

## ORIGINAL ARTICLE



# Tensions as a framework for managing work in collaborative workplaces: A review of the empirical studies

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## Abstract

Companies are increasingly implementing collaborative workplaces (CWs) to promote office collaboration and flexibility. Despite the rapid diffusion of CWs across industries and organizations, research findings suggest that their benefits often fail to materialize due to the existence of tensions and contradictions that develop through the daily actions and interactions of workplace users. This literature review sheds some light on the development of tensions and contradictions in CWs by focusing on their implications for social relations at work. This review identifies the oppositional tensions that surface in CW research findings: *flexibility vs structure*, *fluidity vs stability* and *exposure vs privacy*. In disclosing the underlying mechanisms, this study connects these tensions and their management to the autonomy–control paradox that emerges in CWs. It concludes by suggesting some approaches that are available to managers to assist them in dealing with tensions and unleashing creativity, participation and adaptability.

## INTRODUCTION

Collaboration has become the ‘cornerstone for the creation and the enhancement of the 21<sup>st</sup> century workplace’ (Marshall, 1995, p. 15) since it boosts innovation, consensus and learning through knowledge sharing. To sustain collaboration, companies are increasingly experimenting with collaborative workplaces (CWs). These are non-traditional premises, such as *flexible open spaces* and *activity-based offices*, that companies conceive to support interaction, socialization and collaboration within the organization and across its formal structures (cf. Boutellier et al., 2008; Waber et al., 2014). In the CW, employees from multiple job positions and work groups are co-located in a shared, open office, designed to support planned and chance encoun-

ters through the provision of flexible seating and various interactional areas (cf. Richardson, 2011). Examples of interactional areas include break-out zones, conversation pods and other shared facilities that increasingly characterize the contemporary office landscape (Davis et al., 2011).

The popularity of CWs derives from the results of prior studies which have shown that workplace co-location, openness and flexibility foster collaborative outcomes (e.g. Allen, 1977; Coradi et al., 2015b; Kabo et al., 2014; Zelinsky, 1998). However, researchers have repeatedly observed that such outcomes often fail to materialize in CWs. Instead, CW users might experience additional conflicts (Ayoko & Härtel, 2003; Värlander, 2012), reduced social cohesion (Kingma, 2019) and uncooperative behaviours

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(Morrison & Macky, 2017) that limit collaborative endeavours.

These findings suggest the need to engage with the apparent contradictions surfacing in the CW, which was designed for the purpose of collaboration yet frequently undermines it, and explain the mismatch between organizational expectations and users' experiences. Based on this consideration, the study focuses on how contradictions operate in CWs through the tensions experienced by their users. Specifically, it explores the tensions alighting such contradictions, tying their development and outcomes to the daily actions and interactions of CW users—both managers and employees.

To do this, the paper systematically reviews prior empirical work on CWs, eliciting the inherent contradictions, analysing contributing tensions and examining how CW users typically respond to them. This approach appears to be appropriate for reviewing studies on CWs because tensions surface in the findings of previously undertaken research. These findings have located tensions in the results of workplace interventions (e.g. McElroy & Morrow, 2010); in trade-offs between the instrumental, aesthetic and symbolic office functions (Elsbach & Pratt, 2007); in practices that transform space use (e.g. de Vaujany & Vaast, 2013); and in clashes between space representations, practices and imaginaries (Sivunen & Putnam, 2020). Conversely, this review locates tensions in the misalignment between the organizational expectations guiding archetypical CW designs and users' experiences. It exposes how these tensions dynamically emerge and develop in everyday life in the CW, generating options for responding to them.

By developing this analysis, the study posits three contributions to management and organization research. First, it enhances our understanding of how CWs affect social and relational dynamics at work by systematizing existing knowledge on the topic. In the process, the study discloses three tensions that surface in CW research findings and outlines a framework for identifying the approaches that managers can use to respond to such tensions in a way to prompt participation, creativity and adaptability. Second, it shows how different organizational responses to tensions can contribute to situations that exacerbate inconsistencies, bringing negative outcomes. It also problematizes some widespread managerial approaches to managing collaboration in CWs, such as increasing the frequency of planned group meetings (cf. Bosch-Sijtsema et al., 2010; Wohlers & Hertel, 2018). Finally, this study links the detected tensions and their responses to the autonomy–control paradox. In this way, it questions whether companies can leverage CWs to sustain employees' freedom and emancipation in the allegedly 'new' and post-bureaucratic workplace.

## CONCEPTUAL BACKGROUND: THE CONSTITUTIVE APPROACH TO THE STUDY OF TENSIONS

Tensions arise when actors experience incompatibilities and dilemmas that put them in a state of discomfort, stress and anxiety, making it difficult to make choices between oppositional concepts (Fairhurst & Putnam, 2014). They are experienced as 'feeling states' (Putnam et al., 2016, p. 68), feeding dilemmas, contradictions and paradoxes.

In line with this conceptualization, the literature has formulated several tensions that organizational members face when designing and practicing alternative office spaces. For example, De Paoli et al. (2019) identified the oppositional concepts underlying creative-space images (i.e. collective vs individual contributions, planned vs emergent creativity and professional vs participatory designs). The authors called for caution in favouring one concept over the other, suggesting that workable solutions are those designed through harmonizing the opposites (De Paoli et al., 2019). Similarly, other studies on CWs suggested that design choices should balance the pros and cons of opposite concepts, such as exploitative and explorative learning (e.g. Coradi et al., 2015a,b; Manca et al., 2018), individual mobility and team co-location (e.g. Appel-Meulenbroek et al., 2011; Rolfö et al., 2018; Wohlers & Hertel, 2017) and the opportunities for interaction with those for privacy (Kim & de Dear, 2013; Parkin et al., 2011; Ten Brummelhuis et al., 2012).

Although these studies have provided several insights into the daily struggles and reactions of CW users, all of them have mostly taken an organizational perspective, investigating companies dealing with tensions in terms of solving design dilemmas. Solving such dilemmas encompasses either/or choices, in which organizational members have to select one of two mutually attractive or unattractive alternatives by balancing the respective pros and cons (Cameron & Quinn, 2002; Putnam et al., 2016). In this line, CW dilemmas have mostly implied managing trade-offs through balancing the advantages and disadvantages of oppositional design features, such as openness and enclosures, transparency and privacy, adjustability and fixities, personalization and anonymity (cf. Elsbach & Pratt, 2007).

This approach to tensions conceals two major limitations. First, it overemphasizes the designed aspects of the CW as conceived by companies, while downsizing the active role that users play in organizing their office space (cf. Dale & Burrell, 2008; Kornberger & Clegg, 2004). Second, while taking tensions as the unit of analysis, this approach also tries to bypass them by treating the opposite concepts as incompatible and conflicting. Indeed, it requires companies to make choices between the

opposites, neglecting the existence of alternatives that enable actors to live with the tensions and unleash their creative potential (cf. Lewis, 2000).

To overcome these limitations, academics have contended the need to consider alternative ways of thinking about tensions as immanent and intertwined with how actors work through them (cf. Putnam et al., 2016). According to these scholars, tensions cannot be solved; they are persistent features that develop throughout the everyday activities within the organization. This perspective on tensions called for a shift from solving dilemmas and trade-offs to managing contradictions and paradoxes.

Unlike dilemmas, contradictions and paradoxes involve dichotomies that are situated in the same relationship and mutually constitute each other (Putnam et al., 2016). Contradictions specifically refer to poles that are opposite and yet bound together as interdependent and mutually defining (Smith & Lewis, 2011). In the context of this study, contradictions surface in the design, implementation and use of CWs, and become visible due to the inconsistent outcomes of workplace interventions. When contradictions persist over time, they might cause the emergence of paradoxes that are experienced as either ironic situations or absurd outcomes (Smith & Lewis, 2011). Paradoxical situations, for instance, are those in which democratic workplaces reinforce hierarchies and control (Markus & Cameron, 2002), workplace transparency creates employees who behave less authentically and withhold improvements (Bernstein, 2012) and flexibility triggers settling behaviours (Waber et al., 2014). With paradoxes, the contradictory poles reflect and imply each other, developing an evolving and synergic relationship that shapes the paradox and the responses to it (Putnam et al., 2016).

