



The challenges of hybrid work: an architectural sociology perspective

RESEARCH





*Author affiliations can be found in the back matter of this article

ABSTRACT

An unwanted experiment of prolonged periods of working away from the office was forced on many societies by the COVID-19 pandemic. In the three years since the COVID outbreak, many organisations have shifted to hybrid work practices by mixing working from home with office-based work. Unsurprisingly, a plethora of both academic and grey literature has been published on hybrid work since 2020. This paper scans that literature in order to understand some of the most important questions emerging and compares these with the experience of a small sample of UK-based participants living and managing in this rapidly changing environment. Considering different disciplinary domains (human resources, management, architecture, real estate, technology), the literature in conjunction with the lived experience highlights real tensions surfacing between individual choices, worker wellbeing and organisational needs. Stuck in the middle of these perpetual conflicts are middle managers trying to make things work day-to-day. It is argued that the implications of hybrid work are potentially as profound as those of Taylorism in the early 20th century. Based on the foundations of architectural sociology, a holistic socio-spatial approach is proposed that responds to the rapidly changing world of work.

PRACTICE RELEVANCE

Leaders of organisations need to pay attention to how profound are the changes imposed by hybrid work and to monitor their potential impacts. The dangers of not doing so are manifest as organisations run the risk of inadvertent discrimination and marginalisation, of creating siloes, of damaging their innovative capacity, and of burning out their employees. Middle managers are living with the tensions and conflicts caused by this revolution on a day-to-day basis. The changes in physical space and technology, although evident, are rarely quick or radical enough to strengthen the working practices already in place. Supporting the workforce by investing in these areas will help the transition to more effective hybrid work practices for everyone.

CORRESPONDING AUTHOR: Kerstin Sailer

Bartlett School of Architecture, University College London, 22 Gordon Street, London WC1H OQB, UK

k.sailer@ucl.ac.uk

KEYWORDS:

architectural layout; hybrid work; office; real estate; sociospatial; trends; working from home; workplace; workspace

TO CITE THIS ARTICLE:

Sailer, K., Thomas, M., & Pachilova, R. (2023). The challenges of hybrid work: an architectural sociology perspective. *Buildings and Cities*, 4(1), pp. 650–668. DOI: https://doi.org/10.5334/bc.350

1. INTRODUCTION: THE RISE OF HYBRID WORK

Buildings and Cities
with the
DOI: 10.5334/bc.350
nples of

Sailer et al.

Before 2020, using the office for knowledge-based work was the unquestioned norm with the exception of some organisations enabling more flexible approaches including rare examples of fully remote working practices such as those at Automattic (Berkun 2013).

The COVID-19 pandemic changed this fundamentally. It caused an unasked-for global experiment on working practices including working from home (WfH) at an unprecedented scale. Once the acute phase of the pandemic eased, a return to physical offices was neither considered desirable by every organisation nor as straightforward as anticipated. Some organisations shifted to a fully remote workforce, among them Dropbox as one of the most prominent examples (Horowitz 2022). Dropbox was also quick to redesign their existing office locations, e.g. in Dublin as a collaboration studio with no desks.¹ Other organisations such as Goldman Sachs or Netflix (as reported by HubbleHQ 2023) tried ordering employees back to re-establish working from the office as standard, but many office workers had gotten used to the flexibility that WfH provided and did not want to come back to the office five days a week. In a Leesman report on hybrid work (Leesman 2022a) respondents indicated that 16 of the 21 standardised Leesman work activities (such as focused work, private conversations or phone calls) were better supported at home, demonstrating a considerable appeal towards WfH. Moreover, 41% of the respondents were dissatisfied with their commute, particularly its duration (Leesman 2022b).

The idea of hybrid work, *i.e.* combining WfH and working from the office, has gained traction, despite its obvious complexities. Many leaders do not fully understand what hybrid work is, or how to implement it successfully. Equally, early adopters have found that despite potential benefits, hybrid work also brings unexpected drawbacks.

The confusion is understandable. Not only is hybrid work a new and thorny issue but also it is difficult to grasp and hard to differentiate from other, previously propagated approaches such as 'flexible working', 'agile working', 'remote working', 'teleworking', 'virtual working', 'distributed working' or 'activity-based working'.

Without providing a full definition and history of all these different attempts to structure work more flexibly, a few aspects might be noteworthy. First, most of these vary around where work takes place both on a macro-scale (office, home, satellite offices, third spaces) and micro-scale (where in the office), with some terms also being used interchangeably. Second, these concepts can be traced back to the 1970s with IBM being a core innovator, both in trying out a non-territorial office (van Meel 1995), equivalent to what most would call currently activity-based working, and also trialling teleworking, i.e. staff WfH and connecting with their colleagues via means of telecommunication (Nilles et al. 1976).

The term 'hybrid work'—as far as this can be established—first made an appearance in the academic literature in 1994 as a side note in a US-based research report on distributed work. In it, the authors argue:

The United States is catching up to worldwide interest in satellite offices, rural telework centers, and other hybrid work sites intermediate between the home and the central office.

(National Research Council 1994: 33)

In line with the multiplicity of terminology around flexible work arrangements, 'hybrid work' has different meanings attached to it. Where the above quotation is related to distributed work and excludes the home, other research contributions since have explicitly concentrated on implications of shifting between home and office (Halford 2005), while yet again others focused on working from anywhere and different nuances of what 'hybrid' might entail such as the interplay between physical space, social space and technologically afforded space (Bakke & Yttri 2003; Vartiainen et al. 2007; Vartiainen & Hyrkkänen 2010).

Buildings and Cities

DOI: 10.5334/bc.350

This paper follows the definition provided by Halford (2005), which mirrors most closely what the COVID pandemic inspired, *i.e.* the hybridity of the work experience as employees shift between home and office as main work locations. This definition also seems to be how the wider public sees hybrid work, as cemented by an entry in the *Oxford English Dictionary* in December 2021, where hybrid was defined in employment as a:

flexible model for working [...], specifically by using digital communications technology to allow effective remote access and home working as an alternative to or in combination with traditional office [...] environments.²

An initial scan of the post-pandemic literature on hybrid work revealed an avalanche of material to consider, in both the scholarly and grey literatures. The term 'hybrid work' gained traction in 2021 when it began to appear considerably more often in Google searches³ and also featured more prominently in news articles, consultancy reports, *etc.* In July 2023, a Google search for 'hybrid work' and 'hybrid working' resulted in more than 28.5 and 13.9 million hits, respectively, showing its ubiquity.

Therefore, a research strategy had to be designed that can successfully deal with a topic of not only great complexity and urgency, given that organisations have to decide how to structure their work policies at speed, but also one that is growing day-by-day.

The reason that hybrid work appears as such a complex topic stems—among other things—from the fact that the office has for the longest time been considered a real estate (RE)-related matter, thereby reducing it to its physicality and materiality, despite appeals to consider the office as an investment in people and organisational productivity (CABE 2005). Disciplinary silos both in academia and practice exacerbated the rift between those dealing with physical space and those interested in social matters. Long before 2020, calls for integrated perspectives grew louder, and while it can easily be argued that the physical office has always fulfilled a social function, it was finally the COVID pandemic that revealed the need to consider work and workplaces through a socio-spatial lens. WfH can readily be considered as an attempt to prioritise kinship or close friendship relations; the call back to the office is likewise social as organisations fear a loss of innovative capacity as unplanned encounters decreased with a prolonged absence from the office (Sailer et al. 2021b).

The present paper pursues several aims. First, it addresses the question of hybrid work from a sociospatial perspective building on the emerging discipline of architectural sociology,⁴ recognising the social function of physical spaces and extending this to digital spaces, which are equally constitutive of social relations (Orlikowski 2007).⁵ Second, it considers contributions from different disciplines including human resources (HR), architecture, RE, management and technology, thereby paying tribute to the complexity and multifaceted nature of the topic. Third, to address urgency, scholarly and practitioner-based sources are included as well as the lived experience of hybrid workers to relate theoretical discussions back to real-life challenges. Finally, to manage the growth of the field and the size of the relevant body of literature, a selective approach was chosen, prioritising speed and breadth of coverage over depth, as detailed in the methodology section.

