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A look inside the coworking space

The social and entrepreneurial relevance of new flexible office space environments

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An illustration of a modern coworking space viewed through a window with a dark brown frame. The scene is divided into several panes. In the center, a blue desk holds a laptop. To the left, an orange ergonomic chair is partially visible. To the right, a potted plant with green leaves sits in a yellow pot. The background is a bright blue sky with a large, light blue circular shape and small white dashes, suggesting a bright, airy environment. The overall style is flat and colorful.

A LOOK INSIDE THE COWORKING SPACE

**The social and entrepreneurial relevance
of new flexible office space environments**

Victor Cabral

A look inside the coworking space

The social and entrepreneurial relevance of
new flexible office space environments

VICTOR CABRAL

Colofon

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A look inside the coworking space

The social and entrepreneurial relevance of new flexible office space environments

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Preface

This book took about six years to write. I feel I have to start by sharing how I experienced the final stages of writing and what the impact of COVID-19 has been on this project. Not only because on a personal level the final year and a half of this project, during which COVID-19 became a pandemic, generated quite some significant challenges, but also because it revealed to me that the effort I was making was not going to be in vain (I had many worries whether the whole concept of coworking spaces would make any sense in a post-COVID-19 world). When looking at the challenges I was confronted with, a main one stemmed from the fact that writing from home, and all the associated comfort that it used to bring, changed dramatically. My home used to provide the ideal circumstances to focus, concentrate and organize my thoughts, but during COVID-19 it became just the opposite mainly because the pandemic forced my house to turn into an multi-tenant office building and primary school at the same time. My wife's demanding job and an 8-year old who was now supposed to be home-taught resulted in our home converting into a non-stop, vibrant and lively atmosphere (to avoid future discussion I refrain from using the word 'loud'). This new environment definitely led to many positive developments for which I am very grateful, such as being more aware and involved in what others were doing and engaged in. However, it did not necessarily stimulate my writing (to put it mildly). As a consequence, there were many months in which I did not make any progress at all (and apparently my body does not see waking at 4 AM on a daily basis as an acceptable long-term solution to finding time to write). Also, when it came to collecting data, finding respondents and meeting with other stakeholders for this project turned out to be much more complicated than I could have imagined.

On a more general and positive note, this period also led me to a number of striking and noteworthy observations about my work. For instance, in the introduction of this dissertation I state that people generally need social networks in their lives in order to feel connected and part of something bigger than them. During the COVID-19 pandemic, when most people were asked to avoid social contact and to stay at home as much as possible, the weight of this basic human need seems to have been magnified. Whoever I spoke to, in any given context (personal/at the university/with entrepreneurs at a coworking space), mentioned in some form or other that they really missed having social contacts and interactions. Every time I heard this, it became apparent to me that the topic I had been working on for the past four years was still relevant and important. In fact, in much of the professional interaction I had, I kept hearing the same idea, something along the lines of *"The future of work will increasingly include hybrid work forms"*; *"COVID-19 showed us how technology can help us out when we are not physically together. However, we definitely also need to get back to the office in order to interact face to face with each other, albeit perhaps*

slightly less than pre-COVID-19"; and *"Technology can never fully replace physical social interactions"*. I cannot say enough how delighted I always was to hear that most people felt this way and how their sentiments seamlessly corresponded with my research project.

At some point, I also started doubting whether the whole topic of coworking would survive and live to see post-pandemic times (and, as an implication, whether the content of this dissertation would have any future value) especially since 'coworking spaces', in combination with the practice of 'social distancing', sounded very much like an oxymoron to me at the time. It was just my luck to be working on this topic, I thought. However, as time passed and I noticed that more and more articles were being published on this topic (both managerial and academic), I started realizing that in fact the opposite was being predicted. Indeed, at the beginning of the pandemic many start-ups and coworking spaces were struggling to remain solvent, but the overall narrative regarding the future of coworking seemed to be rather positive. Many articles discussed how the pandemic would reveal how coworking spaces could provide future solutions not only to self-employed people, but more importantly, also to established corporations. To date, many corporations already live with the notion that one of the ways to feed their innovation agendas is to be close to startups as this stimulates potential start-up/firm collaborations (for instance, in Amsterdam, corporations like IBM, ING, PWC, and Microsoft, to name a few, already hire office space in coworking spaces). However, in addition to this development, the pandemic also brought to light the idea that coworking spaces can be an addition to (or a partial replacement of) current offices, and as such, provide alternative flexible, sustainable and economically interesting office solutions. As you may imagine, hearing and reading this added to my excitement about my project.

Looking back, I can say that this has been (by far) the hardest project that I have worked on, one that initially I did not expect to be able to complete. Thankfully, with all the support that I have received, it has turned out to be an amazing journey, a journey with many ups and downs, but most importantly, one that has been extremely educational and gratifying. I hope that whoever reads this dissertation will find it interesting and that it may provide inspiration for future research projects.

Victor Cabral

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List of Publications

Publications that form part of this thesis:

1. **Cabral, V., & Winden, W. V. (2020).** The promise of coworking environments: a content analysis of the positioning of collaborative workspaces in Amsterdam. *International Journal of Entrepreneurship and Small Business*, 40(3), 399-423.

Data collection and analysis were conducted by the PhD candidate. The paper has been jointly written by the PhD candidate and Dr. W. v. Winden.

2. **Cabral, V., & Winden, W. V. (2016).** Coworking: an analysis of coworking strategies for interaction and innovation. *International Journal of Knowledge-Based Development*, 7(4), 357-377.

Data collection and analysis were conducted by the PhD candidate. The paper has been jointly written by the PhD candidate and Dr. W. v. Winden.

Note: An earlier version of this paper was presented as a working paper at the Regional Studies Association Annual Conference in Graz, Austria 3–6 April, 2016

3. **Cabral, V. (2021)** 'Coworking spaces: places that stimulate social capital for entrepreneurs', *International Journal of Entrepreneurial Venturing*, 13(4), 404–424.
4. **Cabral, V., & Winden, W. V. (2022).** The reaction of coworking spaces to the COVID-19 pandemic. A dynamic capabilities perspective. *Service Business*, 16, 257–281

Data collection and analysis were conducted by the PhD candidate. The paper has been jointly written by the PhD candidate and Dr. W. v. Winden.



CHAPTER ONE

Introduction

Being part of social networks plays an important role in many facets of our lives. Whether this relates to friends (e.g. Buote et al., 2007), families (e.g. Broderick, 1993), sports (e.g. Ulseth, 2004), neighborhoods (e.g. Lochner et al., 2003), or employment (e.g. Dess and Shaw, 2001), being part of a social network makes us feel as if we belong to something that is greater than ourselves. Social networks provide opportunities to connect with others, reach our goals, and can make us feel safe and secure (Putnam, 2000).

In the last twenty years, various studies suggest that independent workers also benefit from working together instead of working alone (e.g. Burt 2004, 2009; Kim and Aldrich, 2005). During this time, there has been an increase in the number of workers working remotely (a.k.a. remote working, teleworking, distance working), in part facilitated by flexible approaches by firms regarding where work is performed as well as by rapid development in mobile technologies (Holliss, 2021). The COVID-19 pandemic accelerated these developments (Chatterjee and Crawford, 2021). Examples of such workers include employed workers with workplace flexibility, self-employed workers, freelancers, and/or start-ups. Such workers have the option to work from a variety of places, e.g. from home, regular offices, or from 'third' places such as coffee houses, hotel lobbies, cafés, and libraries (Oldenburg, 1989). However, such places are rather atomistic work environments (often there is the availability of a place to work, Wi-Fi, coffee, ties to staff) and in practice workers do their work very much in isolation. A frequently mentioned downside of such environments is that there is a lack of social networking, social interaction, and the exchange of ideas (Hubbard et al., 2021).

Seventeen years ago (2005) a software engineer, Brad Neuberg, opened the first official coworking space in San Francisco with the idea to facilitate remote workers. According to Neuberg, his rationale for triggering the coworking space phenomenon was to "...combine the freedom and independence of working for myself along with the structure and community of working with others..." (Codinginparadise, n.d.). The combination of relatively cheap workspaces with easy access to coworking communities has become highly appealing for growing groups of workers (Spinuzzi, 2012; Moriset, 2013; Gandini, 2015; Bouncken and Reuschl, 2018; Spinuzzi et al. 2019). Now, seventeen years later after the first coworking space was opened, the coworking phenomenon has proliferated across the globe. There are over 25,000 coworking spaces worldwide servicing more than 1.5 million workers (Coworking Resources, 2021).

The COVID-19 pandemic has presented relevant research opportunities related to coworking. Notably because the pandemic continues having an impact on social structures and work patterns. The pandemic has normalized remote working and accelerated a 'hybrid' (off and online) way of communicating and connecting. For coworking spaces, in the short-run, the biggest impact has been that they have had

to be physically redesigned and that many community-enhancing tools have been moved to the digital realm (Konya, 2020). In the long run, coworking spaces foresee many opportunities that could reverse current trends, mainly driven by one of its core values: the availability of 'social networks' or 'coworking communities'. Managers of coworking spaces expect that many users will return once the pandemic is controlled and that, in addition, they will increasingly appeal to more and more workers, mainly driven by a desire to be part of face-to-face social (business) networks (Kim and Aldrich, 2005). Consequently, the post-COVID-19 era is presenting interesting times for coworking spaces. Coworking spaces are a unique value proposition that promote affordable and flexible workspaces in combination with access to communities which seem now more relevant than ever before. A world where technological possibilities seem endless and where there is a growing acceptance of remote working while being included in communities, presents a wide range of opportunities for the entire coworking industry.

This dissertation has two aims. First, it seeks to provide theoretical insights into a) what coworking spaces offer to workers with workplace flexibility and who want to work (at least part of the time) in more social environments and b) processes that relate to social capital formation and to c) coworking space reactions to drastic changes in the environment of coworking spaces. Second, it seeks to offer a more practical contribution regarding the functioning of coworking spaces and how they can be improved, especially in times of crisis (as during the COVID-19 pandemic).

This chapter will discuss the rationale of the dissertation, the research questions, and present the dissertation outline.

1.1 | Rationale for the research

The first rationale for this dissertation stems from an identified gap in the literature. In the past two decades, the flexible coworking concept has become ubiquitous in many countries around the world, and similarly, as a research topic it has grown rapidly. To date, the main topics in the coworking literature include the emergence of coworking (e.g. Spinuzzi, 2012; Moriset, 2013; Gandini, 2015; Merkel, 2015; Waters-Lynch et al., 2016); different manifestations of coworking spaces (Bilandzic and Foth, 2013; Bouncken and Reuschl, 2018); conceptualizations of coworking spaces (Fuzi, 2016; Fabbri, 2016; Waters-Lynch et al., 2016; Castilho and Quandt, 2017); community building processes at coworking spaces (Rus and Orel, 2015; Garrett et al., 2017; Spinuzzi et al., 2019; Blagoev et al., 2019); the value of coworking for the users of coworking spaces (Parrino, 2015; Gerdenitsch et al., 2016; Bouncken et al., 2018; Bouncken and Aslam, 2019; Merkel, 2017); and the negative aspects of coworking (Bouncken et al., 2018).

This dissertation contributes to the academic literature by extending current conceptualizations of coworking spaces through 1) theorizing the promises of collaborative workspaces and 2) investigating coworking mechanisms that aim at promoting social interaction and innovation. In addition, this dissertation contributes to the emerging literature on community within coworking space environments by examining 1) the formation of social capital in coworking spaces and 2) by researching the impact of the COVID-19 on coworking spaces and coworking communities.

The second rationale derives from a practical relevance. With growing groups of workers with workplace flexibility, and with an increasing range and segmentation of coworking spaces, it is relevant for policy-makers, coworking space managers and users to have more knowledge of coworking spaces in modern economies, what they promise, what types of processes are embedded in coworking spaces, and what the value of working in coworking spaces can be.

1.2 | Research questions

This dissertation builds on current knowledge regarding coworking spaces and addresses the literature gap regarding the mechanisms used by coworking spaces. In addition, it addresses a literature gap regarding processes related to social capital formation and processes related to coworking space reactions to radical changes in the coworking environment. The following three research questions will guide the research:

- 1 What do coworking spaces promise to their users and which coworking strategies do they employ to stimulate interaction?
- 2 How do coworking spaces processes related to social capital formation manifest themselves in coworking spaces?
- 3 How did coworking spaces and coworking communities respond to the COVID-19 pandemic?

1.3 | Research approach

In order to address these research questions, this dissertation is exploratory in nature. The research for this dissertation has been carried out in Amsterdam. Amsterdam offered a good opportunity to do this research because a) the city has a vibrant entrepreneurial atmosphere, b) Amsterdam has a broad variety of coworking spaces, c) Amsterdam is frequently mentioned as one of the top 20 cities globally for coworking activities (Coworking Resources, 2019), and d) the city provided opportunities for convenience sampling and the exploitation of the researchers' personal network.

In the first phase, and to address the first research question, content analysis was conducted on websites of collaborative workspaces in Amsterdam (chapter three). This method was chosen in order to have a systematic analysis of recorded data regarding what types of collaborative spaces exist, what they promise to their users, and if there are differences in how they position themselves towards their potential users. In this analysis, the general focus was on open-plan environments that provide workspaces to start-ups, independent entrepreneurs, self-employed workers, and small-size companies with physical characteristics that enable unaffiliated users to interact with each other. This led in turn to a content analysis of websites of accelerators, incubators, coworking spaces, and fabrication laboratories. For the following parts of the research, the scope was narrowed down to merely coworking spaces. While it should be kept in mind that all categories of spaces display coworking space characteristics, the focus shifted to spaces without stringent selection procedures and without time-bound programs, i.e. coworking spaces. After this selection, two coworking spaces in Amsterdam were examined on how they stimulate interaction and innovation processes between members (chapter four).

To address the second research question, social networking processes facilitated by coworking spaces were examined (chapter five). This chapter builds on previous research in the different social science disciplines. To address the third research question, chapter six analyses how coworking spaces reacted to the COVID-19 pandemic.

For chapter six, a case study approach was adopted in one coworking space in Amsterdam. (StartDock). The selected coworking space embodies all typical aspects of coworking spaces. And after having visited the space the first time, having spoken with the founders, and having received permission to do research at the space, the coworking space showed to have a rich diversity of users and displayed the essential coworking strategies that stimulate social interaction and community building. While doing research in the coworking space, it was possible to rent a work spot for one day a week, for a period of a year. Working in the coworking space facilitated becoming part of the community, enabling the involvement in coworking activities, collecting data and making participatory observations.

1.4 | Structure of the dissertation

This dissertation looks at various aspects related to the topic of coworking. **Chapter two** is a literature review where I present insights from the literature that inform the rise of coworking. These are insights on a) new production systems of the cognitive-cultural economy, b) labor market flexibility and the knowledge worker, and 3) entrepreneurship. This chapter also introduces the Amsterdam case study.

Chapter three is a study on the promise of collaborative workspaces towards potential users. The study was performed by conducting a content analysis of thirty webpages of four categories of collaborative workspaces in Amsterdam (Accelerators, Incubators, Coworking spaces, and FabLabs). The findings of this study highlight the difference in value propositions, and the variety of benefits which are promised by each of the categories, ranging from business development opportunities to facilitated access to social networks.

Chapter four is a qualitative study and focuses on how managed coworking spaces promote social interaction and concurrent innovation outcomes amongst their users through managed coworking interventions. The study was conducted among 18 coworking space users in two particular coworking spaces in Amsterdam. The study provided insights regarding specific coworking space interventions that accelerate the impact on social interaction when workers are co-located.