These conceptualizations of tensions, contradictions and paradoxes outline the constitutive, bottom-up approach to their study (Putnam et al., 2016) that fits the CW's context. Indeed, everyday life in the CW is grounded in responding to tensions that stem from the incompatibilities between organizational expectations and users' experiences. These incompatibilities introduce certain contradictions that workers process through their social actions and interactions, creating systematic response patterns that potentially produce paradoxical outcomes.

## Approaches to respond to tensions

Responses to tensions determine how people generate options that can either transform or reproduce existing organizational practices, structures and relationships, producing either positive or negative outcomes (Putnam et al., 2016; Schad et al., 2016). The positive effects of managing tensions include enhanced learning, creativity and discov-

ery, which can be achieved by altering existing routines or by enabling increased participation (Putnam et al., 2016). The negative effects include vicious cycles, double binds, constraints and marginalization, which induce undesired outcomes (Putnam et al., 2016). Specifically, double binds correspond to situations in which CW users feel stranded between opposites, unable to make choices because no available options seem viable (Tracy, 2004). These typically arise in those situations in which employees receive contrasting messages from the company (cf. Putnam et al., 2014) that, for example, implement policies encouraging the flexible use of office facilities, while managers require groups to stay proximate and constantly 'in view', where they can be seen. Vicious cycles, in contrast, are generated by a series of actions in which the responses of CW users reinforce undesired outcomes. To exemplify, this happens when CW users reduce the availability of conference rooms because they book them as a precaution, while lamenting the lack of available meeting spots (cf. Bosch-Sijtsema et al., 2010).

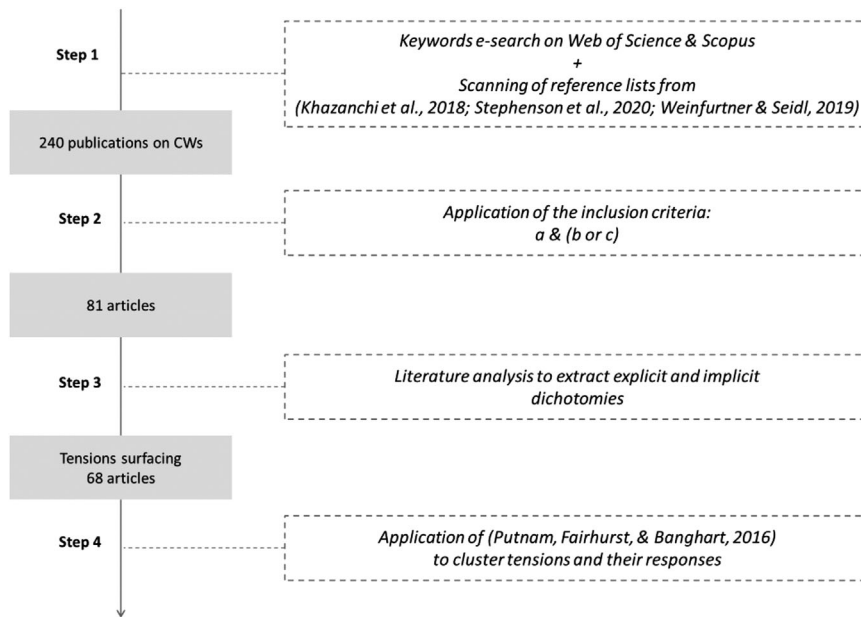
Prior research has identified several options that are available to organizational actors to respond to tensions. Putnam et al. (2016) clustered these approaches into the following response typology.

### Either/or approaches

When enacting these approaches, actors treat the opposite poles as trade-offs, by adopting defensive reactions, selecting or privileging one pole of the relationship over the other, and forcing their separation or segmentation. *Defensive reactions* deny the existence of contradictions and repress paradoxes (cf. Lewis, 2000). *Withdrawal*, in particular, represents an extreme form of repression that implies the physical or psychological abandonment of the scene (Tracy, 2004). *Selection* implies choosing one pole of the paradoxical relationship while overlooking the other (Seo et al., 2004). Finally, through *separation*, actors segment or split the tensions by assigning the oppositional poles to different people, units, functions or times (cf. Smith & Tushman, 2005; Tracy, 2004).

### Both/and approaches

Actors can treat the opposites as interdependent and inseparable by embracing paradoxical thinking, vacillation, integration or balance. Through *paradoxical thinking*, they recognize and reflect upon the opposites to make the concealed tensions explicit, and better deal with contradictory situations (cf. Lüscher & Lewis, 2008). Through *vacillation*, actors mitigate the tensions by moving back



**FIGURE 1** Systematic literature review in four steps

and forth between the poles at different times or contexts (Poole & van de Ven, 2016). Finally, through *balance*, actors pursue a middle ground, sometimes forcing the *integration* of the two opposites (Seo et al., 2004).

### More-than approaches

This last category encompasses reframing, transcendence, connection and reflective practice. Through *reframing*, actors rename the situation to take it out of its context, in such a way as to situate the opposites in a new relationship in which the oppositional tensions are no longer germane (Leonardi et al., 2010). Similarly, *transcendence* posits the opposites into a new relationship in which the oppositional poles are treated as complementary rather than competing (cf. Lewis, 2000). Alternatively, *continual connection* bounds the opposites together into an ongoing interplay that unfolds over time, creating new 'liminal and performative sites of disruptions' where people can live with paradoxes (Putnam et al., 2016, p. 129). These sites of disruptions constitute *third spaces*: border zones or ambiguities that allow people to treat the opposites in an entirely different way. Finally, actors can enact *reflective practice* to increase their awareness regarding the ongoing situation and promote reflexivity, for example, by challenging the normal situational boundaries (cf. Beech et al., 2004).

Research examining the responses to paradoxes suggests that both/and and more-than approaches are more likely to produce positive effects; conversely, either/or approaches often produce vicious cycles and double binds that constrain future actions (Putnam et al., 2016). This response typology has been used to analyse prior empirical research

on CWs, with the modalities explained in the following section.

## RESEARCH METHODS AND REVIEW PROCESS

This review has developed a systematic analysis of the empirical studies on CWs through the following steps, synthesized in Figure 1.

First, the author identified an initial pool of articles by searching in Web of Science and Scopus.<sup>1</sup> The search was conducted using the following keywords: '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'. These terms were identified through a preliminary literature search, aiming to detect the key concepts that scholars have employed to examine the latest trends in the design, use and management of office spaces. Since most of these key concepts, including 'activity-based workplace' and 'new ways of working', started appearing in academic outlets in the mid-1990s, the electronic search was limited to journal articles published between 1995 and 2020. Additionally, the author scanned the reference lists of three recently published reviews on organizational space to locate all the relevant papers (i.e. Khazanchi et al., 2018; Stephenson et al., 2020; Weinfurtner & Seidl, 2019). After reading the titles and abstracts to exclude any irrelevant material, the author identified approximately 240 studies on CWs and their impact on work, management and organizations.



The following inclusion criteria were then applied to the results of this initial search. First, (a) the work needed to explicitly address empirical findings from office settings that combine workforce co-location in a shared, open environment with flexible seating. Second, (b) these settings should be aimed at relational benefits for the company, such as increased collaboration, interaction and knowledge sharing. To integrate the relevant material, the author also analysed (c) those empirical studies from the same pool that have focused on the social and relational implications of flexible seating and/or workforce co-location in a shared, open environment, independently from the organizational rationale underlying these arrangements. Ultimately, this activity led to the identification of 81 relevant empirical studies.

