

## Experimenting with innovation in creative spaces

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In the past three decades, economic and technological changes have significantly increased the geographical distribution of knowledge and innovation workers across the globe (Hinds and Kiesler, 2004), enabling organizational configurations such as globally distributed teams (Maznevski and Chudoba, 2000), online labor markets (Constantinides et al., 2018), online communities (Kim et al., 2014), and smart work programs (Bathini et al., 2017). Interestingly, the rhetoric of the global distribution of talent for conducting innovation work collaboratively has been challenged by the numerous difficulties that distributed workers – and their teams and organizations – face (e.g., increased conflict, coordination difficulties, reduced knowledge sharing, impaired creativity, Gilson et al., 2015). More recently, academic and practitioners have advocated for the importance of proximity between knowledge workers and underlined how co-location remains a powerful condition to enable meaningful collaboration for innovation.

This trend has been going hand-in-hand with the revival of the importance of designing ‘creative spaces’, i.e. physical spaces dedicated to collaborative processes related to creative and innovative outcomes, such as innovation labs, design thinking areas, innovation parks, creative co-working spaces (e.g., Meinel et al., 2017; Varlander et al., 2016; Waber et al., 2014). However, the literature seems to suggest controversial findings on the role and outcomes of creative spaces (e.g., De Paoli et al., 2017) and does not explore how knowledge workers experiment and innovate within different types of creative spaces. spaces (Dul and Ceylan, 2011).

We know that co-location is not the only critical factor and that the environment where people work affects their creative performances (Magadely and Birdi, 2009). New approaches to innovation and collaboration, such as design thinking, lean innovation and agile methods express different needs on the supporting environment to facilitate experimentation or ease the prototyping of ideas in multiple iterations. As there is no proven solution to these challenges, organizations around the world experimented with creative spaces, with results that vary greatly in different organizational, cultural, and industry contexts (e.g. Varlander et al., 2016, Dul and Ceylan, 2014).

This special issue is dedicated to the investigation of how people, teams, and organizations collaborate and experiment with innovative practices in different types of creative spaces and the challenges and opportunities they face in such contexts.

The six papers of this special issue offer a comprehensive view of creative spaces by providing variegated perspectives, case studies, and evidence on exemplary experimentations within them. The first paper, by Ciaramella, Rossi-Lamastra, Rovelli and Tagliaro, provides a literature review on collaborative spaces and underlines the need for an interdisciplinary approach to the study of collaborative spaces that can capture both ‘space-related’ and ‘human-related’

dimensions. Indeed, academic attention to creative spaces is quite recent and involves authors from different disciplines such as Economics, Architecture, Sociology, Entrepreneurship, Engineering, and Computer Science, but inter-disciplinary research on creative spaces – and on experimentations within them – is still at its infancy.

The remaining five papers offer empirical evidence and reflections about experimentations and innovative processes in different types of creative spaces: science parks (Cirella and Yström), smart work centres (Pianese and Errichiello), collaborative communities (Ungureanu, Cochis, Rodighiero, Bertolotti, Mattarelli, Montanari, Rinaldini, and Scapolan), innovation labs (Thoring, Mueller, Luippold, Desmet, and Badke-Schaub), and organization spaces for ambidexterity (Ungureanu, Rietti, and Giustiniano). In particular, the paper by Cirella and Yström investigates the role of managerial practices in fostering the creative climate of science parks. The authors found that the active promotion of a shared identity, the design of structured work processes, the use of communal spaces, and the definition of an internal communication technology by the management team of AREA, an important science park in Northern Italy, promote the creation of a climate that fosters innovation collaboration and joint experimentations between different ‘inhabitants’ of the park. Although science parks are not new, the focus on managerial processes in fostering innovation has received less attention than the study of spatial and architectural needs.

Errichiello and Pianese focus on a type of co-working space, i.e. smart work centers, created to support flexible and remote workers. They propose that such centres, although not specifically created to support innovative projects or R&D processes, can be associated to creative outcomes and thus should be conceptualized as creative workspaces. In particular, they propose that the availability of different locations, the mix of different collaborative technologies made available by the centre, a ‘smart’ organizational culture, and perceptions of social and cognitive proximity foster individual creativity.

Ungureanu, Cochis, Rodighiero, Bertolotti, Mattarelli, Montanari, Rinaldini, and Scapolan’s case study of a collaborative community of designers who work together both ‘onsite’, through a common creative space, and ‘online’, through a collaborative platform, represents an unique context where the physical space blends with the virtual interactivity supported by technology. By studying the community as a hybrid workplace, the authors follow its development longitudinally and show that different stages are characterized by different types of community structuring, identity processes, and knowledge practices, which in turn shape different needs in terms of online and onsite interactions.

Thoring, Mueller, Luippold, Desmet, and Badke-Schaub propose a new method for designing and assessing the success of idea labs, i.e. spaces where different actors with product

ideas can work together for a concentrated period of time. Their approach is based on a co-creation phase where the space is designed in collaboration with different stakeholders (future users, architects, managers of the space), using tools such as visual canvas and workshops, and a set of tools to conduct a follow up evaluations. Their design and assessment of the idea lab of the Science Park Kassel in Germany provides a first experimentation of the proposed tools and suggests practical recommendations for the design of idea labs and experimentations within them.

Finally, the longitudinal case study by Ungureanu, Rietti, and Giustiniano shows how the space is used to manage ambidexterity in organizations. Their investigation of the experimentation with a new organizational space for the Italian National Olympic Committee shows that the features of the space (e.g. the presence physical boundaries, the layout) were used as ‘transitional tools’ when trying to add an ‘exploitation’ logic to the dominant ‘exploration’ logic. In other words, the organizational space was used to deal with identity threats triggered by organizational transition to ambidexterity.

Taken together, these papers suggest that the positive rhetoric around proximity that permeates many previous academic studies and anecdotal evidence about creative spaces should be considered with care and expanded by including a more complex and multi-faced perspective. To this regard, we would like to point out three particularly intriguing directions that the papers of this special issue bring to the fore. First, managerial practices, such as the definition of structured work processes to activate collaboration between heterogeneous actors, appear as fundamental to foster creativity and innovation also in spaces where ‘spontaneity’ is a distinctive attribute (see, in particular, the examples of science parks and smart work centres in the papers by Cirella and Yström and Errichello and Pianese). Future studies should better explore the tension between structuring managerial practices while still allowing for the flexibility and spontaneity that typically characterize a creative space. Second, the creation of an identity of the creative space (or a place identity as suggested by Pierce and Hinds, 2017) appears as fundamental for promoting creativity in many of the contexts described in this special issue. For instance, the study of Ungureanu *et al.* on a collaborative community illustrates the evolution of the organizational identity in parallel with the evolution of the ‘physical’ space *and* the collaborative technology used by the designers. In the study of the Italian National Olympic Committee, the space is a way to represent the innovative identity of the organization (Ungureanu, Rietti, and Giustiniano). Finally, studies on collaborative spaces in general, and on creative spaces in particular, focus on face to face interactions and tend not to consider that members of collaborative spaces have a significant amount of interactions via collaborative technology (e.g. emails, online platforms, videoconference) within and outside of the space. The papers of Ungureanu *et al.*, Cirella and Yström and Errichello and Pianese make it clear that the investigation of the impact of creative spaces on innovation cannot ignore the role played by collaborative technology use in everyday interactions between knowledge workers. We encourage researchers to further investigate the issues of managerial practices, place identity, and collaborative technology use with experiments to be conducted at in-situ settings of creative spaces, such as IdeaSquare at CERN.

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