Chapter five examines how coworking spaces stimulate social capital for entrepreneurs. In particular, the study investigates the performance benefits for entrepreneurs resulting from both bridging and bonding social capital, which are partially created in coworking spaces. Data for this study was collected by interviewing nineteen entrepreneurs across three coworking spaces in Amsterdam. The study distinguishes three coworking interventions as stimulators of social capital, i.e. design of the physical space, facilitative tools, and community management. The findings of the study confirm the relationship between coworking space interventions, bridging and bonding social capital, and performance benefits for entrepreneurs.

Chapter six is a study that analyzed one particular coworking space in Amsterdam and examined how the space and community reacted to the COVID-19 pandemic. The study takes a dynamic capabilities (DC) lens to explore the symbiotic relationship between the management of a coworking space and the coworking community. Findings of the study include the notion that the coworking community is key source of information that may provide ideas to the coworking space management staff, but also that the community is part and parcel of the dynamic capability of the coworking space itself.

Chapter seven is a general discussion of the key findings, the research contribution, implications for practice, and future directions for coworking research.

The figure on the next page depicts the dissertation outline.

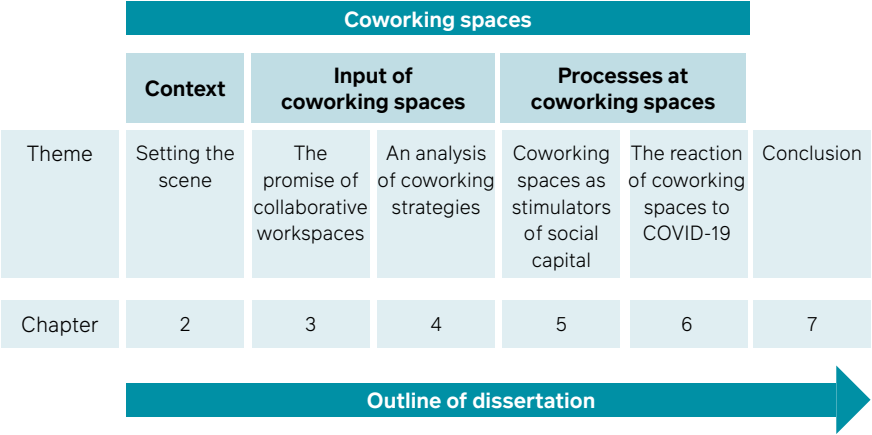


Figure 1 | Dissertation outline (Source: author)



CHAPTER TWO

Setting the Scene

2.1 | Introduction

Over the last few decades, urban landscapes have shown fundamental changes in the production system. There are different facets related to these changes. They comprise, first, the new forms of production that are related to the cognitive-cultural economy; second, flexibility in space and time that is increasingly prevailing amongst organizations; third, the increasing role of entrepreneurship in contemporary economies, and fourth, the emergence of coworking spaces, i.e. flexible office spaces that promote collaboration and innovation.

Cities like New York, Los Angeles, London, Paris, Barcelona, Sydney, Tokyo, Seoul, and Amsterdam are often associated with the 'cognitive-cultural' economy (Scott, 2007). Scott (2007) describes the cognitive-culture economy, and its embodied activities, as all industries that involve (mostly) non-standardized labor processes relying on high intellectual skills and capabilities. Key characteristics of cognitive-cultural economies are continuous 'high-tech' innovations as well as high-end personal services to affluent consumers (e.g. advice in financial management, design) (Scott, 2014). Implicitly, such economies require very specific, highly-skilled input of labor, which has led to new landscapes of production and consumption. Consequently, advanced urban economies have shown a fundamental transition of the spatio-organizational format of production, driven by processes of technological change and globalization (Folmer & Kloosterman, 2017).

In line with these developments, Scott (2014) highlights four important elements related to advanced cognitive-cultural economies. First, advanced economies focus increasingly on non-standard products in technology-intensive and cultural sectors. Second, such sectors in advanced economies display tendencies to horizontal and vertical disintegration. These processes are characterized by an increased restructuring of networks towards specialized and complementary producers with an inclination to agglomeration, especially in large cities. Third, the output of such industries is marked by firm- and place-specific product specifications (in line with Porter, 1996). Fourth, the workforce needed in such transformations is increasingly being asked to develop and deploy high-level cognitive and cultural skills (e.g. cultural awareness, leadership capabilities, technological skills).

In labor relations, firms in cognitive-cultural economies have become more flexible in their approach to work while at the same time becoming more dependent on flexible labor pools of specialized and skilled labor (Kloosterman, 2010). Levy and Murnane (2012) describe how in modern economies information and communication technologies are changing the employment landscape into a computerized economy. Such developments have among other things set in motion processes of a) labor market flexibility and b) entrepreneurship in which both are affiliated with economic

growth, the creation of new companies, markets, and new opportunities (e.g. Naudé, 2008). Such developments have led, in turn, to increasingly large groups of workers (employees with workplace flexibility, self-employed workers, start-ups, freelancers) who are flexible where they perform their work. For such workers, coworking spaces have shown to be attractive locations to work.

A step forward in the study of advanced economies and the associated coworking phenomenon appears from those complementary contributions that are further presented in this chapter. To begin with, I address the topic of 'cognitive-cultural economy' and embedded forms of production. Next, I address the topics of labor market flexibility, the knowledge worker, and entrepreneurship. Afterwards, I continue with highlighting the coworking phenomenon in which I discuss the case of Amsterdam (in this dissertation, Amsterdam is the case in point).

2.2 | The cognitive-cultural economy

Over the last four decades, many cities in the developed world and increasingly in the developing world have displayed a shift towards the production of goods and services that are based, to a large extent, on knowledge-intensive activities. In a range of meaningful publications, Allen Scott has addressed the emergent form of cognitive-cultural economies (Scott, 2007; Scott, 2008; Scott, 2011; Scott, 2012). He uses the descriptor 'cognitive-cultural', to refer to modern knowledge-economies relating production to the mental powers of critical segments of the labor force. Key components of such economies include a greater reliance on intellectual capabilities than on physical inputs or natural resources. Such capabilities include "...skills such as logical thinking, inductive judgment, analytical perception, technical insight, and creativity, as well as workers' capacities for empathy, self-presentation, leadership, communication, social interaction, and all the rest" (Scott, 2011b, p. 854).

Studies on the cognitive-cultural economy describe various changes linked with new production systems that are made possible by technological advancement, spatial reorganization, and new forms of cognitive labor. Scott (2011) summarizes three important markers of the cognitive-cultural economy: 1) production forces reside in digital technologies; 2) new forms of labor are emerging in specific organizations of production; and 3) the role of mental and affective human assets are intensifying in the production systems at large. Mahmoudi and Levenda (2016) discuss other aspects of the cognitive-cultural economy. First, digital methods enable efficient communication and information storage. Such methods reduce transportation costs and time, as well as data storage costs. This has had a significant impact on organizational operations, changing the nature of production. Second, cognitive-cultural economies create new divisions in labor (particularly between high and

low-skilled workers) which has implications for the different layers of social life. Scott distinguishes two classes: highly qualified and a low-wage 'servile class' (Scott, 2011b). The highly-qualified workers perform functions using knowledge and cognition (cognitive-cultural workers) while the servile class mostly perform manual labor. A study by Kloosterman (2013) shows how Amsterdam, an example of a cognitive-cultural urban economy with a very diverse population, has been displaying a transformation in production systems accompanied by growing social stratification. Third, the changes in production systems are also echoed in consumption patterns. Consumers spend larger parts of their earnings on products and services that focus on experiences (Mahmoudi and Levenda, 2016).

Modern economies have been showing an increase in the number of highly educated consumers who can be defined by cultural sophistication rather than income. Currid-Halkett (2017) coins the term 'the aspirational class' for affluent consumers in cognitive-cultural economies. Shaker and Rath (2019) state that such consumers display new forms of urban living and lifestyles. Shaker and Rath (2019) analyzed specialty coffee bars as an example of an amenity that is proliferating across cognitive-cultural economies, which are frequented by large groups of middle and upper-class professionals. Coffee bars together with other cultural consumption amenities (e.g. specialty beer drinking; barbershop services), offer opportunities for experiencing and manifesting the lifestyles and cultivated sensibilities of the aspirational class (Shaker and Rath, 2019). Mahmoudi and Levenda (2016) add to this by stating that contemporary cognitive-cultural cities can be recognized by their predominance in the digital, cultural, or informational economy and, additionally, by their functional character as key nodes in global relationships of the networked urban society. These are societies where the social and digital fabric increasingly intersect (Chiappini, 2020).

Cognitive-cultural economies are often also associated with 'creativity' (Wray, 2021). Creativity is the ability to produce an output that is new and valuable (Runco and Jaeger, 2012). In this context, new relates to being unique, unusual, effective, efficient, contributing something to the academic field or society, which did not exist before. Cognitive-cultural economies identify, nurture, attract and sustain talent in order to mobilize ideas, and promote creativity. Such milieus contain the necessary requirements in terms of hard infrastructure (buildings, roads, communal spaces) and soft infrastructure (mindset, incentives, regulations) to generate a flow of new ideas and inventions (Carta, 2007). In his discussion of cognitive-cultural economies, Scott (2014) distinguishes three interconnected processes, i.e. learning, creativity, and innovation. Learning is an essential component that is a preliminary to creativity. Creativity, according to Scott, comprises the production of meaningful new ideas and innovation relates to the translation of those ideas into concrete, effective outcomes. Even though it is rather difficult to define if something can be called 'creative',

Csikszentmihályi (1996) suggests that experts within certain areas determine what is creative, since they typically have the relevant knowledge.

2.3 | Cognitive-cultural economies and workplace flexibility

In cognitive-cultural economies, new forms of flexible work practices are becoming more and more prevalent (Holliss, 2012; Chatterjee and Crawford, 2021; Holliss, 2021). Flexibility in work practices can refer to working conditions (the de-regulation of contractual arrangements; the extent of part-time, self-employed or nomadic workers), time (time sharing, shift working, evening and weekend working), and place (e.g. telework). A key link between cognitive-cultural economies and workplace reform is that flexible work practices are mostly found in “firms that compete in international product markets, emphasize quality, or have a technology that requires highly skilled workers” (Powell and Snellman, 2004, p.209). The managerial literature on cognitive-cultural economies affirms that flexible work arrangements are essential in an economy based on knowledge production (Kelly, 1998; Atkinson & Court 1998).

Associated with flexible work practices is the topic of workplace flexibility, which lately has received much attention (e.g. Holliss, 2021; Hubbard et al., 2021). Workplace flexibility is seen as “the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks” (Hill et. al, 2008, p.152). Various scholars have indicated that workplace flexibility has become a necessity in contemporary economies (e.g. Halpern, 2005). From different stakeholder angles, the importance of workplace flexibility has been highlighted as an imperative part of current and future work practices. For instance, many multinational enterprises make workplace flexibility central to global strategies to attract, motivate, and keep talent (Hill et al., 2008). Recently, various scholars who focused on the effects of the COVID-19 pandemic on workplace arrangements, indicated that the pandemic will accelerate organizational developments towards short-time working and flexibilization in work location and hours (e.g. Spurk and Straub, 2020; Holliss, 2021).

When taking the perspective of firms in cognitive-cultural economies, one of the goals of workplace flexibility is allowing organizations to adapt to rapidly changing demands coming from either internal or external forces (Wray, 2021). From the worker’s perspective, the goal of workplace flexibility is to enhance the ability of individuals to meet personal, family, and occupational needs (Hill et al., 2010). In this regard, it is assumed that when individuals believe that they have more flexibility in their work practices, they will be more motivated, loyal, and engaged (Hill et. al, 2008). Moreover, flexible work practices emphasize worker autonomy, facilitate worker

involvement, and allow workers to draw on their specialized knowledge to solve problems (Shagvaliyeva and Yazdanifard, 2014).

From a firm's perspective, drawbacks of workplace flexibility are lack of managerial control and employee evaluation by superiors (Mokhtarian et al., 1998). Yet, Freeman (2018) noted that shifts from mass-production systems to a more flexible way of organizing work, can represent a move to more intensive forms of control which is enabled by information and communications technology (ICT). However, studies that were held during the COVID-19 pandemic, provide indications that productivity is not deterred by shifts to remote work and workers can be trusted to get work done from alternative work locations (Maurer, 2020; Chatterjee and Crawford, 2021). Moreover, there are many indications that remote working may remain a permanent feature of the future working environment, accelerated by the experiences made with remote working during the COVID-19 crisis and that more and more it is seen as "the way forward" (OECD, 2020; Chatterjee and Crawford, 2021). In cognitive-cultural economies, it then becomes important for governments to promote investments in the physical and managerial capacity of firms as well as workers ability to perform teleworking (OECD, 2020; Holliss, 2021; Hubbard et al., 2021).

2.4 | Cognitive-cultural economies and the knowledge worker

'Cognitive-cultural economies' and 'knowledge worker' are interconnected concepts (e.g. Reinhardt et al., 2011). Even though there is no consensus about how to define the term 'knowledge worker', scholars agree that the work they perform can be differentiated from other forms of work by its emphasis on 'non-routine' problem solving (Reinhardt et al., 2011). Examples of knowledge workers include programmers, academics, architects, engineers, scientists, design thinkers, public accountants, lawyers, marketers, and any other white-collar workers, whose line of work requires one to "think for a living" (Davenport, 2005). Knowledge workers are believed to shape the performance of knowledge economies through their problem solving, lifelong learning, and innovative skills (Florida, 2005). In the book *The new division of labor* (Levy and Murnane, 2004), the authors explain how computers are changing the employment landscape by the creation of many jobs which often require high-skilled input of knowledge workers. The authors state that nations should prepare populations for the rise in high-wage/high-skilled jobs that involve extensive problem solving that are mostly performed by knowledge workers.

In the last decade, modern economies have shown a rise in the number of such knowledge workers. Several sources estimate that there are over a billion knowledge workers in the world (e.g. Ricard, 2020). This number has been growing rapidly each

year. In the US, in 2016, about 48% of workers could be classified as knowledge workers, or as people with “nonroutine cognitive jobs”, which translates to around 60 million people. Most of these knowledge workers, and especially younger knowledge workers, tend to opt for modern, cultural cities for their residence. Cities like New York City, Singapore, Amsterdam attract many knowledge workers and especially the dense urban city centers attract them because such areas allow for “processes of cross-fertilization, networking, and low transaction costs to accessing gatekeepers, jobs, and labor pools” (Currid & Connolly, 2008, p. 431).

Many of these knowledge workers have flexible workplace arrangements. UpWork (a global freelancing platform where businesses and independent professionals connect and collaborate remotely), analyzed the US work force across American cities and revealed that the number of Americans working outside the traditional office has increased 44 percent since 2005. Moreover, the recent COVID-19 global pandemic has further accelerated remote working by knowledge workers. Many organizations altered work arrangements for large segments of knowledge workers (in order to meet governmental restrictions), which include rapid shifts, to working from home and through the digital realm (DeFilippis et al, 2020). According to a 2020 report by Slack (a digital business communication platform), amongst 2,877 knowledge workers in the US, there has been a ‘remote work wave’ since COVID-19. They estimate that in the US alone, 16 million knowledge workers started working remotely due to COVID-19 as of March 27, 2020 (Slack, 2020).

2.5 | Cognitive-cultural economies and entrepreneurship

Cognitive-cultural economies are often associated with entrepreneurship (e.g. Glaeser et al., 2010). In such economies, there has been a rapid increase in the number of people becoming an ‘entrepreneur’ (as opposed to working for established organizations) (Warner, 2019). The global entrepreneurship monitor stated that in 2019/2020 there were more than 582 million people worldwide in the process of starting or running their own business (GEM, 2020). This noteworthy phenomenon has received much attention by both scholars and policy-makers. Entrepreneurship is seen as the “concept of developing and managing a business venture in order to gain profit by taking several risks” (Entrepreneur Handbook, 2022). Currently, entrepreneurship is getting into the core of every industry in cognitive-cultural economies (Radovic-Markovic et al., 2019). Not only does it contribute, to a large extent, to the overall revenue of urban regions and countries, but it also has a beneficial effect on the workers themselves. For many entrepreneurship is an attractive alternative to the 9 to 5 corporate life and a great career choice that allows for a better work/life balance.