The material was coded inductively to extract the tensions surfacing in CW research findings by adapting the analytical procedure described by Putnam et al. (2014).

For the first-level coding, the author scanned the results sections of the collected papers, searching for evidence of the push-and-pulls of oppositional concepts arising in the CW and causing users difficulty, discomfort and anxiety. For instance, studies have shown that CW users often struggle to find their collaborators, due to the variability of their office locations (e.g. Bosch-Sijtsema et al., 2010). This situation reveals an opposition between individual autonomy in selecting office locations and coordination requirements posed by mutual interdependence in collective activities. Other studies have suggested an opposition between nomadic work practices and habitualized or routine tasks (e.g. Hirst, 2011). Overall, it can be noticed that oppositions surface from the 68 articles that are marked with an asterisk in the reference list, which belong to a broad array of disciplines, including sociology, organizational behaviour, environmental psychology, ergonomics, facility management, corporate real estate and organizational studies.

In the second-level coding, primary tensions were classified by listing the sets of oppositions and combining those that were similar or subsumed by others. The primary tensions identify the preeminent and recurring struggles that arise alongside the implementation and use of CWs. For instance, the aforementioned oppositions feed a primary tension revolving around the competing organizational demands for *flexibility*—as CW users are expected to adjust individual working conditions to specific circumstances—and *structure*—implied by the mutual interdependencies, stationary activities and routines that partly prescribe the use of organizational times and spaces.

This process led to the identification of three primary tensions: (i) *flexibility vs structure*; (ii) *fluidity vs stability*; and (iii) *exposure vs privacy*. The choice of labels for the dichotomies was driven by their frequent use across articles as contrasting language categories that, however, also

highlight complementary aspects of the organizational settings in which CWs are introduced (cf. Fairhurst & Putnam, 2019).

Analytically, each primary tension is tied to a different type of contradiction arising in the CW. The tensions between flexibility and structure reveal the unexpected and contradictory impact of CWs on the organization of individual and collective tasks. The fluidity vs stability tensions focus on the outcomes of CWs on social relationships. The exposure vs privacy tensions disclose the impact of CWs on one's ability to control stimuli coming from the surrounding environment. This analytical differentiation finds correspondence in the spatial model of work relationships proposed by Khazanchi et al. (2018). The model suggests that space supports instrumental and expressive relations by facilitating the exchange of task-related communications, of private and confidential information, and by preserving the resources that enable people to control stimuli and emotions. By drawing upon this model, one can connect the analytical categories to the three areas in which the CW affects work activities and relations, and in which contradictions arise: the instrumental, expressive and regulatory dimensions of the CW.

Finally, for the third-level coding, the author identified the responses for each tension. The response typology proposed by Putnam et al. (2016) was applied to examine how CW users manage tensions, and how situations evolve from their responses. Eventually, tensions, responses and contradictions have been aligned to decipher how these operate together paradoxically, creating synergies or inconsistencies. Table 1 provides a description of the outcomes of the analysis.

## TENSIONS ARISING IN COLLABORATIVE WORKPLACES

This review identifies three primary tensions that surface from prior research and stem from the oppositions between organizational expectations and users' experiences of CWs. The following sections explain how these oppositions play out for each tension, connecting their development to the responses of CW users. By doing so, they also expose the responses of the users that generate positive outcomes, such as learning, creativity and discovery, and those resulting in negative outcomes, including vicious cycles, double binds, constraints and marginalization.

### Flexibility vs structure

The instrumental dimension of the CWs describes how they support different tasks and their integration. In this

TABLE 1 Juxtaposition of tensions, contradictions and responses arising from the analysis

Primary tensions	Feeding oppositions	Fed contradictions	Responses
Flexibility vs structure	<ul style="list-style-type: none"> <li>Individual autonomy vs mutual interdependencies</li> <li>Practice of mobility vs stationary activities</li> <li>Flexibility rule vs routine tasks</li> </ul>	<p><b>Instrumental CW dimension:</b> Although aimed at facilitating the organization of individual and collective tasks, the flexible CW systematically hampers their execution.</p> <p>Users experience the CW as rigid since they suffer less flexibility, more coordination losses and an additional workload.</p>	<p>Either/or:</p> <ul style="list-style-type: none"> <li>Increasing the frequency of planned group meetings.</li> <li>Reasserting the old group policies linked to formal group structures.</li> <li>Enacting settling behaviours to retrieve habitualizations and routines.</li> </ul> <p>More-than:</p> <ul style="list-style-type: none"> <li>Negotiating new routines linked to third spaces or border zones.</li> <li>Clustering physical locations, routes and technologies to increase predictability and findability.</li> <li>Formalizing new rules prescribing the flexible use of the CW.</li> </ul>
Fluidity vs stability	<ul style="list-style-type: none"> <li>Ephemeral spatial configurations vs consolidated social relations</li> <li>Short-term vs long-term collaborations</li> <li>Spontaneous vs organized interactions</li> </ul>	<p><b>Expressive CW dimension:</b> Although aimed at fostering users' engagement through socialization across organizational boundaries, the CW becomes populated with lonely co-workers who have neither social support nor strong ties.</p> <p>Instead of promoting fluid movements, the CW rearranges its users into stable spatial and social configurations.</p>	<p>Either/or:</p> <ul style="list-style-type: none"> <li>Encouraging and enacting clustering behaviours that recreate stable neighbourhoods.</li> <li>Allocating leisure and social time at the office only to group colleagues.</li> </ul> <p>Both/and:</p> <ul style="list-style-type: none"> <li>Integrating visible reference areas for groups, while discouraging settling through negotiating new group rules.</li> </ul> <p>More-than:</p> <ul style="list-style-type: none"> <li>Increasing the frequency and spectrum of social gatherings and informal group events.</li> <li>Moving office sociability into new digital spaces for groups.</li> <li>Reframing the role of the manager towards a coaching approach.</li> </ul>
Exposure vs privacy	<ul style="list-style-type: none"> <li>Involvement requirements vs concentration demands</li> <li>Emotion vs cognition</li> <li>Accountability vs innovation</li> </ul>	<p><b>Regulatory CW dimension:</b> Although aimed at learning, adaptation and change, the CW triggers some mechanisms that hamper cognitive work, reiterate routines and produce more impulsive decisions.</p> <p>Instead of being more accessible and transparent, CW users tend to shield themselves from stimuli and withhold improvements.</p>	<p>Either/or:</p> <ul style="list-style-type: none"> <li>Withdrawing from social situations.</li> <li>Posing the accessibility requirement.</li> <li>Promoting ostensive collaborative engagement with the office space.</li> </ul> <p>Both/and:</p> <ul style="list-style-type: none"> <li>Emphasizing events and synchronizing interactions</li> </ul> <p>More-than:</p> <ul style="list-style-type: none"> <li>Enacting new embodied normative practices.</li> <li>Promoting self-management and spatial awareness to increase reflexivity.</li> </ul>

dimension, the opposition between *flexibility* and *structure* arises from competing organizational demands. On the one hand, we have the demand for *flexibility*, as the company requires CW users to autonomously adjust when and where they work to fit specific tasks (cf. Gonsalves, 2020). On the other hand, we have the organizational demands for *structure*, encompassing those predefined and institutionalized ways of organizing work activities and relations across time and space. Such structure includes routine tasks, mutual interdependencies and bureaucratic procedures that imbed some rigidity into the context of work, limiting flexibility and requiring coordinated efforts (cf. Putnam et al., 2014). Past research indicates that the flexibility afforded by CWs can clash with these structural arrangements, hampering the organization of individual and collective work in multiple ways.

