A Brave New Workplace
Disclosing the smart and the dark sides of the alternative office spaces

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Some parts of this PhD thesis have already been published as:

Abstract

In recent decades, several knowledge work organizations have introduced alternative workplaces (AWs) that are implemented through flexible and collaborative office models. Their rapid diffusion has been prompted by the deterministic assumption that these may influence workers’ relations and behaviors in the office, in a way that is conducive to greater collaboration and adaptive flexibility. Yet, the scarce empirical fieldwork on alternative workplaces and their multidisciplinary nature limit our understanding of their actual implications for people and organizations.

This thesis questions the validity of the deterministic assumption guiding the implementation, use, and design of AWs, and identifies a set of approaches that companies and managers can employ to avoid inconsistencies and negative outcomes. To do this, this thesis builds upon a collection of studies that have been designed to address four research questions. The first study identifies a framework for AWs that has been used as a cognitive model to interpret the results and draw the boundaries of the empirical fieldwork (RQ1). The framework has been employed in an exploratory analysis, aimed at a systematic overview of the barriers and enablers that companies encounter when implementing AWs (RQ2). The second study explores how AWs are experienced by individuals and groups of knowledge workers, by bringing new opportunities and challenges that cast themselves as oppositional tensions (RQ3). The third study looks at how knowledge workers interpret the AW and enact its organization, by means of spatial practices that problematize the status of its flexible and permeable boundaries (RQ4). The fourth study develops a systematic approach to identifying the spatial implications of AWs (RQ3, 4).

Drawing upon these studies, the thesis posits three important contributions. First, it feeds the discussions on AWs by bringing new empirical evidence in a relatively under-researched area. Second, it advances the concept of the AW, by providing a high-level model synthesizing the different organizational areas in which implementation and discourses have taken place. This thesis advocates the need to bring together the discussions on the different aspects of the AW under the same banner, to better investigate
the interactional effects between different implementation areas. Third, the thesis contributes to workplace research and sociology of space by shedding some light on the impact of the spatial reconfiguration of work activities and relations brought by AWs to people and companies. From a practical perspective, this thesis identifies some approaches that are available to companies and their managers to handle the tensions and the identity threats that arise in the new office environment.
Sammanfattning


Utifrån dessa studier lämnar avhandlingen tre centrala bidrag. För det första bidrar avhandlingen med empiriska studier av ett relativt obeforskat område. För det andra presenteras en övergripande modell för AW, vilken
syntetiserar de underdiscipliner som diskuterar AW. Av speciellt intresse är interaktionseffekterna mellan olika implementeringsområden. För det tredje bidrar avhandlingen till arbetsplatsforskningen, och då speciellt rumssociologin genom att belysa effekterna av den rumsliga rekonfigurationen av arbetsaktiviteter och relationer som AW påför människor och företag.

Slutligen, ur ett praktiskt perspektiv identifierar avhandling även metoderför företag och deras chefer för att hantera spänningarna och identitetsutmaningar vilka uppstår i AW.
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Claudia Manca
Stockholm, January 2020
List of appended papers

Paper 1


An earlier version of this paper was presented at the Global Innovation and Knowledge Academy. June, 2017. Lisbon, Portugal.

Paper 2


An earlier version of this paper was presented at the Strategic Management Society Special Conference on Human Capital. April, 2017. Milan, Italy.

Paper 3


Paper 4

Manca, C. “How alternative is the alternative workplace? Spaces for autonomy and control in the brave new office”. Working paper.

An earlier version of this paper was presented at the 35th EGOS Colloquium. July 2019. Edinburgh, United Kingdom.
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1. Setting the scene of the alternative workplace

The following is the testimony of a middle manager from one of the companies that I encountered in my empirical fieldwork.

“When you have dinner at home, the family usually sits together, they have their own seats. And I mean… when I go to sleep in the evening, I don’t pick my daughter’s bed, I pick my bed. You do what you’re used to. If you go by bus to work, you usually sit in the same section… so we tend to do things the way we’re used to doing them. And here, all of a sudden, we’re supposed to be so flexible and so creative and so ‘moveable’. It takes time to adjust.”

1.1. The phenomenon

In the last few decades, work and workspaces have undergone a dramatic transformation. Today, a large number of companies have provided flexibility to their staff\(^1\) so that work can be done across multiple sites, including away from the main office. Meantime, the virtual organizations of the gig economy are instituting platforms that increasingly replace physical offices, creating new virtual places for displaced workers (Gandini, 2018; Halford, 2005). Hence, it seems that reliance on knowledge as a key production factor and the increased availability of global technologies have displaced work activities and relations across a variety of physical and virtual settings (Halford, 2005), to the point that some have argued that work and its organization have become less dependent on specific physical locations and material assets (cf. Dale, 2005).

Yet, if we look at the current business scenario, there is broad evidence that companies still rely on their material and concrete conditions for the

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\(^1\) For example, the recent research conducted by EY and Timewise on flexible work in the UK (2017) reveals that 63% of the UK’s full-time employees already have flexible work options: https://timewise.co.uk/article/press-release-busting-mum-myth/
production, reproduction, and consumption of work, even when this is knowledge-based. Indeed, companies are increasingly experimenting with alternatives to conventional office designs. These alternatives are meant to reduce costs, but should also suit a flexible and digitally equipped workforce, and sustain activities that are increasingly knowledge-based, unstructured, and situation-specific (Bosch-Sijtsema et al., 2010; Davis et al., 2011; Gareis et al., 2006; Khazanchi et al., 2018; Laing, 2006).

Figure 1. The alternative workplace at Vasakronan
(Source: https://officesnapshots.com/2014/01/20/vasakronans-activity-based-headquarters/)
These experiments have given rise to several *alternative workplaces (AWs)*, where companies have combined new technologies, flexible arrangements, and non-conventional office settings that challenge the practices and assumptions of traditional office work (Apgar, 1998; Bean and Hamilton, 2006). In the traditional office, in fact, the high partitions, assigned offices, and functional divisions emphasize individualism, efficiency, and formal structures (De Wit and Van den Ende, 2000). In contrast, the AW has been depicted as a user-centric “*space-as-a-service approach*” (Oksanen & Ståhle, 2013: p 823), where the office space is supplemented with a range of services supporting flexibility and collaboration. These services are generally enabled by adjustable facilities, a variety of collaboration spaces, and embedded technologies that provide ubiquitous connectivity and access to work content (cf. Apgar, 1998).

AW, however, does not identify a unique model for managing and designing the office space. Instead, it is better described as an umbrella term that covers a plurality of different approaches. AWs, for example, have been studied as *collaborative workplaces (CWs)*. These can be depicted as organizational co-working spaces that aim at vertical and horizontal collaboration across formal organizational structures, to mimic the mechanisms for knowledge sharing that we can find in the virtual communities of practice (cf. de Vaujany, Dandoy, Grandazzi, & Faure, 2018). Partly overlapped with the CW concept, organizations are increasingly implementing *activity-based workplaces (ABWs)* by replacing permanently allocated desks and cubicles with hot desks and shared floor sections that support flexibility and different types of activities (Appel-Meulenbroek, Groenen, & Janssen, 2011; De Been & Beijer, 2014). Other companies and studies refer to *innovative workplaces, flex-offices, and new ways of working* (cf. Bosch-Sijtsema, Ruohomäki, & Vartiainen, 2010; Brunia, De Been, & Van der Voortd, 2016; ten Brummelhuis, Halbesleben, & Prabhu, 2011; Van Der Voordt, 2004) to describe slightly different approaches to office design, management, and use.

Independently from the specific approach, the organizational and managerial assumption guiding the introduction of AWs is that these allow for increased flexibility and collaboration (cf. Apgar, 1998; Dale & Burrell,
However, this assumption is not fully reflected by evidence from business and research, which often highlights unintended consequences of the new models and their spatial arrangements (e.g., Ashkanasy, Ayoko, & Jehn, 2014; Bernstein & Turban, 2018; Felstead, Jewson, & Walters, 2005; Irving, Ayoko, & Ashkanasy, 2019; Värlander, 2012). Studies have shown that AWs often bring conflicts (Ayoko and Härtel, 2003), trigger territoriality (Ashkanasy et al., 2014), undermine collegiality (Morrison and Macky, 2017), limit flexibility (Värlander, 2012), and reshuffle stationary workers (Waber et al., 2014). Considering that companies are increasingly experimenting with and committing to AWs, there is a need to problematize the new models and reconsider the general validity of the organizational assumptions guiding their adoption.

1.2. The theoretical problem

The material realm of the AW has long been confined to disciplines that are far beyond the scope of management and organization studies. These disciplines include architecture, ergonomics, and facility management, which have shown a preferred focus on the impact of the new office models on health-related outcomes, such as workers’ satisfaction, motivation, and well-being at work (e.g., Appel-Meulenbroek, Groenen, & Janssen, 2011; Rodriguez-Covili et al., 2011; Wohlers & Hertel, 2016).

Management and organization scholars, instead, have examined the implications of flexible and collaborative ways of working on behaviors and relations (e.g., Demerouti, Derks, ten Brummelhuis, & Bakker, 2014; Putnam, Myers, & Gailliard, 2014; ten Brummelhuis, Bakker, Hetland, & Keulemans, 2012). However, most of their contributions have studied the new ways of working as if they were happening in a vacuum, without considering the concrete and material aspects of the new office models that shape and constraint individual behaviors and collective processes (Bosch-Sijtsema et al., 2011; Halford, 2008). This represents an important limitation, since the rise and the rapid diffusion of AWs suggest a need to analyze work by including the role of the material and concrete aspects of the organizational space.
Recently, management and organization scholars have addressed these material and concrete aspects by examining collaboration affordances (Fayard and Weeks, 2007), the designs prompting flexible behaviors and interactions (Boutellier et al., 2008; Coradi et al., 2015a; Stryker et al., 2012), and why and how people avoid collaboration in collaborative buildings (Bernstein & Turban, 2018; Felstead, Jewson, & Walters, 2005; Irving et al., 2019). These studies implicitly emphasize the design aspects of the new office models, as conceived by managers and organizations. In this way, they portray the image of a static space, made for and passively experienced by knowledge workers. This image, however, overlooks the mutually constitutive nature of the material and social aspects of space (cf. Dale & Burrell, 2008; Sivunen & Putnam, 2019; Taylor & Spicer, 2007).

To overcome these limitations and take into account the material and social aspects of space as interrelated and mutually constitutive, I built the theoretical foundations of this thesis on the field of sociology of organizational space. Hence, in this work space is conceptualized as a rich, multi-layered combination that blends material and symbolic aspects and is experienced – but also produced – by workers through their spatial practices of mobility (de Vaujany & Mitev, 2013; Halford, 2008). In doing so, in contrast to the majority of prior studies on AWs, this thesis problematizes their materiality and the concrete spatial arrangements, paving the way for new insights into their implications for flexibility and collaboration at work.

1.3. Research objective, questions, and delimitations

The idea that AWs support flexibility and collaboration at work might be a preconception of managers and designers rather than a social fact. Instead, the reality can be much more contingent and impinge upon knowledge workers’ experiences and interpretations. This consideration suggests a need to take a deep dive into the social and behavioral implications of AWs, and to provide some insights into how the process of office redesign can be deployed to meet organizational and managerial expectations.
In this thesis, this overarching objective has been addressed by implementing three different perspectives on AWs: contingency, tension, and spatial. These perspectives correspond to the different research questions that emerged from the research journey described in the next paragraph.

- **RQ1.** How can the AW be conceptualized by embracing the different concepts that have been used to describe the latest trends in the design, use, and management of office space?
- **RQ2.** What are the internal contingency factors that influence the performance of AWs in terms of collaboration and flexibility enhancement?
- **RQ3.** How do the tensions and contradictions inherent in the AW operate?
- **RQ4.** How do knowledge workers’ experiences and interpretations of the AW relate to spatial practice and, thereby, to flexibility and collaboration in the office space?

These questions have been addressed in the context of knowledge work by involving in the analyses autonomous and skilled workers whose activities are relatively non-routine, unstructured, and often require cooperation on complex tasks (Pyöriä, 2005).

Since the AW does not imply a single and univocally-defined office configuration, the pass of my empirical analyses focuses on different types of AWs, as specified in Chapter 3.

1.4. My research journey and the emergence of the three perspectives

My PhD process could be described as an evolving journey, where the earlier findings have served to shape the formulation of new research questions. The overarching ambition was to contribute to workplace research by shedding some light on the implications of AWs in terms of people and organizations. This overarching ambition has been developed
throughout four studies, each with its specific objective. Table 1 presents an overview of these studies, which have been listed along with their type and their contributions to the research questions.

<table>
<thead>
<tr>
<th>Study</th>
<th>Title of the related paper</th>
<th>Type of study</th>
<th>Number of interviews</th>
<th>Research question(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Collaborative workplaces for innovation in service companies: Barriers and enablers for supporting new ways of working</td>
<td>Empirical</td>
<td>11</td>
<td>RQ1, RQ2</td>
</tr>
<tr>
<td>2</td>
<td>Tensions as a framework for managing work in collaborative workplaces: A literature review</td>
<td>Conceptual</td>
<td>_</td>
<td>RQ3</td>
</tr>
<tr>
<td>3</td>
<td>Living the brave new workplace: Territoriality, autonomy, and control in activity-based work</td>
<td>Empirical</td>
<td>37</td>
<td>RQ4</td>
</tr>
<tr>
<td>4</td>
<td>How alternative is the alternative workplace? Space for autonomy and control in the brave new office</td>
<td>Conceptual</td>
<td>_</td>
<td>RQ3, RQ4</td>
</tr>
</tbody>
</table>

Table 1. PhD framework

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2 A note on my contribution to the studies: I developed the initial idea and the theoretical reasoning, obtained access to most of the case companies, collected the data (except for the first batch of data for the third study), analyzed the data, collected and elaborated on the insights provided by my co-authors and wrote the papers synthesizing the results from each study.
The first months of my PhD journey were spent digging into the literature on workplace research, searching for the concepts and the discourses that have been employed by management and organization scholars to analyze the latest trends in the design, use, and management of office spaces. To identify the relevant articles, I conducted a systematic electronic search in different databases, including Scopus, Web of Science and Google Scholar, using a list of key words that have been drawn from my previous workplace consulting experience and brainstorming sessions with my thesis supervisors. The initial list included phenomenon-related items, such as new ways of working, agile office, flexible work/office, multi-space, activity-based office/work/workplace, and collaborative workplace. New terms from my ongoing reading, such as hybrid workspace, multi-locational work, and nomadic work, were regularly fed into this list.

To get a holistic view of AWs blending the technological, material, and social aspects, my first literature search included conceptual and empirical studies within different fields and disciplines, including social sciences, real estate, facility management, and information technology. Throughout this preliminary analysis, I found that most of the relevant studies tended to focus on the physical environment, the embedded technologies or the effects of flexible work options; however, they have largely overlooked the interactions between them (Chan et al., 2007). Thus, my initial ambition was to develop a multidisciplinary approach to AWs, in order to provide new insights into a topic that had been addressed by compartmentalized research streams that devoted their attention only to specific aspects of the new office. The multidisciplinary ambition partly explains my initial struggles to find a theoretical foundation on which to base my work. Nevertheless, this allowed me to approach the following inductive phase of my research with few preconceptions regarding the theories explaining the joint effect of different AW aspects on people and organizations.