Two main research questions are addressed:

- Which key themes arise from the literature for hybrid work strategies?
- To what degree are those themes reflected in the lived experience of hybrid work?

The paper is structured as follows. The next section outlines the methodology. This is followed by insights gained from the literature, showing how each domain forefronts particular issues pertinent to its respective field. The results section analyses the lived experience of hybrid workers thematically based on the main concerns from the literature. The discussion then weaves these strands together and summarises common themes. The paper also further elaborates on the idea of sociological thinking in architectural research as a way to combine people and place issues. The conclusions provide reflections on the emergent topic of hybrid work from a scholarly point of view and sketch a future research agenda.

2. METHODOLOGY AND DATA

An exploratory, qualitative approach was chosen that combines a scan of the literature with hybrid work experience interviews.

In the literature search, the keyword 'hybrid work' was used alongside the qualifiers 'office', 'home' and 'workplace'. Table 1 shows the comparison of the number of results when using different search platforms, including Web of Science, Scopus and Google Scholar. These variations are to be expected, given what each platform includes in its scope.

KEYWORDS	SEARCH PLATFORM	NUMBER OF RESULTS
'hybrid work' AND (office OR home OR workplace)	Web of Science	90
	Scopus	565
	Google Scholar	6,320

A closer look at the increase of the body of literature over time is revealing—Scopus, for example, reports only 34 documents published in 2020, with a further 88 in 2021, 228 in 2022 and already 223 in the first six months of 2023. This exponential growth underlines the popularity and urgency of the topic, but also highlights the difficulties of pursuing a systematic literature review. By the time this would be completed and processed through academic publishing channels where lead times can be up to a year or two, it would already be out of date.

Additionally, following the argument that Google Scholar provides broader coverage beyond just journals (Martín-Martín *et al.* 2018) and the importance of hybrid work for practitioners who normally neither consult nor publish in journals, it was decided to rely on Google Scholar as a source. Therefore, speed and breadth of coverage was prioritised to suit the aims of the paper.

There is little guidance on how to deal with a research topic in flux and at the same time one that receives a lot of public attention. The paper partially relies on the strategies of researching an emerging topic suggested by Privett (2020) in a detailed doctorate of co-working. This includes relying on the grey literature much more than the scholarly research of a more established topic would typically do while still maintaining critical distance in the sense-making. Choosing publications was another tricky matter. Owing to the sheer number of publications, it was impossible to read everything at speed. Instead, a selective stance was adopted prioritising documents that (1) covered the five domains well; (2) had already gained traction by being cited repeatedly; and (3) were written by well-known scholars, practitioners and organisations in the field.

To gain insights into the lived experience of hybrid work, six in-depth semi-structured interviews were conducted with participants who have practised hybrid working in the last months, as their organisations have been finding their own way of figuring out how to respond to post-pandemic demands on office space. The interviews focused on five factual questions outlined in a previous conference publication (Sailer *et al.* 2022) and were conducted before themes of the literature had emerged. Hence, questions were asked about the following basic aspects:

- Where the work took place
- How the office was designed
- Whether management styles had changed due to hybrid work
- Which changes to the RE had been implemented
- Which technological solutions supported their hybrid work set-up.

A UK-based convenience sample was chosen aiming for a diversity of industry, roles and types of organisations (Table 2). The sample is slightly skewed towards middle managers.

Table 1: Differences in the body of literature across different search platforms

ID	INDUSTRY	ORGANISATION SIZE	GENDER	AGE (YEARS)	ROLE
HE	Higher education	5,000-10,000	Male	≥ 60	Middle manager
TECH	Technology	300-600	Male	40-49	Middle manager
INS	Insurance	≥ 30,000	Male	30-39	Employee
FIN	Finance	≥ 30,000	Male	30-39	Middle manager
ARCH	Architecture	300-600	Female	30-39	Employee
DES	Interior design	300-600	Male	30-39	Middle manager

Table 2: Overview of the interview participants

Interviews were conducted based on principles of ethical conduct (Padan 2020), following informed consent and confidentiality procedures. Since interviews were not recorded and of a non-sensitive nature, the research was exempt from formal ethical approval.

The evaluation of the interviews followed a deductive approach, using key concerns emerging from the literature as themes for the content analysis. Again, this method was best suited to the wealth of literature available and the required speed of the study.

3. LITERATURE: FIVE DISCIPLINARY PERSPECTIVES ON HYBRID WORK

The truly interdisciplinary nature of research on work—bridging from HR and management researchers to architecture and RE scholars all the way to computer scientists—is also reflected in the body of literature on hybrid work. Being a transdisciplinary topic, research on work also brings together scholarly and practitioner communities.

Therefore, the literature discussion is structured around those disciplines and focuses on exemplary papers and reports by both scholars and practitioners.

3.1 HUMAN RESOURCES: PEOPLE AND CULTURE

From the people perspective of HR, WfH as well as hybrid work seemed advantageous and employees showed high levels of adaptability, embracing the changes imposed on them by the pandemic, e.g. in a study of German employees (Schade et al. 2021). Having more control over how and when to complete a task and knowing they can be relied upon made employees feel competent while WfH, which boosted motivation and wellbeing. The public sentiment toward hybrid work arrangements is also mostly favourable. A study on Twitter (Patel 2022) showed that of 1000 tweets containing the term 'hybrid work', 62.5% were classified as positive while only 4.2% as negative.

However, other studies highlighted the downsides of WfH and hybrid work for people including domestic distractions, blurred work-life boundaries (Wendsche *et al.* 2021), increased social isolation (Babapour Chafi *et al.* 2022) and lack of organisational identification (Kossen & van den Berg 2022), although the latter factor was mediated by task interdependence, that is the extent to which members of an organisation must rely on each other to complete their work tasks, as this significantly weakened the correlation between increased levels of WfH and social isolation (Kossen & van den Berg 2022).

These downsides in turn raised issues for the health and wellbeing of employees who WfH because psychological detachment from work in non-work time is important for maintaining health and wellbeing (Karabinski *et al.* 2021). Overworking was an issue (Vyas 2022), as was insufficient preparation of employees for self-organisation, building a work and rest schedule, emotional burnout, cramped conditions, and distractions when WfH (Konovalova *et al.* 2022). An increase in the gap between members of the hybrid team working in different formats (from the office versus from home), and the threat of an increase in the gender gap were also noted by the authors.

Buildings and Cities

DOI: 10.5334/bc.350

A further recurring challenge in the HR discourse is how to maintain an inclusive culture. The quality, frequency and nature of interactions changed when colleagues were physically remote and there was less dynamic, spontaneous communication. Knight et al. (2022) found that in-office interactions—especially with colleagues—can improve employees' job satisfaction and reduce their feelings of loneliness. Colleague support was the strongest predictor of job satisfaction. While workplaces can be noisy and full of distractions, collaboration and coordination among team members were easier, and individuals were more visible when career development opportunities arose.

Yang et al. (2021) conducted a research study of 61,182 US Microsoft employees over the first six months of 2020 to estimate the effects of remote work on collaboration and communication. The authors of the study used data from workers' emails, calendars, instant messages and video/audio calls. Results showed that following remote work, the collaboration networks of workers became more static and siloed, with fewer bridges between disparate parts. A decrease in synchronous communication and an increase in asynchronous communication was also observed. The authors concluded that it could be harder for employees to acquire and share new information across the network.

In a review of research contributions to a special issue on hybrid working, Kaiser *et al.* (2022) argued that WfH alters the relationship between the formal and informal organisational structures giving online meetings as an example, which require invitations and are typically highly structured and make it more difficult to establish informal relational work. This may be especially important for new employees, for whom the development of new collegial relations is a critical part of the informal induction processes.