For example, tight interdependencies and bureaucratic procedures require group members to closely coordinate their efforts. However, due to the flexibility in determining office locations, CW users may experience additional difficulties in finding people, getting documents signed promptly and involving their non-co-located colleagues in the unplanned and spontaneous meetings that are critical for coordination (e.g. Bosch-Sijtsema et al., 2010; Wohlers & Hertel, 2018). Besides, even when everyone is within reach, collaborators may still struggle to find a proper space to meet due to the frequent unavailability of conference rooms and collaboration areas that are also used flexibly by other groups (Brown & O'Hara, 2003; Ekstrand & Karsten Hansen, 2016). These struggles become more salient in larger offices and for larger groups, as these pose additional challenges to coordinate the work of spatially dispersed employees (cf. Bodin Danielsson & Bodin, 2008; Haapakangas et al., 2019).

Thus, the flexibility afforded by the CW often translates into unpredictability regarding workers' locations and the availability of spaces to meet. This unpredictability clashes with the demand for predictability imposed by the structural arrangements, producing some coordination hassles that hamper the organization of collective work. Coordination hassles can be partly addressed through the increased use of technologies: instant messaging, shared calendars and emails sustain coordination in CWs by enabling frequent interactions between non-co-located colleagues (De Paoli et al., 2013; Ten Brummelhuis et al., 2012). However, coordination losses can still occur due to the increased amount of asynchronous communication (Brown & O'Hara, 2003).

The flexibility vs structure tensions can also stem from collisions between the organizational rules prescribing the flexible use of the CW and the routine tasks that impose predefined ways of using the same office facilities. CW users are expected to move around the office and fre-

quently switch desks, even when their tasks are prescribed by routines that fit stationary work (Babapour, 2019; De Paoli et al., 2013; Gorgievski et al., 2010). As a result, they often engage in activities that they perceive as trivial and pointless, including searching for and setting up suitable workstations, as well as the storing, carrying and retrieving of necessary material (e.g. Hirst, 2011; Rolfö et al., 2018; Van Der Voordt, 2004). Also, when a suitable workstation is not available, CW users might end up selecting sub-optimal locations that do not fit the requirements of their activities (Babapour, 2019; Babapour et al., 2020; Hoendervanger et al., 2018).

Overall, these dynamics outline a first contradiction surfacing in CW findings. The flexible CWs are meant to provide people with greater control over individual and collective work, to facilitate its organization (cf. Gerdenitsch et al., 2018). Yet the inherent flexibility collides with the demand for structure that relates to the coordination of group work, stationary work styles, routine prescriptions and activity requirements. This collision creates a scenario in which users perceive the CW as rigid and structured, since they experience less flexibility, coordination losses and an additional workload.

### Responses to the flexibility vs structure tensions leading to negative outcomes

To cope with these tensions, managers in CWs often achieve some structure by increasing the frequency of planned group meetings (e.g. Bosch-Sijtsema et al., 2010; Värlander, 2012; Wohlers & Hertel, 2018). As a result, CW users structure their work to a greater extent, investing most of their office time in interacting with group members within planned meetings. This reduces the time that people spend in informal interactions with temporarily co-located colleagues from other groups (Bosch-Sijtsema et al., 2010; Värlander, 2012; Wohlers & Hertel, 2018). Also, the increased frequency of group meetings further reduces the availability of collaboration areas and conference rooms (e.g. Ekstrand & Karsten Hansen, 2016; Zamani & Gum, 2019). This reduction exacerbates the tensions and feeds another contradiction, as the CW hampers informal collaborations by systematically reducing workers' ability to arrange impromptu or unplanned meetings (Brown & O'Hara, 2003). The increased frequency of group meetings corresponds to an *either/or* approach, aiming to facilitate the organization of collective work through the *selection* of structure over flexibility, reinforcing the collaboration patterns that develop within formal group structures.

Managers can also contribute towards reinforcing formal structures and prior interactional patterns by reasserting the old group policies (Irving et al., 2020).

These include the prior norms, standardized routines and specialized information and communication systems that reiterate the established organizational paths for solving issues locally, within the group, even when these might be shared with other teams or departments (see also Manca et al., 2018). The enactment of these policies again corresponds to an *either/or* approach, through which groups reassert structure and predictability amid the CW, to simplify the organization and coordination of work activities and interactions. However, these policies limit any efforts to collaborate beyond formal group boundaries.

Also, to simplify the organization of individual and collective work, CW users often display settling behaviours that limit flexible engagement with the office space (e.g. Elsbach, 2003; Hoendervanger et al., 2016). Office settlers, as named by Hirst (2011), claim the ownership of space by leaving personal items on desks to discourage their use. They also come to the office early in the morning and select the same workstation every day, in a repeated action that constitutes incipient institutionalization (see also Lansdale et al., 2011; Van Marrewijk & Van Den Ende, 2018). By *selecting* structure over flexibility, settlers retrieve some useful routines that reduce the unnecessary work linked to the daily search for proper office space (Lansdale et al., 2011; Van Marrewijk & Van Den Ende, 2018). Nonetheless, they also relinquish the opportunity to adjust their office locations to the activities being performed. Also, settlers usually select the most desirable spots at the office, reducing their availability to other colleagues (e.g. Babapour et al., 2020; Kingma, 2019). These dynamics may lead to sub-optimal office space allocation, reinforcing the contradictory outcomes. Besides, workers who are higher in the organizational rank might be facilitated in claiming favourite places (Berti et al., 2017; Van Marrewijk & Van Den Ende, 2018). When this happens, settling behaviours bring about the reproduction of a company's hierarchies, thwarting the democratic aspirations of the CW (Berti et al., 2017; Van Marrewijk & Van Den Ende, 2018).

## Responses to the flexibility vs structure tensions leading to positive outcomes

Aside from the *either/or* responses that exacerbate inconsistencies, scholars have identified some alternative approaches that CW users enact to unleash the creative potential of the flexibility vs structure tensions and enhance organizational adaptability.

To facilitate collective work, managers and employees can negotiate new routines linked to *third spaces* or *border zones* that lie outside conventional office spaces.

Sivunen and Putnam (2020), for example, observed that activity-based workers altered the meanings of liminal spaces; they used hallways and staircases as meeting points for discussing work issues, while heading to the cafeteria or the canteen. Also, CW users in this study progressively adapted their behaviours by developing new routines for using various spaces and facilities (Sivunen & Putnam, 2020). For instance, they moved regularly across workstations and zones throughout the day, developing predictable routes and spatial use patterns that match the performed activities with the characteristics of the available areas, such as proximity to printing machines and walk-in areas (see also Babapour, 2019). CW users can also cluster routines, regular routes, use patterns and physical locations with digital technologies to increase predictability. For example, they often use shared calendars to signal their locations to managers and colleagues, and/or instant messaging tools to make it easier to spot their location at the office and quickly obtain task-relevant information (De Paoli et al., 2013; Palvalin et al., 2015). These routes and use patterns create *border zones* where CW users *continually connect* flexibility (since they move around) with structure, facilitating coordination and reducing the effort to find a suitable workstation.

Furthermore, managers *transcend* the tensions between flexibility and structure through casting these two poles as intertwined rather than opposite. They do this by clearly communicating and specifying the rules and prescriptions regulating the flexible use of CW technologies and facilities (Gerdenitsch et al., 2018; Rolfö, 2018; Rolfö et al., 2018). These rules could be defined at company level or be group specific. They include, for instance, clear indications regarding behavioural restrictions in the different office zones, and the maximum time for which a desk could be left unattended (Babapour et al., 2018; Brennan et al., 2002; Edenius & Yakhlef, 2007). Group-specific rules, in contrast, include the specification of coordination requirements within the group, alongside the protocols to be used in communication processes, and to regulate eventual telework options (cf. Kossek et al., 2015). Such protocols and rules also define a systematic and structured approach to information sharing within the group; to aid coordination and make sure that everyone receives the right information in a timely manner (Bäcklander et al., 2019; Wohlers & Hertel, 2018). Through enacting new rules and protocols, managers elaborate a new approach to the CW in which, rather than being treated as opposites, flexibility is enabled and complemented by structure.