This first exploratory study, combined with the preliminary analysis of the literature, allowed me to deepen my understanding of the interaction between AWs and the broader organizational context. These preliminary results were formalized in paper 1, in which my co-authors and I proposed a conceptual model for AWs and the internal contingency factors affecting
their outcomes. The inductive approach allowed us to add the contingency perspective to the analysis of AWs, which was missing in the literature, by highlighting the factors that hinder or contribute to the success of AW initiatives. In this first explorative study, we also detected some mechanisms through which the barriers that emerged from the analysis reinforce themselves, feeding certain tensions. These stem from the clashes between the organizational assumptions guiding AW introduction and knowledge workers’ experiences of the new office space.

The tension perspective was fully embraced in the second study. In developing this study, I returned to the literature collected in the first place and analyzed the articles that empirically explored the implications of AWs in terms of organizations and space users. To analyze prior literature, I applied a tension-based analytical lens (Putnam et al., 2014), aiming to identify the opposite forces, concepts, and behaviors that push and pull against each other when companies introduce AWs. In line with the overarching PhD objective, I devoted my attention to those tensions that originate from the misalignment between organizational expectations and workers’ experiences. Paper 2 presents the results of this literature analysis, showing how tensions evolve through the actions and interactions of the different organizational actors. These findings suggest that, when studying the implications of AWs, it is important to consider not only the way in which the office is configured by organizations and top managers to overwrite knowledge workers’ behaviors, but also how knowledge workers interpret the AW, and how their subjective meanings and interpretations relate to spatial and work practice.

This perspective was developed in paper 3, presenting an in-depth empirical investigation on how AW adoption affects knowledge workers’ relations, experiences, and meanings, and how these changes affect spatial and work practice. This inquiry provides a field study on three case organizations that have recently introduced AWs in the form of activity-based offices. Throughout the 37 interviews with knowledge workers at the case companies, my co-authors and I collected stories of acceptance, resistance, and negotiation, where the social, cultural, and material aspects of space became intertwined, highlighting some interesting consequences of AWs.
These stories have been analyzed by employing narrative analysis to explore the subjective interpretations of AWs made by knowledge workers and how these relate to practice. This study disclosed some identity threats presented by AWs and explored how knowledge workers mitigate such threats by reorganizing their space in a way that could undermine flexibility and collaboration at work.

Finally, the insights from the theoretical and empirical analyses were formalized in paper 4, which develops a systematic, conceptual approach to identifying the spatial implications of AWs.

**Figure 2.** Timeline for the research process, with different colors for the different studies
1.5. The structure of this work

This thesis is composed of six chapters.

Chapter 1 introduces the research background, sets the research problem, and presents the related research questions. Chapter 2 provides an overview of the AW discourses across different research streams and proposes spatial theory as the theoretical lens through which to look at the phenomenon, by introducing its fundamental assumptions and explaining how this perspective can enrich our understanding of AWs. Chapter 3 describes the research design choices for the overall research project, including those concerning the selection of the empirical settings, and data collection and analysis methods. Chapters 4 summarizes the appended papers. Chapter 5 discusses the obtained findings in the context of the research questions. Chapter 6 concludes the thesis by providing implications for theory and practice, discussing its limitations, and indicating the direction for future research.
2. Theoretical frame

Organization and management studies have already provided several different concepts that deal with the latest changes in the design, management, and use of office spaces, to shed some light on their implications for people, groups, and organizations. In this chapter, I review these concepts and the related discourses, highlighting their key references, insights, and limitations. I then propose Henri Lefebvre’s theory of spatial production as a way to draw the different workplace discourses together, overcome the problems with the various concepts, and advance the understanding of the AW.

2.1. Organization and managerial discourses around alternative workplaces

Prior literature has provided different concepts via which to study and describe the latest trends in the design, use, and management of office spaces. In this section, I describe and review the concepts that have informed my studies on AWs, alongside their main implications for managers, people, and organizations (see Table 2).

In this thesis, I have used the AW concept to refer to the general empirical context of my findings. However, the concepts of collaborative and activity-based workplace have been used in the appended papers, to better characterize the specific contexts of the related studies.

<table>
<thead>
<tr>
<th>Discourses on the AW</th>
<th>Key references</th>
<th>Key inquiries</th>
<th>Main limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace flexibility</td>
<td>Kossek et al., 2015; Lautsch, Kossek, &amp; Eaton, 2009; Putnam et al., 2014; Van Dyne et al., 2007</td>
<td>How do employees perceive flexibility? How does flexibility impact on their work-life balance? What are the managerial and group challenges of</td>
<td>Lack of attention to the material and concrete conditions of production, including the effects of temporary and ever-changing work locations.</td>
</tr>
<tr>
<td>New ways of working and the agile office</td>
<td>Bosch-Sijtsema et al., 2010; Demerouti et al., 2014; Gerdenitsch, Kubicke, &amp; Korunka, 2015; Joroff, Porter, Feinberg, &amp; Kukla, 2003; Kingma, 2019; ten Brummelhuis et al., 2012; Vartiainen &amp; Hyrkkänen, 2010</td>
<td>How does technological embeddedness impact on people and groups? How does multi-locational work affect individuals?</td>
<td>Space seen as a resource or constraint that only influences behaviors and coordination, without considering the active molding role of its users. Limited discussions on the implications of the changed physical and virtual workplace.</td>
</tr>
<tr>
<td>Activity-based office</td>
<td>Appel-Meulenbroek et al., 2011; Bodin Danielsson &amp; Bodin, 2008; Felstead et al., 2005; Gerdenitsch, Korunka, &amp; Hertel, 2018; Gillen, 2006; Parker, 2016; Wohlers &amp; Hertel, 2016, 2018</td>
<td>How does control over the physical and social environment affect individuals and groups? What is the impact of non-territorial arrangements on people’s well-being?</td>
<td>Main focus on employees’ health-related outcomes. Physical workspace seen as a static entity conceived by companies and passively experienced by employees.</td>
</tr>
<tr>
<td>Collaborative spaces and the generative building</td>
<td>Allen &amp; Henn, 2007; de Vaujany &amp; Mitev, 2013; Heerwagen et al., 2004; Hillier, 1996; Hua et al., 2011; Kornberger &amp; Clegg, 2004; Markus &amp; Cameron, 2002; Bernstein &amp; Turban, 2018; Irving et al., 2019; Sivunen &amp; Putnam, 2019</td>
<td>How do office spaces shape collaborative dynamics and social interactions at work? How are space and social relations mutually constructed?</td>
<td>Deterministic assumption that the form (design) follows the function (collaboration). Lack of consensus on the spatial characteristics that promote collaboration and flexibility at work.</td>
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**Table 2.** Concepts and discourses on the alternative workplace
2.1.1. Workplace flexibility

The first concept that informed my study on AWs is workplace flexibility (WF), which involves the option for individuals to adjust and make autonomous choices regarding where, when and how long they work (Gerdenitsch, Kubicek, & Korunka, 2015; Hill et al., 2008; Putnam et al., 2014). WF is usually implemented through a set of policies and practices that provide knowledge workers with spatial and/or temporal flexibility. In spatial terms, with flexplace options – including teleworking, remote working, hoteling, and hot-desking – knowledge workers can carry out their activities across multiple locations, inside the office and even offsite. Flextime, by contrast, gives people the opportunity to decide when to work, and comprises arrangements such as part-time work, leave of absence, job shares, and flexible work schedules (Kossek et al., 2015). Both flexibility components are introduced into organizations through a set of formal policies and practices that give people the possibility to adjust their work schedules and locations, in a way that better meets activity requirements, personal preferences, and business needs. Besides these formal arrangements, WF also requires the support of digital technologies and ICT infrastructure enabling virtual and multi-locational work (Gerdenitsch et al., 2015). Spatial flexibility, in addition, is often implemented through an ensemble of alternative office designs that prompt flexible behaviors in the office space, including the activity-based office configurations that will be described later.

Researchers have found several potential benefits associated with WF, due to the fact that this allows people to control various aspects of their work, in order to accommodate both business and personal needs. For example, WF has the potential to provide knowledge workers with greater control over their work-family boundaries, allowing for work-life balance and well-being improvements (Buzzanell et al., 2005; Byron, 2005). Flexibility also helps people to optimize their work conditions in order to address varying activity requirements; in this way, it can increase job quality, reduce job-related stress, and support the efficient use of time (Haddock et al., 2006; Kelliher and Anderson, 2014; Peters and Van der Lippe, 2007; Raghuram and Wiesenfeld, 2004). Through these positive outcomes, WF may also result in improved job satisfaction (Almer and Kaplan, 2002; Kelliher and Anderson,
2014), greater worker engagement (ten Brummelhuis et al., 2012), and the increased display of organizational citizenship behaviors (Van Dyne et al., 2007).

Nonetheless, some have argued that WF involves some challenges in certain contexts and for specific types of jobs. Some jobs can be carried out flexibly across multiple locations, while others are more dependent upon material conditions of production – such as specific equipment required – that bind work activities and relations to specific times and places (Kossek et al., 2015). WF can also be perceived as a burden by some workers who prefer more structure and routine in their daily work activities (Rogers, 2014). The stability afforded by structure and routine can be even more relevant in those contexts that are characterized by static processes, rigid deadlines, and bureaucratic annoyances (Fleetwood, 2007; Putnam et al., 2014). Indeed, flexibility may cause additional difficulties when organizing meetings, coordinating work, and effectively navigating the office space. These hassles can transform WF into a perceived challenge rather than an acknowledged opportunity (Bosch-Sijtsema et al., 2010; Van Dyne et al., 2007; Putnam et al., 2014). Also, when managers serve as gatekeepers who grant or preclude access to WF, possible asymmetries in knowledge workers’ treatment may bring negative consequences for individuals and organizations. Leslie and colleagues, for example, showed the potential career penalties for those who take advantage of WF, depending on managers’ attributions regarding its use. This research also showed that work-life balance attributions, often in relation to women’s use of WF, were frequently penalized in terms of career advancement (Leslie et al., 2012). In line with these findings, other researchers have proved that women are more likely to be subjected to various forms of stigmatizing treatment due to flexibility use (Stone & Hernandez, 2013), suggesting that this unequal treatment may spoil the collaborative work climate.

WF can also alter the social identification processes that generally occur in the office. In fact, flexible workers often perceive themselves as outsiders even when they work at the office, collocated with their immediate colleagues (Koroma et al., 2014). By pushing knowledge work outside the conventional office spaces and schedules, WF can create a “lonely office”,

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where the overall level of social support is significantly reduced not only for flexible workers but also for those who come to the office during regular working hours (Rockmann and Pratt, 2015).

Finally, some scholars argue that WF enhances workers’ control over their physical and social work environments (Felstead, Jewson, Phizacklea, & Walters, 2002; Galpin & Sims, 1999). However, several studies have also suggested that the enhanced control afforded by WF might be illusory. Indeed, even when working from locations outside the main office, workers continue to follow organizational norms and expectations, and they subject themselves to even stricter scrutiny and self-discipline in order to fulfill the trust that managers have placed in them (Lewis et al., 2007). Also, by blurring the work-life boundaries, WF induces more intrusions of work into private life and vice versa (Fleming and Spicer, 2004; Halford, 2005). These dynamics explain why some studies have found that WF results in work intensification (Kelliher and Anderson, 2014), greater workload (Demerouti et al., 2014), and increased work/non-work role conflicts (Peters and Van der Lippe, 2007).

This overview shows that there are intense academic debates on the factors influencing knowledge workers’ perceptions of WF, either as an inducement afforded by companies and managers to improve working conditions or as a constraint that reduces their freedom and negatively affects their social environment at work. Owing to spatial – and, sometimes, also to temporal – flexibility, my research on AWs has been informed by the insights from these debates.

However, to get the full picture of the AW phenomenon, these insights into WF should be combined with insights from other discourses within workplace research, which have looked more into the material and concrete conditions of work, including the technological tools and the physical space. In the following paragraphs, I introduce these discourses and the related concepts, which shed some light on the problematic aspects inherent in the material and concrete domain of the AW.
2.1.2. The agile workplace and new ways of working

The agile office is a workplace discourse that tries to go beyond routines and static designs and functioning parameters, by leveraging the so-called new ways of working (Joroff et al., 2003; Kornberger and Clegg, 2004). New ways of working (NWW) have been conceptualized through the combination of three aspects: temporal flexibility, spatial flexibility, and the increased use of the digital technologies that have been deeply embedded in the context of work. Together, these three aspects provide knowledge workers with the autonomy and the tools to decide when, where and how to perform their jobs (Gerdenitsch et al., 2015; ten Brummelhuis et al., 2011). From a conceptual standpoint, NWW and WF largely overlap; however, studies on the former concept have dealt more explicitly with the effects of technology’s embeddedness on knowledge workers (cf. Kingma, 2019). The greater emphasis on the technological aspect is justified not only by the fact that technologies are essential to enable flexible work options, but also because their increased use brings new opportunities and challenges for those who have embraced the NWW.

NWW have been linked to several potential benefits, including increased organizational flexibility (Martínez-Sánchez et al., 2007), greater process efficiency, and various costs reductions (Rennecker and Godwin, 2005), mainly linked to greater efficiency in the use of office space (Blok & Groenesteijn, 2011). Scholars have also argued that NWW give knowledge workers greater control over their work processes and facilitate efficient communication (Gajendran & Harrison, 2007; ten Brummelhuis et al., 2012). Greater control and efficient communication are afforded by the ubiquitous connectivity and access to productivity tools and work content, including in mobility. In fact, NWW increase engagement through improved connectivity; this prevents knowledge workers from feeling isolated from their group and disconnected from the work taking place in the office (ten Brummelhuis et al., 2012). NWW also provide new virtual spaces for collaboration, knowledge sharing, and learning opportunities (Blok & Groenesteijn, 2011). However, the increased technological embeddedness presents workers with some additional challenges.
As mentioned in the previous section, flexibility blurs the boundaries separating the private and the professional life spheres; this dynamic has been proved to be exacerbated when spatial and temporal flexibility are combined with the extensive use of technologies at work (Hill, Hawkins, & Miller, 1996). The side-effects of the increased blurring between private and professional domains have been extensively researched by management and organizational scholars, who have depicted these two domains as “competing emotional cultures or gravitational fields” (Gephart, 2002: 336) that are imbued with different activities, relations, and significance of time and place. When one domain conflates into the other due to this blurring, people are likely to experience some emotional clashes in the meanings that are associated with different fields (Sewell and Taskin, 2015; Wapshott and Mallett, 2012). Knowledge workers experience these clashes as tensions, which reduce their work-life balance and increase the number of work/non-work role conflicts (Marsh & Musson, 2008), although several factors can influence these downsides. These factors include individual perceptions (Lee & Brand, 2005), personalities (O’Neill et al., 2009), institutional environment and subculture (Peters and Heusinkveld, 2010).

Greater technological embeddedness has also been associated with an increase in the number of interruptions at work and, thereby, with the increased fragmentation of work activities (Rennecker and Godwin, 2005). Fragmentation and interruptions are positively correlated with work exhaustion (Cropley & Purvis, 2003; ten Brummelhuis et al., 2012) and negatively correlated with job absorption; thus, they result in longer work hours (Beal et al., 2005).

Finally, scholars have shown that NWW also bring potential challenges to collaborative work. By enabling connections across times and places, technologies create distributed work systems that have fluid borders and temporary structures, hampering the development of cohesion and trust among the system agents (Bosch-Sijtsema et al., 2011). Research has also highlighted some additional hindrances faced by multi-locational workers, which could be place-specific – such as poor internet connection or noise in the surrounding environment – or relate to the fact that multi-locational
workers tend to feel like social outsiders, even when working at the office (Koroma et al., 2014).