3.2 MANAGEMENT: LEADING PEOPLE

The second people perspective comes from the management, leadership and organisation science field.

Managers, it seems, have found the change to hybrid work tricky as sceptical leadership teams were seen as the biggest challenge to new ways of working (Berger et al. 2021). Zillow real estate chief executive officer, Rich Barton, cautioned that a hybrid model of work could create managerial bias in favour of employees reporting frequently to the workplace because they seemed more dedicated than their counterparts WfH the majority of weekdays, and thus encountered difficulties integrating into the fabric of organisational culture (Hartmans 2021). The question of equity between WfH and office-based workers is a common concern (Babapour Chafi et al. 2022; Odom et al. 2022), also known as proximity bias (Hopkins & Bardoel 2023).

Managers and non-managers seem to evaluate hybrid work differently, as non-managers were more likely to volunteer into the hybrid experiment, to WfH, to predict positive impacts on productivity and to reduce their attrition under hybrid compared with their manager colleagues (Bloom et al. 2022). These findings highlight how hybrid work is typically beneficial for both employees and firms, but is usually underappreciated particularly by managers.

Hirsch (2021) stated that managers should recognise advantages that the virtual technologies brought, for example, that Zoom calls enabled a greater diversity of voices to be heard; and that individual creativity and small-group discovery was more productive of fresh thinking in online workshops than the conventional mass workshops.

Another study on WfH arrangements found that middle managers from all sectors were those most stressed by the hybrid and remote experiences during COVID-19 (Choudhury 2020). They tended to face a myriad of challenges and pressures in terms of responding to senior leadership, while seeking to effectively support and manage teams of subordinates. In a related workforce survey from the UK, it was found that line manager support for WfH arrangements was the most critical determinant of employee comfort with flexibility while the absence of this support was the most significant factor inhibiting comfort with flexible arrangements (Taylor *et al.* 2021), thus making management a key factor for hybrid work.

Buildings and Cities

DOI: 10.5334/bc.350

Gratton (2021) suggested that managers should consider the challenge of hybrid work from four distinct perspectives: jobs and tasks, employee preferences, projects and workflows, and inclusion and fairness. Companies should identify key jobs and tasks, determine what are the drivers of productivity and performance for each, and think about the arrangements that would serve them best. Employee engagement in the process was seen as key to understand and will differ significantly from company to company.

The above insights suggest that leadership in times of hybrid work is crucial. Organisations are not only forced to examine traditional workplace models but also question and re-evaluate their existing leadership styles.

Letting go of control, practising trust, creating a shared sense of purpose, finding new ways to motivate staff and reading subtle signals while bridging increasing employee–manager distances were among the management challenges emerging from interviews (Babapour Chafi et al. 2022).

Data from leaders' diaries during WfH identified a broad repertoire of leadership practices including: (1) solving problems collaboratively and monitoring team progress; (2) creating space for socialising and teambuilding; (3) making the team feel supported and encouraging feedback; and (4) communicating to build a virtual culture of trust (Krehl & Büttgen 2022). The findings demonstrate that leaders tended to focus on relation-oriented leadership practices rather than task oriented, while finding it challenging to choose the right digital tool to fit their message.

These new qualities of leadership—relation oriented, a shared practice enacted on all levels with a focus on support and stewardship—have been described by various scholars as 'post-heroic' leadership. This emerged against the background of a complex, volatile and uncertain world as well as attempts to humanise work while at the same time leveraging innovation opportunities and the potential of collaborative work. In his comprehensive study on post-heroic leadership, Skerlavaj (2022) argues that hybrid work underlines the need for this style of leadership by strengthening relationships at work, fostering the resilience of people and organisations, and providing psychological safety.

3.3 OFFICE LAYOUT: THE STRUCTURING OF SPACE AND PLACE

The way offices have been structured internally—as cellular spaces, shared offices, open-plan or cubicles—and in turn how those categorical and more detailed configurational choices, e.g. how the size of open-plan offices has affected desirable outcomes such as communication, teamwork, satisfaction, productivity or employee experience has long been subject to a fierce scholarly and media-driven debate pre-pandemically (for an overview, see, e.g., Sailer & Thomas 2021). Therefore, office layout could be expected to be a key concern to scholars in the hybrid work era, too.

Based on interviews with business leaders and a survey, design studio Hassell (2021) identified five different post-pandemic workplace models, whose upsides, downsides and implications were discussed extensively: as-is (everyone in the office from 9 to 5); turbo-charged activity-based working (office as a shared space with increased sharing ratios); clubhouse (office becomes a social hub); hub-and-spoke (satellite offices closer to home); and no office (everyone works from home or elsewhere). Design implications for the office varied depending on the model and ranged from considerations of which mix of spaces were required to managing experiences and expectations.

A follow-on survey by Hassell (2022) showed that hybrid work was on the rise and that workers who spent around 60–80% in the office showed the highest levels of engagement, trust and feelings of belonging. However, workers forced back to the office were twice as likely to consider quitting than those free to choose where they wanted to work, so the authors suggested attracting employees back rather than decreeing them to do so. While commute length was the biggest single driver in drawing people back to the office, a combination of amenities and features such as access to green spaces and fresh air, more spaces for focused work, free food and spaces for communal eating, as well as COVID safety precautions was equally effective in combination.

Buildings and Cities

DOI: 10.5334/bc.350

A comprehensive analysis by Myerson & Ross (2022) tracing the history, present and future of the office presented ideas for physical workplaces in the post-pandemic era as a resource centre among various other locations. Interior office design was argued to best focus on social functions, purpose, employee health and flexibility of use, thus fostering collaboration and creativity.

Similar suggestions were made by Fayard *et al.* (2021), who described three distinct roles for the physical office in hybrid work: first, as a social anchor and a culture space to enhance togetherness and 'human moments' that build trust; second, as a schoolhouse that enables people to learn from each other, especially for new members of the organisation; and third, as a hub for unstructured collaboration that feeds into innovation. Design recommendations included more social spaces and more differentiation of spaces to suit organisational needs.

Providing evidence against the blanket statement that offices need to provide communication spaces, a detailed stated-choice study (Appel-Meulenbroek *et al.* 2022) showed that the office equally needs to cater for concentrated tasks. Appel-Meulenbroek *et al.* (2022) argued that a one-size-fits-all solution is unlikely to be valuable to all employees, and that diverse workplaces were needed. Generally, since spaces with dense occupancy levels, surrounded by intelligible conversations and isolated away from walking routes, were not preferred, it was recommended to manage noise, disturbances and feelings of crowdedness in nuanced ways, but enclosure and isolation were not desirable attributes of workplaces.

Both Rahaman *et al.* (2020) and Sailer *et al.* (2021a) studied the relationship between seating arrangements and perceived productivity at work pre-pandemically, yet applied their findings to hybrid work. While the former study highlighted the importance of face-to-face communication and closeness to team members, the latter found that the size of open-plan areas was inversely related to productive working as well as teamwork. Both studies suggest accommodating teamwork in better ways, for instance, by smaller, more intimate areas to underline the attractiveness of the physical office in a hybrid scenario.

3.4 REAL ESTATE: THE NEED FOR PLACES

Another place-related dimension to explore is the discipline of RE. It is to be expected that the rise in WfH and the shift to hybrid work models might reduce the demand in RE as organisations are aiming to reduce their office footprint.

Gauger et al. (2022) studied work satisfaction and productivity and their dependence on space and suggested that future work will be multilocal, divided between the 'first', 'second' and 'third' places. Gauger et al. described the first place, the home office, as ideally suited for concentrated tasks with high work autonomy; and the second place, the corporate office, as a place for social interactions and face-to-face tasks. Third places such as co-working spaces can substitute first and second spaces if those are unavailable to employees.

Naor et al. (2022) combined a Google Trends search with several surveys to estimate a potential reduction in the Israeli office RE market by up to 15%.