Overall, these responses outline a creative approach available to managers and employees *to reassert predictability and structure in the midst of the CW* while preserving flexibility.



## Fluidity vs stability

The expressive dimension describes how the CW supports social relationships through promoting closeness, affection and sense of belonging within the organization. In this dimension, the opposition between *fluidity* and *stability* arises from competing ways of organizing social relationships in time and space. On the one hand, we have the *fluidity* inherent in the CW that encourages users to move within ephemeral social configurations that downplay the role of organizational structures and boundaries for organizing collaborations (cf. Elsbach & Bechky, 2007; Ungureanu et al., 2021). On the other hand, there is the *stability* intrinsic to the path-dependent, fixed and recursive nature of those frames of reference that individuals and groups normally use to organize social relations at work (cf. Schreyögg & Sydow, 2010).

In the traditional office, the possibility for social relations was produced by stable spatial configurations. By sitting next to the same people every day, employees could develop close relationships with them and easily get work-related support (cf. Halford, 2004). In the CW, users face additional challenges when working to develop social ties with managers and peers due to the reduced co-located time and the impossibility of using personal artefacts to maintain relationships (e.g. Elsbach, 2003; Hoendervanger et al., 2016; Rolfö et al., 2018; Van Der Voordt, 2004). These struggles suggest that CW fluidity collides with the stability of those social relations with friends and colleagues that used to be framed and organized by stable spatial and material configurations.

Also, practices of mobility generate some temporary organizations around tasks and problems that require quick solutions (cf. Boutellier et al., 2008). People within these temporary organizations, however, do not have enough time to get to know each other and form strong bonds (Berti et al., 2017; Edenius & Yakhlef, 2007; Morrison & Macky, 2017). Indeed, in the CW, workers might be sitting next to semi-strangers they only know by sight every day (Berti et al., 2017; Edenius & Yakhlef, 2007; Morrison & Macky, 2017). In this situation, small and informal discussions, particularly those around non-work topics, become unacceptable, and people may opt for a low profile to avoid any contact (Berthelsen et al., 2017; Hirst, 2011). Thus, the fluidity of these temporary organizations collides with the need for relational stability in time and space favoured by stable group boundaries, which is essential to develop group dynamics and cohesion (Wohlers & Hertel, 2018). This collision becomes even more salient for newly hired and temporary employees, who do not have any pre-existing professional and social networks and face

additional difficulties when trying to build them in a dispersed office community (Taskin, 2019). The fluidity vs stability tensions trigger another contradictory outcome as CW users might end up perceiving themselves as lonely and placeless riders, who have been separated from their group members and feel isolated, without close ties and without social support from either their managers or colleagues (cf. Brown & O'Hara, 2003).

## Responses to the fluidity vs stability tensions leading to negative outcomes

Workers typically respond to the fluidity vs stability tensions by mobilizing and imposing stable social structures in different ways. For example, they often recreate fixed and predictable spatial configurations to organize their social relations (e.g. Ekstrand & Karsten Hansen, 2016; Elsbach, 2003; Warren, 2006; Wohlers & Hertel, 2017). They do this by arranging themselves into clustered group zones that facilitate contact and collaboration (Ekstrand & Karsten Hansen, 2016; Elsbach, 2003; Warren, 2006; Wohlers & Hertel, 2017). Studies suggest that CW users enact these clustering behaviours to defend the localized sociabilities with their previously co-located colleagues, independently from the actual need for collaborating on projects and tasks (cf. Halford, 2004; Thanem et al., 2011). Through clustering, CW users transform the CW into a more familiar, comfortable and stable social space that they can easily navigate, and where they can reaffirm their social identities (cf. Brunia & Hartjes-gosselink, 2009). However, clustering does not come without unintended consequences in terms of social relations. Although allowing for some relational stability, it also limits the opportunities for new, fruitful encounters at the office, as it rematerializes the boundaries around different groups (cf. Irving et al., 2020; Värlander, 2012). The enactment of clustering corresponds to an *either/or* approach through which workers reject the fluidity inherent in the CW to reterritorialize their interactions with friends and previously co-located colleagues into stable spatial configurations or neighbourhoods. With this response, workers feed another contradiction in which the fluid CW only reinforces stable group boundaries (cf. Van Marrewijk & Van Den Ende, 2018; Waber et al., 2014).

Furthermore, managers may trigger double binds by explicitly encouraging employees to stay co-located with them and the rest of their group (cf. De Paoli et al., 2013). In these situations, CW users receive contrasting indications from either the company, which encourages fluidity, or from the managers, who require stability (see also Ekstrand & Karsten Hansen, 2016).

Finally, CW users might force the *separation* between the two poles by assigning fluidity to conventional working hours, whilst stability in social relations is pursued within breaks and leisure time at the office, mostly in spaces designated for interactions. For instance, Thanem et al. (2011) observed that people at their case organization systematically used fun-rooms and cafeterias at regular times to meet exclusively with other group members. Similarly, Appel-Meulenbroek et al. (2011) found that most of the employees in the activity-based office regularly have lunch solely with their group colleagues. By relegating fluidity and stability to different domains, CW users enact the *vacillation* between the two poles at different times and across different contexts in an attempt to hold the two opposites together. However, this vacillation might easily fall into *separation*. The mechanisms regulating socialization, in fact, can quickly recreate some stable boundaries around formal group structures, limiting the socialization dynamics across groups and departments (cf. Thanem et al. 2011).

### Responses to the fluidity vs stability tensions leading to positive outcomes

Past research has suggested some approaches that CW users can enact to avoid the stability trap and sustain new collaborations and relational fluidity.

First, managers can increase the spectrum and frequency of informal group events. Social gatherings, rituals and pulse meetings reintroduce some degree of stability in the relational dynamics of CW users, creating new social spaces for groups that sustain trust and mutual dependency (Wohlers & Hertel, 2018). The informality of these gatherings allows people to nurture mutual affection by enabling them to discuss topics unrelated to work (Wohlers & Hertel, 2018). By leveraging these events, managers develop new *third spaces* in which relational stability plays out, while fluidity is preserved in the conventional working hours and spaces.

Short talks and informal chats amongst immediate colleagues can also be encouraged by partly moving office sociability into new virtual group spaces, where CW users reterritorialize their electronic interactions with group colleagues (cf. Halford, 2008; Wohlers & Hertel, 2018). This territorialization creates 'shared cognitive representations of the groups' (Millward et al., 2007, p. 554) through which CW users reaffirm their social identity and increase their engagement with colleagues (cf. Millward et al., 2007; Ten Brummelhuis et al., 2012). Managers also use these virtual spaces to get more involved with the employees' work, even when they are not in view, to make sure that they are not suffering due to an excessive workload or a lack of social support (cf. Apgar, 1998; Halford, 2005). Complementarily, they also strengthen their engagement

with individual employees in proximate spaces by walking around and frequently interacting with them (Apgar, 1998; Halford, 2005). To justify the higher extent of connectivity and personal engagement with their individual employees, managers in CWs *reframe* their role from supervisors to coaches (cf. Apgar, 1998; Bean & Eisenberg, 2006). In this way, they adapt their role to the CW by seeking new meanings for it. By doing so, they hold the opposites together by ensuring stability in social relations whilst promoting fluid movements across group boundaries and spaces.

Finally, past research suggests that there could be an opportunity to *integrate* some reference areas for groups into the CW which would be characterized by fluid borders (cf. Joy & Haynes, 2011; Wohlers & Hertel, 2018; Zamani & Gum, 2019). These reference areas might stem from regular routes or routines that recreate permeable boundaries around group interactions; they can also be created through mobilizing group artefacts, such as whiteboards and prototypes, which direct the attention of group members towards a common purpose (cf. Ungureanu et al., 2021). These reference areas recreate a home base for employees—a place to go back to—without crystallizing them into stable spatial configurations. However, to keep the borders fluid and permeable, the use of these areas should be bound by specific rules that discourage settling (Babapour & Rolfö, 2019). By clustering physical locations, routines and new rules preventing settling tendencies, managers enable workers to *vacillate* between fluidity and stability depending on the time, the people occupying the group area in the specific moment and the activities at hand, keeping the CW suspended between these two poles.