These results might be partly extended to the context of multi-locational work within the main office, suggesting the opportunity also to base my research on the insights from studies on the NWW. NWW literature includes several insightful considerations regarding the effects of switching locations and new technologies on knowledge workers.

Nonetheless, there is still a need for a thorough discussion on the impact of the different AW layouts, digital resources, and facilities on individual and collaborative knowledge work. Furthermore, with a few exceptions (see Bosch-Sijtsema et al., 2010), studies on the NWW have mainly analyzed the implications of multi-locational work outside the office. Hence, to conduct my research on the AW, I needed to enrich my insights with those from the discussions on workplace concepts that have focused more on the material and concrete conditions of work in the contemporary office: the activity-based and the collaborative workplace.

2.1.3. The activity-based workplace

One of the concepts most frequently used to describe the changing nature of workplaces is activity-based configuration. The activity-based workplace (ABW) concept originated from Veldohen & Co., a Dutch consulting firm that conceived this model for an insurance company, Interpolis, in 1996. Twenty years later, ABW has spread beyond the Netherlands, extending its reach to Australia and becoming one of the latest trends in the design, use, and management of office space (Clapperton, 2014). ABW implies the substitution of permanently allocated desks with shared floor sections that suit different types of activities, including concentration and collaborative tasks (Bodin Danielsson and Bodin, 2008). Hence, workspace variety is a critical characteristic differentiating ABW from more traditional office settings; this characteristic allows workers to select work locations based on

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3 Not individually owned or assigned.
their personal preferences and task requirements (Appel-Meulenbroek et al., 2011; Smith et al., 2013).

With only a few exceptions (e.g., Bäcklander, Rosengren, Falkman, & Stenfors, 2019; Parker, 2016; Sivunen & Putnam, 2019), the ABW concept has been explicitly brought into the academic debate mainly by disciplines outside the scope of organization and management studies, such as real estate, ergonomics, architecture and facility management. Nonetheless, management and organization scholars have analyzed this model and its features by labeling them in different ways. Some, for example, have referred to the concepts of shared and flexible offices (Felstead, Jewson, & Walters, 2005), in which individuals and teams lose their traditional territorial boundaries by working across a variety of shared settings within social systems with fluid borders that can be easily crossed to collaborate with others (Bean and Hamilton, 2006). Other scholars have referred to mixed spaces or multi-spaces and examined how these are practiced and appropriated by individuals and groups of knowledge workers (Allen & Henn, 2007; Coradi, Heinzen, & Boutellier, 2015a; Gillen, 2006).

Independently from the concept in use, the ABW reduces real estate costs, while accommodating demands for spaces that support different types of activities (Bodin Danielsson and Bodin, 2008; Van Der Voordt, 2004). However, it also affects knowledge workers’ perceptions, motivations, and behaviors, creating some opportunities and, at the same time, posing several challenges to organizations and their people.

For example, the ABW reduces knowledge workers’ opportunities to personalize their office space; this affects both workers’ relationships with others and their regulatory functions at work (Byron & Laurence, 2015). Through symbolic representations of the self that are carried out via workplace personalization, knowledge workers can find common ground with their colleagues, based on their shared experiences, and establish a common understanding of the respective roles at work (Byron & Laurence, 2015). In addition, knowledge workers can use personalization to achieve

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4 The self-regulation function means that workers can use workplace personalization to regulate their emotions and behaviors at work (Byron & Laurence, 2015).
the desired separation or integration in aspects pertaining to their private and working lives (Byron & Laurence, 2015). These self-regulation mechanisms might get lost in non-territorial and shared office environments like the ABW.

Also, office spaces are always constellated with places and territories that are appropriated by groups; within these places, critical group-level processes may develop, including group identification, cohesion and knowledge sharing (see Altman, Taylor, & Wheeler, 1971). The ABW de-territorializes these places that used to be owned and inhabited by groups, reshuffling the old systems of collective identities and inducing new collaborative dynamics in the broader office space. However, by de-territorializing group places, the ABW endangers the development of critical group processes (Wohlers and Hertel, 2016). These undermined dynamics would explain why researchers found that, as offices become more shared\(^5\), distraction, uncooperative behaviors, distrust, and negative relations increase, supervisory support decreases, and friendship relationships among co-workers are not improved (Morrison and Macky, 2017).

Despite these downsides, research has also suggested that, when compared with the open-plan office, the ABW moderates identity threats, as it provides knowledge workers with greater control over their physical and social environment that shields them from unnecessary social interactions, fulfilling people’s need for control (Gerdenitsch et al., 2015, 2018). According to this research, the ABW reduces the risk of being exposed to unnecessary social interactions and supports the development of new collaborative dynamics in the office (Bodin Danielsson & Bodin, 2008; Heerwagen, Kampschroer, Powell, & Loftness, 2004; Lee & Brand, 2010). In addition, the ABW may improve knowledge workers’ perceptions of organizational culture, conveying the image of a company that values flexibility, collaboration, and teamwork (Van Koetsveld and Kamperman, 2011).

\(^5\) In this study the office types are placed on a continuum, with cubicles and hot desking being at the two extremes.
However, there is only a little empirical evidence of the greater collaboration opportunities afforded by ABWs (Davenport et al., 2002; Davis et al., 2011). Instead, some studies have found that the overall interactional energy may even drop with the introduction of the new office configuration, due to the reduced collocated time of group members (Waber et al., 2014). To effectively coordinate group work, knowledge workers in the ABW have to plan their activities and the workplace utilization proactively. Consequently, the ABW might be not ideal for those jobs and delivery processes that are unpredictable or hard to plan (Van Koetsveld and Kamperman, 2011). Besides, the ABW requires a behavioral change that should involve not only employees but also managers. In fact, in the ABW managerial practices and assumptions about traditional office work might be subject to reconsideration, due to the altered structure of presence and visibility in the office space (Ropo et al., 2015).

To conclude, the ABW is another useful concept that informed my research on the impact of AWs on flexibility and collaboration at work. Nonetheless, as already mentioned, the discourses on the ABW have been mainly confined to disciplines with theoretical underpinnings that are distant from those of management and organizational studies. Also, as emerged from our discussion, prior studies on the ABW looked at space as a rather static entity that is designed by companies to influence or shape knowledge workers’ actions and relations. However, this conceptualization of space overlooks the role that people have in shaping and enacting their workspace; an active role that becomes even more salient in the AW, where flexibility provides workers with the possibility to continually re-shape their workspace and socialize it. To inform this perspective, I introduced the last discourse on the AW.

2.1.4. The collaborative workplace and the generative building

The last discourse focuses on the collaborative and interactional facilities and designs that are combined into the collaborative workplace (CW). CWs feature a variety of locations that recognize “the value of giving people lots of choice in where, when and how they worked” (Becker, 2004: xix), to accommodate
different work patterns and collaboration needs. Thus, CWs include not only those areas designed for collaborative work, like team and meeting rooms, but also the office locations that workers can use for collaboration and impromptu interactions, such as service and amenity-related spaces (Hua et al., 2011). The proliferation of this type of space in the office environment is driven by the belief that good ideas spring from impromptu meetings and interactions, and that wisely designed offices should contribute to both the professional and the social growth of its inhabitants (Markus and Cameron, 2002). Thus, the studies on the CW concept have mainly examined the spatial aspects that prompt collaboration and socialization dynamics in the office space.

Becker & Steel (1995) were among the first scholars to highlight the role of social and informal meeting spaces for individual and organizational growth. More recent studies have added further details and nuances to the CW picture. Several researchers have investigated the role and the configurations of CWs that aid cross-functional collaboration to support innovation processes (Boutellier et al., 2008; Coradi et al., 2015a; Stryker et al., 2012). Stryker and colleagues, for example, found that workplace visibility and the number of collaboration opportunities offered by formal and informal meeting spaces are positively correlated to face-to-face interactions (Stryker et al., 2012). This is also in line with the results presented by Allen, who studied interaction-promoting office facilities and found that CWs promote movements of people across different subsystems. This concept was formalized around the idea of the non-territorial office, where walls and permanently allocated desks and workstations are eliminated so that people and groups in the office space lose their socio-geographical boundaries (Allen & Henn, 2007).

Nonetheless, even CWs may hide some unintended consequences in terms of flexibility and collaboration at work. Non-territorial offices, for example, eliminate the barriers that workers can use to control social interactions and stimuli at work. A lack of control, in turn, can increase the risk of overstimulation\(^6\) which triggers conflicts and negative emotions (Ayoko and

\(^6\)Knowledge workers experience overstimulation when they are constantly exposed to unnecessary social contact and interruptions. The
Härtel, 2003). To reduce the risk of overstimulation and regain control of their workspace, workers engage in territorial endeavors (Ashkanasy et al., 2014), through which they reassert their perceived ownership of office spaces and artefacts (Brown et al., 2005). Through territorial endeavors, people establish psychological distance from each other, reducing the collaborative dynamics in the office space (see Ashkanasy et al., 2014). In this way, similarly to what we observe in the context of the ABW, CWs undermine the social identification processes that develop smoothly in more traditional office spaces.

The types of layouts or designs supporting interactions have also been subjected to intense academic debate. Hillier, for example, found that most work-related interactions happen in individual offices rather than common or shared spaces (Hillier, 2008). This result suggests that the design of a space – e.g., closed vs. open – does not necessarily determine its collaborative function. In fact, closed offices can still be collaborative, depending on their spatial integration or segregation with the shared work areas and with the rest of the building (Markus and Cameron, 2002).

Drawing upon these findings, Hillier advanced the concept of the CW, proposing the idea of the generative building that supports individual identity and concentration work, while also promoting interactions and collaboration with others (Hillier, 1996; Kornberger and Clegg, 2004). Scholars have described the generative building as a collection of ambiguous spaces that lend themselves to collaborative tasks, such as the quick resolution of unclear problems that need to be framed, by embodying order and chaos, organization and disorganization (Kornberger and Clegg, 2004).

The temporary areas for project groups offer an example of ambiguous space in which knowledge workers from different functions gather to share ideas and carry out conceptualization activities. Thus, unlike the ABW, the generative building is not driven by the functionalist belief that the form – i.e., the office layout and design – follows the desired function – i.e., collaboration. Instead, it leaves room to explore the potential of the alternative and flexible forms that give rise to new meanings (Kornberger

overstimulation risk is a major drawback of the open office environment (Maher and von Hippel, 2005).
and Clegg, 2004). Thus, the most important part of the workplace consists of an “absence of building” that can transform itself while being used and occupied for different purposes (Kornberger and Clegg, 2004). In this sense, the generative building reflects and seeks generative movements rather than static conditions, and invites its users to become “illegal architects” (Hill, 1998) who can define and redefine the space in a creative way, according to the given context and the specific situations.

The concepts of the CW and the generative building suggest that, to grasp the social and behavioral implications of the AW, we need to understand how the office space organizes our activities and relations; but also how we creatively organize the space, according to the specific situation. Hence, these concepts pave up the way for a new perspective on the AW, in which the material and social aspects of office space become intertwined and mutually constituted, in such a way that the workspace is actively crafted and enacted by its users (cf. Sivunen & Putnam, 2019).

2.2. Summarizing the limitations of the different concepts and outlining an alternative theoretical approach

So far, I have introduced different concepts to outline the implications of AWs for people and organizations. Each concept feeds into the discussions on specific aspects of the AW – the inherent flexibility, the technological embeddedness, and the new office configurations – providing some relevant insights. Nonetheless, the same concepts also involve limitations.

Studies on WF have largely emphasized the impact of flexible work practices on individuals and groups; however, they have overlooked the role played by the physical work environment. In fact, prior research has paid only little attention to the impact of WF on everyday working life, particularly in relation to the challenges posed by multiple and temporary work locations (Bosch-Sijtsema, Ruohomäki, & Vartiainen, 2010; Koroma, Hyrkkänen, & Vartiainen, 2014). Indeed, most of these studies have examined flexible work as if this happens in a vacuum, often neglecting the role played by the material and concrete conditions of the production, reproduction, and consumption of work.
NWW discourses have partly overcome this limitation by introducing considerations on the material and concrete aspects of work. The related studies have examined how multi-locational work and new media embeddedness influence people’s behaviors, attitudes, and group coordination (Bosch-Sijtsema et al., 2011; Koroma et al., 2014; ten Brummelhuis et al., 2012). However, these studies have neglected the active role that workers play in molding their social, physical and virtual workspace, in order to increase collaboration and individual agency.

ABW research has similar drawbacks. Studies on the ABW have analyzed workers’ struggles in the new office and the eventual moderators, such as the degree of control over one’s environment (Lee & Brand, 2005). However, with the sole exception of Sivunen & Putnam (2019), these studies have also portrayed the image of a static office space, designed by companies and passively experienced by workers. Also, the discussions around the ABW have mainly developed within research streams such as architecture, real estate, and facility management, tending to focus on the intelligible aspects of the new office space, such as its layout, the design, the distribution and allocation of facilities, and the distance or proximity between people. In these studies, spatiality is treated an easy construct to be observed and measured; however, these studies have largely overlooked the social dynamics that bring specific manifestations of spatiality, including the observed patterns of distance and proximity (cf. Taylor & Spicer, 2007).

Finally, with a few exceptions (e.g., Bosch-Sijtsema et al., 2011; ten Brummelhuis et al., 2012; Van Dyne, Kossek, & Lobel, 2007), most of the discussions around WF, NWW, and ABW have shown a preferred focus on workers’ health-related outcomes, rather than devoting their attention to the social implications of these concepts.

These limitations have been partly overcome by the discourses around the CW, in which scholars have revived an interest in the impact of alternative office configurations on social relations at work, by investigating the spatial aspects that prompt collaboration and flexibility in the office space (e.g., Heerwagen, Kampschroer, Powell, & Loftness, 2004; Hua, Loftness, Heerwagen, & Powell, 2011). Nonetheless, most of these studies are based on the deterministic assumption that the collaborative function follows the
form – intended as the design, the layout, the spatial integration or the segregation with the rest of the building, and so forth (cf. Kornberger & Clegg, 2004). Thus, these studies have mainly focused on how the CW is planned and executed by companies as a way to drive collaborative and flexible behaviors, overlooking the role that people may have in shaping and enacting their own workspace. The active role of space users is salient in the context of the AW, where the flexible space provides individuals with a set of resources – such as hot desks, shared settings, and reconfigurable areas – that they can use to shape their physical and social environments (cf. Kingma, 2019; Värlander, 2012).

Some researchers working on the collaborative space concept have started to adopt this perspective, in which workers’ actions and spaces co-evolve in such a way that they constitute new behavioral and interactional patterns (see de Vaujany & Mitev, 2013; Kornberger & Clegg, 2004). In this work, I have embraced this perspective on the AW by considering the concrete and material office aspects and paying attention to the agency of individuals and groups in enacting the physical, virtual, and social space (Halford, 2008). Thus, I have considered not only the physical dimension of the AW as conceived by companies, but also the perceptions and interpretations of knowledge workers, who enact the organization of the AW through different uses and appropriations. To do this, I drew upon Henri Lefebvre’s theory of social space production. This theory is described in the next paragraph, where I contextualize its use to the AW.

2.3. Developing a spatial understanding of the alternative workplace

For a long time, social sciences have depicted spaces and places as neutral settings; “as the dead, the fixed, the undialectical, the immobile” (Foucault, 1980: p. 70). More recently, organization scholars have started to argue that space should instead be treated as a rich and dialectically-engaged combination that blends social, cultural and material aspects (Dale, 2005; Taylor and Spicer, 2007). In line with this perspective, a seminal contribution is represented by the work of Henri Lefebvre, *The Production of Space* (1991), which sheds some
light on the entanglement and the mutual connection between the material and social aspects of space. According to Lefebvre, space is not an inert stage for actions, but the social production of three interrelated and overlapping aspects, namely spatial practice, representations of space and representational space (see Figure 3).