For many entrepreneurs, cognitive-cultural urban economies are highly appealing. Most importantly because they offer a concentration of social networks, large pools of potential partners, and a quality of life that educated and ambitious entrepreneurs expect (Florida, 2014). As Elfring et al. (2021) describe, having access to social networks is the core of entrepreneurship. More specifically, the dynamism of networking that is stimulated in urban economies can present opportunities for entrepreneurs (Elfring and Hulsink, 2019). A key factor that stands out, is access to talent. For entrepreneurs, this is paramount in their decisions for where to live and work, and in specific, access to technically trained workers (Elfring et al., 2021). Entrepreneurs actively look for places that educated and ambitious workers want to live in (Florida, 2014). Other key factors in the location choices of entrepreneurs are transportation networks (airports, good high-way infrastructure) and proximity to customers and suppliers.

Urban managers and policy-makers aim at creating favorable entrepreneurial settings, because the argument is that the more intensive intraregional competition among firms is, the higher the regional economic growth (Jacobs, 1969). Examples of policy interventions are tax-cuts or loans and grant programs offered directly to entrepreneurs (smallbusiness.com, 2018). On a practical level, cities now offer an increasing variety of infrastructure to allow people to start a company with greater ease than ever before. Cities like New York, Berlin, London, and Amsterdam have a vast offering of work spaces such as accelerators, incubators, coworking spaces, catering for free-lancers, self-employed workers, start-ups, and small-size companies (e.g. Capdevilla 2013; Waters-Lynch et al. 2016). Such environments aim at creating the required spatial and social context for entrepreneurs and have become communities and hubs for the exchange of ideas, collaboration, and innovation.

2.6 | The emergence of coworking spaces

Cognitive-cultural economies have shown a rapid rise in the number of coworking spaces. Especially in inner creative suburbs of 'vibrant cognitive-cultural' cities, there tends to be a clustering of coworking spaces (Waters-Lynch and Potts, 2017). Coworking spaces are office environments that accommodate different types of workers with workplace flexibility. In modern knowledge economies, the term coworking has started to be used as a new term for a new social way of working. Clay Spinuzzi (2012, p. 399) defined coworking spaces as "open-plan office environments in which workers work alongside other unaffiliated professionals for a fee". Coworking.com (n.d.) clarifies this by stating: "coworking spaces are built around community-building and sustainability...independent professionals and those with workplace flexibility work better together than they do alone...coworking spaces uphold the values set forth by those who developed the concept in the first

place: collaboration, community, sustainability, openness, and accessibility". In this dissertation, I follow Spinuzzi's view and define coworking spaces as spaces where (self-) employed workers, start-ups, and small-sized firms share office environments and are open to sharing their knowledge with the rest of the coworking community.

In 2005, Brad Neuberg opened the first "official" coworking space in San Francisco as a response to the perceived lack of social interaction in business centers and the apparent lower level of productivity of working at home (Botsman & Rogers, 2011). Since then, the concept is getting more and more popular in the modern work landscape of most cities (Moriset, 2013) (see also figure 2). In Amsterdam, for instance, there are more than one hundred spaces that describe themselves as coworking spaces. Deskmag.com (2019) reports more than 1,7 million working people around the world who are members of one of the 19,000 coworking spaces. Both in Europe and in the United States, there are annual coworking conferences dedicated to this emergent work form where coworking space managers and founders meet, share experiences, and discuss common issues. From the perspective of coworking space managers, a main aim is the stimulation of 'co-working' (as in working together) resulting from social processes because of co-location (Smidt et al, 2014). This is in line with a vast number of scientific publications that have underlined the importance of co-location in knowledge transfer between firms and their environment (e.g. Chesbrough, 2003; Von Hippel, 2007; Parrino, 2015).

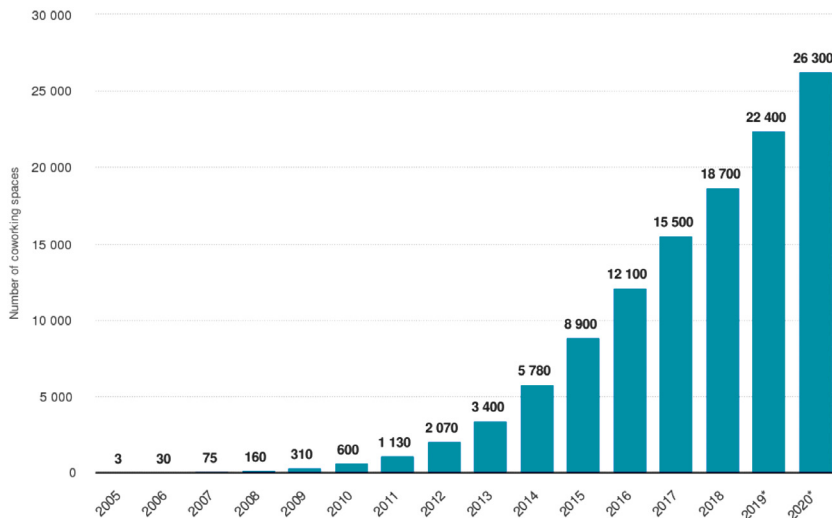


Figure 2 | Number of coworking spaces worldwide from 2005 to 2020. (Source: Deskmag, 2019)

An important contribution comes from Capdevila (2013), who sees parallels between coworking spaces and industrial clusters when it comes to knowledge exchange dynamics. According to the author, the difference is that in industrial clusters the embedded units typically tend to be firms and organizations, whereas in coworking spaces they are entrepreneurs, startups, self-employed workers, freelancers, and the like. The physical proximity in coworking spaces combined with cognitive proximity and frequent social interaction helps nurturing relationships based on trust (Boschma 2005). This, in turn, can lead to the development of new projects among coworking members. In coworking spaces, such projects represent a common way of collaborative innovation created amongst members (Capdevila, 2013, pp 7). Hence, the added-value of being member of a coworking space lays in being embedded in a coworking community and the possibility for knowledge exchange within that community. This is what differentiates coworking spaces from other types of clusters and (office) environments (Weijts-Perrée et al., 2016)

2.7 | The users of coworking spaces

In the work of Spinuzzi (2012), one of the guiding research questions was to unveil who actually coworks. In his work, he contrasts the people who actually cowork with the targeted groups of coworking space proprietors. Typically, coworking space proprietors target people who have freedom to choose where they work, especially those who find home offices and coffee shops to be inadequate workspaces. Often these people are cognitive-cultural workers and operate as small business owners, freelancers, and entrepreneurs. Important characteristics of targeted people are the need to seek business leads, business partnerships, but also friendships (Spinuzzi, 2012).

Standing (2011) coined the term 'the precariat' which is an emerging social class whose members typically have 'flexible' labor contracts; temporary jobs; or work intermittently for employment agencies. A big part of the precariat are educated people that aspire to create a 'good society' based on progressive values of equality, freedom and ecological sustainability (Standing, 2014). Many of these people are project-oriented, entrepreneurial, and multi-skilled but lack a clear future career prospect (Standing, 2014). For such people, coworking spaces are increasingly relevant, as they may provide a social and economic safety net.

In practice, the people who actually cowork are small-business owners (most of which are one-person organizations), freelancers, consultants, interns and employees of businesses inside coworking spaces, and people working remotely for businesses outside the coworking space (Spinuzzi, 2012). Of these workers, many have an internet or information technology component to their business.

In 2017, Deskmag held a global coworking survey to share developments about who has been using coworking spaces (Foertsch, 2017). One of the insights of the survey was that the number of freelancers working from coworking spaces has been declining. Foertsch (2017) explains that often the bigger coworking spaces are, the more they provide offices for firms. As a consequence, the (relative) ratio of freelancers has been decreasing. The survey showed that for spaces with 100 or more workstations, around 30% of the coworkers are freelancers. A tendency is that freelancers increasingly prefer working in smaller coworking spaces.

As far as the disciplines in which coworkers are active, IT, PR and sales are the most present industries (Foertsch, 2017). Also, the high level of education remains a typical feature among coworking space members. The survey revealed that around 85% of coworkers have finished an academic education: 41% at bachelor level, 41% at master level, and 4% at doctorate level (Foertsch, 2017).

2.8 | The case of Amsterdam, the Netherlands

The Amsterdam Metropolitan Area (AMA) can be considered a cognitive-cultural area (Kloosterman, 2013; Shaker Ardekani, 2016). When looking at how policy-makers aim to develop the Amsterdam region, two of the main topics relate to 'innovation' and 'entrepreneurship' (Noord-Holland.nl, 2020).

With regards to 'innovation', the aim is to strengthen the innovative capacity of the economy in order to respond to constant changes in society. A main topic surrounding this pillar is 'innovation climate'. This entails, among other things, how SME innovation funds are developed to support sustainable innovations for SMEs. With regards to 'entrepreneurship', the municipality is focused on adapting the socio-economic conditions to deal with changing dynamics in the economic landscape as a result of the rise of entrepreneurship and self-employed people. Policies focus on, for instance, creating an attractive business climate by providing sufficient space, good accessibility, good education, a strong innovation climate, and good digital accessibility.

The Amsterdam Metropolitan Area, and specifically the city of Amsterdam, is considered the engine of economic growth, and a catalyst for creativity and innovation in the North-Holland region. As Amsterdam has continued to develop further as the core city of an internationally competitive and sustainable European metropolis, the municipality of Amsterdam developed the 'Structural Vision Amsterdam 2040'. The vision highlights what Amsterdam needs to do to continue being economically strong and sustainable for the coming decades, such as dealing with the densification of space, rolling out the city center, and the transition to new sustainable energy sources. In this regard, the topics of 'innovation' and 'entrepreneurship' have a significant role.

In order to promote innovation, the municipality of Amsterdam created the Amsterdam Economic Board. The board was established to streamline the working relationships between the private sector, knowledge institutes, and governmental institutions in order to deal with complex urban issues (e.g. health, mobility, circular economy, jobs of the future) (Amsterdam Economic Board, 2022). To address these issues, stakeholders in the region are sought that have expertise, knowledge, and manpower to promote innovative solutions. The role of the board is to detect opportunities for innovation, creating cross-sector partnerships for innovative projects and offering access (inter)national networks (Amsterdam Economic Board, 2022).

In promoting innovation, the municipality also highlights the role of entrepreneurship. Similar to the Economic Board, the municipality created the Amsterdam Center for Entrepreneurship (ACE). ACE was founded in 2008 and is a collaboration between two research universities, three applied science universities and private sector sponsors, and it has as an aim teaching essential entrepreneurial skills to students and prospective business owners. The focus is on the incubation of start-ups and the development of venture labs. ACE is also one of the founding partners of Dutch Centers for Entrepreneurship (Dutch CE) and is part of an informal network of national and international entrepreneurial organizations. Along with the key role of the (future) start-ups themselves, is the interaction between them, the knowledge institutes, and private sector investors, with Amsterdam being a center with high network density and many connecting events.

Kloosterman (2013) provides an insightful study on how Amsterdam has developed over the past four decades from a city in crisis (in the 70s) to a 'resurgent city' (as described by Scott, 2008). Especially in the last two decades, Amsterdam has developed into an appealing city for cognitive-cultural workers from both the Netherlands and abroad, who benefit from wide-ranging production systems, from the vibrant cosmopolitan atmosphere, and from the diversity in amenities. In his work, Kloosterman (2013) also describes how Amsterdam has been showing processes of gentrification in various (former working class) neighborhoods, and how the city has changed into a place of choice for the highly-educated. In a later work, Kloosterman and Pfeffer (2020) analyze the Amsterdam canal district, a dense urban district that shows a high concentration of cognitive-cultural production and consumption.

2.8.1 | Self-employed workers in the Netherlands

Statistics Netherlands (CBS) defines self-employment as "A person who carries out work at his/her own account or risk: in their own company or practice with staff; as a major shareholder; in assisting family members; as a self-employed person who does not employ staff" (CBS.nl, n.d.). When excluding the group of shareholders and people who assist in family businesses, two types of self-employed can be distinguished

within this definition. The first category can be seen as the traditional self-employed. This entrepreneur often has his own business space, logistical means, and capital. These are often entrepreneurs in traditional sectors such as the hotel, restaurant, and catering industry or the agricultural sector. The number of these traditional self-employed compared to the total number of self-employed has remained stable in the past ten years (CBS.nl, n.d.). The agency reports a rapid rise of the so-called 'new self-employed'. This entrepreneur typically carries out work that previously was covered through an employment contract. Additionally, the new self-employed are entrepreneurs who are not tied to a place and generally have limited working capital. In recent years, in the Netherlands, this group has experienced significant growth.

Friedman (2014) describes the rise of the 'gig economy'. 'Gig workers' have flexible approaches to work and are typically employed in a variety of occupations. The term comes from the employment of musicians to play a particular set during an evening performance, i.e. 'a gig'. In the gig economy, workers are hired on the spot for a job with a flexible contract, without a promise for future employment. So rather than giving workers long-term contracts, in the gig economy firms hire workers for a gig and by doing so employers can adjust employment and even wages in response to demand conditions (Friedman, 2014). From the firm's perspective this makes employment and wages more flexible while shifting risk of economic fluctuations onto workers (De Stefano, 2015). For gig-workers, this approach frees them to seek the best possible working conditions and wages. However, it also dramatically increases uncertainty and economic risk (De Stefano, 2015).

With regards to numbers, Statistics Netherlands (CBS) reports that in 2019 the Netherlands had 1.2 million self-employed workers without staff members. In almost all sectors, the share of self-employed people has increased. The largest increase occurred in the construction industry where in 2017 more than a quarter of all workers in that sector were self-employed. The share of self-employed people also increased above average in information and communication services. Conversely, the increase in large sectors such as industry, trade, hospitality and public administration was relatively small.

2020 appears to have brought a stop to the rise in numbers of self-employed people in the Netherlands. During the time this section was written, no official numbers had been published by the Dutch Central Agency for Statistics, and only rough speculative estimates could be found online. Nevertheless, the consequences of the COVID-19 pandemic have been disastrous for this segment because the virus brought the entire country to a social and economic standstill. As a result, many self-employed people ended up with terminated assignments, incurred major financial losses (despite financial aid by the Dutch government), and are still awaiting uncertain times.

2.8.2 | Entrepreneurial conditions in the Netherlands

When looking at Dutch entrepreneurial conditions in specific, the Global Entrepreneurship Monitor 2018/2019 (a large-scale entrepreneurship survey held among the adult population of various countries worldwide) states that the Netherlands offered, for a second year in a row, the best conditions for entrepreneurship (GEM, 2020). Stam (2014) speaks about a favorable Dutch entrepreneurial ecosystem, i.e. an interdependent set of actors that is governed in such a way that it enables entrepreneurial action. According to the GEM, the Netherlands is outstanding with regards to entrepreneurial education, government support, and professional infrastructure. Particularly, access to finance and entrepreneurship education have improved compared to 2017.