A more differentiated picture was drawn by the quarterly UK Office Market report based on research by CBRE (2022b), which showed that the overall office RE market in the UK was down by 6% compared with the five-year average figure, but up by 12% compared with 2021. Particularly, premium office space was in high demand. Upgrading existing RE through better amenities, more 'we spaces' and improved aesthetics were recommended strategies by the CBRE (2022a).

The picture in the US seems more daunting for the office RE market according to a comprehensive, data-driven analysis (Van Nieuwerburgh 2023), showing that during the pandemic urban centres lost population; that the number of paid-days WfH increased from 5% in 2019 to 38% in 2021; that office occupancy figures were 55–60% down compared with pre-pandemic levels; and that office lease revenues fell by 17.5% while RE vacancies doubled to quadrupled. Labelling WfH an 'apocalypse' for the office RE market, Gupta *et al.* (2022) provided a detailed forecasting model of the valuation of the New York City market, highlighting a potential decline in value of 39% in the long term, modelled up to 2029. This means RE, how it is used and therefore valued might undergo dramatic shifts in the coming years.

3.5 TECHNOLOGY: BRINGING PEOPLE AND PLACES TOGETHER

Finally, technology and tools could be seen as a way of bringing people and distributed places together. The computer-science sub-branch of human-computer interaction is particularly interested in how tools can help interactions flourish across distances, and this is crucially relevant in the new context of hybrid work.

Mark et al. (2022) highlighted common challenges for technology-mediated interactions in remote work conditions such as loneliness, stress and lack of boundaries, thus echoing the concerns of HR communities, yet also pointed out that understanding technologies in detail and how people use them can help improving tools to overcome these limitations.

With this view of improving videoconferencing tools, it was theorised that the commonly known 'zoom fatigue' might be caused by visual overload, such as close-up views of others and seeing oneself constantly (Bailenson 2021). Johnson & Mabry (2022) examined workers' perceptions about the experience of Zoom fatigue and how this related to or produced emotional exhaustion. Based on a mixed-method study, the authors showed that workers felt psychologically depleted by a range of issues, including video meeting load, the excess load needed for their job, video meetings that were not beneficial to them, video meetings that took up the time and energy needed to perform other job responsibilities or fulfil their home responsibilities, and the perceived necessity to surface act during meetings. The data showed these factors related to diminished wellbeing in the form of emotional exhaustion.

The theme of self-presentation in video was taken up in a series of studies reported by Taber *et al.* (2022), adding an important nuance to the Zoom fatigue discourse as it showed that control over self-presentation was seen positively and that adaptations were possible to manage video engagements. Further suggestions for tool improvement included options to switch off or alter the self-depicting video by users.

How social talk among colleagues and the so-called 'water-cooler conversations' can be hosted in video calls has been studied by Bleakley et al. (2021). Due to the scheduled nature of social talk on video, participants complained about the lack of spontaneity and reported feeling more comfortable chatting with those they already knew well; however, they also found that social talk on video reduced barriers to participate as opposed to that occurring in physical spaces. Talking etiquette was altered on video as turn-taking, natural interruptions or splintering off conversations was more difficult. Bleakley et al. provided suggestions for the design of video call tools to better support social talk, such as better planning, playfulness, de-emphasising status, or prompting for joint tea breaks or shared online lunches.

Critiquing existing virtual reality (VR) solutions for aiming at merely replicating existing face-to-face communication practices in technology-mediated platforms, McVeigh-Schultz & Isbister (2022) developed alternative approaches for VR systems that can intervene in social practices and could thereby produce new and very different sets of affordances for interaction. This experimental lens opened up potential opportunities in the future to reflect on interaction practices and support desired outcomes, for instance, more equal social dynamics.

3.6 THEMES EMERGING FROM THE HYBRID WORK LITERATURE

Taken in isolation, each paper cited provides insights into the shift to hybrid work suggesting an incremental adjustment to prevailing working practices. However, taken as a whole, the changes required for organisations to achieve hybrid work practices that support organisational objectives and protect the health and wellbeing of employees seem far more profound.

The apparently straightforward decision to allow employees to WfH, when appropriate, has led to academics suggesting that:

- individuals need to develop new levels of self-discipline that hitherto has been provided by the rule-based rituals and routines imposed by visiting the office every day
- managers need to change their leadership styles to incorporate practices that develop social and emotional awareness of employees regardless of their location

Buildings and Cities

DOI: 10.5334/bc.350

• the physical layout of offices also needs to change to encourage different types of social interaction as well as focused time when they are in use and

• technology needs to be assessed not just for its functional requirements but also for the sociological impact of using these tools.

As a result, all employees need to be retrained in how to be effective in this new environment, managers need to return to school to understand the new demands of leadership, the information technology (IT) department needs to become sociologists, and facility managers need a new playbook.

This agenda seems daunting enough, but hovering over all this need for change are the warnings of serious negative impacts if organisations get it wrong: inequality could be baked into the hybrid model with younger employees and marginalised groups suffering disproportionately; individuals may vote for the flexibility and convenience of hybrid work, but as a result suffer from social isolation and a marked deterioration in work-life balance; organisations may be sacrificing the very creativity and innovation that makes them distinct; and stuck in the centre of all this are the poor middle managers who are expected to have all the answers.

The work published during the course of the COVID pandemic has therefore revealed a change to working practices within organisations potentially as profound as the changes brought about by Taylorism in the early 20th century. The 'scientific management' of Taylor (1911), through time and motion scrutiny of the workforce, improved economic productivity but at the expense of the care and dignity of the individual. The long-term impact was a loss of trust between employees and their employers.

Given the seismic shift in working practices suggested by the recent literature, this paper aimed to know more about what is happening in practice to obtain some insights about the day-to-day lived experience of hybrid work. The literature provided a focus on four key themes to analyse:

- How are individual choice, individual welfare and the needs of the organisation balanced?
- Are relational management practices more in evidence and are middle managers squeezed?
- Is physical office space changing to accommodate more social activities and are '3rd spaces' in use?
- Has technology moved beyond a means to replace face-to-face interaction?

The findings are described in the following section.

4. THE LIVED EXPERIENCE OF HYBRID WORK

4.1 BALANCING INDIVIDUAL CHOICE, INDIVIDUAL WELFARE AND ORGANISATIONAL NEEDS

To understand how potentially competing factors have been balanced in practice, the way in which decisions on WfH have been made were investigated. Hybrid work was in force for all six of the organisations interviewed. For three organisations hybrid work was not a possibility prepandemically, but in all cases the pandemic had prompted a shift towards a greater proportion of days worked from home. No difference was found in today's lived experience between those organisations that had some element of hybrid working in place before the pandemic and those that did not.

The policies that determined who could WfH, how often and on which days varied between the organisations interviewed, but two criteria for making this decision were prominent. The first related to the needs of the company, where five out of six varied the number of days employees were required in the office based on the nature of the job being performed. For example, in the insurance company (INS) the client-facing brokers were in most days, underwriters three to five days, and actuaries and analysts one to two days. Similarly, in HE, professional service staff were

typically in the office three days per week and academics far fewer. The exception (architecture—ARCH) specified the same numbers of days required in the office for all employees. Beyond the demands of specific roles, four of the six provided company-wide guidance on the number of inoffice days, whilst in the other two the policy was decided at the team level.

The second criterion used by all six organisations was that of personal choice, as highlighted by this design participant:

The preference for in-office days differs by personal circumstances, where people live, travelling and commuting times and personalities—social ones are more likely to come in.

[DES]

These criteria for selecting who should work from the office and when appear to be rather functional and individualistic and lack considerations of the impact on others. With one exception, little evidence was found that thought had been given to individual welfare. The possible impact of these policies on wellbeing, work-life balance, the innovative value of chance encounters and the possible marginalisation of certain groups such as more junior colleagues feature far less prominently in decision-making.