These responses outline an approach allowing CW users to *reterritorialize the previously localized sociabilities* into new places for groups that temporarily stabilize relational dynamics.

### Exposure vs privacy

The regulatory dimension encompasses the resources that a workplace provides to individuals and groups to monitor and control their access to information, stimuli and emotions. In this dimension, the tension between *exposure* and *privacy* arises from two competing affordances of interactions. On the one hand, we have the *exposure* of CW users to visual and acoustic stimuli produced by the surrounding environment, afforded by open landscapes, shared locations and low partitions (cf. Bernstein, 2008). On the other hand, there is the *privacy*—defined as 'the ability to control and limit physical, interactional, psychological, and informational access to the self or to one's group' (Burgoon et al., 1989, p. 132)—that is usually enabled by closed doors, high walls and opacities (cf. Laurence et al., 2013).

The exposure to stimuli afforded by the CW is meant to increase the likelihood of knowledge transfer, facilitate collaboration and nurture collective intelligence (cf. Allen & Henn, 2007; Stryker et al., 2012). However, past research indicates that interaction occurs when accessibility, privacy and permission are balanced (Fayard & Weeks, 2007); also, privacy is as important as exposure to interaction and learning (cf. Becker et al., 1983; Bernstein, 2012; Hua et al., 2011). Yet CWs are often unbalanced in terms of exposure. This is demonstrated by the fact that CW users often advocate the need for 'solitary moments of reflection' (Edenius & Yakhlef, 2007, p. 205) and lament over-exposure to unwanted stimuli from the surrounding environment, including noise, distractions and interruptions (e.g. Bernstein & Turban, 2018; Brunia & Hartjes-gosselink, 2009; Coradi et al., 2015b; De Been & Beijer, 2014; Kim & de Dear, 2013). Overstimulation brought on by exposure is at variance with the concentration demands posed by complex knowledge work which requires privacy (e.g. Candido et al., 2018; Göçer et al., 2018; Zamani & Gum, 2019).

Exposure in the CW also creates a hectic space that tunes all users to its rhythm, inviting people to participate in the ongoing activities (Bosch-Sijtsema et al., 2010; Monaghan & Ayoko, 2019; Ungureanu et al., 2021). This increased involvement speeds up and facilitates problem solving. However, it also contributes to producing more impulsive and less informed solutions and decisions (Edenius & Yakhlef, 2007). Hence, users' exposure to stimuli in the CW creates an affective environment where emotions overtake the reflection time, enabled by privacy, that is needed to perform and achieve effective solutions (Edenius & Yakhlef, 2007; Monaghan & Ayoko, 2019).

Also, exposure is often meant to drive out wasteful practices and routines, as it makes performances more visible and people more accountable for them (cf. Bernstein, 2008; Kingma, 2019; Van Der Voordt, 2004). However, exposure may also cause the emergence of decentralized forms of control within and between employees, which reinforce the urge to comply with socially negotiated rules, expectations and routines (cf. Bernstein, 2008, 2012). In CWs, these expectations include the fulfilment of professional roles (Berthelsen et al., 2017; Ekstrand & Damman, 2016), gendered norms (Hirst & Schwabenland, 2018) and ostensive collaborative engagement with the office space (Coradi et al., 2015b; Lansdale et al., 2011; Wohlers & Hertel, 2018), which generates the expectation of interacting merely for interaction's sake. In fact, in the CW, 'silence is unbecoming', to the point that people who engage less frequently in interactions might be suspected of withholding information and knowledge (Edenius & Yakhlef, 2007, p. 202). Additionally, the increased use of electronic communications strengthens the norms of permanent presence in the virtual group space, reinforcing the social expectation of

responsiveness also through technologies (Kingma, 2019). In this way, instead of producing an environment conducive to learning, adaptation and change, the CW only hampers cognitive work, produces more impulsive decisions and reiterates routine work.

## Responses to the exposure vs privacy tensions leading to negative outcomes

CW users typically react to the exposure vs privacy tensions by *withdrawing* from social situations. For example, they often avoid physical interactions, replacing them with digital ones (Bernstein & Turban, 2018; De Paoli et al., 2013; Wohlers & Hertel, 2018). Also, when the office provides a variety of spaces, CW users tend to reserve concentration rooms and private spots as a precaution, independently from the activities at hand (e.g. Bosch-Sijtsema et al., 2010; Van Marrewijk & Van den Ende, 2018). In this way, the availability of spaces for performing concentration tasks is increasingly reduced, exacerbating the underlying tensions.

Furthermore, when they have the opportunity to do so, CW users increasingly work from locations other than the main office, including home (Appel-Meulenbroek et al., 2011; Berthelsen et al., 2017; Lansdale et al., 2011). By withdrawing from social and physically co-located situations, CW users regain some privacy; at the same time, they expose themselves to an increased amount of stimulus through digital means (cf. Halford, 2005; Ten Brummelhuis et al., 2012). Managers can also intensify the exposure requirement by constantly checking the responsiveness of non-co-located employees to calls and emails (Ekstrand & Karsten Hansen, 2016; Halford, 2005). These responses exacerbate contradictions since they generate more digital interruptions (cf. Ten Brummelhuis et al., 2012).

The identified responses to the exposure vs privacy tensions correspond to *defensive reactions*, through which people *withdraw* from social situations to avoid unwanted stimuli, distractions and noise. These responses, however, exacerbate the underlying contradictions and induce vicious cycles, as they increasingly expose people to unwanted stimuli and systematically reduce the availability of spaces to perform concentration tasks.

## Responses to the exposure vs privacy tensions leading to positive outcomes

Research suggests that CW users also enact some alternative approaches that allow them to handle the exposure vs privacy tensions so as to unleash its creative potential. Managers and employees, for example, can



co-define and formalize new norms and guidelines that govern the use of objects and the selection of workstations to signal their availability or unavailability to interact. For instance, Monaghan and Ayoko (2019) noticed that CW users progressively substitute territorial endeavours with socially negotiated norms that regulate interactions, such as the use of headphones to signal cognitive work and reduce distractions.

CW users also improvise privacy filters by selecting corner places in open areas, or employing physical objects to recreate temporary secluding partitions (Babapour et al., 2020; Baldry & Barnes, 2012). The enactment of these individual practices allows users to *transcend* the given space and redefine the CW as either quiet or collaborative, private or exposed, according to the situation, concentration demand and availability of suitable spaces to perform the given activity (cf. Sivunen & Putnam, 2020).

Similarly, groups can employ movable objects and partitions to recreate private group areas amid the open landscape (Bernstein, 2008; Tagliaro & Ciaramella, 2016; Zamani & Gum, 2019). In these areas, CW users can reflect, experiment and take the risk of changing inefficient routines, without being constantly in view and thereby accountable for visible behaviours and performances (cf. Bernstein, 2008).

Furthermore, by emphasizing participation in planned group meetings, rituals and social events, managers can synchronize group interactions (Van Dyne et al., 2007) and leave ambiguous time frames in which people are not expected necessarily to be accessible to others. These ambiguities enable workers to *vacillate* between accessibility and privacy, depending on the situation and the tasks at hand.