The GEM states that, for innovation-driven economies such as the Netherlands, the greatest accelerators for entrepreneurship lie in entrepreneurship education at primary school, government policy in the field of tax burden and regulations, R&D transfer, and corporate financing. Compared to other European countries, the Netherlands is doing relatively well on these points (see figure 3). According to the survey, nearly two thirds of the adult Dutch population felt that there were good opportunities to start a business in 2018. This is the highest level in ten years and is considerably higher than other developed countries (the average score of EU countries is 43%). In 2018, this led to 9.9 % of the adult Dutch population starting or setting up a new company and 5.4% recently becoming an owner of a company. When looking at the separate ecosystem components, the Netherlands, compared to Europe, reported the highest values in the sample for ten out of twelve ecosystem components.

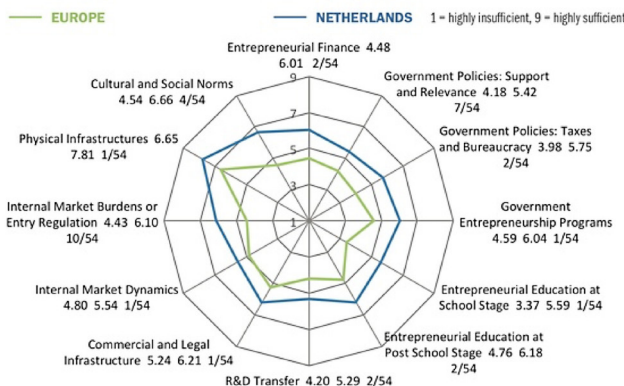


Figure 3 | Dutch entrepreneurial ecosystem compared to Europe (Source: GEM, 2020)

2.8.3 | Coworking spaces in Amsterdam

According to Coworking Resources (2019) the top three major countries with the highest density of coworking spaces are Luxembourg, Singapore and Ireland, with Luxembourg coming in first at 8.5 new spaces every year for every 1.000.000 inhabitants. The Netherlands ranks 19th with 0.7 coworking spaces per year per 1.000.000 inhabitants. Looking at the top cities by coworking growth, in London, every five days a coworking space opens (Coworking Resources, 2019). In New York City, every 7.5 days one opens (Coworking Resources, 2019). In Amsterdam, every 47 days there is a new coworking space (Coworking Resources, 2019).

Zooming in on Amsterdam, there is a large number of collaborative work space providers. When this research began in 2016, there were around 50 spaces. Ever since that time, various new places have opened, but also smaller spaces have closed, resulting in a relatively slow growth of the total number of collaborative workspaces. In 2020, Amsterdam had six accelerators, three FabLabs, nine Incubators, and 43 Coworking Spaces. For this thesis, the following types of spaces were excluded: basic multi-tenant buildings, spaces pertaining to multinationals, large companies, or universities.

2.9 | Insights on the impact of COVID-19 on coworking

Recent studies and reports on the impact of COVID-19 on coworking spaces paint a bleak picture for the short term, but also predict a bright future in the longer term. On the downside, a recent survey (March 2020) amongst 14,000 coworking spaces in 172 countries revealed that 72% of spaces had witnessed a significant drop in the number of people working from their space since the outbreak (Konya, 2020) while 41% of coworking spaces experienced a negative impact on membership and contract renewals (Konya, 2020). In addition, almost 70% of the spaces experienced a drop in the number of new membership enquiries. Many startups and self-employed people have retreated from coworking spaces to working from home (WorkTech, 2020). Founders of coworking spaces report that their users are afraid of being infected with COVID-19 by sharing the typical open-plan areas with people whose travel history and social network situation is completely unknown. Also, demand is down due to the current or expected negative economic impact of COVID-19 on many small businesses and independent workers (SocialWorkplaces.com, 2020). Owners of coworking spaces are confronted with plummeting turnover due to a drop of contracts/subscriptions and tenants, but still face high costs due to long-term rent contracts with landlords and, as a result, many coworking spaces struggle to stay solvent (Feldman, 2020).

On the bright side, start-ups and self-employed people are expected to return after the pandemic, as they value the social contexts that helps them work on their business whilst avoiding social isolation (Spinuzzi, 2012). Coworking spaces may increasingly appeal to established companies that will adopt more remote and flexible working concepts. Coworking Resources (2020) estimates that the number of coworking spaces worldwide will pass 40,000 by 2024, up from 20,000 in 2020. Worktech academy (2020) expects that approximately five million people will be working from coworking spaces by 2024.

2.10 | Conclusion

The inquiry into the coworking phenomenon highlights the usefulness of illuminating new forms of organizing work through the lens of cognitive-cultural economies. This dissertation moves the debate further by focusing on new forms of input and processes within coworking spaces, a flexible office concept that has become ubiquitous in cognitive-cultural regions. This chapter is a first step in the research on coworking and aimed identifying facets that are relevant for a general understanding of the topic. Moreover, it introduced the overarching setting of this dissertation. In particular, the case of Amsterdam and local entrepreneurial conditions were highlighted. In addition, it addressed the coworking phenomenon, the drivers for its emergence, and the impact of COVID-19 on the coworking industry. Lastly, an overview was provided of the different types of coworking spaces in Amsterdam. This allows for a comprehensive understanding and contextualization of the findings of this dissertation.



CHAPTER THREE

‘The promise of coworking environments: a content analysis of the positioning of collaborative workspaces in Amsterdam’

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Abstract

The emergence of collaborative workspaces is a remarkable feature of contemporary cities. These spaces have appeared rapidly, catering for the locational needs of self-employed workers, start-ups, and small-size companies. The objective of this paper is to provide an analysis of four categories of collaborative workspaces (Accelerators, Incubators, Coworking spaces, and FabLabs). For the case of Amsterdam, we conducted a website content analysis to assess how these spaces position and present themselves towards potential users. The empirical evidence shows that these spaces promise a variety of benefits, ranging from business development to access to social networks. This diversity illustrates the emergence of distinct work settings in an economic environment characterized by the need to work in a social environment that at the same time stimulates networking and collaboration.

3.1 | Introduction

In the last decade there has been an increase in the number of workers with work place flexibility (e.g. Grzywacz et al. 2007, Putnam et al. 2014). Workplace flexibility can be seen as the opportunity to adjust where, when and how to work (Hill et al. 2008; Lai et al. 2009). This rise can be explained by on the one hand the increasingly flexible approach from firms as to where staff can perform their jobs (e.g. Useem and Harrington 2000) and on the other hand the rapid growth in the number of entrepreneurs, freelancers, and start-ups (OECD 2016; Startuphub 2017). Many are “digital workers”, freed from restraints of office or factory-based employment (Terranova 2000). Implicitly, they have the choice to work from a variety of places such as from home, traditional offices, or other public spaces that can host individuals beyond the realms of home and work (a.k.a. ‘3rd places’, Oldenburg 1989). Typically, they want to be in social environments where communication with other like-minded individuals is possible, and at the same time can serve as a breeding place that stimulates collaboration and innovation (e.g. Chesbrough 2006; Botsman and Rogers 2011). To service this growing group of workers, there has been a rise of collaborative workspaces that provide work places within a social environment (Spinuzzi 2012; Gandini 2015). Spaces such as accelerators, incubators, coworking spaces, and fablabs have appeared at a rapid pace, catering for free-lancers, self-employed workers, start-ups, and small-size companies (e.g. Capdevilla 2013; Waters-Lynch et al. 2016).

To attract independent entrepreneurs and small companies, collaborative workspaces try to differentiate by promising different benefits to their potential users. These benefits vary from social environments, to environments for networking, to places for knowledge sharing and learning. In delivering such benefits, collaborative workspaces can differentiate by means of the design of the interior of spaces and by applying managerial mechanisms, such as organizing events and managing access to different communities (e.g. Parrino 2013; Fuzi 2016). Yet, for many workers it is unclear which spaces to select because it is not clear which benefits such spaces bring and how they are delivered. In order to have a clear understanding of how collaborative spaces present themselves to their users and which benefits they promise, an insight in collaborative workspaces seems warranted.

This paper identifies different profiles of collaborative workspaces and tries to understand how they differ in presenting their benefits to their users in terms of space, organizational setup, and community aspects. The research is done in Amsterdam, which is a city that shows a concentration of such spatial configurations. We investigate the following two research questions:

- 1 Which benefits are promised by different categories of collaborative workspaces?
- 2 How do collaborative workspaces claim to deliver these benefits?

First, we review relevant literature on the rise and range of collaborative workspaces (section 2). Next, we explain our methodological approach (section 3). Our results are presented in section 4, and section 5 concludes.

3.2 | Literature

In this section, based on a literature review, we discuss the emergence of various types of collaborative workspaces. Also, we review studies that help to understand how the spatial, managerial and community aspects of collaborative workspaces might have an impact on collaboration and business success.

3.2.1 | Explaining the rise of collaborative workspaces

One of the drivers for the emergence of collaborative workspaces is the shift towards flexible work approaches by firms in modern knowledge economies. Emblematic for these flexible practices is how companies look at the location where work can be performed. Advancements in mobile technology make it possible to have workers perform work activities in other places besides the conventional offices (Brown and Green 2001). In order to connect with colleagues or get work done, people do not need traditional offices. This can be achieved by using mobile technology, and meeting people physically can be organized only for specific activities. Mitchell (1995) calls this 'post-sedentary spaces': environments that can be accessed via ICT networks.

Arthur (1994) conceptualized this phenomenon as "boundaryless work". With boundaryless work, jobs are designed in such a way that workers sustain extra-organizational networks or activities and traditional firm boundaries are broken. Terranova (2000) coined the term "digital workers", freed from the constraints of the traditional office or factory-based work thanks to new mobile technologies. In advanced economies, there has been a rise in the number of such workers. A study by Intuit (2010) has stated that 40% of the US workforce will be freelancers or self-employed workers by 2020. In Europe, 16.1 % of the total workforce was self-employed (OECD 2016). At the same time, Europe is showing a rapid rise with regards to start-ups. Startuphub (2017), a website that provides an analysis of the startup ecosystem across Europe, reports over 800.000 startups in Europe alone. These start-ups raised 16 billion Euros in 2017, which is twice as much as what was raised in 2015 (Atomico, 2017). For many of these startups, workplace flexibility and a better work-life balance is an often cited advantage to launch such a venture (DeFelice, 2017).

An implication of work location flexibility is that workers can perform their work in a broad variety of places. They can work at home, in libraries, cafés, and collaborative

work offices. Felstead et al. (2003) provide evidence suggesting that self-employed workers increasingly carry out work in a variety of different places that go beyond home-based environments but also on the move. Helbrecht (2011) discusses formal and informal work environments and describe the functions of neighborhoods in the knowledge economies. Cafés, restaurants, and social centers are used to coordinate, arrange and moderate projects and contacts. Additionally, there is supporting evidence that in project-based production, teams come together in new social settings in order to generate knowledge and ideas (Maskell et al. 2006). Rallet and Torre (2009) discuss three types of places for such temporary geographical encounters. They call places such as trade shows, conferences or exhibitions “transitory places”; they also introduce places especially designed to facilitate social interactions, such as “platform teams” or “project teams”, and thirdly they discuss everyday places, such as coffee houses, where workers can travel to in order to meet or work. These developments indicate that for such workers, executing work activities is not limited anymore to either home or office contexts and as a result new inspirational work environments are sought. Collaborative workspaces emerge as a potential response to these trends and provide work environments for such workers.

3.2.2 | A range of collaborative workspaces

In parallel with trends in boundaryless work, and the rising number of mobile workers, there has been a rise of new workspaces that facilitate productive activity alongside social interactions. Smidt et al. (2014) introduce “innovation and creativity labs”, spaces which temporally unite specialized competencies in a single place. They are “...configurations that enable organizations to be open to external creative influences, as well as generating and promoting knowledge and innovations...” (2014 p.236). Capdevila (2013) applies the term “localized spaces of collaborative innovation”. These are spaces of innovation communities that are localized but do not belong to an organization. One of the main characteristics of such spaces is that they share information and tools among the members and they encourage the free sharing of knowledge (2013 p.3). Oksanen and Stahle (2013) introduce the term “innovation spaces”. These are spaces that “...enable interaction, nurture social capital, accelerate start-ups, generate artistic activities, and support the flow of ideas...(2013 p.815)”. They denote that such spaces with shared areas, support people’s motivation, ability, and opportunity to share knowledge and experiences.

Studies on innovation spaces have introduced different configurations of collaborative spaces. Terms and descriptions occurring refer to accelerators, incubators, coworking spaces, and fablabs. Accelerators offer programs helping startups to fine-tune their businesses and prepare for upscaling through mentoring, access to shared workspaces, networks of specialists, and capital (Cohen 2014). Estimates of the number of accelerators range from 300+ to over 2,000, spanning six

continents. Incubators, as a separate category, differ from accelerators in the sense that mentorship services and potential networks are not part of a start-up program but are available and can be asked for upon the need of the workers. Generally, incubators are described as organizations that constitute or create a supportive environment which is conducive to the development of new firms (Grimaldi and Grandi 2005; Chan and Lau 2005). Workers in incubators can receive an integrated package of services such as shared workspace, coaching, networking, and access to capital (Dutch Incubation Association 2018). Coworking spaces, as a third category, are shared workspaces where independent entrepreneurs or small companies work in shared open-plan office environments (Spinuzzi 2012). Unlike accelerators and incubators, coworking spaces do not offer any forms of formal mentoring. Yet, similarly to both types, coworking spaces offer both office facilities as well as extra services such as access to on and offline communities, workshops, and networking events. Fablabs (fabrication laboratories but sometimes also named as makerspace, hackspace) are small-scale open workspaces offering (personal) fabrication (Menichinelli 2011). A fablab is normally equipped with an array of flexible fabrication tools (such as 3D printers) that cover several materials, with the aim to make "almost anything". Waters-Lynch et al. (2016) organized the development of such spaces in a dimension of 'work-learn-play third spaces'. In an overview in which the development of collaborative spaces is shown over time, the first types of spaces were incubators in the end of the 1950s. These were categorized as learning third spaces. During the 1990s, hackerspaces and fablabs arose as play third spaces, and in the 2000s coworking spaces and accelerators originated as learning and work third spaces.

These studies describe the recent development of innovative spaces aiming to service users who want to work in social environments, and, as such, it generates an initial framework of analysis into how they claim to promise a variety of benefits to the users.

3.2.3 | Collaborative workspaces: the need for clear differentiation

Collaborative workspaces are businesses themselves, and like any business they need to differentiate and communicate their points of difference with its competitors, so that potential clients can understand the claimed differences and have a clear idea what benefits they get from spaces (Armstrong and Kotler 2013). Clearly positioning a firm or brand, is the key strategic framework for an organization's communications (Jewel 2007). Armstrong and Kotler (2013 p.193) describe this process of positioning as "...the act of designing the company's offering and image so that they occupy a meaningful and distinctive competitive position in the target customers' minds". Spaces may emphasize the distinguishing features of their brand and they may try to create a suitable image (Maggard 1976). This is particularly important in markets that are competitive and where entry barriers for new spaces are low and when workers can easily shift to alternative locations (Porter 1979).

Various positioning strategies can be discerned (Fill and Turnbull 2016). Bhat and Reddy (1998) make a distinction between functional and expressive positioning. Functionally positioned brands emphasize the product attributes and benefits, while expressive brands emphasize the social benefits that a brand can bring. In the context of collaborative workspaces the functional promise embraces shared office spaces in social environments with all the required amenities where one can work and develop their business. Other attributes may be start-up programs, networking events and social activities. The expressive approach considers the spaces as places to network where new relations can be established, friends can be made, or where new business deals can be completed. Such strategies are not comprehensive nor discrete (Fill and Turnbull 2016).