This omission of social criteria was highlighted by the rather more considered policies of ARCH, where the managing partners had developed a hybrid work schedule that split the entire organisation into five cohorts of approximately 50 people, each with two or three partners. Each cohort was asked to be in the office three days per week, with a minimum of two. The schedule meant cohorts overlapped, ensuring they met with different groups and cohorts each time.

In addition, it was found in five of the six companies that the personal support offered to employees to work effectively in a hybrid environment was also rather functional. The technical ability to set up and dial into remote team meetings and to access work remotely was provided, but training on the softer skills, such as avoiding social isolation or finding a clear demarcation between work and home life when WfH, appeared absent. Again, there was an exception, this time in TECH who provided online platforms focused on looking after mental health in the hybrid office.

4.2 RELATIONAL MANAGEMENT PRACTICES AND THE SQUEEZE ON MIDDLE MANAGERS

Difficulties in the development of meaningful working relationships within teams and between middle managers and their teams were evident.

There was a marked change in the interaction between managers and their direct reports. The clearest manifestation of this was the increase in formal one-to-one meetings between managers and their team members. Four of the six organisations interviewed reported on this directly, for example:

Senior managers had to adapt their style to the new hybrid approach where during prepandemic times they would talk to people randomly relying on who they can see in the office. Post-pandemic, there is a shift towards more formal 1–1's because they cannot rely on those chance encounters anymore.

[TECH]

This formalisation of the relationship between manager and employee was also found between team members who tended to interact through formally arranged meetings with agendas and time limits.

A recognition that hybrid work lacked opportunities for informal interaction central to the development of close working relationships was apparent in attempts to find alternative mechanisms for encouraging the socialisation of teams. Examples included a meeting-free day in TECH, and specially organised social events in design (DES). Yet these events were in the most part considered extracurricular and could therefore only ever be a partial solution to the loss of opportunities to develop close personal relationships.

The means of producing meaningful social bonds within the hybrid office appeared to be difficult to achieve in practice. This was not set as an explicit task in any of the companies, but rather something that all the middle managers interviewed knew intuitively needed to be achieved and willingly took on. Yet the difficulty of the task was not fully recognised by the organisation, and this might create an unsustainable pressure on middle managers in the future.

Sailer et al.
Buildings and Cities
DOI: 10.5334/bc.350

4.3 PHYSICAL SPACE, SOCIAL ACTIVITIES AND THIRD SPACES

Examples of the redesign of office space to accommodate more collaborative work and encourage more social activities were found, but overall there was a frustration that these changes had not gone far enough or fast enough.

Office redesign was made possible because in all six cases office occupancy had dropped due to hybrid working practices. Four of the six organisations had either reduced the office space used or accommodated growth within the same area.

For example, ARCH consolidated three offices into one and implemented activity-based working. In support, workstations were fitted with screens, and lockers for personal belongings were provided. The workspace of TECH featured more small meeting rooms, whiteboards and single/double-use booths. Desk-sharing and bookable spaces were introduced post-pandemically. INS sublet some office space despite growth of 10% per quarter. The number of meeting rooms increased substantially post-pandemically to accommodate video conferencing and team meetings. This was achieved in part by converting offices into meeting rooms and big meeting rooms into smaller ones. In DES, some personal offices were removed and desks reduced in size to introduce more flexible collaborative areas, labelled 'touchdown spaces'.

Despite these changes in office design, the analysis showed that most of the frustrations and tensions of hybrid work arose when staff considered the changes to office space to have not gone far enough, thus imposing constraints on the types of social interaction they believed were necessary. All six of the interviewees described the benefit of WfH for focused work and using the office for conversations and collaboration. However, the challenges created by these arrangements were highlighted by this finance interviewee:

I feel more productive working from home because it is easier to focus especially when writing a report and doing data analysis. Home also allows me to organise the day and schedule planned meetings. The office is good for face-to-face interactions and random encounters and allows me to meet new people. Without the random encounters in the office, I would not meet people who recently joined the company and as a consequence they would not get to join the virtual meetings I organise from home. I'd say that our work has become more siloed rather than collaborative.

[FIN]

Similar sentiments were expressed elsewhere: INS wanted more 'chill out areas and a shared gym'; ARCH liked the introduction of activity-based working, but argued that the clusters of desks should be smaller to create more collaboration space; and DES wanted more soft seating and breakout spaces and for the office to be of greater quality overall to encourage people to spend more time there.

Although all interviewees commented on the benefits of WfH for focused work, there was little evidence that the organisations had invested in these spaces to make them fit for purpose, and no mention that the organisations had provided the option of 'third spaces' for employees who could not create the right environment at home.

4.4 HAS TECHNOLOGY MOVED BEYOND A REPLICATION OF FACE-TO-FACE INTERACTION?

As with the commentary on spaces above, the technology required for hybrid work had attracted investment in all six companies and had transformed during the pandemic. Despite this, the technology also remained a source of frustration in all six because it fell short of facilitating

the types of informal interaction made possible by the pre-pandemic office. A typical comment suggested:

Sailer et al. Buildings and Cities DOI: 10.5334/bc.350

One problem we have is that when you have a meeting with remote participants, it's very hard to not disengage when you are remote and only listening.

[TECH]

It can be concluded that despite considerable investment in technology, the investments made did little more than make hybrid work possible and were not yet being used to develop fundamentally new ways of working that would be more effective in a hybrid environment.

5. DISCUSSION

This paper asked for commonly emerging concerns in hybrid work through a scan of the recent literature and a glimpse into its lived experience.

5.1 THEORETICAL INSIGHTS VERSUS LIVED EXPERIENCE

The research questions were answered through a socio-spatial lens, as suggested in this paper's aims. The wellbeing of employees through overwork, social isolation, and the potential for unintended discrimination and marginalisation is a very real concern, as is the danger of organisational siloes and a potential loss of culture, cohesion and innovation. This is not necessarily due to bad intentions or inconsiderate strategies, but more an unintended consequence of the complexity of the issues at hand and the pressure on both individuals and organisations to act in the face of uncertainty.

It is worth noting that solutions appearing preferable at first sight, such as the choice made by many employees to WfH as much as possible, may have counter-intuitive downsides, not just for the employees themselves but also strategically for the organisation as a whole, e.g. in fostering unwanted silo effects.

For some aspects of hybrid work, the literature and lived experiences did not concur. In some cases, the literature suggested more forward-thinking approaches that were not yet found across the small sample of interviewees such as technology that goes beyond replicating known contact patterns; relational leadership; or using offices predominantly for social and collaborative functions. In addition, less explicit pressure amongst the middle managers interviewed was found than the literature suggested. However, these pressures manifested at the conjunction of the social interaction desired and spatial networks in use. It is also possible that those conflicts are still in the making and will surface as hybrid work continues to unfold and develop.

5.2 CREATING A HOLISTIC SOCIO-SPATIAL PERSPECTIVE

Finally, a proposition is made to adequately address the immense complexities of hybrid work and the challenge ahead through an interdisciplinary approach that builds bridges between people and place concerns, and that is the perspective of architectural sociology.

What is meant by architectural sociology is a systematic consideration of the social effects of spatial design choices. In this socio-spatial perspective, space is not seen as a neutral container of a certain size and with particular characteristics such as location, colour or materials, but rather as a mechanism of bringing people together or keeping them apart (Hillier & Hanson 1984). The success of the physical office pre-pandemically despite all the critique of inadequate layout choices as evident in the open-plan debate, and despite all the calls for the death of the office with the advent of mobile computing devices might as well be its subtle abilities to nurture the human need for connection and social belonging. The fundamental questioning of the need for offices caused by the pandemic upheaval requires a reconsideration of what offices are good for psychologically, socially and organisationally. Extant research using the socio-spatial 'space syntax' paradigm has highlighted how spatial structures lead to co-presence and encounters (Backhouse & Drew 1992), and how those interactions in turn lead to positive outcomes such as knowledge-sharing (Peponis

Buildings and Cities

DOI: 10.5334/bc.350

et al. 2007), social network relations (Wineman et al. 2014) and innovation (Toker & Gray 2008). Space, in this view, is not a determinant of behaviour but rather an opportunity structure (Sailer & Li 2022), a scaffolding for social practices to emerge and depending on how space is configured, a vehicle to make particular outcomes more likely.