The discussed approaches correspond to *both/and* and *more-than* responses, which are likely to produce positive outcomes through promoting learning and adaptability. Nonetheless, these approaches alone might not be sufficient for sustaining collaboration in CWs. For example, overstimulated workers might end up using the socially negotiated norms to systematically signal their unavailability to interact (Göçer et al., 2018; Irving et al., 2020). Furthermore, the vacillation between exposure and privacy can easily fall into separation, since CW users can employ the movable partitions to permanently shield the group from outer scrutiny and interactions. In this regard, an idea that surfaces from prior research on paradoxes is that of *reflective practice*, meaning that managers can engage in actions aimed at promoting increased reflexivity and the progressive adaption of users' behaviours (e.g. Putnam, 2015). In the CW, managers advocate increased reliance on self-management and spatial awareness (Kingma, 2019), as users should constantly decide where to sit to regulate exposure to stimuli

(Babapour, 2019; Bäcklander et al., 2019; Bodin Danielsson & Bodin, 2008; Kingma, 2019; Peponis et al., 2007). This leads to an increased reflexivity and the emergence of a socially negotiated code of conduct that progressively reduces the risks of improper behaviours and overstimulation (Coradi et al., 2015b).

The discussed approaches allow users to *modulate privacy and exposure* so as to transcend the given designs and keep the CW open to a variety of spatial performances.

## A FRAMEWORK FOR MANAGING COLLABORATION IN COLLABORATIVE WORKPLACES

The identified tensions and their development resulted in three themes that outline a framework for managing collaboration in CWs (Table 2). According to the framework, managers can sustain collaborations by reasserting predictability and structure in the midst of flexibility, reterritorializing the previously localized sociabilities and modulating privacy and exposure.

To *reassert predictability and structure in the midst of flexibility*, managers create new conditions and spaces where the unpredictable becomes predictable, so that structure can still be achieved without compromising operational variability and individual flexibility. This is done by enacting new routines that devise third spaces or border zones lying outside conventional office spaces; by clustering new routines with digital technologies and physical locations in such a way as to create predictable routes and usage patterns that facilitate findability and coordination (e.g. Sivunen & Putnam, 2020); or by specifying the strict rules governing the flexible use of the CW (e.g. Wohlers & Hertel, 2018).

To *reterritorialize the previously localized sociabilities*, managers create new places to nurture and develop friendships and improve social support. They do this by instituting new social, digital and physical third spaces for groups, or by engaging in frequent and proactive interactions framed into a coaching approach (cf. Apgar, 1998; Bean & Eisenberg, 2006). This enables a less intrusive, yet still effective, way to monitor the status of individuals and their performance, preventing people from simply disappearing from the shared social space. Additionally, managers can create reference zones for groups in visible areas, which can be used flexibly by group and non-group members (e.g. Wohlers & Hertel, 2018).

Finally, by *modulating exposure and privacy*, managers keep the CW suspended between these two poles, enabling a more 'randomized co-presence with others' and, at the same time, the 'protection of the solitary' (Hillier, 1996,



TABLE 2 Approaches for managing collaboration in CWs

Emerging managerial themes	Traps (either/or responses)	Alternatives (both/and, more-than responses)
<i>Reasserting predictability and structure in the midst of variability</i>	<ul style="list-style-type: none"> <li>• <b>Selecting</b> structure over variability by increasing the frequency of planned group meetings, reasserting the old group policies linked to formal group structures (e.g. group-specific ICT systems and standardized procedures for solving issues locally, etc.) and enacting settling behaviours to retrieve the old routines.</li> </ul>	<ul style="list-style-type: none"> <li>• Enacting new routines linked to <b>third spaces</b> (e.g. use of liminal spaces for small talks, regular routes, etc.) and clustering such routines with technologies and physical locations to enhance predictability (e.g. predictable locations combined with shared calendars and IM tools).</li> <li>• <b>Transcending</b> the contraposition between variability and structure by negotiating new rules prescribing the flexible use of the CW at group and company levels (e.g. behavioural restrictions, coordination requirements and communication protocols)</li> </ul>
<i>Reterritorializing previously localized sociabilities</i>	<ul style="list-style-type: none"> <li>• <b>Selecting</b> stability over fluidity by encouraging and enacting clustering behaviours that recreate stable neighbourhoods.</li> <li>• <b>Separating</b> stability and fluidity by setting the expectation that people would spend leisure and social time at the office only with group colleagues.</li> </ul>	<ul style="list-style-type: none"> <li>• Creating new <b>third spaces</b> by increasing the frequency and the spectrum of informal group events (e.g. social events and group rituals) and frequently interacting with group members in new digital social spaces for groups.</li> <li>• <b>Reframing</b> managers' role towards a coaching approach to sustain their increased engagement with individual employees and their work.</li> <li>• Enabling <b>vaccillation</b> between fluidity and stability through <b>integrating</b> visible reference areas for groups in the fluid CW, while discouraging settling habitualizations through encouraging movements and defining group rules.</li> </ul>
<i>Modulating privacy and exposure</i>	<ul style="list-style-type: none"> <li>• <b>Withdrawing</b> from social situations by increasingly working from home, systematically selecting less visible workstations and subverting the intended design to territorialize private spots at the office.</li> <li>• <b>Selecting</b> exposure rather than privacy by requiring those who are not 'in view' to be always reachable and accessible to managers and colleagues through digital means and sustaining ostensive collaborative engagement with the office space.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Transcending</b> the given space and making it workable through enacting new embodied normative practices aimed at signalling one's availability or unavailability to interact, independently from the collaborative design.</li> <li>• Enacting ambiguities that enable <b>vaccillation</b> between privacy and exposure by specifying timeframes in which employees are not required to be available to managers and colleagues.</li> <li>• Promoting <b>reflective practice</b> through setting up a self-management expectation to improve learning and adaptability.</li> </ul>

p. 265). They do this by recreating some opacities for individuals and groups. They promote the formalization of embodied normative practices that regulate interactions, such as the use of headphones or the selection of corner workstations (e.g. Sivunen & Putnam, 2020). To enable effective vacillation, they rely on discourses around self-management aimed at increasing spatial reflexivity (cf. Kingma, 2019).

## THE RISE OF THE AUTONOMY–CONTROL PARADOX

The discussion around the dichotomies inherent in the instrumental, expressive and regulatory dimensions of the CW revealed some degree of conceptual overlap between the different tensions. This overlap resides in the fact that such tensions do not correspond to mutually exclusive categories; in fact, through the responses of CW users, these tensions become partly entangled with one another, feeding the autonomy–control paradox (Mazmanian et al., 2013). In other words, the tensions and their management create an environment in which the more people are autonomous, the more they are controlled and limited in their free will. The paradox arises from how CW users respond to the tensions between the characteristics of the new office spaces and their need for structure, stability and privacy.

CWs are meant to facilitate the organization of work by providing employees with flexible arrangements (cf. Gastaldi & Corso, 2014). However, the literature indicates that CWs can also reduce individual flexibility, resulting in longer work hours and more trivial activities (e.g. Hirst, 2011; Rolfö et al., 2018). To simplify the organization of individual and collective work, CW users typically reintroduce some degree of predictability and structure through, for example, new physical and digital routines that improve coordination (Sivunen & Putnam, 2020). The added structure helps these groups to meet their objectives and provides support to individuals, particularly to those who perceive flexibility as a poor fit (cf. Gerdenitsch et al., 2018). Nonetheless, structure provision increases organizational and peer-based control; it restricts the flexibility inherent in the system and makes people more accountable not only for their outcomes, but also for the way in which they spend their time at work (cf. Edenius & Yakhlef, 2007).

Also, the CW is meant to support collaborative work through openness and fluidity (e.g. Boutellier et al., 2008). However, prior studies have revealed that these characteristics may undermine informal interaction and collaboration within groups (cf. Bernstein & Turban, 2018). To achieve stability and social support, CW users can reterri-

torialize their relations by creating new social, virtual and physical places for groups (Elsbach, 2003; Halford, 2004; Wohlers & Hertel, 2017). By doing so, they partly submit to the relational fluidity afforded by CWs and expose themselves to the stricter scrutiny of managers and colleagues. Yet this reterritorialization seems to play a fundamental role in preserving self-determination, by preventing feelings of social isolation.