Collaborative workspaces have an array of possibilities to differentiate themselves from competing spaces (e.g. Waters-Lynch et. al 2016). Our focus is on two types of differentiators: differentiation by means of spatial design and differentiation through managerial mechanisms, such as facilitative tools and the community setup. With regards to the spatial point of view, there is a vast body of literature that highlights the role of space as an influencer of collaboration and social networking. Sailer and Penn (2007) demonstrated that the way an office is physically organized has an impact on the form and structure of intra-organizational networks. A study by Wineman et al. (2009) showed that within academic departments network structures are affected by distances separating agents, as well as office locations of agents. Heerwagen et al. (2004) state that spaces that offer accessibility, visibility and short walking distances, entice networking behavior. Other researchers have studied how spatial design influences interactive human behavior. Oksanen and Stahle (2013) denote that spaces with shared physical spaces, such as having shared working rooms, support people's motivation, ability, and opportunity to share knowledge and experiences. Williams (2013) introduced the 'engage/disengage' model. 'Engage' relates to engaging with people by actively looking for them. Physical environments that enhance engagement are communal areas, lounge corners, canteens, coffee corners. 'Disengage' relates to distancing from others in order to stimulate thinking and focus through silent and private solo-work. Spaces for disengagement are e.g. private booths or quiet relax areas. Jenkins (2008) describes such contexts as a human-ecosystem. The author describes that when designing the physical space, this process should take into account the social, cultural, and behavioral elements of social interactions. Collaborative workspaces can manage space to stimulate social networking amongst users and through those means differentiate from other spaces.

Managerial mechanisms are also applied to differentiate from other spaces. These mechanisms play a role in stimulating interaction, tie formation, and collaboration. Research by several scholars has outlined a number of such mechanisms, such as facilitative tools and community management. Facilitative tools are mechanisms

which can “push” interaction, networking and collaboration among members (Capdevila 2013; Parrino 2013). Some studies focus on e.g. the bridging role of facilitators (or moderators, hosts, brokers) (Garret et al. 2014; Cabral and van Winden 2016). Facilitators can play a role in coordinating and connecting members to each other in order to generate new products or services. Others have focused on tools such as networking events, services, and support (Muhrbeck 2011; Fabbri and Charue - Duboc 2014; Parrino 2013). Such tools stimulate users to interact, share knowledge, and learn from each other. Other mechanisms influencing social interaction is the community management of spaces. To stimulate networking and social interaction, studies on network management suggest that the management of users in organizations, influences interaction practices which in turn can enable business performance and contribution to cross-fertilization (Boschma 2005; Tata and Prasad, 2008; Bergh et al. 2011; Cohendet et al. 2014). Management of the community is often manipulated by having selection procedures, selective admission processes, or having an industry focus (Moriset 2013, Fuzi 2016). Since many organizations want to help in achieving successful communication and learning amongst actors, the management of users is used to assure that the cognitive bases of actors are close to each other (Boschma and Lambooy 1999). People with similar knowledge or expertise may learn from each other in an efficient way and at the same time they can extend their cognitive scopes (Nooteboom 2000). Careful selection of users facilitates community-building and the sense of belonging, which in turn is critical in stimulating trust and business development (Gundolf and Jaouen, 2005; Tata and Prasad, 2008; Bergh et al. 2011).

To sum up, there is a rising number of workers and start-ups with workplace flexibility, seeking social environments that stimulate social networking and collaboration. At the same time, different forms of collaborative workspaces have emerged that aim to service such users. As any other business, collaborative workspaces benefit from clear positioning towards those potential users, by presenting organizational platforms, facilitative tools and community setups. In our next section, we explain our methods to create insight in how different forms of collaborative workspaces differentiate themselves.

3.3 | Methods

The aim of this paper is to analyze which benefits different types of collaborative workspaces promise to users, and how they claim to deliver them. This research was carried out in the city of Amsterdam. Before elaborating on the operationalization, we explain the city selection.

3.3.1 | City selection

The knowledge-intensive and innovation-driven economy makes Amsterdam an attractive city for young talent, entrepreneurs, start-ups, hobbyists, and freelancers (Smeekees 2011). These workers are often flexible in where to perform their work and in order to develop their business, generate knowledge and novel ideas, social interaction and collaboration is sought in modern and innovative spatio-temporal environments. This group of workers has grown rapidly in Amsterdam. Damen (2016) reports that Amsterdam hosts between 100,000 and 150,000 micro-organizations (entrepreneurs, self-employed workers, start-ups) and this number is increasing rapidly. Another trend is that firms in the Netherlands strongly promote distance and remote working. TNO, a Dutch organization for applied research, expects that by 2020, around 30% of the Dutch firms provides location and time flexibility to their employees (TNO 2014). These trends indicate that in Amsterdam more and more work practices are performed outside organizations and many of these workers work in collaborative workspaces. To this end, Amsterdam was chosen as a case study area for the identification and presentation analysis of collaboration-enhancing workspaces (see figure 4 for the yearly increase of collaborative workspaces in Amsterdam).

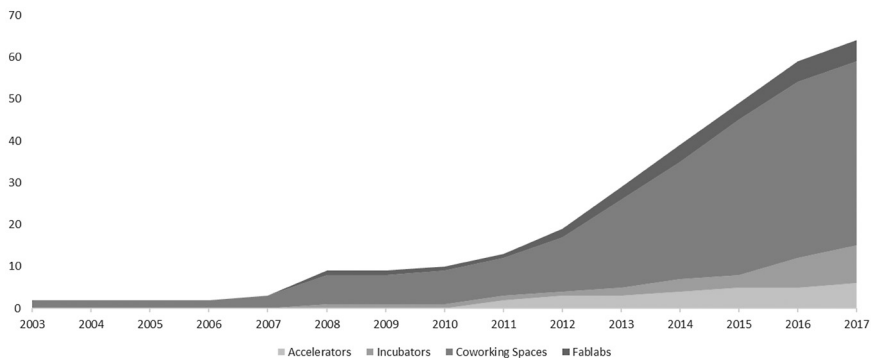


Figure 4 | Yearly increase of collaborative workspaces in Amsterdam (Source: author)

3.4 | Operationalization

In the first part of this research, we identify different types of collaborative workspaces. Next, we clarify how they differ in the benefits they promise towards the potential users. To identify collaborative workspaces online desk research was the main source; to examine how the spaces differ in promising added value, content analysis of online websites was conducted.

3.4.1 | Identifying spaces

Following the literature review, we define collaborative workspaces as open-plan environments that provide workspaces to start-ups, independent entrepreneurs, self-employed workers, and small-size companies with physical characteristics that enable unaffiliated users to interact with each other. These range from having shared working rooms and shared meeting spaces (coffee places, cafeterias, lounges) to having shared technical and physical infrastructure (e.g. equipment, machines). To facilitate interaction between users, collaborative workspaces may apply various organizational tools. These range from mentorship programs to workshops to having social events. Besides this, collaborative workspaces also aim to manage the community to increase the chances of interaction. In some occasions through stringent selection procedures, in other occasions by having an admission process. To reduce the scope of spaces, the following types of spaces were excluded: basic multi-tenant buildings, spaces pertaining to multinationals, large companies, or universities, and spaces such as pubs, coffee houses, and libraries.

To identify collaborative workspaces that fit the description, online desk research was the main source, and the online search terms used were “collaborative workspaces Amsterdam”, “collaborative innovation spaces Amsterdam”, “coworking spaces Amsterdam”, “shared workspaces Amsterdam”, “joint workspaces Amsterdam”. This led us to sites such as coworker.com, launchdesk.nl, foursquare.com, sharedesk.net which provided further directions to websites of different spaces. The primary analysis of these websites was performed by understanding website sections such as “Who are we?”, “What do we do?”, “About us” etc. The analyzed material allowed for a classification of the spaces according to their business model. The refinement and classification of spaces was based on the available definitions of groups of spaces which followed from the literature review and that allowed us to apply the operational description of collaborative workspaces. This resulted in a list of 64 spaces which were placed under four existing categories of collaborative workspaces: accelerators, incubators, coworking spaces, and fablabs (In this paper the term fablab is chosen to encompass various spaces where people come together to fix things, and make new things in a social environment. This category also includes spaces that call themselves makerspaces or hackerspaces). The description of the four categories, theoretical reference, and characteristics of the categories of spaces are displayed in table 1.

Table 1 | Characteristics of collaborative workspaces (Source: author)

Category	Operational description and reference	Characteristics
Accelerators	Accelerators offer programs that help startups to fine-tune their businesses and prepare for upscaling through mentoring, access to shared workspaces, networks of specialists, and capital (Cohen, 2014)	<ul style="list-style-type: none"> - Shared working environment - Acceleration program including mentorship, and access to human and financial resources
Incubators	Incubators assist emerging businesses by providing a variety of services such as access to specialized professionals, flexible space, shared equipment, and administrative services (Grimaldi and Grandi, 2005).	<ul style="list-style-type: none"> - Shared working environment - Access to specialized mentors and industry specialists
Coworking spaces	Open-plan office environments where workers work next to other unaffiliated professionals for a fee (Spinuzzi, 2012)	<ul style="list-style-type: none"> - Shared working environment - Organizational platform (e.g. events, on and offline communities, workshops)
FabLabs	Fablabs (fabrication laboratories) are small-scale work spaces offering (personal or shared) fabrication (Menichinelli, 2011)	<ul style="list-style-type: none"> - Shared working environment - Shared fabrication facilities

3.4.2 | Analysis of spaces by performing website content analysis

In step 2, we assessed what value these spaces promise to their potential users and how they claim to do this. This was done by analyzing primary source data and performing website content analysis of the different spaces. All the websites of the population of accelerators, incubators, and fablabs, were analyzed. The category of coworking spaces had the largest population in Amsterdam (44). A selection of ten websites were chosen which include representative multinational coworking spaces such as WeWork and Spaces. Further inclusion of sites seemed to garner repetitions of meanings that were already encountered. See table 2 for the sample selection. After this, texts, pictures, and videos were extracted from the websites and Atlas.ti software was used for the analysis.

Table 2 | Number of collaborative workspaces in Amsterdam, analyzed websites, and sample (Source: author)

Type	Total number of spaces in Amsterdam	Nr. of websites analyzed	Sample
1 Accelerators	6	6	1- https://www.rockstart.com ; 2- https://www.startupbootcamp.org 3- http://www.innoleaps.com/ ; 4- http://collider.io/amsterdam/ ; 5- http://fashionforgood.plugandplaytechcenter.com/ ; 6- https://themainingredient.co/
2 Incubators	9	9	1- http://amsterdam.impacthub.net/ ; 2- http://www.starthubvertoom.nl/ ; 3- http://b-buildingbusiness.com/amsterdam/ ; 4- https://letitgrow.org/ ; 5- http://www.prodock.nl/ ; 6- http://www.scalehub-amsterdam.com/ ; 7- https://tq.co/ ; 8- http://www.kitchenrepublic.nl/home/ ; 9- http://vrbase.co/
3 Coworking spaces	44	10	1- https://www.spacesworks.com/ ; 2- http://www.thethinkinghut.com/ ; 3- https://www.a-lab.nl/ ; 4- http://www.thestartuporgy.com/ ; 5- http://b-buildingbusiness.com/ ; 6- https://www.wework.com/ ; 7- http://bouncespace.eu/ ; 8- http://www.startdock.nl/ ; 9- http://workspace6.com/ ; 10- http://freedomlab.org/
4 Fablabs	5	5	1- https://laglab.org/ ; 2- http://www.techinc.nl/ ; 3- http://makerversity.org/ ; 4- http://waag.org/nl/ ; 5- https://www.zb45.nl/

Next, to generate insight into each of the four categories of collaborative workspaces, the extracted text was coded. We defined variables related to which business benefits are claimed to be delivered, and how such benefits are delivered. This was done per category of collaborative workspace. Assigning codes to the extracted text and to code families was a process which was performed through cross-checks with fellow researchers. Table 3 displays an overview of the variables, the codes which were developed within each variable, and theoretical references.

Business benefits: For this study the variables Collaboration and Generic business development were chosen as business benefits. These are alleged benefits for the

users of collaborative workspaces which followed from previous studies (Capdevilla 2013; Oksanen and Stahle 2013; Smidt et.al 2014; Waters-Lynch et. al 2016).

An example of a quotation related to the variable “collaboration” is “..on the campus you will encounter scientists, artists, philosophers, designers, engineers and entrepreneurs all working together.....”. This quotation received the code “work together” and was placed under this variable. An example of a quotation related to “generic business development” is “...we do not only support you in scaling your business. We are also focused on personal and team development.”. This quotation was coded with “scaling”, “personal development”, and were placed under this variable.

How are the benefits delivered?: For this study the variables Physical characteristics, Facilitative tools, and Community management were chosen as mechanisms to deliver benefits.

1 Physical characteristics. This variable relates to spatial arrangements that encourage and enable collaboration between different actors, i.e. a physical environment aimed at creating and facilitating an internal community (e.g. open-plan office environments, shared rooms, shared equipment). An example of a quotation that was placed under this variable is “...This space has been designed for interaction and serendipity but also calmness and reflection together with impact makers like yourself...”. This quotation received the code “design for interaction”.

2 Facilitative tools. This variable relates to whether spaces have strategic mechanisms to facilitate the users in their business development or in facilitating relational encounters. Examples are: having community hosts, providing workshops; providing educational programs; and providing feedback and support; giving access to financial capital and human resources. An example of a quotation that was placed under this variable is “...a full calendar of business events, speakers and networking lunches....”. This received the codes “events”, and “lunches” and was placed under this variable.

3 Community management. This variable relates to whether spaces manage in and external communities/networks as a way to promote knowledge-exchange and collaborations. Examples of how internal communities can be managed are f.i. by having an industry or business focus; having admission procedures and other entry policies to select users. External communities/networks can be managed by facilitating access to partners, suppliers, corporate institutes, alumni etc. An example of a quotation is: “From Amsterdam to Johannesburg, Singapore to San Francisco, we have evolved into a rapidly expanding, diverse global network of over 15,000+ members in 80+ locations.” This was coded with “international network” and was placed under this variable.

Table 3 | Variables, theoretical references, and developed codes (Source: author)

	Variable	Theoretical references	Developed codes
Business benefits	Collaboration	Moriset, 2013; Smidt et al., 2014; Gandini, 2015; Capdevila, 2015	collaboration, connect to new people, creating together, cross-overs, sharing knowledge, serendipity, work together
	Generic business development	Spinuzzi, 2012; Waters-Lynch et al., 2016	achieve goals, create success, grow, innovation, learn, personal development, scaling, team development, working
How are benefits delivered?	Physical characteristics	Heerwagen et al., 2004; Oksanen and Stahle, 2013	collaborative work space, creative environment, customized work environment, design for interaction, event spaces, equipment, lounge area, meeting rooms, office essentials, overview of projects, overview of users, shared rooms, variety of spaces, work space
	Facilitative tools	Chan and Lau, 2005; St-Jean et al, 2012; Garret et al., 2014; Cabral and van Winden, 2016; Cohen, 2014	access to resources, courses, events, funding, host, informal events, in-house experience, lunch, mentors, pitches, providing feedback and support, start up programme, supplementary services, workshops
	Community management	Boschma, 2005; Moriset, 2013 Parrino, 2013; Cohendet et al., 2014; Cabral and van Winden, 2016;	alumni, business phase of members, community, entry mechanisms, external network, flexible terms, industry focus, internal network, International community, international network, investors, memberships, partners, same industry, similar people, variety of industries, variety of users

Next, to determine which benefits different categories of spaces promise to deliver, the number of quotations pertaining to each business benefit was summed up. Afterwards, the ratio between collaboration and generic business development was calculated per space category. The next step, was to highlight which business benefits were mentioned the most. Codes that were linked to more than 10 quotations within the sample were determined as significant. These first steps enabled us to deduce which benefits are promised by each of the four categories of spaces.