I have described these three (sets of) aspects, plotting them onto a spatial understanding of the AW.

![Figure 3. Spatial triad](Lefebvre, 1991)

The first set of aspects that contribute to the social production of – organizational – space is the spatial practice, defined as the “production and reproduction, and the particular locations and spatial sets characteristics of each social formation” (Lefebvre, 1991: 33). This spatial practice represents the phenomenological dimension of the AW, which includes the daily routines, the office routes and the workflows that are strictly connected to our perceptions of its material reality. Most of the studies on AWs have focused on this space dimension, looking at how the observable aspects of the newly instituted office space – e.g. layout, people and resource allocation – determine specific patterns of behaviors and interactions, with a preferred focus on knowledge and learning (e.g., Allen & Henn, 2007; Boutellier et al.,
Coradi et al., 2015b; Coradi, Heinzen, & Bontellier, 2015a; Hua et al., 2011; Stryker & Santoro, 2012; Stryker et al., 2012). For example, Coradi and colleagues studied how the office layout and the resource allocation support research and development work, suggesting the opportunity of an ABW – or multi-space office configuration – to combine knowledge exploitation and exploration. According to their results, knowledge exploitation is supported through greater physical proximity between the functions that need to collaborate quickly and manage first-hand information; knowledge exploration, instead, is supported by the increased visibility that triggers cross-functional interaction (Coradi et al., 2015b). Hua and colleagues introduced new spatial layout-level metrics – such as the distance of individual workstations from the nearest CW – to examine the relationship between office configuration and its perceived support for collaboration (Hua et al., 2011). All these contributions offer interesting insights on how the intelligible – and measurable – aspects of space and spatiality shape people’s behaviors and collaborative dynamics, building upon the idea that physical distance and proximity are good predictors of certain patterns of behaviors and interactions. However, by building upon this assumption, these studies have also overlooked some less intelligible aspects of space that still play an essential role in shaping not only people’s behaviors and perceptions, but also these spatial manifestations of distance and proximity (Taylor and Spicer, 2007).

Space, in fact, “cannot be perceived as such without having been conceived in thoughts before” (Schmid, 2008: 39). Thereby, the second dimension of space refers to its representations, which comprise the intelligible spatial aspects as they are conceived – i.e. planned and executed – by designers, architects, engineers (Lefebvre, 1991), and top managers (Dale, 2005). Indeed, all the intelligible aspects of the AW, such as its layouts, partitions, resource dislocation, and work rules, are meant to embody organizational and managerial conceptualizations in material forms (Dale, 2005). The intelligible aspects of AWs embody democratic aspirations of openness, transparency, and accessibility, which are meant to induce new behavioral and interactional patterns across functional and hierarchical structures, by changing the meanings that workers associate with their office space (cf. Bean & Hamilton, 2006). However, despite these collaborative and democratic
aspirations and conceptualizations, AWs also draw control and power discourses. In fact, scholars have repeatedly noticed that these “architectures of democracy” (Markus and Cameron, 2002) often imply reinforced control through enhanced accountability – which, in the context of AWs, is afforded by open and transparent office features (see Bernstein, 2008; Kornberger & Clegg, 2004; Parker, 2016). This perspective on AWs is also aligned with the Foucauldian idea that modern institutions use panoptic structures to materialize power relations (Baldry, 1999; Foucault, 1995), suggesting that, even in the democratic AW, power relations are still central to understanding the dynamics that shape spatial configurations.

The centrality of power relations in shaping space in terms of visibility, distance, and proximity is also supported by the fact that, although companies are increasingly boundary-less and flexible, most managers in AWs still require the physical presence of their employees in the office and mostly judge their performance based on observable behaviors (Ezzamel et al., 2001; Halford, 2005). Thus, underneath the rhetoric of democracy and staff empowerment, AW concepts convey some ethos of the scientific management principles of disciplinary and coordinative control, bringing the productivity and cost reduction agenda from the back of the stage to the front (Parker, 2016). Visibility and reinforced control in AWs are also achieved by technological embeddedness, which extends managerial and peer-based control to private and domestic places that used to be beyond the organizational reach (cf. Bell & Taylor, 2004; Fleming & Spicer, 2004). WF and NWW, in fact, have been proved to bring the reinforcement of some forms of technocratic control over individuals and groups, which result from the newly negotiated social order co-created by managers and employees (Sewell and Taskin, 2015).

By devoting attention to the power relations in the workspace, I can therefore shed some light on the reasons why AWs are configured in certain ways, moving my analysis beyond the surface manifestations of the organized space and how these operate and look. However, by only adopting a power perspective to look at how space is conceived by organizations to control workers’ behaviors and attitudes, there is a risk of missing some other aspects that shape the meanings and the practices of
AWs. Thus, I move beyond the analysis of space as conceived by top managers and organizations, to look at how knowledge workers resist the power and disciplinary regime by actively reconstructing their space through their experiences and understandings (cf. Baldry, 1999; Halford, 2008; Sewell & Taskin, 2015).

This consideration leads us to the last set of spatial aspects, which constructs the *representational space* arising from the symbolic use of the material objects (Lefebvre, 1991). This dimension, also characterized by Lefebvre as the *lived space*, emphasizes the symbolic and imagined aspects of space, in which material and cultural elements are fused (Dale, 2005). Symbolism is mainly expressed in the material artefacts that characterize the workplace, symbolizing openness and accountability, as well as exposure and control (Dale, 2005). However, these symbols and imaginaries are appropriated by individuals, who engage with them personally, but also on a socially negotiated level (Dale, 2005). If we look at the representational or symbolic dimension of the AW, it seems that its intelligible aspects, like its layout, décor and rules, attempt to instill new meanings in the representational space of individuals and groups, in order to overwrite their prior spatial practices and create new patterns of behaviors and interactions in the office. However, the researchers who studied how people make sense of the managerial discourses around AWs found that workers adopt frames that drive their interpretations and actions idiosyncratically, as they make sense of AWs in different ways (Bean and Eisenberg, 2006; Halford, 2004, 2008). For example, in her study of the interrelations between spatial meanings and practices in the context of hot-desking, Halford found that workers build their experiences upon complex resources that lay outside managerial discourses, which are constructed through diverse experiences, memories, and identities operating at different spatial scales, from individual to collective, from local to global (Halford, 2004). So, for example, some workers might oppose hot-desking not because it undermines status or social relations that are framed into work practices, but because it makes it much more difficult to maintain and navigate consolidated friendships at work. Others embrace the hot-desking practice not because this facilitates their jobs, but because it reflects their experiences as nomads in entirely different contexts – e.g. because they were refugees or because of the
flexibility constructed in the job market (Halford, 2004). Thus, different personal and socially-produced resources result in different meanings and interpretations of AWs that can produce different practices. In addition, the different interpretations of others can also affect how knowledge workers (co-)produce their own space. This is shown, for example, by the study conducted by Wapshott and Mallett, who explored how teleworkers reassert a divide between work and private spaces in the domestic domain, and how this space re-appropriation is contingent upon their own and co-residents’ interpretations (Wapshott and Mallett, 2012).

Thus, the representational dimension of the AW suggests the importance of also including how knowledge workers experience the new office space in their daily work activities in the analysis, and how these experiences shape their understanding of space and, consequently, their daily practices.

In my thesis, I try to embrace the three aspects of AWs by conceptualizing the new office space as the combination of the three intertwined dimensions – spatial practices of distance and proximity, ordered through spatial planning and interpreted through the ongoing experiences of AW users (Taylor and Spicer, 2007). In this way, I account for how knowledge workers attribute meanings and significance to the AW, look at the patterns of power and resistance that may shape the manifestations of distance and proximity, and explain how the new spatiality is practiced in everyday working life. Thus, I can overcome the limitations of most studies on AWs, which provide an understanding that could be mapped onto a specific space dimension and contribute to the creation of an integrated theory of organizational space (Taylor and Spicer, 2007). Specifically, I devote my attention to the space production dynamics happening at the micro/organizational scale, looking at the space production dynamics that span the multiple levels represented by company, groups and individuals, which have been explained through the interaction between top-down spatial planning, bottom-up practices, and spatial symbols and meanings. Thus, the space around individuals and groups that establish boundaries between areas of influence within the office space became the main analytical theme that I analyzed by using conceptual resources other than social space, such as place and territoriality.
2.4. Lived spaces, places, and territories of the alternative workplace

The concept of representational or lived space lies within the social constructivist paradigm and overlays the physical aspects of space, by incorporating symbols and images. Thus, it can be used to integrate the subjective experience of AWs with their material and concrete aspects, chasing the idea of the co-creation between object and subject (Borgerson, 2005). By looking at the lived or representational space of AW users, I explore why and how knowledge workers “live” the office space and make it meaningful, eventually transforming it into a lived place (Shortt, 2015).

According to Tuan (1977: 54), a “space lies open”, without any “fixed pattern of established meanings”, while a “place” is the calm “centre of established values” (Tuan, 1977). Thus, by subjectively experiencing the lived spaces and making them meaningful through identity, stability, and attachment, knowledge workers eventually transform the lived spaces into lived places (Shortt, 2015).

This observation conveys interesting implications for my research. Knowledge workers in AWs might search for stability and attachment in the new office environment that challenges consolidated office meanings and functioning. This search may become manifested – thus, observable – in the way in which workers create new places in the office for individuals and groups, and make them meaningful. The process through which knowledge workers create new meaningful places in AWs could be studied by drawing upon the ideas of territory and territoriality.

Territoriality is a geographical notion that can be understood as “a spatial strategy to affect, influence or control resources and people” in a specific area (Sack, 1986: 1). Massy (1993) was among the first human geographers to provide a social connotation for this concept, suggesting that, when we enact territoriality, we re-establish places that are more than just physical areas surrounded by boundaries; they are, in fact, “imagined and articulated moments in networks of social relations and understandings” (Massey, 1991: 28).
Raffestin (2012) took this argument on the social connotation of territories a step further, defining territoriality as an ensemble of relations that individuals have with their physical and social environments, which originates in a three-dimensional socio-spatiotemporal system (Raffestin, 2012). From territoriality, the concept of territory emerges: a framework with a strong cultural connotation, which is socially constructed through the actions and the relations of the agents in the system – or through the projection of labor by a community into a given space (Raffestin, 2012). The community that inhabits a territory develops activities and social relations with the physical and social environments, in order to satisfy their needs while attaining the greatest possible autonomy allowed by the available resources (Raffestin, 2012: 129). Thus, if we bring the concept of territoriality into the office context, we can state that individuals and groups create and appropriate territories, like individual and group areas, to carry out their activities and social relations at work, while striving for autonomy.

These territories can be found in any workplace. Indeed, “life in organizations is fundamentally territorial” (Brown et al., 2005: 577), as employees constantly claim and defend their ownership of spaces and objects, to control their organizational identities and relations (Brown et al., 2005). The personalization acts that are commonly found in office spaces, such as displaying personal artifacts, nameplates on office doors and family photos on desks, are all territorial markers through which workers construct and communicate varying facets of their identities, including their professions, status, and selected aspects of their personal lives (Wells, 2000). Thus, knowledge workers use these markers as symbolic representations of the self, to express who they are and who they want to be. In this way, they create a common understanding of their work role, share personal information, establish a desired divide between work and private aspects, and find common ground with others (Byron & Laurence, 2015). Hence, by enacting territoriality, workers shape their workspace in a way that affects both their relationships at work and their self-regulatory functions (Byron & Laurence, 2015).

With the introduction of AWs, companies force non-territorial spatial arrangements on individuals and groups that deprive them of their places or
territories at the office (Wohlers and Hertel, 2016). In this way, AWs reshuffle the old system of relations at work, imposing new relationships on knowledge workers with their physical and social environments. So, for example, knowledge workers in the AW are often not anchored to specific workstations or team areas, but can move flexibly within the office space and bump into colleagues from different areas and departments. Hence, it can be argued that companies intentionally try to leverage AWs in order to de-territorialize the places of individuals and groups of workers, allowing for new creative assemblages or lines of flight (Deleuze and Guattari, 1980) that are represented by new collaboration, processes and ideas that are prompted by non-institutionalized work and interactional patterns.

However, there are always forces of stratification that attempt to capture these lines of flight and reabsorb the de-territorialized apparatus into institutionalized systems of identities (Jones and Woodward, 2005). Middle managers, for example, may ask their group members to be “on view” in the flexible and non-territorial AW and sit next to their colleagues. In this way, they try to recode the old systems of relations, reasserting the old spatial and social orders to reiterate their controlling role. When several managers behave in this way, smooth spaces for new assemblages generated by the AW are territorialized and re-institutionalized. At the same time, resistance against the AW might be exerted not only by middle managers but also by employees, who may attempt to reterritorialize and re-institutionalize the AW by creating new meaningful places where they reaffirm prior social and spatial orders, to regain a sense of security in the face of the uncertainties brought by AWs (see Jones & Woodward, 2005).

Territoriality, therefore, is an interesting lens through which to look at the dynamics of knowledge workers reacting to the changes in their social space brought about by the AW, by drawing new spatial maps that they use to navigate their social relations and their everyday working lives. However, territorial endeavors might also produce some misalignment between the different aspects of the spatial triad, triggering tensions that persist over time and require constant adjustments of the different space components. This consideration suggests an opportunity to combine a spatial
understanding of the AW with a tension lens, to introduce a dynamic perspective on the AW.

2.5. Tensions in the alternative workplace

According to some studies, with the introduction of AWs, some companies managed to achieve greater flexibility and collaboration, and to enhance their ability to recruit and retain key human resources (Ellerton, 2015; Gastaldi and Corso, 2014; Ruostela et al., 2015). However, despite these achievements, prior research on the effects of AWs on people and organizations has also shown unexpected findings. For example, some scholars have suggested that knowledge workers can also experience flexible and collaborative AWs as isolating and controlling (e.g., Parker, 2016; Rockmann & Pratt, 2015; Waber et al., 2014). Others have suggested that AWs may reduce knowledge sharing, collaboration, and the display of innovative behaviors (e.g., Bernstein, 2008; Blok et al., 2012; Ekstrand & Damman, 2016; Irving et al., 2019; Kim, Candido, Thomas, & de Dear, 2016).

In line with research conducted by Sivunen and Putnam (2019), I contend that these results are symptomatic of the existence of tensions that stem from the misalignment between the organizational space as conceived by management and organizations and the organizational space as reacted to – experienced and perceived – by knowledge workers. These tensions are dialectical and persist over time, leading to unexpected and contradictory outcomes, since office spaces designed to support flexibility and collaboration end up reducing them.
Figure 4. Tensions between space as conceived by companies and experienced by workers

To disclose the mechanisms underlying the emergence and the persistence of these tensions in the AW, I draw upon a spatialized understanding of power relations and look at the contestation dynamics taking place in the AW.

Lefebvre described the social space as constantly suspended between two complementary processes of spatial domination and appropriation, which constitute the forms of power and resistance that produce and transform a space (Lefebvre, 1991). Through the domination process, space is leveraged to materialize power relations that control the behaviors, meanings, and associations of its users. When power shapes the space in such a way that the latter is aligned to users’ interests, the dominated and appropriated spaces coincide. However, most of the time, power shapes space in disregard of users’ interests. When this happens, the dominant space is imposed over the appropriated space. Despite this, users can still resist the dominant space through instances of appropriation without domination (Lefebvre, 1991), aiming to reassert their interests.