In the same vein as the configuration of physical spaces can be conceptualised as socially and organisationally consequential, the configuration of digital tools creates affordances for behaviour, as powerfully argued by the human-computer interaction and sociomateriality communities. Digital spaces are thus spaces too, to be included in a socio-spatial perspective of hybrid work. In fact, Hillier & Hanson (1984) have offered a lens through which to theorise the different ways in which people connect to one another as (1) spatial, for instance guided by proximity or copresence, or (2) 'transpatial', inspired by social similarities or bonds such as kinship, affiliation, group membership, etc. Where physical space has been seen as an antecedent to the formation of network ties (Small & Adler 2019), digital spaces can certainly play a similar role, yet differently shaped and possibly less well understood to date.

To reframe the challenge of hybrid work then through the lens of architectural sociology means considering the social and organisational impact when the spatial configuration of the office is no longer the sole arena for solidarities to form and for practices to be enacted. Digital tools and their different sets of affordances for interaction, social cohesion and organisational culture need reflecting on, likewise. How employees cope and how managers lead through a combination of using physical and digital spaces to foster desirable social and organisational outcomes, and what this means for RE, is all included in this socio-spatial perspective inspired by architectural sociology, thus combining all five domains of this paper.

5.3 LIMITATIONS

The limitations of this paper centre mainly on the difficulty of remaining on top of a topic that is changing dynamically. At the beginning of 2020, no one would have predicted the profound changes occurring in the world of work and particularly workplaces due to the pandemic. Based on the research insights of this paper, it can be argued that we are only now beginning to understand the actual immensity of the change and its implicit challenges, thanks to the plethora of studies that have been undertaken and those still in the making.

The speed at which the discourse has been moving, in both the scholarly domain and even more so in the world of practice, has necessitated working with the literature informally without sacrificing scientific rigour or critical distance. Thus, two worthwhile tasks for future research suggest themselves: first, to undertake a systematic review of the scholarly literature further down the line once the discourse has solidified somewhat; and second, developing explicit methodologies for dealing with a topic in flux and being confronted with an avalanche of material could be a relevant piece of research that might inform future studies in a variety of fields.

Another limitation lies in the limited sample of the interviews undertaken. A future research agenda on hybrid work might include broadening perspectives by interviewing across industries, roles, gender and diverse geographical locations. Adapting the questions to explicitly ask for pressures, conflicts and how balancing is achieved would probably unearth further insights.

More detailed interviews might directly inform best practice, as any office-based knowledge-intensive organisation had to position itself in the last months and years, often without access to data and insights. Many have opted for a hybrid model (HubbleHQ 2023), and according to the latest surveys, it seems that choices are beginning to solidify. For instance, the Bay Area Council Economic Institute (2023) found it its latest survey in March 2023 that 73% of employers believe they are already operating under their 'new normal' and do not envisage further changes.

6. CONCLUSIONS

This paper has provided an overview of how hybrid work, *i.e.* the practice of shifting the locus of work between an office building and other places—in practice currently predominantly home—has

developed in the years since the COVID pandemic. Through a scan of the literature and interviews with a small sample of hybrid workers, it has highlighted challenges as well as emerging strategies by adopting a socio-spatial lens, thus bringing divergent approaches together.

Sailer et al. Buildings and Cities DOI: 10.5334/bc.350

What this paper has contributed to the debate on hybrid work at this point in time is an elaborate sketch of some of the key themes and strategic questions facing organisations post-pandemically. Reaching across disciplinary boundaries and summarising research from the five different domains of human relations, management, architecture, real estate and technology allowed the drawing of a detailed picture of the current state of the art in hybrid work in mid-2023. Reflecting on the enormity of the transformation and the challenges identified, it might turn out to be premature to think that the matter of hybrid work has already been settled, despite the amount of research undertaken to date and the views from many organisations believing that they are already operating under their 'new normal'. Organisations might still need to try out different options and adjust their modus operandi over time, also reacting to what other organisations have found to work for them and their industry more broadly.

Pushing further for an interdisciplinary view of hybrid work, and a transdisciplinary one, considering practitioner concerns alongside academic questions seems needed to truly understand the issue at hand. In suggesting the perspective of architectural sociology as a holistic approach, further fruitful debates around the people, places and technologies that make up hybrid work are anticipated.

NOTES

- 1 See https://interiorarchitects.com/projects/dropbox/.
- 2 See https://www.oed.com/view/Entry/89809#eid1341549790.
- 3 See https://trends.google.com/trends/explore?date=2020-01-01%202022-11-10&q=hybrid%20working.
- 4 Architectural sociology is still an emerging field, especially in the Anglo-American discourse. The field is much more mature in Germany with several book publications sketching the domain (e.g. Delitz 2009).
- 5 This refers to the theory of sociomateriality, a subdomain of organisation studies interested in the entanglement of the social and the material, particularly based on intersections with technology.

ACKNOWLEDGEMENTS

The authors thank the interviewees for their time and valuable insights provided.

AUTHOR AFFILIATIONS

Kerstin Sailer (D orcid.org/0000-0001-6066-7737

Bartlett School of Architecture, University College London, London, UK

Matt Thomas (D) orcid.org/0000-0001-8505-390X

Department of Strategy and International Business, The Business School, University of Birmingham, Birmingham, UK

Rosica Pachilova (D) orcid.org/0000-0002-1248-6381

Bartlett School of Architecture, University College London, London, UK

AUTHOR CONTRIBUTIONS

All authors have equally contributed to the original research presented in this paper as well as to the writing of the manuscript.

COMPETING INTERESTS

The authors have no competing interests to declare.

Sailer et al.
Buildings and Cities
DOI: 10.5334/bc.350

ETHICAL APPROVAL

Since the interviews were not recorded and of a non-sensitive nature, the research was exempt from formal ethical approval.

FUNDING

No funding was received.