In order to determine how the different types of collaborative workspaces claim to deliver the benefits, 24 co-occurrence tables were made, combining the variables related to which business benefits are delivered and how they are delivered (2x3x4 space categories). An example of a co-occurrence is illustrated by the following quotation: “We make you part of a strong community (how) focused on collaboration and problem solving (business benefit)”. In each sample, 10 co-occurrences were considered as a significant number. These steps resulted in 4 tree diagrams displaying which benefits

are offered by each category of space and how they are delivered. The thickness of the lines represent the number of occurrences which were revealed from the data.

We also created a positioning map which is represented graphically in figure 10. In this step the number of quotes were systematically summed and ratios were calculated related to two dimensions: 1) the ratio of quotations related to external and internal community management (External/Internal) 2) the ratio of quotations related to physical characteristics aiming for serendipitous encounters and organized facilitative tools (Focus on serendipity/Focus on organized facilitation). See table 4 for the code overview representing the two dimensions.

Table 4 | Dimension, focus, and codes used for the positioning map (Source: author)

Dimension	Focus	Codes
Community management	Focus on internal	Community, Host, Internal network, International community, Similar people, Staff, Variety of industries, Variety of users
	Focus on external	Alumni, External network, International network, Investors, Partners
Organizational mechanisms for networked collaboration	Focus on serendipity	collaborative work space, creative environment, customized work environment, design for interaction, event spaces, equipment, lounge area, meeting rooms, office essentials, overview of projects, overview of users, shared rooms, variety of spaces, work space
	Focus on organized facilitation	access to resources, courses, events, funding, host, informal events, in-house experience, lunch, mentors, pitches, providing feedback and support, startup programme, supplementary services, workshops

3.5 | Results

The extracted texts yielded 602 quotations with a total of 990 assigned codes. The results show that there are different approaches in the different collaborative space categories. On the broadest level, results show that the four categories of spaces promise a combination of both collaboration and business development opportunities (see figure 5). Accelerators, incubators, and coworking spaces highlight business development opportunities to a higher extent than collaboration opportunities. Fablabs present a balance of both business development and collaboration benefits. In terms of how the collaborative workspaces position themselves towards potential users, results reveal that there are differences in the focus of employed organizational mechanisms and in the scope of networks that they may provide.

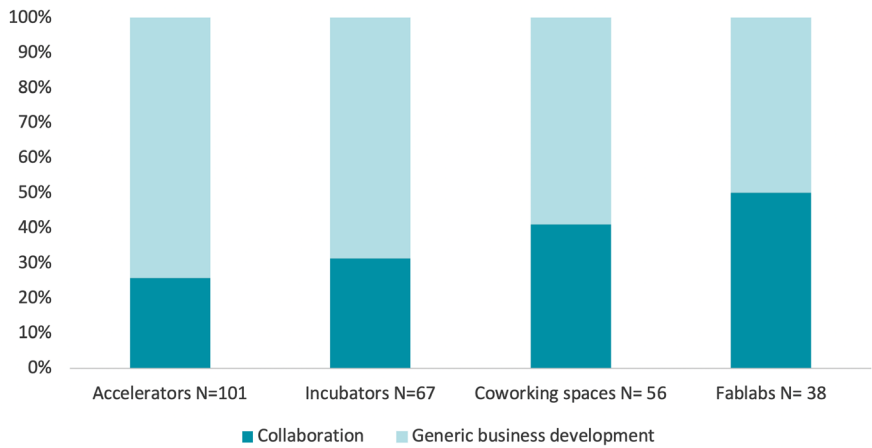


Figure 5 | Promised value ratio collaboration vs. generic business development (Source: author)

Accelerators have a highly structured program which forges bridges to external networks. Incubators, fablabs, and coworking spaces accentuate internal networks and communities more than access to external networks. Meanwhile, the organizational mechanisms that they apply are less formal than the ones of accelerators. Thus, the results show differences in levels of employed organizational mechanisms and access to communities across the different spaces. Interestingly, all categories of spaces promise a combined benefit of business development opportunities with access to communities. The positioning strategies of the spaces are presented in figure 10 (scale of the axis is omitted to provide the relative position of the collaborative workspaces).

In this next part, we discuss the results per space category regarding what benefits are promised and how they are delivered.

Accelerators: Accelerators promise opportunities for scaling, growing, and learning for their users. They stimulate users to develop an idea into a scalable, successful business and contribute to this by creating social environments where connections to new people can be made. Typically, their offer start-up programs in which start-ups are connected to others as part of the program. Based on the empirical data, accelerators provide collaborative opportunities by facilitating connections and collaboration mainly with external parties. The next quotation is representative for their claimed benefits:

“Join our accelerator program where we help you build, validate and scale your business and find the best international product/market fit. We help you better understand product design, market fit and business models by enabling you to directly work with relevant suppliers, users, professionals and other stakeholders in energy.” (Source: Rockstart.com)

Many have created an organizational platform to facilitate external linkages, including a combination of mentoring, access to capital and a vast offer of networking opportunities. Accelerators claim to give continuous support to their users to make connections to relevant stakeholders. On their websites, they highlight events and pitches as moments where such connections are made and where feedback and support is provided. Such events and business pitches are presented as key moments for startups to find solutions for problems they might face. Typically, accelerators organize events and pitches with additional moments for networking, requests for advice, and discussion with specific audiences, including venture capitalists, industry specialists, corporate representatives, and other stakeholders. The following quotation represents these claimed opportunities:

“...X is an international event series bringing together startups and seasoned entrepreneurs for a session of pitching and problem solving. The risk-free environment allows for startups to pose their biggest challenges to an experienced audience of entrepreneurs, founders and investors – providing direct feedback, support and hopefully, a handful of great contacts.” (Source: Rockstart.com)

The management of external communities is promoted as a way to forge connections and potential collaborations. According to the data, accelerators promote strategic cooperation between start-ups and multinational enterprises for the innovation processes of their users. This next quotation is an exemplification of this:

“We are highly selective over which brands can be part of our accelerator. They have to be open to new ideas, have the time to work with our startups, and potentially offer trials, pilots, or first deals. We work with the big dogs like X, who have the market influence to make your startup a success, who are flexible, looking to collaborate and remember what it’s like to be in your shoes.” (Source: Innoleaps.com)

For generic business development, the combination of the facilitative platform and community management promotes business growth, scaling, and learning. The international network of relevant mentors, partners, investors, in combination with organized events where business ideas are presented, is claimed to support the process for early-stage firms in scaling and growing.

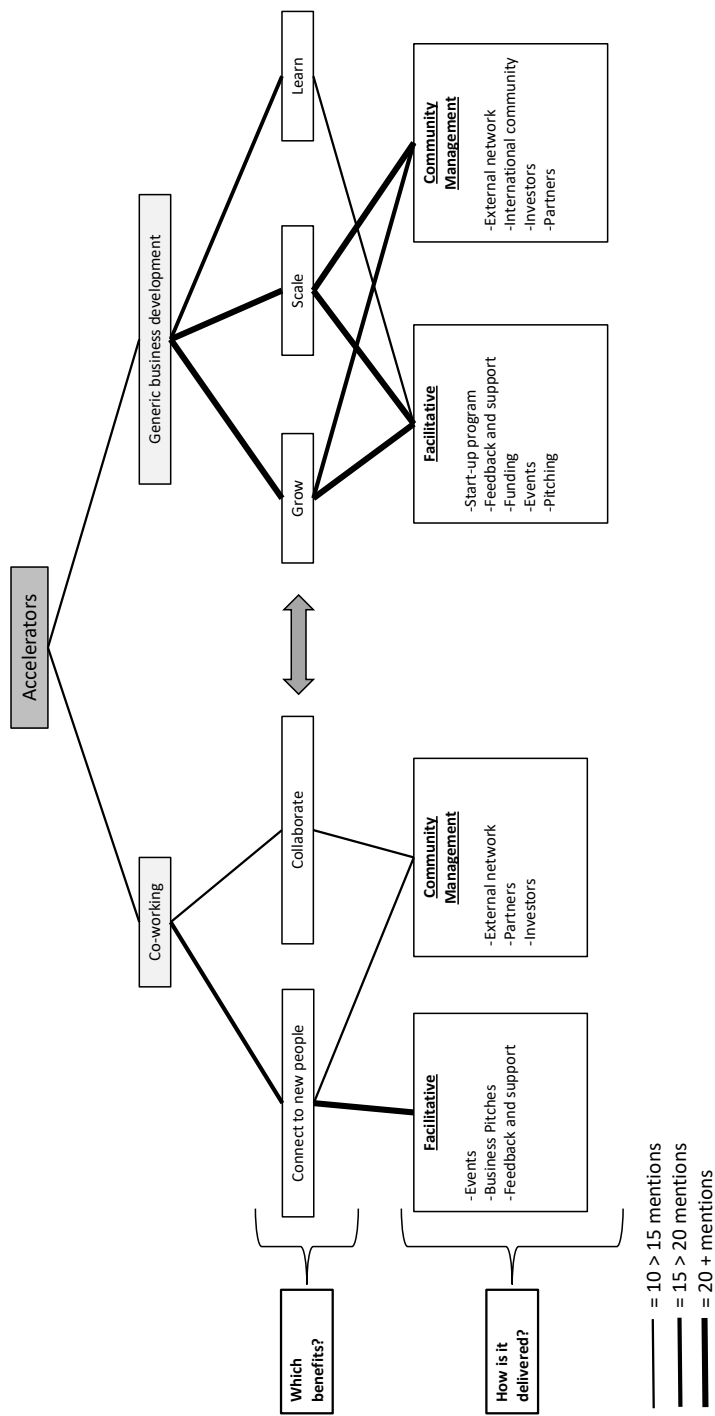


Figure 6 | Accelerators: benefits and delivery of benefits (Source: author)

“With branches in Colombia and the Netherlands, events in 25+ cities across the globe and a vast network of startups, experts and investors, X offers an international community to startups. This way they can best prepare themselves for global scaling.”

(Source: Startupbootcamp.org)

Figure 6 displays the alleged benefits of accelerators and the strategic means to deliver the benefits.

Incubators: According to the empirical data, incubators promise social environments for collaboration, growth and learning. This following quotation is representative for the claimed benefits of incubators:

“...X has evolved into a collaborative global community that now inspires, connects and enables people across the world to sustainably impact society. We are a dynamic place where people meet and collaborate with each other. We build bridges between startups, creatives, and corporates and bring them together, setting up ways to connect with-, learn from- and grow with each other” (Source: Amsterdam.impacthub.net)

The alleged collaboration is facilitated by offering access to both internal and external networks. Internal networks are mostly presented through access to local and international incubator communities. By joining an incubator, workers have access to a wide range of contacts and, as such, become part of an (inter)national community that is allegedly focused on collaboration and solving problems for each other. Some incubators also have a specialization (e.g. focus on virtual- and augmented reality, agriculture, or maritime industries) and by connecting people with similar interests, such incubators present an accelerated process related to solutions or opportunities for local or global issues of workers.

External networks are presented through partnerships with local and international firms. These partners are portrayed as contributors to finding collaborative solutions for the workers at the incubators. Such collaborative solutions often entail outsourcing of innovation-oriented processes of the partners to start-up companies. At the same time, through such cooperation, workers have access to resources such as networks, finances, and expertise that might be inaccessible or unaffordable for them.

Regarding generic business development, growth and learning is promoted through a combination of facilitative tools and community management. Growth is facilitated through access to resources and networks, such as knowledge, talent, and expertise that help existing businesses in growing. Events are moments when such access to networks is facilitated. At such events, organizers, fellow users, and partners share experiences and aim to help with problems. This entails that the internal community

and partners play an essential role in providing such experience and knowledge. Incubators claim that by working with a strong community of internal and external professionals they stimulate the entrepreneurial climate and improve access to talent, capital, networks, knowledge and markets. At the same time, by becoming part of such networks, incubators claim to add value by being a platform that builds bridges between the startups and corporates and brings them together, setting up ways to connect, learn, and grow with each other.

"We help virtual- and augmented reality startups and freelancers grow by providing them with a wide range of resources and by making them part of a strong community focused on collaboration and solving problems for each other." (Source: Vrbase.co)

Figure 7 displays the alleged benefits of incubators and the strategic means to deliver the benefits.

Coworking Spaces: Coworking spaces promise social environments that foster productivity and generic business production, where, if wanted, connections can be made to other local people. Coworking spaces emphasize the office component and attract users by renting places for working and where the social aspect is an additional benefit. The following quotation is representative for these promised benefits:

"Welcome to X, your place to work. Where you'll watch businesses grow because of people and ideas. Where you'll surround yourself with those who love what they do." (Source: Spacesworks.com)

Coworking spaces claim that their social environments are conducive to making connections to new people. Such connections are mostly from internal networks. The communities that coworking spaces aim to cultivate is what makes coworking spaces unique. Coworking spaces create such communities by offering informal moments (e.g. by organizing joint lunches, having centralized coffee drinking machines) which strongly stimulate serendipitous encounters. Coworking spaces also organize formal moments, such as business events, networking lunches. However, this is promoted to a lesser extent than the informal opportunities aiming for serendipity. Such casual encounters are claimed to add value either on a professional level or on a personal level. Internal networks are also presented as enrichment of the work-life experience.

"Start up a conversation while you wait for your coffee or introduce yourself over lunch, and you may just find a partner for your next big venture. The energy of the Spaces community is contagious – and even if you don't find a new business associate, you may find a new friend. Add a full calendar of business events and you'll see just how hard we work to keep you engaged." (Source: Starthubovertoorn.nl)

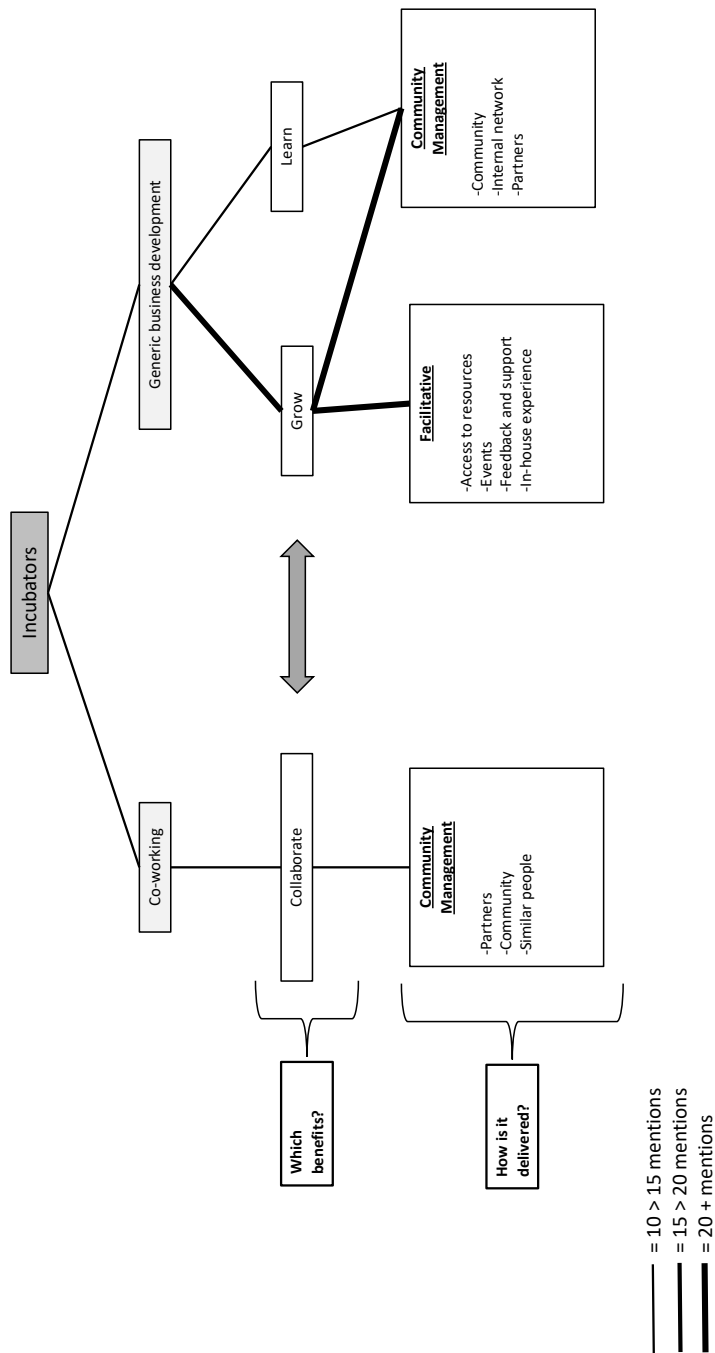


Figure 7 | Incubators: benefits and delivery of benefits (Source: author)

Regarding business development, coworking spaces claim that the combination of their premises and internal community are conducive to generic productivity and growth of businesses. They emphasize the physical environment as a space that provides all facilities that workers need, offering a variety of spaces ranging from private customizable offices to socially-oriented workspaces. The combination of the physical space with co-location of other members is claimed to stimulate the working process. This is said to have an activating effect that pushes workers to bring out the best in themselves. Especially, because generally workers joining coworking spaces have shared interests, drives, and attitudes. Coworking spaces claim that being surrounded with such a community stimulates productivity and growth.