Cues for these contestation dynamics can be easily found in the AW. The new rules and the other top-down planned aspects of the AW may be
interpreted as organizational attempts to shape spatial practices, by controlling and overwriting the meanings, the symbols, and the images that knowledge workers associate with their office space. Companies that seek to become less bureaucratic and hierarchical can therefore leverage the AW initiatives for organizational change, by imbuing the new office space with behavioral cues that prompt flexibility and collaboration (see McElroy & Morrow, 2010). Thus, the controlling function of the AW emerges in the lived – or representational – space, in which the behaviors of workers are prescribed and prohibited through the domination process (Lefebvre, 1991).

However, “no space ever vanishes utterly” (Lefebvre 1991; p. 164) and some traces of the old symbols, meanings, and imaginaries will persist over time, influencing how people live and perceive the office space. These dynamics bring some clashes between the new meanings, instilled by organizations through the new spatial representations, and the old meanings that workers associate with their space. People experience these clashes as tensions inherent in AWs (see Sewell & Taskin, 2015; Wapshott & Mallett, 2012).

Being related to the meanings and significance of lived spaces and places at the office, these tensions attain the identity processes and arise from the contraposition between individuals or groups and the larger social system. By losing their places, individuals and groups lose control over the territorial boundaries surrounding their workspaces, which have been proved to be necessary to maintain ties with the larger social system, by controlling accessibility and preserving unique identity (Byron & Laurence, 2015; Elsbach, 2003; Sundstrom & Altman, 1989). Thus, the loss of individual and group territories occurring in the AW may trigger some clashes between the non-territorial arrangements of the AW and the significance of individual and group places at the old office. To cope with such tensions, knowledge workers enact territorial spatial practices aiming to re-appropriate the old places owned by individuals and teams. Territoriality can therefore become the analytical lens through which to look at the dynamics of control and resistance in the AW, i.e., how knowledge workers experience the clashes in meaning when they move from a traditional office to an AW, and how they react to these.
By re-territorializing the de-territorialized AW, knowledge workers re-appropriate the places for individual and group work, and reorganize and reabsorb the AW into codified formal structures and systems of identities, bridging the inconsistencies between materiality and thoughts. However, by doing so, they also reassert their consolidated understanding of office functioning. This understanding, in turn, can undermine flexibility and collaboration beyond formal structures, and reiterate some forms of control exerted by managers and colleagues, with mechanisms that will be described and examined in the results section.
3. Research design and methodology

In this chapter, I present my overall research approach, explaining how the different studies have progressively shaped my understanding on the AW, directing my attention towards new aspects to investigate and new conceptual resources to draw upon. Thereafter, I detail and explain my methodological choices, including the research strategy, the case selection, the data collection, and the data analysis. I conclude by discussing the limitations underlying my choices and their possible remedies.

3.1. Research approach

Overall, my research can be framed into an abductive research approach (Dubois and Gadde, 2002), in which I constantly moved between the empirical and theoretical dimensions of the analysis through the different research stages, as displayed in the journey description and synthesized by Figure 5.

![Abductive research process](image)

**Figure 5.** Abductive research process (based on Dubois & Gadde, 2002)
This approach was particularly valuable for my research, since my interest lays not in confirming existing theories on AWs, but rather in creating a systematic research framework, starting from a broad and explorative glance at the AW implications. This research process, which was non-linear and path-dependent, helped me to match theory and reality, by constantly moving between the literature and the empirical domain, while combining inductive and deductive approaches (Kakkuri and Lukka, 2008).

I started deductively, with the first explorative literature study aiming to identify and select the most significant articles and detect the gaps in the current knowledge. The insights gained in the first instance allowed me to deductively derive the conceptual model that I used to draw the boundaries of my empirical fieldwork. Then, in the first empirical study, I took an inductive attitude, trying to approach the empirical data with as few preconceptions as possible, to understand what was interesting in the field. As the theory began to emerge, I could easily recognize the literature of close relevance; hence, the reading of relevant literature and theories contributed to shaping my understanding of the implications of AWs, and (spatial) theory began to emerge. At the same time, the understanding gained through the analysis of the relevant studies was deepened through the empirical fieldwork, which provided in-depth insights into the spatial reconfiguration phenomenon of work activities and relations brought by the AW and its interactions with the broader organizational context, which progressively directed and focused the search for empirical data.

The abductive nature of my journey allowed my research to be more explorative, as new decisions were made continuously based on the results so far. However, this process came with its challenges and shaped the type of knowledge that I could create, as it led me to analyze specific emerging topics while neglecting others (Edmondson and McManus, 2007). The non-linearity and path-dependency also made the development of my theoretical understanding of the AW implications long and winding, possibly limiting the achievement of disruptive theoretical contributions, due to the limited time available for PhD activities. Indeed, my point of departure was represented by the empirical phenomenon rather than the theoretical problem, and I took several conceptual turns before the generative moment
arrived and I could find a suitable theory to draw my insights. Eventually, these resources lay outside my primary area of knowledge and expertise, bringing me into the unfamiliar but inspiring domain of sociology of space. Once there, I discovered some aspects that would possibly have been more interesting to analyze, but these should be regarded as directions for future research.

3.2. Literature review

For the conceptual development of paper 2, I carried out a systematic review of the existing studies on AWs. Driven by RQ3, I applied a tension-based approach to the analysis of prior empirical work on AWs (Putnam et al., 2016). In doing so, I could tease out the contradictions, analyze the feeding tensions, and understand how knowledge workers typically respond to them. This review developed through the following steps.

First, a preliminary literature survey conducted for paper 1 allowed me to identify a set of terms that scholars have employed to examine the latest trends in the design, use, and management of office spaces. These terms have been used as key words to conduct an electronic search in Web of Science and include: alternative workplace, collaboration & office, collaborative building, collaborative office, collaborative workplace, collaborative space, flexible office, hot-desking, open space, open-plan office, activity-based office, activity-based workplace, new ways of working, non-territorial office, non-territorial workplace, non-territorial space, and office design. To cull the collected articles, I read the abstracts and excluded the irrelevant papers, restricting the scope of my analysis to the inclusion criteria stated in paper 2. Specifically, this review comprised only the empirical studies that were conducted in office settings designed to foster interactions beyond organizational boundaries and structures, through the combination of collocation, shared spaces, and flexible seating. The selected articles were subsequently examined to identify those that explicitly dealt with the experiences of AW users. Additionally, the reference lists for the identified articles were scanned to supplement the relevant empirical material. Ultimately, this activity led to the identification of approximately 40 empirical studies that were relevant to this review.
The material was coded deductively, in order to extract the tensions and the contradictions surfacing in AW research findings. Explicit and implicit tensions and dichotomies were clustered together into similar themes that outline the recurring struggles and states of discomfort, stress, and anxiety that are experienced by knowledge workers. These clusters corresponded to three primary tensions, feeding in the contradictions surfacing in AW research findings. Finally, these tensions, their responses, and the contradictions were aligned into four coherent narratives that show how tensions evolve through the daily actions and interactions of AW users.

3.3. Case study methodology

Although I have framed the overall research process as abductive, the explorative nature of the empirical studies called for a fairly inductive approach\(^7\), in which the empirical material constituted the foundation of the analyses. Considering the explorative nature of my research, I decided to opt for a case study design. Case studies have been proved to be insightful tools for examining work settings, where the phenomenon and its broader context are not easily separable (Flyvbjerg, 2006) and where learning is bounded with the environmental context (Dubois and Gadde, 2002). In addition, they are useful when the study object is relatively new (Siggelkow, 2007) and allow for the combination of multiple observations that are useful to unfold the dynamics of complex relational phenomena (Eisenhardt, 1989).

3.3.1. Selection of the case companies

In the context of my thesis, the cases correspond to the different AWs that I have been studying for my research. Specifically, I decided to focus on recent transition cases, and to look at companies that have recently introduced AW initiatives – up to five years ago, but in most cases from a

\(^7\) It has been argued that being completely inductive is not possible, since even the simple decision of studying a specific phenomenon relies upon a pre-understanding that guides our prejudices (Dubois and Gadde, 2002).
few months to two years ago. The transition to AWs represents a key research opportunity, since it challenges the established office configurations and functioning, modifying the social relations of knowledge workers with their physical and social work environments (Halford, 2004). Also, the choice of including recent transition cases allowed me to contrast knowledge workers’ experiences between the new and old office environments.

The organizations involved in the first study (paper 1) were the Spanish branches of multinational service companies. These companies were picked from various industries, including banking and finance, education, telecommunications, consulting, and engineering, to ensure the representation of different service industries. In this study, I used purposive sampling through the selection of AWs that have been implemented by established companies in the service sector. This choice was driven by the fact that established service companies constitute interesting research settings, as they rely on AWs to support cross-functional collaboration that is regarded as critical to sustain multidisciplinary innovation (Ostrom et al., 2010) and might face additional challenges due to the existing bureaucratic culture and structures (cf. Barley & Kunda, 2001). Thus, for my first empirical study, I selected service companies with at least 15 years of business experience. A more detailed description of the case companies for the first study is provided in Table 3.

In the second empirical study (paper 3), I selected three companies that differ in terms of age, industry, size, ownership, and culture, to capture a broader spectrum of activities, designs, and office types. For the second empirical study, I used theoretical sampling, as case companies and respondents were selected while conducting research. To begin with, I collected data from two of the three case companies – referred to as companies A and B – and from the first set of respondents. Based on the results from this first round, I returned to the same case companies and added a further organization, company C, to produce additional insights into the changes in social relations at work brought by AWs. A more detailed

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8 From the time when I started collecting data for that specific case.
description of the case companies involved in the second empirical study is provided in Table 4.

For both my empirical studies, case section was made in such a way to ensure access to the object of study (Yin, 1989), but also to data. Thus, before the empirical field work, I contacted and met the top managers or the key change agents at the case companies, to secure their full collaboration, access to relevant informants and, in most of the cases, the possibility to perform field observations.

<table>
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<tr>
<th>Case</th>
<th>Description</th>
<th>Industry</th>
<th>Sources of evidence</th>
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| 1    | In 2017 the company started implementing CW initiatives at the main office in Madrid, by developing a pilot initiative that targeted approximately 40% of the IT staff. The main ingredient of the change was the provision of flexitime and flexplace arrangements for all the employees involved in the pilot, who could autonomously organize their working time and spaces according to the business objectives. To sustain the change in work practices, the company also carried out a set of parallel initiatives to develop the required set of managerial soft skills for leadership in the new AW. | Banking | • In-depth interview with the HR manager and the innovation manager, who led the pilot initiative (1 hour, transcribed)  
• Interpretative notes taken by three co-authors |
| 2    | In 2015, the company moved its employees in Madrid into new headquarters, conceived as a smart building. This represented | Banking | • In-depth interview with the HR manager responsible for the project (1 hour, |
an opportunity for the company to start changing the way in which 6000 people work at its headquarters. The new space was designed as a platform to enable new and fluid collaborations across hierarchies and functions, while promoting openness, transparency and customer-centric values. Additionally, the company introduced state-of-the-art technologies for virtual collaboration and new work concepts borrowed by the lean start-up, and experimented heavily with agile and scrum approaches.

In 2016, the company refurbished one of its buildings in Madrid, implementing a flexible office to sustain collaboration between different areas and departments in order to reduce the time-to-market, and to facilitate the cultural mix of employees coming the two companies that were merged. The new building, which hosts approximately 800 employees, was designed using an activity-based model and has open landscape features. Private offices were banned and managers and employees were collocated in open plan offices with standard furniture. As the pilot building was successfully...
completed, the company is currently planning a roll-out to other buildings within the hub. Additionally, the company is also working on the implementation of a teleworking pilot that aims to save costs.

4 In 2017, the company redesigned one office floor of its school in Madrid, to enhance collaboration between and within teams. The project involved 22 people within the area of educational programs: one head of the area, three directors, eight program managers and ten technicians. The new space has been conceived as a collaborative space and a digital office, aimed at enhancing collaboration and reducing environmental impact. This initiative is linked to the provision of flexible working schedules with core hours, with ongoing discussions regarding the possibility of giving employees greater flexibility to work autonomously across different locations.

Education

- In-depth interview with the HR manager leading the project (2 hours, transcribed)
- Internal documents on the new office provided by the respondent
- Interpretative notes

5 In 2011, the company moved one of its main offices to a new building in Madrid. The new office was designed as an open and transparent space, which supports dynamic collaborations, awareness and

Consulting, engineering, architecture

- In-depth interview with a managing director (1 hour, transcribed)
- Field notes collected during the company
diversity. In this office, only a few top directors have private offices; employees and managers are located in open plan offices, organized into reference areas where people belonging to the same department but with different profiles are mixed.

6 The company works in an open space office with enclosed meeting rooms. It recently introduced a set of tools to enable distance collaboration, including a tool for knowledge management that works as a project and skills repository, to support information sharing, as well as global collaboration and staffing. It also revised the incentive system to align it with collaborative goals.

7 In 2016, the company opened a new innovation center conceived as a creative, collaborative and flexible space to develop creative activities. The environment was designed for 70 people and ten managers in an area of approximately 400 m², where people work flexibly and collaboratively by arranging their activities, working times and locations according to their needs. The main objective was to create a collaborative and flexible space.
to better adapt to the needs of the company and its customers, nurture interpersonal relationships and foster cross-pollination of ideas among employees but also with clients, who are invited to work at the innovation center occasionally.

8  In 2016, the company moved its employees, who were previously spread across three different buildings around Madrid, into a new office. The new office is configured as an open space with assigned seats and a few private offices for executives. The main rationale behind the move was a desire to bring people together in a space designed to favor formal collaborations and informal interactions among colleagues, in order to improve knowledge sharing and the organizational climate.

9  The company’s workplace is quite traditional, with a mix of open spaces, private offices, and shared offices, but the company is working on its organizational culture by spreading distributed teamwork and bringing managers and employees together in shared offices. It recently introduced a new telephone system and is on the verge of launching IT projects.
to improve remote working and collaboration between different offices.

Table 3. Details of the cases involved in study 1 (Manca et al., 2018)

<table>
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<tr>
<th>Case</th>
<th>Description</th>
<th>Industry</th>
<th>Sources of evidence</th>
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| A    | Company A is a Swedish formerly government-owned real estate company, headquartered in the Stockholm area. In 2012, the company moved its headquarters to new premises, where it implemented ABW to boost collaboration, self-leadership and innovative performance. Two years later, the company also implemented ABW at its Uppsala office, using the same designs and tools in a smaller context but in a similar cultural setting. | Real estate, workplace advisory | • Introductory meeting with the main project leader  
• In-depth interviews with three top managers, eight middle managers, and five employees from the Stockholm and Uppsala offices in the first round, and five managers in the second round (all tape-recorded, transcribed and analyzed)  
• Observations during company visits, approx. 2 hours spent at Stockholm office and 6 hours spent at Uppsala office |
| B    | Company B is a small privately-owned accounting company based in Stockholm, representing a fast-growing and agile start-up firm | Accounting | • In-depth interviews with three employees and one manager in the first round, and |
with a young workforce.

In 2015, the company implemented ABW as a means to boost self-leadership and collaboration between different professional groups, including accountants and developers.

Company C is a state-owned company in the aviation industry, with offices in different cities in Sweden. In 2016, the company moved its employees into new headquarters in Stockholm, which was designed accordingly to the ABW model.