REFERENCES

- Appel-Meulenbroek, R., Kemperman, A., van de Water, A., Weijs-Perrée, M., & Verhaegh, J. (2022). How to attract employees back to the office? A stated choice study on hybrid working preferences. *Journal of Environmental Psychology*, 81, 101784. DOI: https://doi.org/10.1016/j.jenvp.2022.101784
- **Babapour Chafi, M., Hultberg, A.,** & **Bozic Yams, N.** (2022). Post-pandemic office work: Perceived challenges and opportunities for a sustainable work environment. *Sustainability*, 14(1), 294. DOI: https://doi.org/10.3390/su14010294
- **Backhouse, A.,** & **Drew, P.** (1992). The design implications of social interaction in a workplace setting. *Environment and Planning B: Planning and Design*, 19, 573–584. DOI: https://doi.org/10.1068/b190573
- **Bailenson, J. N.** (2021). Nonverbal overload: A theoretical argument for the causes of zoom fatigue. *Technology, Mind, and Behavior*, 2(1). DOI: https://doi.org/10.1037/tmb0000030
- Bakke, J., & Yttri, B. (2003). Hybrid infrastructures for knowledge work. In Proceedings to the 4th International Space Syntax Symposium, London, UK. https://www.spacesyntax.net/symposia-archive/ SSS4/fullpapers/42Bakke-Yttripaper.pdf
- **Bay Area Council Economic Institute.** (2023). Bay Area Council Employer Network: Return to Office Tracking Poll, 28 March 2023. https://public.flourish.studio/story/1872649/
- **Berger, S., Weber, F.,** & **Buser, A.** (2021). *Hybrid work compass. Navigating the future of how we work.*Universität St. Gallen. https://www.alexandria.unisg.ch/264298/1/2021_Hybrid%20Work%20Compass_Report.pdf
- Berkun, S. (2013). The year without pants: WordPress.com and the future of work. Jossey-Bass.
- Bleakley, A., Rough, D., Edwards, J., Doyle, P., Dumbleton, O., Clark, L., Rintel, S., Wade, V., & Cowan, B. R. (2021). Bridging social distance during social distancing: Exploring social talk and remote collegiality in video conferencing. *Human–Computer Interaction*, 1–29. DOI: https://doi.org/10.1080/07370024.2021.1 994859
- **Bloom, N., Han, R.,** & **Liang, J.** (2022). *How hybrid working from home works out* (Working Paper Series No. 30292, July 1). National Bureau of Economic Research (NBER). https://www.nber.org/papers/w30292. DOI: https://doi.org/10.3386/w30292
- **CABE.** (2005). The impact of office design on business performance. Commission for Architecture and the Built Environment (CABE) and British Council for Offices.
- **CBRE.** (2022a). *Make hybrid work. A framework for the ultimate hybrid working model.* https://www.cbre.co.uk/insights/articles/make-hybrid-work-a-framework-for-the-ultimate-hybrid-working-model
- **CBRE.** (2022b). UK office market figures report, Q4 2022. https://www.cbre.co.uk/insights/figures/uk-office-market-figures-q4-2022
- **Choudhury, P.** (2020). Our work-from-anywhere future. *Harvard Business Review*, November 1. https://hbr.org/2020/11/our-work-from-anywhere-future. DOI: https://doi.org/10.5465/AMBPP.2020.225
- Delitz, H. (2009). Architektursoziologie. Transcript. DOI: https://doi.org/10.1515/9783839410318
- **Fayard, A.-L., Weeks, J., & Khan, M.** (2021). Designing the hybrid office. From workplace to culture space. *Harvard Business Review*, March–April, 2–11. https://hbr.org/2021/03/designing-the-hybrid-office
- Gauger, F., Bachtal, Y., & Pfnür, A. (2022). Work experience from home: Hybrid work and the future of distributed work locations—A comparative empirical analysis between the US and Germany. Corporate Real Estate Journal, 11(3), 280–292. https://www.ingentaconnect.com/contentone/hsp/crej/2022/00000011/00000003/art00009
- **Gratton, L.** (2021). How to do hybrid right. *Harvard Business Review*, May 1. https://hbr.org/2021/05/how-to-do-hybrid-right

- **Gupta, A., Mittal, V.,** & **Van Nieuwerburgh, S.** (2022). Work from home and the office real estate apocalypse (Working Paper Series No. 30536). National Bureau of Economic Research (NBER). http://www.nber.org/papers/w30526. DOI: https://doi.org/10.3386/w30526
- **Halford, S.** (2005). Hybrid workspace: Re-spatialisations of work, organisation and management. New Technology, Work and Employment, 20(1), 19–33. DOI: https://doi.org/10.1111/j.1468-005X.2005.00141.x
- **Hartmans, A.** (2021). Zillow is adopting a hybrid model of work, but its CEO says it's trying to prevent one major downside: A 'two-class system' where those who come into the office are viewed as better employees. *Business Insider*. https://www.businessinsider.com/hybrid-work-models-could-hurt-remote-workers-zillow-ceo-warns-2021-2
- **Hassell.** (2021). Remote? In-person? Hybrid? How to structure the workplace after COVID. Hassell Studios. https://www.hassellstudio.com/research/how-to-structure-the-workplace-after-covid-19
- **Hassell.** (2022). The magnetic workplace. 2022 Workplace Futures Survey. Hassell Studios. https://www.hassellstudio.com/research/the-magnetic-workplace-2022-workplace-futures-survey
- Hillier, B., & Hanson, J. (1984). The social logic of space. Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511597237
- **Hirsch, P. B.** (2021). Sustaining corporate culture in a world of hybrid work. *Journal of Business Strategy*, 42(5), 358–361. DOI: https://doi.org/10.1108/JBS-06-2021-0100
- **Hopkins, J.,** & **Bardoel, A.** (2023). The future is hybrid: How organisations are designing and supporting sustainable hybrid work models in post-pandemic Australia. *Sustainability*, 15(4), 3086. DOI: https://doi.org/10.3390/su15043086
- **Horowitz, B.** (2022). Dropbox tossed out the workplace rulebook. Here's how that's working. *Time*, September 12. https://time.com/6204715/dropbox-remote-work/
- **HubbleHQ.** (2023). The official list of every company's back-to-office strategy (updated weekly). https://hubblehq.com/blog/famous-companies-workplace-strategies
- **Johnson, B. J.,** & **Mabry, J. B.** (2022). Remote work video meetings: Workers' emotional exhaustion and practices for greater well-being. *German Journal of Human Resource Management*, 36(3), 380–408. DOI: https://doi.org/10.1177/23970022221094532
- Kaiser, S., Suess, S., Cohen, R., Mikkelsen, E. N., & Pedersen, A. R. (2022). Working from home: Findings and prospects for further research. *German Journal of Human Resource Management: Zeitschrift für Personalforschung*, 36(3), 239700222211069. DOI: https://doi.org/10.1177/23970022221106973
- **Karabinski, T., Haun, V. C., Nübold, A.,** et al. (2021). Interventions for improving psychological detachment from work: A meta-analysis. *Journal of Occupational Health Psychology*, 26(3): 224–242. DOI: https://doi.org/10.1037/ocp0000280
- **Knight, C., Olaru, D., Lee, J. A.,** & **Parker, S. K.** (2022). The loneliness of the hybrid worker. *MIT Sloan Management Review*. https://sloanreview.mit.edu/article/the-loneliness-of-the-hybrid-worker/
- **Konovalova, V. G., Petrenko, B. V.,** & **Aghgashyan, R. V.** (2022). Choosing a hybrid work model and new challenges. In *Proceedings of the International Scientific Conference Smart Nations: Global Trends in the Digital Economy* (pp. 547–554). DOI: https://doi.org/10.1007/978-3-030-94873-3 69
- **Kossen, C.,** & **van der Berg, A. M.** (2022). When the exception becomes the norm: A quantitative analysis of the dark side of work from home. *German Journal of Human Resource Management: Zeitschrift für Personalforschung*, 36(3), 213–237. DOI: https://doi.org/10.1177/23970022221083695
- **Krehl, E.-H., & Büttgen, M.** (2022). Uncovering the complexities of remote leadership and the usage of digital tools during the COVID-19 pandemic: A qualitative diary study. *German Journal of Human Resource Management: Zeitschrift für Personalforschung*, 36(3), 325–352. DOI: https://doi.org/10.1177/23970022221083697
- **Leesman.** (2022a). *Purposeful Presence: How and why employees return.* https://www.leesmanindex.com/purposeful-presence/
- **Leesman.** (2022b). *Hybrid: Where are the risks hidden in the hype?* https://www.leesmanindex.com/hybrid-where-are-the-risks-hidden-in-the-hype/
- Mark, G., Kun, A. L., Rintel, S., & Sellen, A. (2022). Introduction to this special issue: The future of remote work: Responses to the pandemic. *Human–Computer Interaction*, 37(5), 397–403. DOI: https://doi.org/10.1080/07370024.2022.2038170
- Martín-Martín, A., Orduna-Malea, E., Thelwall, M., & Delgado López-Cózar, E. (2018). Google Scholar, Web of Science, and Scopus: A systematic comparison of citations in 252 subject categories. *Journal of Informetrics*, 12(4), 1160–1177. DOI: https://doi.org/10.1016/j.joi.2018.09.002
- **McVeigh-Schultz, J.,** & **Isbister, K.** (2022). A 'beyond being there' for VR meetings: Envisioning the future of remote work. *Human–Computer Interaction*, 37(5), 433–453. DOI: https://doi.org/10.1080/07370024.20 21.1994860