This next quotation represents this promised benefit:

"Are you in need of a more inspiring work environment that helps your company to flourish? X offers a variety of fully enclosed, lockable, serviced office spaces in Amsterdam starting at 25m2 to customized spaces. All offices can be fully furnished according to your wishes. Bring your company into a creative startup ecosystem that enables you to bring out the best in yourself. When you rent an office space, you become a member of the community and get access to everything X has to offer; enjoy our fresh, daily lunch, get fit in our gym, attend our events, be part of our online community and meet with new coworkers every day." (Source: B-buildingbusiness.com)

Figure 8 displays the alleged benefits of coworking spaces and the strategic means to deliver the benefits.

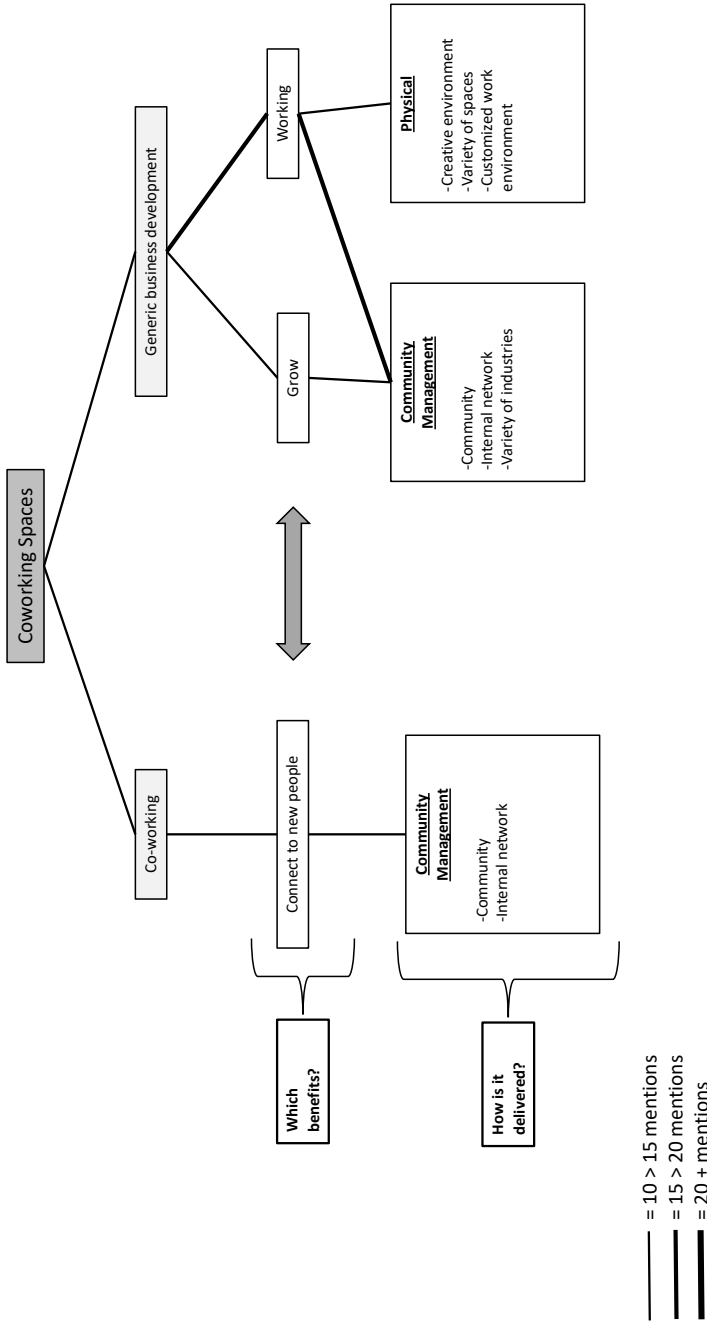


Figure 8 | Coworking spaces: benefits and delivery of benefits (Source: author)

Fab Labs: Fablabs offer social work environments where users work next to others, and where sharing knowledge and opportunities for learning are highly promoted. This next quote is a representation for claimed benefits of Fab Labs:

“We combine co-working space with clean and messy workshop space, machines and tools. Really what we’re doing isn’t about the space though, it’s about people. Through our spaces we bring together people with all kinds of creative and technical expertise. All members are encouraged to pass on their experiences and expertise to others.”

(Source: Makerversity.org)

Concerning co-working, the websites of Fab Labs promote knowledge sharing as a benefit. Knowledge sharing happens during courses, events, and workshops for both internal users and external publics that use the facilities. One of the ways Fab Labs are able to generate knowledge sharing because of the availability of in-house experts.

“Our experts can guide creative workshops from start to finish and design with you. We can organize a public debate, or an evening to share the results with the public.” (Source: Zb45.nl)

Most Fab Labs also create opportunities for knowledge sharing by giving access to equipment (e.g. 3D printers, steel and woodworking machines). Such machines can be used under the condition that afterwards the knowledge is shared with other users of the space.

With regards to business development Fab Labs promote themselves as locations for learning. Access to the machinery and equipment during organized courses and workshops facilitates learning. Such courses and workshops are meant for people who want to get a better understanding of the machines or and how to apply it in their business development..

“You can find out what a 3D printer can do and learn how to create, customize and print your own 3D designs! The workshop will be concluded with the 3D print diploma, which will allow you to work on your creations every Tuesday at X.” (Source: Waag.org/nl)

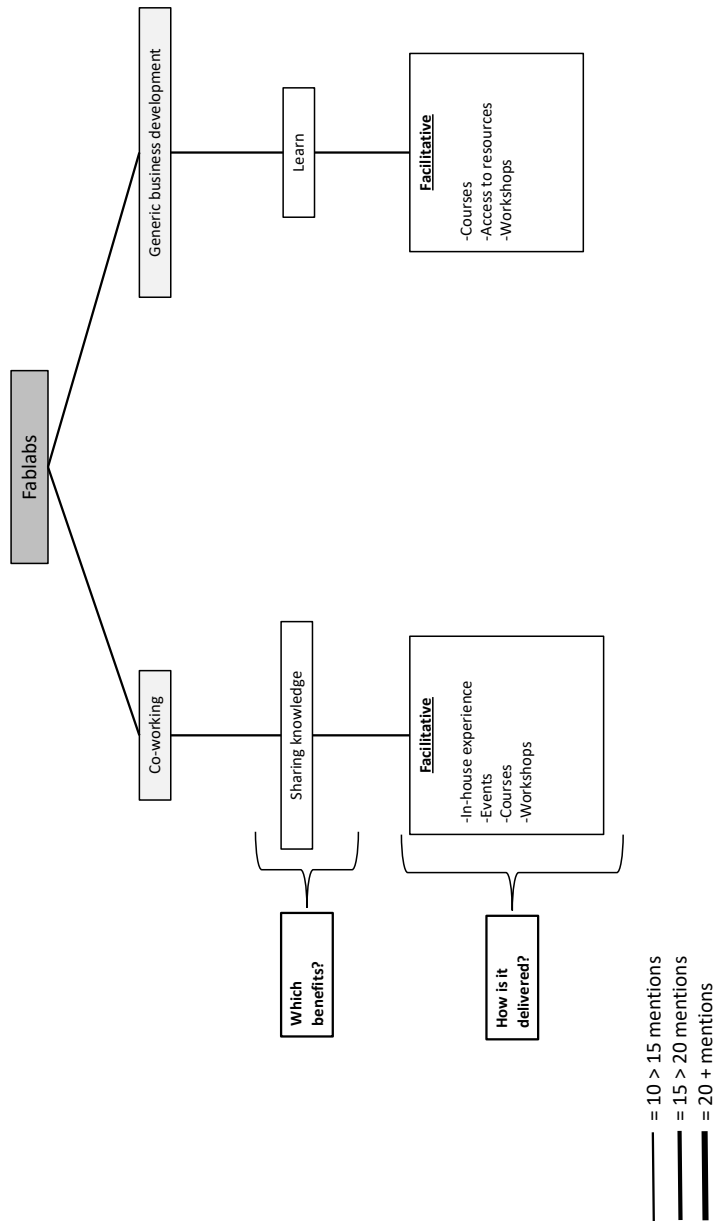


Figure 9 | Fablabs: benefits and delivery of benefits (Source: author)

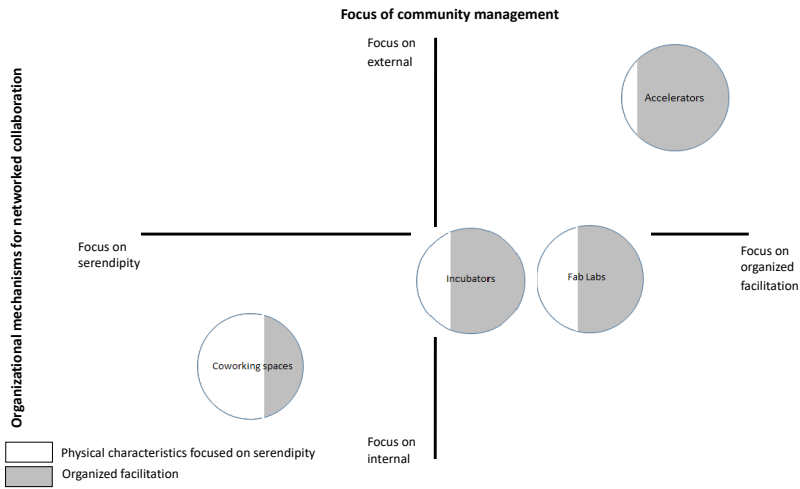


Figure 10 | Relative position of the different collaborative workspaces according to the level of organizational mechanisms and the focus of community management (Source: author)

3.6 | Conclusions

This paper analyzed four categories of collaborative workspaces (Accelerators, Incubators, Coworking spaces, and FabLabs) regarding the benefits that they claim to provide for their users. The different categories were analyzed in terms of space, organizational setup, and community aspects. The content of websites was analyzed to deduce what benefits the four categories of spaces promise to workers and how they differ in delivering these. Content analysis was used for developing codes related to physical, facilitative, and community elements. In order to determine the promised benefits for workers in collaborative workspaces two business benefits were chosen, collaboration and generic business development, which are complementary and not mutually exclusive.

In line with literature on innovation spaces, our evidence suggest that different categories of spaces position themselves differently toward their potential users, ranging from places for generic productivity to places to learn, experiment, and grow (Gimaldi and Grandi 2005; Waters-Lych et al. 2016). This study adds to this knowledge by presenting a deeper understanding regarding the specification of benefits that is promised and how they are delivered from the point of view of the spaces. In competitive markets in which spaces aim to attract growing groups of self-employed workers, start-ups, and small businesses (OECD 2015; Angellist 2017), it is important to differentiate and clearly communicate the core points of difference. The results show that collaborative workspaces offer a combination of collaboration and

generic business development benefits towards workers who seek to advance their business in social environments. In all categories of spaces the claimed promises are built around social environments where small businesses can develop in different forms whilst social networks facilitate the workers. We shall revisit here the main differences regarding the proposed value and its importance.

Accelerators and incubators put a relatively strong emphasis on generic business development, positioning themselves around the elements of growing and scaling. Fostering connections to relevant others is presented as a mediator for growth. Co-working spaces and fablabs present a balanced mix of coworking benefits and generic business development. Coworking spaces highlight themselves as places to work with the additional benefit of making connections to new people. Fablabs clearly have as a focal point that their environments are conducive to learning and knowledge sharing.

Regarding benefits and delivery modes, accelerators present their offering around growing and scaling, and focus on external community management and formal facilitative elements to deliver this. Accelerators emphasize the value of external networks and present possibilities to make connections to corporations, partners, and investors. Connections with external networks is moderated through facilitative elements such as start-up programs, mentors with corporate affiliations, events, and organized moments for presentation of ideas to an array of audiences. Incubators claim to be conducive for collaborative opportunities, by offering access to internal communities and external networks. Business development opportunities range from growing to learning. Incubators facilitate collaboration by presenting access to events, internal and external networks, and in-house specialists. Compared to accelerators, incubators present the facilitative elements less frequently. Coworking spaces differentiate themselves by offering places for working and growing in which the physical attributes of the environment play a role in stimulating the workers. They offer a variety of inspirational and creative environments that can be customized according to the wishes of workers. In order to differentiate from traditional offices, coworking spaces promise added value by giving access to internal networks, and coworking communities. Lastly, fablabs differentiate themselves by offering shared environments that give opportunities to workers for experimenting and producing with local equipment and machinery. Fablabs also offer many courses and workshops in the usage of such equipment for both internal and external users. As such, fablabs deliver benefits of learning and sharing knowledge to users by applying physical and facilitative components. Though learning about machines and using them in shared environments workers are enticed to share ideas and experiences.

We conclude, based on our empirical findings, that the broad category of collaborative workspaces represent a variety of spatial configurations providing space to develop

businesses, promote collaborative work, and enable access to important resources, such as people, equipment, knowledge, and finances. For location-flexible workers and start-ups who seek a workspace combined with social networking and collaboration, it is relevant to know which spaces moderate interaction and exploit co-presence to foster joint work and learning. For collaborative workspaces it is therefore paramount to promote a careful and conscious differentiation. The dynamics empirically observed in Amsterdam indicate that collaboration and innovation processes have become increasingly diversified. The formats identified in this paper complement this general development in various ways. While providing spaces for work, social interaction and innovation, collaborative workspaces also provide the setting to deal with the innovation challenges of workers, and the increasing transformation of labor markets, and of the knowledge economy more generally. In increasingly flexible business environments, collaborative workspaces provide conditions for knowledge workers, to combine their knowledge domains and shared experiences in new, dynamic market environments.

In light of the limited nature of literature highlighting the differentiation of collaborative workspaces regarding benefits and delivery modes, this research has attempted to clarify this. Managerially, this research offers insight into how collaborative workspace managers can convey clear information towards potential users regarding what their spaces stand for and how they differ from competing spaces. This is particularly relevant in markets that are increasingly competitive and where workers have growing need for expressive and functional information regarding where to work. The results also have implications for entrepreneurship promotion policies, that should take localized interfirm dynamics more into account as a source of innovation. Theoretically, a specification of the benefits and delivery modes of collaborative workspaces in the larger pool of innovation spaces can provide a useful framework for future research. The empirical part provides a first attempt to better understand collaborative workspaces and how they contribute to the growing group of workers with work-location flexibility. As such, it sheds light on collaborative innovation and networking practices that embody new types of social capital in an increasingly flexible urban economy.