Aviation

- Introductory meeting with two ABW project leaders
- In-depth interviews with none managers (eight were tape-recorded, transcribed and analyzed; for one, the authors received the written answers from the respondent)
- Observations during company visits, approx. 6 hours spent at the site

Table 4. Details of the cases involved in study 3

3.3.2. Collection of the empirical material

To grasp the aspects of a multifaceted reality and the complexity of social situations, I opted for a qualitative research approach. Qualitative data are rich and nuanced (Weick, 2007), and allow researchers to dig deeper into
behaviors, perceptions, and relational mechanisms that would otherwise be difficult to observe.

The theoretical grounding for the AW is still at an early stage. Thus, for both my empirical studies, I decided to employ an inductive theory-building strategy using qualitative data (Edmondson and McManus, 2007).

For the first empirical study (paper 1), the primary source of evidence was interviews with eleven managers and executives in different organizational areas that are typically involved in AW deployment, including human resources, facility management, and innovation management. The objects of the analysis were the AWs deployed at the case companies, and the organizational factors affecting their outcomes. According to the analysis objects, I interviewed organizational members who have been directly involved in the design, deployment, adoption, and follow-up of these AWs. Thus, I used purposive sampling to pick respondents, since the purpose of my study drove their selection (Eisenhardt, 1989; Yin, 1989). The interviews were semi-structured and used a protocol that included open questions on the implemented initiatives and the related contingency factors. I intentionally kept the interviews broad in scope, in order to capture a broader range of themes and contingencies. I also collected critical incidents, at least one for each case. My insights were enriched by the interpretative notes that I created for each case, with the help of my co-authors, in order to integrate cross-case comparisons, field observations, and external documents (Miller and Crabtree, 1992).

For the second empirical study (paper 3), I employed a variety of methods to generate data on knowledge workers’ interpretations and experiences of the AW, including observations and interviews with project leaders and AW users. In the second study, the unit and the level of analysis have changed, as I devoted my attention to individuals’ lived experiences of the AW. The primary data source for this study was represented by 37 interviews with knowledge workers at the three case companies, while observations and the related field notes were used to support the evidence from the interview study. Interviews were carried out in stages, as described below.

First my co-author, assisted by two research assistants, conducted 20 semi-structured interviews with the knowledge workers who use the AWs
implemented by companies A and B. Respondents were identified with the help of key informants – ABW project leaders – at the case companies, and belong to a plurality of organizational levels and departments, in order to get a broader perspective of ABW implications and to combine managers’ and employees’ views. Questions were inductive in nature and aimed to describe the changes encountered by knowledge workers in their daily activities and social relations at work, due to the introduction of the AW in the form of ABWs.

Afterwards, building upon the understanding gained in the first stage, I conducted participant observations to see how knowledge workers used the office space, and contextually performed an additional set of 17 interviewees with middle and top managers from the three case companies. The objective of the second round of interviews was to confirm and deepen the preliminary understanding gained through the earlier interviews and better deploy the power implications of ABW. These interviews were semi-structured and used a combination of descriptive and contrast questions to study the changes triggered by ABWs in knowledge workers’ daily activities and social relations at work, as well as their subjective interpretations. To better explore the impact of ABWs on autonomy and control, in the second round of interviews I also asked in-depth questions about any changes in the way in which managers allocate and control knowledge workers’ activities, monitor team performance, ensure workplace collaboration, arrange meetings, and use digital technologies at work.

3.3.3. Analysis of the collected empirical material

In the first empirical study (paper 1), interviews were tape-recorded, transcribed and subsequently coded by following the inductive approach outlined by Gioia, Corley, & Hamilton (2012). This approach was chosen in order to generate new concepts that were systematically and rigorously grounded in data. Thus, I preliminarily conducted a first-order analysis of the transcripts, to identify the codes and the categories that emerge from informant’s perspectives on the contextual factors affecting AW outcomes. During this step, to ensure the integrity of the inductively derived codes, I
tried as far as possible to adhere to the words of the respondents when choosing the label or code. When the first-order codes had been defined, my co-authors and I started searching for similarities and differences among these, grouping them into categories to reduce the codes to a manageable number. Afterwards, we performed a second-order coding by organizing the first-order categories into themes and aggregated dimensions, which suggested existing concepts drawn by literature that might be used to describe and explain the contingency factors affecting the AW outcomes. After an initial stage of analysis, we started cycling between emergent data, themes, concepts, and the relevant literature, shifting from an inductive to an abductive approach to data analysis. The emerging themes identifying the contingency factors were discussed with my co-authors, with the help of the interpretative notes and archival material, to reach a consensual interpretation of the collected data.

The second empirical study (paper 3) instead adopted an abductive approach to data analysis, which involves different activities. First, I approached my data analysis inductively, by focusing the pass of the analysis on the grounding coding of the key recurrent topics that emerged from the interviews, which adhered to the guiding research questions (Glaser and Strauss, 1967). As time went on, I started identifying more abstracted themes in the data that showed the implications of the AW in terms of workers’ experiences, interpretations, and their link to practice. However, at this stage, the conceptual boundaries between categories were still unclear and overlapping. Therefore, I dug deeper into the academic literature on AWs and organizational spaces to sharpen the distinction between categories. Informed by the literature, I started coding by employing the conceptual resources drawn from the relevant studies, which include threats to the self, territorial endeavors, and new managerial approaches due to the AW.

Building upon the identified categories, my co-authors and I developed four representational narratives of the AW, which lay outside official organizational discourses, and outlined four alternative accounts on the new office space as interpreted by knowledge workers. Two reasons drove the choice of narrative analysis. First, through their narratives knowledge
workers describe their struggles of living and resisting against the de-territorialized AW, and create subjective meanings and interpretations of the AW by connecting past, present and future activities in a coherent story (Bruner, 1990; Mattingly, 1998). Thus, analyzing the narratives allowed me to explore not only the meanings that are embedded in knowledge workers’ stories on the AW, but also those that are constructed through the narratives themselves (Mattingly, 1998). Second, the narratives could also be used to analyze the self as a discursive formation, which emerges in the margins of the dominant organizational and managerial discourses, and goes beyond the imposed representations. In that sense, I embraced a Foucauldian view on the narratives as technologies of the self (Foucault, 1988), i.e., as active practices of self-formation, through which knowledge workers challenge the new order to reassert or constitute their professional and group identities at work (cf. Tamboukou, 2008). These narratives and the way they were derived have been discussed with my co-authors. Each narrative discloses the alteration of the meanings of autonomy and control, and shows how knowledge workers enact territoriality to strive for freedom at different scales.

3.4. Limitations of data collection and analysis approaches and remedies

One of the primary concerns about the quality of research refers to the internal validity of the findings. Ensuring internal validity means providing findings that constitute an accurate representation of the described phenomenon (Easterby-Smith et al., 2012). Hence, internally valid findings are free from any interpretation. However, this expectation impinges on the rationalist assumption that there is a single reality towards which the analysis may converge (Guba, 1981). This assumption is not met by my

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9 Here, I am referring to the existence of different paradigms of inquiry, including the rationalistic and naturalistic ones, based on different assumptions (about the nature of reality, the nature of the inquirer/object relationship and the nature of the “truth” statement) that might be tested in the different research contexts (Guba, 1981).
thesis, which builds its theoretical foundations on the naturalistic assumption that there is no absolute knowledge regarding what the reality is like. Thus, rather than showing the absolute truth of my findings, when conceiving of the design for my empirical research, my main concern was showing the *credibility* of the interpretations that I drew from the diverse data sources (Guba, 1981).

To achieve credibility, I used triangulation, which is defined as the application of several methods, investigators, theories, and data sources to support my evidence (Easterby-Smith et al., 2012). Specifically, I employed several types of triangulation. First, in each study, I was able to triangulate most of the interview insights using the notes from the field observations and, in some cases, with the publicly available documents on the AW initiatives that were carried out at the case companies. In addition, I relied on different case companies for the two studies. In this way, I added depth to the study, which was not dependent on a single case, as suggested by Eisenhardt (1989). Also, in the second empirical study, I involved different types of respondent, including projects leaders of AW initiatives, as well as managers and employees at the case companies, in order to get a range of perspectives on the phenomenon, cross-check the results from each respondent type and avoid simplistic views. Finally, all my analyses and interpretations were discussed and checked with all the co-authors.

Triangulation also helped to enhance the *confirmability* of my findings, to produce results that might be considered investigator-free, and thereby clean of my predilections and biases. The use of different methods for collecting data and the involvement of different types of respondents allowed me to gather data from a variety of perspectives and test my predilections. In addition, the results from my analyses were cross-checked by all my co-authors, who have different perspectives on research in terms of paradigm (Guba & Lincoln, 1981). The involvement of different researchers in the analysis, the triangulation of data sources and the reflexivity practice – in the discussion of my findings, I always highlighted what was my interpretation and what strictly adhered to the respondents’ words – make the findings more confirmable and less reliant on my own interpretations of the reality that I observed.
An additional concern for the quality of my research lays in the **dependability** of the findings, which aims to ensure the stability of data even when changing the data collection tool. When discussing dependability, I should take into account the apparent instabilities emerging from the different realities observed: how respondents make sense differently of their realities, and how I make sense of their sense-making.

To ensure the dependability of the findings, I used at least two different methods for collecting data: interviews and field notes taken during participant observations. In this way, I enhanced their dependability by employing (partly) overlapping methods to compensate for their respective weaknesses. Interviews were necessary to get respondents’ interpretations of the contingency factors and the new meanings emerging in the AW. However, they did not allow me to observe the link between these interpretations and their spatial practices, or the peculiarities of the given organizational context. For this reason, I also used field observations. Furthermore, I created an audit trail to enable an external auditor to check how data had been collected and examined. This audit trail took the form of documentation composed of field notes, interpretative notes, and transcripts.

The last concern relates to the **transferability** of the findings to similar contexts. Social and behavioral phenomena are bound to specific contexts; thus, it is not possible to generate truth statements with general applicability (Guba, 1981). I therefore produced statements in my research that described or provided interpretations of a specific context but could also be extended to similar ones. To ensure the transferability of my findings to similar contexts, I used theoretical and purposive sampling, aiming not at statistical generalizations, but to maximize the production of insights on the studied population. Thus, the sampling process unfolded depending on the emergent insights about what appeared relevant in the field. Aside from the sampling choice, I also tried to keep track of the characteristics of the organizational context and of the interviewees, by providing a rich description of the cases and the object of study, in order to enable comparisons to be made and to make judgements about the fit with other possible contexts.
4. Summary of the appended papers

This chapter introduces a summary of the four appended papers that constitute the thesis. For each paper, I mention the purpose, the main methodological choices, the main findings, and the related implications for research, as well as the originality of the study and its contribution to the thesis.

4.1. Paper 1

**Purpose:** In this paper, my co-authors and I focused on two objectives. First, the identification of a conceptual model for AWs aimed at collaboration in service companies. Second, we used the model to draw the boundaries of the empirical fieldwork and analyzed the key contingent factors that sustain or hamper AW performance – i.e., their ability to support and foster collaborative dynamics.

**Methodology:** The study is based on 11 semi-structured interviews that we conducted with innovation managers, human resource managers, and facility department executives at nine multinational service companies. Our focus was on service companies, where AWs are implemented to sustain cross-functional collaboration that is critical to value creation.

**Findings:** My co-authors and I drew a conceptual model for AWs and identified a set of conditions that aid or hamper the performance of AWs in those service companies that seek to enhance collaboration and innovation through these initiatives. We observed that, if not counterbalanced by the identified enablers, the detected barriers tend to reinforce each other, feeding in tensions between deployment areas. By connecting these tensions and their management, we highlighted two overarching dilemmas that companies face when deploying AWs: i) *autonomy-control*, which stems from the inter-group dynamics between managers and employees, and ii) *exploration-exploitation*, which stems from the contraposition between the knowledge production dynamics at individual and group levels.

**Research implications:** Through this study, we contributed to workplace and knowledge management literature by providing new evidence on the
ability of AWs to support collaboration and knowledge sharing in the context of established service companies. This has been done by adding a contingency perspective on the factors that hinder or contribute to AW performance. Also, we highlighted the mechanisms through which the impeding factors reinforce themselves, generating tensions among deployment areas. Finally, we explored how companies and their decision-makers can mitigate negative outcomes of AW interventions by leveraging the enabling factors.

**Originality/value:** Through this paper, we addressed the call from management and organization scholars for more research digging into the interactional effects among workplace design areas (e.g., Chan et al., 2007). Additionally, we added a contingency perspective to the study of AWs that provides guidelines for companies and managers when implementing and deploying AWs in their organizations.

**Contribution to the thesis:** This paper contributes to the research questions by devising a conceptual model for AWs (RQ1) and shedding some light on the internal contingency factors that influence their performance in terms of collaboration and flexibility enhancement (RQ2).
4.2. Paper 2

**Purpose:** In this paper, my goal was to shed light on the intricate puzzle of AW consequences, by detecting the tensions, contradictions, and paradoxes that surface from prior research findings. By embracing a constitutive approach to the study of tensions in AWs designed to promote collaboration, I linked the emerging paradoxes and contradictions to the responses of organizational members to these tensions. In doing so, I was able to highlight how tensions arise and develop through the actions and interactions of workplace users. I also generated options for managing tensions in such a way as to avoid inconsistencies and negative outcomes.

**Methodology:** I reviewed prior empirical studies on AWs, to tease out the tensions, contradictions, and paradoxes, and to link them to the responses of the organizational members. Studies have been analyzed by coding for oppositional tensions and related responses. Tensions and responses have been organized into coherent narratives explaining how paradoxes and contradictions operate and develop through the daily actions and interactions of AW users.

**Findings:** Unintended and negative outcomes of AWs are rooted in the existence of tensions that surface in prior research findings and stem from the clashes between the organizational expectations on the use of space and users’ needs. These tensions include (i) *variability vs. structure*, (ii) *fluidity vs. stability*, and (iii) *accessibility vs. privacy*, and they develop through the response patterns that are enacted by AW users in their everyday actions and interactions. The way in which these tensions develop indicates that autonomy and control in the AW are paradoxically tied. Managers can handle the autonomy-control paradox in order to avoid inconsistencies and sustain collaboration. This requires adopting certain identified approaches that relate to three emerging managerial themes: (i) *reasserting predictability and structure in the midst of variability*, (ii) *reterritorializing previously localized sociabilities*, and (iii) *modulating privacy and accessibility*. These themes outline a framework that managers can use to prompt generative movements and creative organizing in the AW.
Research implications: This paper extends the literature on AWs by digging into their unintended and contradictory outcomes, and by offering an integrative view for managing the tensions arising in this type of environment. This review also contributes to organizational studies by drawing some positive and negative power implications for organizations and their managers. Finally, the emerging themes and the related approaches highlight the need to adapt the managerial role to the AW by refocusing it around the management of social relations and knowledge processes.

Originality/value: Through this paper, I have addressed the call from management and organization scholars to retrieve the role of the physical and material aspects of work (e.g., Barad, 2003; Karen Dale, 2005), to dig into the apparent contradictions of AWs, and to develop actionable knowledge for managers and organizations. In doing so, I have produced a framework that managers can use to sustain collaboration in AWs, and to keep the system suspended between variability and structure, fluidity and stability, and accessibility and privacy.

Contribution to the thesis: This paper contributes to the research questions by identifying the tensions experienced by AW inhabitants and the mechanisms through which these lead to contradictory outcomes that may hamper collaboration and flexibility at work (RQ3).
4.3. Paper 3

**Purpose:** In this study, my co-authors and I have focused on workers’ lived experiences, to examine how the interpretation of work and meanings is constructed in the AW, and how these meanings and interpretations relate to spatial practice. In this way, we were able to explore the impact of the AW on social relations as intertwined with the context where they develop and, thereby, on autonomy and control at work.