Finally, the CW remains suspended between aspirations of exposure and transparency, and workers' needs for privacy and control over stimuli. To avoid inconsistencies, managers can create some opacities or zones of privacy through, for example, synchronized interactions and embodied normative practices (e.g. Sivunen & Putnam, 2020). These, again, reduce workers' autonomy and flexibility in how they practice the office space; at the same time, they are essential in providing CW users with some degree of control over exposure to interactions.

Overall, these findings suggest that, in the CW, autonomy is entangled with organizational control. The paradox evolves in the way in which autonomy and control are mutually constituted and defined in the CW. Indeed, control is made possible by the greater flexibility, fluidity and exposure afforded by the system, and evolves through workers' responses to the identified tensions.

## CONCLUSIONS AND CONTRIBUTIONS TO THEORY AND PRACTICE

Prior literature has revealed a number of contradictions surfacing in the CWs, designed for the purpose of collaboration and frequently undermining it (cf. Felstead et al., 2005; Irving et al., 2020; Värlander, 2012). This review investigated the development of such contradictions by using the conceptual framework proposed by Putnam et al. (2016) to show how these emerge from the various research findings on CWs.

By doing so, this paper provides a comprehensive summary of the current understanding and existing knowledge regarding the social and relational implications of CWs. This summary analytically exposes the tensions between the archetypical ideas of flexibility, fluidity and exposure underlying CW designs, and users' demands for structure, stability and privacy. It also illustrates how the contradictions develop through the responses of CW users, exploring how these could possibly lead to negative outcomes. In fact, this study shows that managers and employees in CWs frequently respond to tensions by enacting some approaches that deny the oppositional forces, or repress them, exacerbating the subtle inconsistencies. In line with prior research on paradox dynamics and responses to tensions (cf. Fairhurst & Putnam, 2014; Putnam et al., 2014;

Schad et al., 2016), this study found that these approaches, corresponding to either/or responses, are likely to produce vicious cycles and double binds that carry relational drawbacks. In these situations, the CW, designed to foster flexibility, fluidity and exposure, ends up undermining collaboration by increasingly structuring how people navigate the office, reducing their socialization dynamics and making them less exposed and accessible to their colleagues.

By identifying the either/or responses that exacerbate inconsistencies, this study also questions some common managerial approaches. For example, managers in CWs are keen on planning more formal group meetings. Occasionally, they reiterate the old procedures to deal with problems only within group boundaries, even when these could easily be solved by involving more actors. Additionally, they might configure group zones as stable neighbourhoods, where employees can reterritorialize their interactions with group colleagues. The discussed dynamics through which the tensions unfold suggest that such approaches are likely to induce negative effects, creating new constraints to collaboration.

However, prior research has also suggested some alternative approaches that managers can embrace to reframe the tensions, vacillate between the poles and supersede the oppositional forces in new border zones or third spaces. These approaches outline a framework for managing collaboration in CWs. This framework discloses how managers can keep the CW suspended between flexibility and structure, fluidity and stability, exposure and privacy, in such a way as to live with the tensions and unleash their adaptive and creative potential.

From a theoretical perspective, the relevance of this framework is threefold. First, it highlights the active role that CW users play to enact and organize their office space while managing tensions. Hence, the framework contributes to overcoming the emphasis on the design aspects that characterize most of the prior research on CWs, which tended to treat the embedded tensions as dilemmas that could be solved by balancing the pros and cons of opposite design choices (cf. Coradi et al., 2015a; De Paoli et al., 2019).

Second, this framework contributes to research on tensions and paradoxes by showing how, in the context of CWs, the both/and and more-than approaches are likely to produce positive effects by feeding virtuous cycles; whereas the end/or responses are likely to feed vicious cycles and double binds, resulting in negative outcomes. Thus, the identified themes and approaches illustrate what the process of embracing and living with tensions involves in the CW, extending prior research on coping tactics and strategies to this context (cf. Baxter & Montgomery, 1996; Fairhurst & Putnam, 2014; Seo et al., 2004).

Finally, the framework draws positive power implications of CWs. CW interventions are often accompanied by organizational discourses promoting ideas of freedom,

autonomy and self-management (e.g. Bäcklander et al., 2019; Bean & Hamilton, 2006). However, prior research has shown that the inherent flexibility, fluidity and exposure of CWs trigger some control mechanisms that reduce individual freedom. These control mechanisms stem from the new social and material work arrangements; yet they develop through users' responses, often resulting in increased workload, social conformity and reduced flexibility. Therefore, it seems that, despite its promises of greater freedom, the CW reiterates organizational control and old power relationships. This is in line with the work of other authors who highlighted the emergence of new mechanisms of surveillance and control brought by flexible and non-conventional workplaces (e.g. Barnes, 2007; Sewell & Taskin, 2015; Taskin, 2019; Thanem et al., 2011). However, unlike such work, this study suggests that managers can prompt generative movements and creative organizing (cf. Kornberger & Clegg, 2004) through leveraging the outlined framework.

## GUIDELINES FOR FUTURE RESEARCH

This study outlines some guidelines for the future of CW research. First, the discussions around the tensions suggest the relevance of various individual and contextual factors significantly influencing social and spatial performances of CW users. These factors include group size, office size, psychological traits, individual preferences, affective environment and mutual interdependencies within the group. Future empirical research should investigate how these factors drive different appropriations, uses and experiences in the CW.

Furthermore, the framework suggests that, in the CW, traditional assumptions and practices of managerial work might be at stake. In the new context of work, managers enact some approaches that develop throughout new assemblages of office routines, physical locations, material objects, codified rules, tacit norms and digital technologies. Managers embrace these approaches to engage more with individuals and avoid relational drawbacks within the group. Thus, with the workplace transformation, it seems that the focus of managerial work has also changed: from managing groups of employees to coaching individuals and their social relations at work. This consideration provides an additional argument sustaining the changing nature of managerial work in the transformed workplace (cf. Halford, 2005), suggesting that the social and material context of managerial work may play a more important role than previously thought. For this reason, further empirical research should devote closer attention to the everyday work of managers in the CWs, in order to shed some new light on how the transformed workplace affects practices and assumptions of their work.

The latter contribution might be particularly relevant in a post-pandemic world. At the time of writing, COVID-19 has deeply affected the social and material arrangements of work through increased digitalization, office de-densification and the greater use of prescriptions and barriers limiting face-to-face interactions. In this scenario, several companies are considering reconfiguring their office spaces to reduce real estate costs and get the most out of the fewer face-to-face interactions. In this respect, the CW might represent a viable and appealing option. Yet this study suggests that the CW often becomes the theatre of unforeseen social dynamics that stem from the spatial reconfiguration of work activities and relations. Some of these dynamics might become more salient in the COVID-19 aftermath. For example, we can expect that the ostensive collaborative engagement with the office space promoted by CWs would collide with the social distancing norms brought forward by COVID-19, bringing new fluidity vs stability tensions. Similarly, the increased use of flexible work options with the asynchronous modes of communications might exacerbate the tensions between flexibility and structure. Hence, it is fundamental that companies and managers understand the dynamics through which the tensions develop, alongside the practices and approaches that give rise to creativity and adaptability. This consideration calls for more critical research questioning traditional managerial practices and assumptions, alongside the poeticized ideas of community and flexibility underlying CW interventions (cf. Dale & Burrell, 2010). Only by producing more critical accounts would it be possible to understand whether and how the transformed workplaces are supporting the new processes and structures of the allegedly post-bureaucratic organization, instead of reiterating constraints, hierarchies and control.

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## NOTE

<sup>1</sup> The detected studies were all peer reviewed, except for three articles published in *Harvard Business Review* that have been included in the analysis because of their strong pertinence to the topic: Apgar (1998), Bernstein (2008) and Waber et al. (2014).

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