary work tactics: an affordance perspective, *New Technology, Work and Employment* 34(1): 18–36.
- Star, S. L. and Griesemer, J. R. (1989). Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39, Social Studies of Science 19(3): 387–420.
- Vallabhan, C. (2012). KSA leads the world in mobile usage -, *ITP.Net*. Retrieved February 28, 2017, from http://www.itp.net/588729-ksa-leads-the-world-in-mobile-usage
- Wajcman, J. and Rose, E. (2011). Constant Connectivity: Rethinking Interruptions at Work, *Organization Studies* 32(7): 941–961.

Wang, A. B. (2017, January 1). French employees can legally ignore work emails outside of office hours, *The Washington Post*. Retrieved from https://www.washingtonpost.com/news/worldviews/wp/2017/01/01/french-employees-canlegally-ignore-work-emails-outside-of-office-hours

Williams, R. and Edge, D. (1996). The social shaping of technology, *Research policy* 25(6): 865–899.

Yin, R. K. (2013). Case Study Research: Design and Methods, SAGE Publications.

Zoonen, W. van and Rice, R. E. (2017). Paradoxical implications of personal social media use for work, *New Technology, Work and Employment* 32(3): 228–246.