**Methodology:** The study is based on a study that examines managers and employees from three case companies that have recently moved into AWs designed to support activity-based work. The study employed a combination of data sources, including field observations and interviews with 37 key informants at the case companies.

**Findings:** This paper develops four representational narratives of the AW: *i)* the dynamic scene, *ii)* the overly stimulating office, *iii)* the virtual landscape, and *iv)* the group-splitting space. These narratives identify four alternative accounts of the AW, which fall outside the dominant managerial and organizational discourses. Each narrative reveals some threats to the self brought about by activity-based work, alongside the dynamics through which managers and employees negotiate autonomy and control aspects to mitigate such threats. Thus, through the development of these narratives, we show that control in AWs goes beyond the power discourses expressed by their material and structural arrangements; in fact, it develops through self-regulatory mechanisms that are enacted by individuals and groups to cope with the identified threats to the self. These mechanisms reduce flexibility and collaboration in the AW.

**Research implications:** We have contributed to the ongoing debate on whether ABWs and alternative office models can be used to foster freedom and flexibility, by questioning fluidity and collaboration in the ABW (Halford, 2004, 2005; Kornberger and Clegg, 2004). In doing so, we have also contributed to the literature on sociology of space by addressing the call for more research into workplace socialization and embodied spatial practices (Halford, 2008).
**Originality/value:** We have added to the emerging stream of research applying Lefebvre to the new office models by using space production theory in a multi-case analysis aimed at a more nuanced understanding of AW implications for people and organizations. We have also shown the usefulness of employing narrative analysis to reveal the processual and performative aspects of the new office space.

**Contribution to the thesis:** This paper contributes to the research questions by suggesting a processual account to look at AW implications for managers and employees, disclosing how they enact spatiality to cope with the identity threats brought by AWs (RQ4).
4.4. Paper 4

**Purpose:** In this paper, my ambition was to develop a structured approach that highlights the spatial implications of AWs, based on territoriality and space production theory.

**Methodology:** I drew upon literature on organizational space and workplace research to inform the outlined approach. The conceptual foundations of this approach are built upon space production theory, human geography, and a spatialized understanding of power relations.

**Findings:** This study developed a structured approach to outline the spatial implications of AWs. This approach suggests that the intelligible aspects of the AW may trigger some territorial endeavors that problematize the permeable boundaries around groups and individuals. These territorial endeavors may be interpreted as instances of space domination and appropriation, which generate some dialectical tensions that can be observed in the symbolic or representational dimension of the newly instituted space.

**Research implications:** This study suggests that AWs are subject to the “illusion of transparency”; hence, they are not completely intelligible and they do not give space inhabitants free rein for their actions. In fact, there is a contestation dynamic unfolding in the representational aspect of the AW that limits a company’s ability to control the practices and imaginaries of space inhabitants. In addition, in order to (re)appropriate the de-territorialized spaces of individuals and teams in the AW, space inhabitants – managers and employees – tend to recreate the pre-existing hierarchies of labor and production, reducing workplace collaboration and flexibility. Thus, research should focus on finding new ways in which individuals can re-engage with the AW and (re)appropriate the smooth space territorialized by managers.

**Originality/value:** The structured approach outlines an alternative way to look at the effects of AWs on individuals and teams, providing companies and managers with some suggestions for how they can reframe the
dialectical tensions over time, in a way in which collaboration and flexibility can still be achieved.

**Contribution to the thesis:** This paper contributes to the research questions by explaining how the apparent tensions of AWs develop and manifest themselves through the dynamic interrelation between the elements of the spatial triad – planning, practice, and imaginaries (RQ3, RQ4).
5. Discussions

This chapter synthetizes the findings from the different papers and discusses them in relation to the specific research questions. Specifically, this chapter starts by outlining the conceptual model for AWs (RQ1). It then discusses the contingency factors that companies encounter when implementing AW initiatives (RQ2). Thereafter, the chapter discusses how AWs are experienced by knowledge workers by presenting opportunities and challenges that cast themselves as oppositional tensions (RQ3). Finally, it discusses how workers’ experiences and interpretations relate to spatial practice (RQ4). Through these steps, I outline the systematic investigation framework that emerged from the abductive approach and is presented in Figure 6.

![Systematic investigation framework](image)

**Figure 6.** Systematic investigation framework

5.1. Drawing a conceptual model for alternative workplaces

**RQ1.** How can AW’s be conceptualized by embracing the different concepts that have been used to describe the latest trends in the design, use, and management of office space?

My preliminary literature review suggests that AW can be conceptualized as a combination of balanced layouts, shared facilities, embedded technologies,
flexible work policies and practices, and organizational change initiatives, aiming to sustain knowledge work by fostering collaboration and flexible behaviors in the office.

To draw a comprehensive conceptual model for AWs, aiming to direct my empirical fieldwork and guide the interpretation of the empirical results, I modified the framework originally proposed by Chan and colleagues to describe the various dimensions that are involved in the workplace design process (Chan et al., 2007). In the original framework, these dimensions include organizational design, information technology, facility management, and financial performance. Researchers have suggested that these dimensions are often characterized by the contrasting objectives, pursued by different groups or departments within the company (Chan et al., 2007). By proposing a modified version of that model (see Figure 7), I have tried to overcome the departmental view, by linking AW introduction to the initiatives framed within the organizational culture and structure area, rather than to financial performance. In this way, I have highlighted the organizational areas that need to be aligned in order to sustain AW introduction and achieve greater collaboration and flexibility. As in the original framework, my model suggests the existence of some interactional effects between the different implementation areas, such as tensions and complementarities. These interactional effects might affect the implementation of AWs and their ability to sustain new ways of working entrenched in greater collaboration and flexibility.

The conceptual framework in Figure 7 allows me to draw two preliminary conclusions, one on the empirical front and the other on the analytical front. My first argument is developed on the analytical front. The existence of the interactional effects highlights the need for a more comprehensive analysis of AWs, which takes into account all the implementation areas, in order to detect and acknowledge any synergies and tensions. My introductory review of the discourses on the changing nature of workplaces suggested that prior management and organizational research tended to focus on single areas, depending on the research stream. In fact, there are plenty of studies which have separately examined the effects of physical workspace redesigns (e.g., Ayoko & Härtel, 2003; Wohlers & Hertel, 2016) and flexible work practices
(e.g., Almer & Kaplan, 2002; McNall, Masuda, & Nicklin, 2010; Putnam et al., 2014) on knowledge workers’ behaviors and attitudes. Despite the relevance of their insights, these studies are like “isolated islands among larger intellectual archipelagos” (Chan et al., 2007), which overlooked the possible interactional effects between different implementation areas. Thus, what is still lacking is an integrated view of the different workplace aspects that can highlight all the potential synergies and trade-offs. In my thesis, I try to outline a holistic approach to AWs, without devoting my attention only to the physical workspace aspects, the flexible policies and practices, or the new technologies, but also to the combination of interventions that spans varying implementation areas and, thereby, to the possible interactional effects among them.

On the empirical front, my model can be used to draw the empirical boundaries of the fieldwork on AWs. In fact, this model was employed in my first empirical study to detect the contingency factors that hamper or support AW introduction.

**Figure 7.** Collaborative workplace: a conceptual framework
(Manca et al., 2018)
5.2. Developing the contingency perspective

**RQ2.** What are the internal contingency factors that influence the performance of AWs in terms of collaboration and flexibility enhancement?

Prior research has suggested that AWs might be used to dismantle consolidated routines and work practices, to promote new collaborative dynamics driven by customer orientation (Coradi et al., 2015a; Hua et al., 2011; O’Neill and McGuirk, 2003; Waber et al., 2014). However, these studies have also shown that AW features often bring unintended consequences that hamper flexibility and collaboration. For example, AWs may fail to produce steady movements, only reshuffling stationary knowledge workers (Waber et al., 2014).

My first empirical study (paper 1) contributes to this debate by adding a contingency perspective that identifies the factors influencing AW performance, i.e., its ability to sustain innovative ways of working, entrenched in enhanced collaboration and flexibility. This study was conducted in the context of established service companies, which rely heavily on multidisciplinary groups for innovation and might face additional challenges due to the current culture and structures.

My findings show that, despite the existence of different approaches to AW initiatives, some recurring barriers and enablers can be identified. These barriers include control-oriented middle management behaviors, lack of top management sponsorship, presence-based culture, inadequate organizational structures, strict technology requirements, low degree of perceived job fit, individual resistance to change, and infrastructural constraints. The enablers, on the other hand, include top and middle management commitment, internal communication, cross-functional project teams, participative design approach, integrated trial-and-error approach, management-by-objective system, budget allocation, and deployment and surveillance.

The identified barriers can be mapped onto my conceptual model for AWs, based on the organizational area (Figure 8). The map reveals an unbalanced distribution, with most of the barriers related to organizational culture and structure. Within this area, control-oriented middle management was found to be the most relevant barrier, which emerges when managerial behaviors focused
on the direct control of employees’ activities collide with the interventions in other organizational areas, i.e., the physical space, ICT, and work practices. Additional barriers that refer to the elements characterizing the organizational culture and structure include lack of top-management sponsorship, presence-based culture, inadequate organizational structures, and resistance to change.

My findings, combined with the literature on AWs, suggest that if not counterbalanced by the identified enablers, the detected barriers may reinforce each other, leading to the emergence of interactional effects between organizational areas that feed the tensions highlighted in Figure 8.

![Figure 8. Mapping the internal barriers (Manca et al., 2018)](image-url)
In the open and often transparent AW, knowledge workers’ performances are always visible, reinforcing expectations of efficiency and accountability (cf. Bernstein, 2008; Ekstrand & Damman, 2016; Parker, 2016). Furthermore, the status loss brought about by the reduced personalization has been shown to trigger managers’ behaviors aimed at reinforcing hierarchies and control structures (Carlopio and Gardner, 1992; Elsbach, 2003). Higher control and accountability, in turn, hamper innovation performance, as experimentation and risk-taking behaviors are inhibited in the contexts where workers constantly feel “under the spotlight” (Bernstein, 2008; Bernstein, 2012). Accountability in AWs is also created by the digital technologies that afford ubiquitous connectivity, making people constantly accessible and extending organizational control to private domains (Golden & Geisler, 2007; Leclercq-Vandelannoitte, Isaac, & Kalika, 2014).

Thus, when AW initiatives are implemented in organizational contexts characterized by control-oriented middle management, knowledge workers end up experiencing the flexible AW as controlling. Also, constant visibility and accessibility in both the physical and the virtual dimensions of the newly instated space may bring more distractions and interruptions at work. These have been associated with negative attitudes, withdrawal, and thereby reduced collaboration at work (cf. Ashkanasy et al., 2014; ten Brummelhuis et al., 2012).

Furthermore, the physical and virtual dimensions of the AWs at the case organizations have been designed to foster exploratory learning dynamics, through a combination of initiatives that increase the likelihood of cross-pollination of ideas among people belonging to different hierarchical levels, groups, and departments. Nonetheless, knowledge workers often need to carry out concentration and collaborative tasks within smaller groups or teams, which might be hampered in the restless and explorative AW (Bosch-Sijtsema et al., 2010; Coradi et al., 2015b; Waber et al., 2014). When exploratory dynamics are perceived as a poor fit for a specific job – for example, because the job relies heavily on exploitative learning within the group or requires more heads-down work – the AW might be experienced as stressing and isolating from group members.
These considerations suggest the existence of tensions that might be embedded in the context of AWs. In the next chapter, I discuss the tensions that have been identified in paper 2.

5.3. Developing the tension perspective

**RQ3. How do the tensions and contradictions inherent in the AW operate?**

When companies implement AWs, terms such as flexibility and freedom become part of managerial discourses, recalling concepts of autonomy, self-management, and post-bureaucratic organization (Bean and Hamilton, 2006; Hirst, 2011). However, according to the findings presented in paper 2, the freedom, variability, fluidity, and accessibility inherent in the AW may trigger some control mechanisms that limit individual autonomy, with dynamics that retrace the rise of the autonomy-control paradox.

Various scholars have already acknowledged the emergence of this paradox in the context of multi-locational and flexible work (see Mazmanian, Orlikowski, & Yates, 2013; Putnam et al., 2014). Paper 2 suggests that the autonomy-control paradox also surfaces in the research on AWs. In particular, the paradox stems from how knowledge workers individually and collectively manage the tensions between the characteristics of the new office spaces and their demands for stability, structure, privacy, and social support.

For example, knowledge workers in the AW have the autonomy to adjust their work times, locations, and schedules according to business and personal needs. Nonetheless, this opportunity for variability creates some coordination and motivational difficulties that reduce the actual flexibility of knowledge workers, who have to coordinate more with their colleagues, ensure proactive availability, and often work extra hours in order to meet rigid deadlines. This tension between variability and structure is exacerbated in those companies or processes that are characterized by fixed arrangements, such as rigid deadlines and static workflows. To avoid coordination and motivational hassles, groups of knowledge workers tend
to introduce additional structure, through rules, routines, and standardized procedures that reduce the need for coordination and the uncertainties related to the commitment of others in the group (cf. Edenius & Yakhlef, 2007; Irving et al., 2019; Sivunen & Putnam, 2019). The added structure helps these groups to meet their objectives and, at the same time, provides support to individuals, particularly those who perceive flexibility as a bad fit. Nonetheless, structure provision also increases organizational and peer-based control, by restricting the variability inherent in the system and making people more accountable not only for their outcomes but also for the way in which they spend their time at work, which is dictated by routines and procedures.

Figure 9. Oppositional tensions and the emergence of the autonomy-control paradox (based on Lefebvre, 1991)

Overall, the findings in paper 2 suggest that, despite its rhetoric of workers’ empowerment, in the AW autonomy is tied to the organizational control. The paradox evolves in the way in which autonomy and control are mutually constituted and defined in the AW; in fact, control is made possible by the greater flexibility, transparency, variability, and fluidity afforded by the system.

In addition, control is not only triggered by AW characteristics, but is also created by knowledge workers, who react to the identified tensions by
selecting a pole of the relationship over the other – structure over variability, privacy over accessibility, and stability over fluidity. However, by doing so, they reduce the flexibility and the collaboration opportunities in the new office space, and thereby the benefits attainable through the AW.

Prior literature suggests that knowledge workers react by selecting one pole of the oppositional tension over the other when they find themselves trapped in *double binds* (Putnam, 1986), which are emotional dilemmas generated from the competing demands posed by companies, management, and groups. In fact, knowledge workers in the AW are supposed to be adaptable, but act in static processes and deliver according to rigid deadlines. They are expected to drive out wasteful work practices and take more risks and initiatives, but they are more responsible and constantly accountable for their performances, so they cannot afford to make mistakes. They are required to be movable and sociable but, at the same time, they need to collaborate intensively with their group members, nurture their social relations with them, and meet their expectations, including in terms of support provision. When these circumstances arise, knowledge workers receive contrasting signals, as they find themselves in the paradoxical situation in which the company has created a working system that promotes variability, fluidity, transparency, and freedom, but competing organizational demands discourage these.

This argument points to the need to identify approaches that organizations and their managers can take in order to deal with the tensions that knowledge workers experience in the AW, and to avoid double binds. The identification of these approaches requires a preliminary investigation of how knowledge workers interpret and make sense of the AW, and which identity threats arise there. The need for structure, stability, privacy, and social support reflects some regulatory mechanisms through which people build their social and professional identities at work. Thus, the discussed tensions suggest that workers perceive their identities to be endangered in the AW. This leads us to the last perspective on the AWs that I embraced in papers 3 and 4.
5.4. Developing the spatial perspective

**RQ4.** How do knowledge workers’ experiences and interpretations of the AW relate to spatial practice and, thereby, to flexibility and collaboration in the office space?