- Myerson, J., & Ross, P. (2022). Unworking. The reinvention of the modern office. Reaktion.
- Naor, M., Pinto, G. D., Hakakian, A. I., & Jacobs, A. (2022). The impact of COVID-19 on office space utilization and real-estate: A case study about teleworking in Israel as new normal. *Journal of Facilities Management*, 20(1), 32–58. DOI: https://doi.org/10.1108/JFM-12-2020-0096
- **National Research Council.** (1994). Research recommendations to facilitate distributed work. National Academies Press. DOI: https://doi.org/10.17226/4812
- Nilles, J. M., Carlson, E R., Jr., Gray, P., & Hanneman, G. J. (1976). The telecommunications–transportation tradeoff: Options for tomorrow. Wiley.
- **Odom, C. L., Franczak, J.,** & **McAllister, C. P.** (2022). Equity in the hybrid office. *MIT Sloan Management Review*, 63(3), 1–4. https://sloanreview.mit.edu/article/equity-in-the-hybrid-office/
- Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization Studies*, 28(9), 1435–1448. DOI: https://doi.org/10.1177/0170840607081138
- **Padan, Y.** (2020). Practising ethics guides to built environment research: #2 Asking questions. https://www.practisingethics.org/s/2-Asking-Questions.pdf
- **Patel, N.** (2022). Mining public opinion about hybrid working with RoBERTa | Empirical quests for management essences. *Researchberg.com*, 2(1). https://researchberg.com/index.php/eqme/article/view/48
- Peponis, J., Bafna, S., Bajaj, R., Bromberg, J., Congdon, C., Rashid, M., Warmels, S., Yan, Z., & Zimring, C. (2007). Designing space to support knowledge work. *Environment and Behavior*, 39(6), 815–840. DOI: https://doi.org/10.1177/0013916506297216
- **Privett, I.** (2020). Experience unbound. The effects of coworking on workplace design practice (PhD dissertation, Royal College of Art, London). https://researchonline.rca.ac.uk/4444/
- Rahaman, M. S., Kudo, S., Rawling, T., Ren, Y., & Salim, F. D. (2020). Seating preference analysis for hybrid workplaces. *Paper presented at the NFW'20: Symposium on New Future of Work. ArXiv.* DOI: https://doi.org/10.48550/arXiv.2007.15807
- Sailer, K., Koutsolampros, P., & Pachilova, R. (2021a). Differential perceptions of teamwork, focused work and perceived productivity as an effect of desk characteristics within a workplace layout. *PLoS ONE*, 16(4), e0250058. DOI: https://doi.org/10.1371/journal.pone.0250058
- Sailer, K., & Li, X. (2022). Spatial opportunity structures for resilient social networks: The role of architectural and urban form. In E. Lazega, T. A. B. Snijders & R. P. M. Wittek (Eds.), A research agenda for social networks and social resilience (pp. 239–256). Edward Elgar. DOI: https://doi.org/10.4337/9781803925783.00022
- Sailer, K., & Thomas, M. (2021). Socio-spatial perspectives on open-plan versus cellular offices. *Journal of Managerial Psychology*, 36(4), 382–399. DOI: https://doi.org/10.1108/JMP-10-2019-0556
- Sailer, K., Thomas, M., & Pachilova, R. (2022). A hybrid office how-to: Developing a framework to address the complexities of the post-pandemic return to the physical office. Paper presented at the Transdisciplinary Workplace Research Conference, Milan, Italy (pp. 543–552). https://www.twrnetwork.org/wp-content/uploads/2022/11/TWR-III-Proceedings.pdf
- Sailer, K., Thomas, M., Pomeroy, R., & Pachilova, R. (2021b). The innovation deficit: The importance of the physical office post COVID-19. *Corporate Real Estate Journal*, 11(1), 79–92. https://www.ingentaconnect.com/content/hsp/crej/2021/00000011/00000001/art00010/
- **Schade, H. M., Digutsch, J., Kleinsorge, T.,** & **Fan, Y.** (2021). Having to work from home: Basic needs, wellbeing, and motivation. *International Journal of Environmental Research and Public Health*, 18(10), 5149. DOI: https://doi.org/10.3390/ijerph18105149
- **Skerlavaj, M.** (2022). *Post-heroic leadership. Context, process and outcomes*. Palgrave Macmillan/Springer Nature. DOI: https://doi.org/10.1007/978-3-030-90820-1
- Small, M. L., & Adler, L. (2019). The role of space in the formation of social ties. *Annual Review of Sociology*, 45(1), 111–132. DOI: https://doi.org/10.1146/annurev-soc-073018-022707
- **Taber, L., Dominguez, S.,** & **Whittaker, S.** (2022). Cats, kids, and video calls: How working from home affects media self-presentation. *Human–Computer Interaction*, 37(5), 454–479. DOI: https://doi.org/10.1080/07 370024.2021.1970557
- **Taylor, F. W.** (1911). The principles of scientific management. Harper.
- **Taylor, H., Florisson, R.,** & **Hooper, D.** (2021). Making hybrid inclusive—Key priorities for policymakers. https://www.managers.org.uk/wp-content/uploads/2021/10/wf-cmi-making-hybrid-inclusive-policy-brief.pdf
- **Toker, U.,** & **Gray, D. O.** (2008). Innovation spaces: Workspace planning and innovation in U.S. university research centers. *Research Policy*, 37, 309–329. DOI: https://doi.org/10.1016/j.respol.2007.09.006
- **van Meel, J.** (1995). *Workplaces today*. Centre for Facilities Management—Realdania Research, Technical University of Denmark.

- Van Nieuwerburgh, S. (2023). The remote work revolution: Impact on real estate values and the urban environment (Working Paper Series No. 30662). National Bureau of Economic Research (NBER). http://www.nber.org/papers/w30662. DOI: https://doi.org/10.3386/w30662
- Vartiainen, M., Hakonen, M., Koivisto, S., Mannonen, P., Nieminen, M. P., Ruohomäki, V., & Vartola, A. (2007). *Distributed and mobile work—Places, people and technology*. https://research.aalto.fi/en/publications/distributed-and-mobile-work-places-people-and-technology
- **Vartiainen, M., & Hyrkkänen, U.** (2010). Changing requirements and mental workload factors in mobile multi-locational work. *New Technology, Work and Employment*, 25(2), 117–135. DOI: https://doi.org/10.1111/j.1468-005X.2010.00243.x
- **Vyas, L.** (2022). 'New normal' at work in a post-COVID world: Work-life balance and labor markets. *Policy and Society*, 41(1), 155–167. https://academic.oup.com/policyandsociety/article/41/1/155/6512154. DOI: https://doi.org/10.1093/polsoc/puab011
- **Wendsche, J., de Bloom, J., Syrek, C.,** et al. (2021). Always on, never done? How the mind recovers after a stressful workday? *German Journal of Human Resource Management*, 35(2): 117–151. DOI: https://doi.org/10.1177/23970022211004598
- Wineman, J., Hwang, Y., Kabo, F., Owen-Smith, J., & Davis, G. F. (2014). Spatial layout, social structure, and innovation in organizations. *Environment and Planning B: Planning and Design*, 41(6), 1100–1112. DOI: https://doi.org/10.1068/b130074p
- Yang, L., Holtz, D., Jaffe, S., Suri, S., Sinha, S., Weston, J., Joyce, C., Shah, N., Sherman, K., Hecht, B., & Teevan, J. (2021). The effects of remote work on collaboration among information workers. *Nature Human Behaviour*, 6(6). DOI: https://doi.org/10.1038/s41562-021-01196-4

TO CITE THIS ARTICLE:

Sailer, K., Thomas, M., & Pachilova, R. (2023). The challenges of hybrid work: an architectural sociology perspective. *Buildings and Cities*, 4(1), pp. 650–668. DOI: https://doi.org/10.5334/bc.350

Submitted: 25 April 2023 **Accepted:** 04 August 2023 **Published:** 23 August 2023

COPYRIGHT:

© 2023 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See http://creativecommons.org/licenses/by/4.0/.

Buildings and Cities is a peerreviewed open access journal published by Ubiquity Press.