The extant literature on the AW suggests the reinforcement and emergence of forms of control that arise from the new interactions between materiality, work practices, and spatial practices (Bernstein, 2008; Cross & Parker, 2004; Ekstrand & Damman, 2016; Wohlers & Hertel, 2016). However, these studies mainly devoted their attention to the intelligible aspects of the new office space, as conceived by top managers and organizational designers to control and overwrite employees’ behaviors. In this way, they overlooked workers’ interpretations of autonomy and control within the new model and how these interpretations relate to practice. In my second empirical study (paper 3), I added to these findings by conducting an empirical investigation of how knowledge workers interpret the AW and enact its spatial organization to achieve autonomy.

Drawing upon social space and territoriality concepts, I conducted an empirical analysis to blend knowledge workers’ interpretations with the social and material aspects of the AW, in the specific context of activity-based work. Throughout this analysis, I identified four representational narratives from ABW users: (i) the dynamic scene, (ii) the overly stimulating environment, (iii) the virtual landscape, and (iv) the group-splitting space. Each narrative discloses some dystopian threats for the construction of the self at work, perceived by knowledge workers. These threats include social conformity and control, the perceived loss of privacy at work, reduced control over social interactions, the blurrier divide between private and professional identities, and endangered collective identities.

To mitigate these threats, knowledge workers in the study organizations engage in territorial endeavors, which recreate places of comfort in the flexible and hectic AW, at different scales – individual and group, private and professional. In these virtual and physical places, knowledge workers reassert the functioning and the consolidated system of identities that characterized the traditional office. In fact, they reintroduce the old routines, the control mechanisms, the interactional patterns, and the organizational
norms that descend from their consolidated understanding of social relations in time and space. This would explain why, sometimes, the “space (of AW) simply reshuffled stationary workers rather than creating movement” (Waber et al., 2014; p. 74).

The results from papers 2, 3, and 4 show that managers play a crucial role in overcoming this behavioral inertia and unlocking the potential benefits attainable through the AW – in terms of flexibility and collaboration enhancement. For example, in paper 2 I observed that managers in AWs often create new routines, and promote new social occasions for group socialization and virtual spaces for groups. Thus, with the transition to AWs, the primary object of the managerial role has changed: from managing people and groups to managing social relations at work.

However, we also found traces of the old control and supervisory mechanisms that characterized traditional office environments. As discussed in the previous paragraph, the control function is substantiated by the enhanced accessibility of knowledge workers, their increased proactive and planned contact with managers, and the introduction of normative practices that prescribe behaviors within the group. Yet, this control function does not emerge as a one-sided organizational attempt to exert control over knowledge workers. Instead, it is the result of an ongoing negotiation process that is triggered by the new spatial arrangements and is jointly carried out by managers and workers, bringing the emergence of a newly negotiated social order.

Overall, my studies suggest that organizations employ AW not only to reduce overheads and operating costs, but also – and primarily – to carry out a symbolic contestation of office functioning and meanings, emphasizing flexibility and collaboration over managerial control and formal structures. Nonetheless, companies should not overrate the extent to which they can control knowledge workers’ meanings and behaviors by using the new model. Papers 3 and 4, in fact, highlighted how territorialization emerges as a localized strategy enacted by knowledge workers to re-appropriate the places that are fundamental for the construction of their selves at work, and that were de-territorialized by AW.
6. Conclusions and future research

In this last chapter, I conclude my work by discussing the validity of the organizational assumptions guiding the introduction of AW’s. Based on my conclusions, I summarize the main contributions of this thesis, its limitations, and the prospects for further research.

6.1. Conclusions

The AW has received plenty of attention from both academia and practitioners. While companies have adopted the new models to increase office flexibility and collaboration, only scarce research has empirically investigated how the AW affects these outcomes. The lack of research made it difficult to ensure the validity of the organizational assumptions guiding AW introduction. My thesis contributes to workplace research by developing new knowledge on the implications of some of the AW models on individual behaviors and social dynamics at work. To derive the AW implications, I drew upon three different perspectives that have emerged from the abductive research process and have been deployed and interpolated across three different studies: contingency, tension, and spatial perspectives.

Employing the contingency perspective, I identified the organizational conditions that facilitate or hamper the AW performance, i.e., its ability to nurture social relations across organizational boundaries. In addition, I highlighted the mechanisms through which the detected barriers can reinforce themselves, generating tensions between the implementation areas in which the AW initiatives may take place.

Combining the tension and the spatial perspectives, I explored how knowledge workers make sense of the AW, and how their sense-making relates to spatial practice and shapes behavioral and interactional outcomes. The tension perspective was employed by analyzing prior studies on flexible and collaborative work environments, in order to identify the oppositional tensions that are experienced by knowledge workers in the AW. These tensions generate some contradictions, since the flexibility, fluidity, and
accessibility afforded by the new office models are enacted and achieved through structure, stability, and privacy. My analysis also suggested that, in the AW, autonomy and control are closely tied, such that the latter emerges not only from the features of the new office – such as its openness, transparency, and technological embeddedness – but also from the way in which knowledge workers practice and socialize their office space.

I supported these findings empirically, using the spatial perspective to see how knowledge workers interpret the AW, and how their subjective meanings and interpretations affect their spatial practices. I identified four representational narratives of the AW, each of which discloses some threats to the construction of the self at work that are brought by the new office model. Drawing on my empirics, I described how knowledge workers mitigate such threats through territorial endeavors that recreate some lived places at the office, at different scales: individual and group-level places, attaining to either the private or the professional sphere. These places are made meaningful through identity and repetitions. Meaningfulness is therefore achieved via the reassertion of the consolidated routines, the prior interactional patterns, and the established organizational norms that characterized the old office. Through these, knowledge workers reconstruct a sense of familiarity in the hectic, isolating and unstructured AW. By doing so, they relinquish part of the freedom afforded by the new models, subjecting themselves to exacerbated operational restrictions and organizational control. Hence, control in the AW is the result of the new social order negotiated by managers and employees, in which autonomy and control are mutually constructed and entangled within a paradoxical relationship.

To conclude, are the organizational assumptions guiding the AW introductions met?

Although companies and their top managers can leverage some enablers to sustain AW office models, they cannot overstate the extent to which these could be used to control and overwrite knowledge workers’ behaviors and social relations. The contestation for individual and group places that develops in the representational dimension of the AW suggests that both middle managers and employees act as forces of stratification. These forces
try to capture the de-territorialized apparatus of the AW into predefined systems of individual and collective identities. In this way, employees and managers regain some security in the face of the uncertainties brought by the competing demands, the altered meanings, and the emerging interpretations of the AW. This consideration explains why, despite the presence of a variety of shared locations to increase spontaneous interactions, knowledge workers in the AW keep interacting primarily with their group members; they do this within scheduled time slots and in standard meeting rooms. The consideration also explains why AWs are often crowded with “early birds”; knowledge workers who come to the office early in the morning, select the preferred work station – possibly in concentration rooms or by office corners – and drop the exploration of their office space.

Thus, the AW may become the theatre of unforeseen social dynamics that stem from the reconfiguration of work activities and relations in time and space. These dynamics have the potential to reduce collaboration and flexibility in the office. For this reason, it is fundamental for the top and middle managers in AWs to understand the dynamics through which the contestation for individual and group places unfolds over time. In this way, they can promote approaches through which knowledge workers can creatively engage with their office space, and reframe or connect the oppositional tensions in order to sustain collaboration and flexibility in the AW.

6.2. Contributions

My thesis contributes to the body of knowledge in workplace research. Following the typology developed by Davis and Parker\textsuperscript{10} (1997), my work conveys three main contributions in terms of new evidence and improved concepts.

\textsuperscript{10} Davis and Parker presented four possible contributions of a dissertation: new or improved evidence, new or improved methodology, new or improved analysis, and new or improved concepts or theories. Any combination of these is also possible (Davis & Parker, 1997).
The first contribution is the introduction of an improved concept. Specifically, I provided a high-level model synthesizing the different organizational areas in which AW discourses and implementation have taken place. Drawing upon this model, I advocated the need to tie these discussions to the different aspects of the AW under the same banner, to better investigate the interactional effects among implementation areas.

The second contribution lies in the analysis of the AW from a spatial perspective. With a few exceptions (e.g., Hirst, 2011; Sivunen & Putnam, 2019; Värlander, 2012), the current discourses on AWs tend to look at the office space as a rather static entity; a fixed container designed by companies, in which knowledge workers find new constraints or resources to deploy their work activities and relations. This perspective on AWs becomes even more evident when considering the privileged focus of previous literature on the intelligible aspects of the new office spaces, such as their designs and practices. Nonetheless, scholars have observed that companies are made up of spaces with increasingly flexible and ambiguous boundaries that are continuously shaped by space users through their interactions (de Vaujany & Mitev, 2013; Halford, 2008; Munro & Jordan, 2013; Taylor & Spicer, 2007; Wapshott & Mallett, 2012). These space crafting dynamics become even more salient in the context of the AW, which brings flexible boundaries that are constantly renegotiated by individuals and groups. Space crafting becomes visible in the representational or symbolic domain of the AW, where the contestation for the old individual and group territories develops. This contestation involves the company, its managers, and its employees. By embracing a spatial perspective, I have contributed to the literature on the sociology of organizational space by problematizing the flexible and ambiguous boundaries of the lived places and spaces of the AW.

Finally, my third contribution is the provision of new empirical evidence to test the validity of the assumptions underlying AW adoption. With this regard, the originality of my work lays in the analysis of data that have been gathered from both managers and employees, so that I could integrate their perspectives on AW introduction. In this way, I have outlined the related implications on social relations and managerial roles.
6.3. Managerial and societal implications: elaborating on the smart and the dark sides

Overall, my results draw some positive power implications for management by outlining the smart sides of AWs. This thesis suggests that AWs can provide a framework for generative movements, allowing for creative organizing (Kornberger and Clegg, 2004). Managers can sustain these movements by enacting approaches that create new spaces for structure, predictability, privacy, and control in the midst of the hectic and flexible AW. These approaches leave the AW suspended between chaos and order, generating movements that create and organize new knowledge and communication flows.

These approaches, which emerged from the results in papers 1 and 2, also highlight the need to adapt the managerial role to the new context of work by refocusing it around the management of social relations and knowledge processes. This new focus implies a closer engagement of managers with their employees; the creation of new spatial and temporal boundaries around groups, and an active effort to link individual knowledge workers to those who can be beneficial for their work.

In the traditional office with assigned desks and private offices, managers can often adopt “lazier” approaches to information and knowledge sharing, since these are facilitated by the proximity to their employees. Also, the provision of social support to people in need, particularly to poor performers and newcomers, is facilitated by collocation with the other group members. In the AW, employees instead experience more difficulties in getting the social support they might need from their immediate colleagues. They often struggle to spot the relevant information that is produced by the overstimulating social system. Territoriality and social withdrawal are concrete risks that might translate into the invisibility of some knowledge workers in the social group space. These dark sides or unintended consequences of AWs require a more inclusive and proactive managerial approach to knowledge and information sharing. This approach prevents the overstimulation risk and ensures that all employees, even those
who are out of sight, receive the right amount of personal and work-related support.

The dark sides of AWs can also be seen at a macro-level of analysis. In line with prior findings on hot-desking by Hirst (2011), we observed in paper 3 that knowledge workers might experience AWs as a less favorable, overly stimulating, and unstructured environment. This environment increases work and cognitive load, obliging people to spend time sitting next to semi-strangers. Although this thesis does not directly engage with this hypothesis, these findings suggest that workers may interpret the AW as a signal of reduced employer commitment, which appears to be temporary, tentative, and only oriented towards cost reduction. This issue created by AWs is significant from a societal perspective, because it contrasts with the urge to create sustainable work systems that are able to engage and fulfill human resources without devaluing and burning them out (cf. Docherty, Kira, & Shani, 2009). Also, the reassertion of the status quo of the old office, as seen in paper 4, raises some questions regarding the ability of AWs to sustain the new organizational processes and structures that are brought about by the alleged shift towards the post-bureaucratic organization (Heckscher and Donnellon, 1994). These considerations call for more research questioning the poeticized idea of community and flexibility delivered by AWs (cf. Dale & Burrell, 2010), to understand how the latest changes in organizational spaces are actually supporting collaboration, flexibility, and engagement, over hierarchies, structure, and control.

6.4. Limitations

This research is based on case study analysis, which has been shown to be an appropriate design to fulfil my research objectives. Nonetheless, my work also has some limitations that should be discussed.

First, I used interviews as the primary method for data collection, while I could have combined additional data sources to triangulate the interview data to a greater extent. For example, a diary study could have been useful to generate further insights into how knowledge workers perceive the impact of the AW on their daily work. Also, I could have used additional
methods to measure the social relations in time and space quantitatively, for example through social and spatial network metrics.

Second, to improve the transferability of my findings, I analyzed the cases of several office settings introduced by companies within various industries. Nonetheless, I can still detect some cross-case characteristics of my sample that limit the transferability of my findings. For example, most of the studied organizations are established companies, within the service industry and with quite bureaucratic organizational structures. Therefore, my findings could be transferred only to organizational contexts that share similar characteristics.

Third, access to the respondents at the case companies was not always ideal and, despite my efforts to embrace a broader perspective, the analyses often privileged a managerial viewpoint. Although this aspect may reduce the credibility of my findings, it also strengthens my work. Indeed, my empirical results have been interpolated with those from previous literature which, as already discussed, have focused on the employees’ perspectives on the AW.

6.5. Directions for future research

In this thesis, I problematized the assumptions underlying AWs, based on an overly generalized view on the relationship between space, collaboration, and flexibility. I showed that AWs are designed by following some romanticized ideas of fluidity, accessibility, and variability; these design efforts convey a deterministic assumption that spaces designed in certain ways prompt collaboration, as if these have the agency to do things on their own (cf. De Paoli, Sauer, & Ropo, 2017). Yet, the same material conditions can produce different outcomes, depending on how people interact with their physical and social environment. This suggests the need to further engage with the subjective experiences, interpretations, and needs arising in AWs, to show how people create different accounts of these by drawing upon a set of complex personal resources that operate at different levels (cf. Halford, 2004). These resources include behavioral traits of office occupants, but also their job position, working tasks, tenure, functional context, organizational culture, and personal background. By including these
elements in the analysis, it would be possible to understand the emergence of different accounts of the AW, highlighting the dynamics through which space is co-created by workers.

In this way, it would be possible to dig into the quest to ascertain whether only certain types of people and work fit the AW context; or, alternatively, if the AW can construct the type of worker who is engaged, collaborative, and self-determined, and behaves according to organizational assumptions and expectations.

This thesis also calls for more process studies on AWs, possibly considering cases of companies that have already reached the steady stage of the AW transition. In this way, it would be easier to understand how space can be leveraged by managers within everyday life at the office, considering the relationships between space, time, and knowledge creation.

Finally, automation is approaching the context of knowledge work in the form of smart sensors and intelligent technologies that are increasingly embedded in the AW. Thus, another interesting venue for future research would be to look at how this shift towards the smart office is affecting knowledge workers’ experiences and practices, and to renegotiate autonomy and control at work. Such research would produce new insights for managers into what is needed to lead employees in this new world of work, and how smart technologies could be used to nurture social dynamics, without resulting in lower engagement and distant relationships.
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