3.7 | Limitations

In performing desk research external validity issues arose, resulting from city selection and sample selection. The research was performed in one single case study area: Amsterdam. Amsterdam was chosen because it is a representative area for this phenomenon. This is supported by existing literature in the field of innovation spaces and coworking. With the knowledge that there are many metropolitan areas with similar characteristics, the goal of this paper is providing insight into how collaborative

working environments establish themselves in one case study area and to give an indication of how this could be in similar regions. With regards to the population of spaces and sample selection, our online search revealed a great diversity in the sizes across the different types of spaces. There are significantly more coworking spaces than the other three categories of spaces (Accelerators, Incubators, Fablabs). Regarding coworking spaces we selected a representative sample, and from the other categories of spaces we analyzed the entire population. This approach complicates making statistically meaningful comparisons. However, the goal of this paper is making a first step in providing insight into how collaborative workspaces position themselves in an exploratory inductive manner and not in a quantitative manner. Future research could be dedicated to further examine this.



CHAPTER FOUR

‘Coworking: An analysis of coworking strategies for interaction and innovation’

Cabral, V., & Winden, W. V. (2016). Coworking: an analysis of coworking strategies for interaction and innovation. *International Journal of Knowledge-Based Development*, 7(4), 357-377.

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Abstract

This paper analyses how managed coworking spaces affect the innovation process of their members. Managed coworking spaces are working environments for independent professionals, with an active role of the manager of the space to foster collaboration and interaction. It is often taken for granted that coworking contributes to innovation, yet, it is not fully understood how coworking spaces can be effective in fostering innovation, and what role management could play. This paper presents a mix of strategic management tools applied by two coworking spaces in Amsterdam. Qualitative research techniques were applied to shed light on their effectiveness for interaction and innovation. We analyse policy implications for owners/managers of coworking spaces to enhance collaboration, knowledge transfer, and promoting new business opportunities.

4.1 | Introduction

Firms and knowledge workers in industrialized economies increasingly experiment with innovative work practices and new work locations (Appelbaum, 2013). As a result of mobile technology professionals are enabled to work in other places besides conventional offices (Brown and Green, 2001). Locations such as libraries, lodges, hotels, or coffee houses have become increasingly popular as places to work. Part of the attractiveness of such places is that they offer an intermediate space between home and work away from distractions and with a social and inspiring atmosphere (Oldenburg, 1989). Coworking spaces are examples of such third places. They provide interactive and collaborative environments, which for achieving innovations is important (Amin and Roberts, 2008).

Coworking is a growing phenomenon. The term was coined by Brad Neuberg, an engineer who founded the Spiral Muse in San Francisco in 2005. Coworking spaces can be defined as “open-plan office environments where workers work next to other unaffiliated professionals for a fee” (Spinuzzi, 2012). The concept of coworking is getting anchored in the work landscape of major business cities, especially in “creative cities” (Florida, 2004), such as San Francisco, New York, London, Berlin, and Amsterdam (Moriset, 2013). Such cities are rich in innovative cultural and creative industries which increasingly show ‘nomad’ working practices (Gandini, 2015).

The concept of coworking is associated with community-building, collaboration, openness and accessibility (Coworking Wiki, n.d.). Knowledge workers use coworking spaces to meet others (“It’s all about who you know”) and highly value the collaborative environment to feed their innovation and creativity (Leforestier, 2009). Moriset (2013) describes such environments as “serendipity accelerators”, places that facilitate unplanned interaction with peers. Implicitly, it is often assumed that the collaborative environments in coworking spaces contribute to innovation (Botsman and Rogers, 2011) due to the network-enhancing characteristics.

Increasingly, managers of such spaces deploy strategies to promote social capital formation, collaboration, and community-building (van Winden et al., 2013). In this paper, we focus on the management of coworking spaces. We aim to explore how strategic management interventions affect interaction between members in coworking spaces and ask ourselves the following three questions: 1) Which strategic management tools are used in coworking spaces to make workers interact?, 2) To what extent do these tools facilitate interaction?, and 3) How do these tools enable innovation? To date, little empirical research has been done regarding this topic. This paper is based on an analysis of two managed coworking spaces in Amsterdam and is organized as follows: We first review relevant literature and then identify four strategic management tools to promote interaction. Next, we explore how these tools are

applied and what their effects are. This will be based on interviews with management and members. We end with conclusions, policy implications and questions for further research.

4.2 | Literature

In this study, we analyse how coworking spaces enhance networking and innovation, focusing on the question how their management can contribute. Here we present some key findings and insights from the literature that might inform intervention strategies. Those are studies on a) social capital, b) the link between physical environment and people's behaviour, and c) innovation and space. Over the last decades, a wealth of literature has appeared in each of these domains, and we cannot claim to even approach comprehensiveness.

4.2.1 | Social capital

Coworking spaces are environments which might foster social capital. Granovetter's (1973) distinction between weak and strong ties helps to understand the process and impacts on social capital formation as a result of interaction between members in coworking spaces. Weak ties can be particularly useful for information retrieval, diffusion of innovations (Granovetter, 1983), and assistance for workers in finding business opportunities (Groot, 2013). Strong ties, on the other hand, are important because they facilitate support, help (Krackhardt, 1992), and provide access to resources (Groot, 2013). As such, coworking spaces are environments which foster network formation and can be seen as innovation marketplaces in which the social, and collaborative environment provide (in)direct access to supplementary resources and capabilities. These are necessary for successful innovation (Das and Teng, 2000). The facilitated proximity of workers from different companies stimulates such network formation. Moreover, when members are aware of other coworking members, synergistic group behavior is supported (Dourish and Belotti, 1992) which may improve business performance (Brüderl and Preisendörfer, 1998). Having social networking sites contributes to this. They enable members to present themselves, connect to a local network, and develop and maintain relationships with other members (e.g. Ellison et al., 2007).

Furthermore, the connecting role of management, or as Hargadon (2003) calls them "connectors", contribute to network formation. By coordinating and connecting members, the manager of a coworking space builds bridges to link distant worlds-industries beyond your own- to generate new products or services. The connecting role can lead to a reduction of time needed to find appropriate contacts and to an increase in the chance of the connections being valuable (Hering and Philips, 2005).

This role of management also helps in building the reputation of the coworking space. This effect fits with Chemannur and Paeglis (2005), who found that perceived quality of management is closely related to firm reputation. Management can also play a key role in connecting internal users to key players outside the coworking space. These roles are referred to as boundary spanning roles (Daft, 2006). Boundary spanning managers detect relevant information about changes in the external environment, and represent the interests of a member to that environment. In consequence, having effective boundary spanning activities can lead to higher levels of legitimacy amongst members, municipalities, and client groups (Jemison, 1984).

4.2.2 | Physical environment and people's behavior

Penn and Hillier (1992) suggest that spatial layout plays a key role in facilitating the effective use of human resources in innovation-based locations. Their research showed that in laboratory environments spatial patterns affect movement patterns and that it plays a role in making people pass each other's workstations resulting in interactions and knowledge exchange. From a design perspective, Oksanen and Stahle (2013) developed a framework of spaces that facilitate the establishment of connections. They introduce "collaboration and communication enabling spaces" as a characteristic which enables the formation of networks. When innovative spaces have spatial arrangements that promote interaction, such as having shared rooms, this will support people's motivation, ability, and opportunity to share knowledge and experiences (Oksanen and Stahle, 2013). With regards to collaboration in coworking spaces, Heerwagen et al. (2004) hint that spatial layouts offering accessibility, visibility and short walking distances affect face-to-face interaction. Pancholi et al. (2015) state that innovation spaces which are open and collaborative tend to ignite innovation and knowledge generation processes. These spatial factors are therefore significant for knowledge creation and learning in such spaces (Senoo et al., 2007). Moreover, the physical (geographical) proximity of the different workers facilitate the establishment of connections. However, this does not necessarily mean that it results in effective and fruitful collaboration.

4.2.3 | Insights from studies on innovation and space

Porter (1998) hints that clustering facilitates access to new customers and suppliers (Porter, 1998). It may also lead to other benefits such as cooperative working (e.g. Leforestier, 2009; Spinuzzi, 2012), gaining access to new knowledge (Silberberger et al., 2010; van Winden et al., 2012), and new business opportunities (Groot, 2013). However, a key insight from the vast spatial innovation literature is that physical proximity does not always lead to effective and fruitful collaboration. Boschma (2005) argues that other types of proximity matter as well, such as organizational proximity (coordination of knowledge), social proximity (socially embedded relations on micro-

level), institutional proximity (rules and regulation) and cognitive proximity. In order to reach interaction effects, such as knowledge exchange in coworking spaces, different types of proximity should be complemented and coincided (Boschma, 2005). For instance, to achieve successful communication and learning, the cognitive bases between actors should be close to each other (Boschma and Lambooy, 1999). People with similar knowledge or expertise may learn from each other in an efficient way and at the same time they can extend their cognitive scopes (Nooteboom, 2000). On the other hand, some cognitive distance increases the potential for learning because of dissimilar knowledge bases, which are needed for new ideas and creativity (Cohendet and Llerena, 1997).

This insight calls for careful management of knowledge-related activities. Having focused knowledge-related managerial activities improves the utilization and incorporation of people and ideas into a network (Lönnqvist and Laihonen, 2013). This understanding has implications for the selection of members of coworking spaces. Handpicking members of coworking spaces helps to increase the chance that they interact, work together and benefit from each other's presence (van Winden et al., 2012). Based on this notion, some founders of coworking spaces seek specialization (Link and Scott, 2006) which, besides reducing cognitive and other distances, distance, can also help to gain a reputation as “the place to be” within a certain industry. Moreover, there is evidence that specialized knowledge locations grow faster than those with a heterogeneous member mix (Link and Scott, 2006).

4.2.4 | Conceptual framework

We focus on the question how coworking spaces foster interaction, and what outcomes may result from that. Figure 11 shows our frame of analysis. Based on insights from the various strands of literature, we identify four strategies which can be applied in coworking spaces to foster interaction. 1) “The coworking space manager as connector”, 2) “Regulate the mix of workers”, 3) “Interior design that fosters interaction”, and 4) “Tools for networking”. The proposed strategies may lead to various forms of interaction and innovation.

We distinguish two forms of collaborative interaction: a) between members within the coworking space, and b) with parties outside the space. Collaborative interaction is defined as interaction in which people discuss issues that are related to their work, learning or solving problems in a collaborative way (Moller, 1998). We define innovation as new projects (Jamrog et al., 2006; Nordfors, 2009), new ways to acquire clients, suppliers, knowledge and ideas.

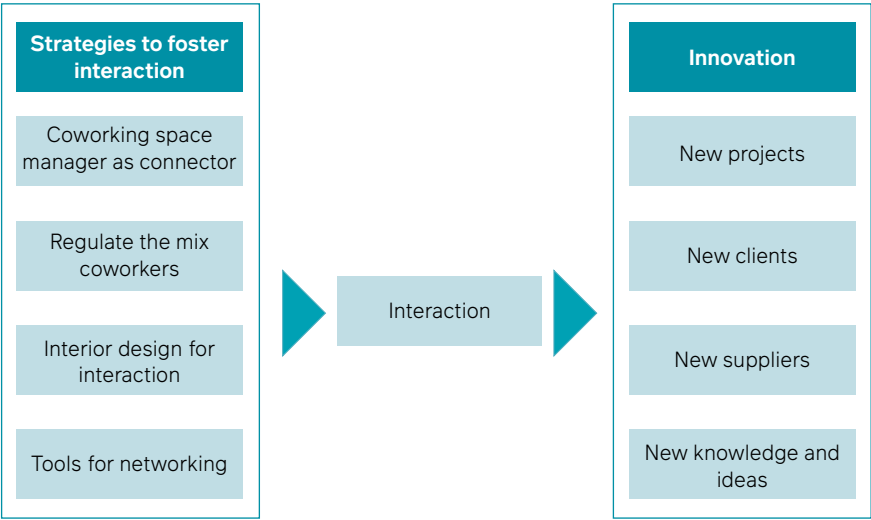


Figure 11 | Strategic tools to foster interaction and innovation (Source: author)

4.3 | Methods

This research has a qualitative and exploratory nature and for this purpose a case study approach was chosen. Despite the fact that statistical generalization is a limitation, it can serve as a precursor for rigorous empirical testing in future research (Merriam, 1998). We analyse 2 cases, in order to provide more generalizable foundation (Yin, 2003) making the evidence more compelling, and the overall study will therefore be more robust (Herriot and Firestone, 1983).

4.3.1 | City selection

Our case studies are in Amsterdam, reported as one of the European cities where coworking is widely popular (Deskmag.com, n.d.). Amsterdam has a growing group of self-employed workers (Hatfield, 2015). This can be explained by patterns of globalization, technological change, and the effects of the 'great recession'. Moreover, ever since the 1990s the Dutch government has been supporting labor market flexibility, including working hours and location flexibility. Gradually, flexible working has become an accepted phenomenon in the Netherlands (Teulings and Hartog, 1998) and more and more people work in coworking spaces. In addition, many office spaces in Amsterdam are unutilized (Parool, 2015), which is why some of them are rented as coworking spaces.

4.3.2 | Sites, Sample, and Data collection

As preliminary investigative research, we visited several coworking places in order to gain a good understanding on which types of coworking spaces exist and how they differ from each other. We selected the cases based on them having an explicit strategy and organizational platform to entice “cross-pollination” amongst members. Despite the fact that many coworking spaces give room to many activities which could be defined as coworking, not all emphasize the collaborative component. The cases which were selected for this research are: **A-Lab** and **FreedomLab**.

Before collecting data, each of two coworking spaces were visited and interviews were held with the director (A-Lab) and community manager (FreedomLab). In these interviews the vision, strategies and aims of the coworking space were discussed. After that, we spent several days at the 3 locations to get a good idea of the dynamics in coworking spaces and to understand what is going on (Gill and Johnson, 2002). The interviews, direct observation and talks with members enabled us to construct an overview of interaction strategies which are synthesized in table 5.

Table 5 | Interaction strategies in two coworking spaces (Source: author)

	FreedomLab	A-Lab
Management as connector	<ul style="list-style-type: none"> - Active board recruiting outside CWS contacts - Active board integrated among members and linking members 	<ul style="list-style-type: none"> - Active board managing outside CWS contacts - Active board linking members
Regulating the mix of workers	<ul style="list-style-type: none"> - Onboarding procedure with a focus on open attitude - Managing disciplines of tenants - Group of researchers to complement entrepreneurship 	<ul style="list-style-type: none"> - Creating clusters of tenants of creative and technology industries - Entry and exit policy
Design for interaction	<ul style="list-style-type: none"> - One printer & coffee machine - Homely themed rooms - One entrance - Open and secluded spaces - Walls for work display 	<ul style="list-style-type: none"> - Coffee house - Themed laboratories to link creatives with technology - Hallways to foster encounters - Brainstorm areas
Tools for networking	<ul style="list-style-type: none"> - Collective lunch - Lunch presentations - Social media sites - Meditation & Yoga - Workshops 	<ul style="list-style-type: none"> - Website with live feeds - Company names and locations visible - Sport and Social events - Presentations - Website connecting workers within and outside CWS

As a next step, we interviewed members, 18 in total. At FreedomLab 8 people were interviewed (8% of the members) and at A-Lab 10 people were interviewed (13% of the members). Table 6 displays the sample characteristics. 16 respondents defined themselves as founder or director of their company and only 2 were employees. To collect a broad range of perspectives of the coworking concept and maximize the diversity of the sample, members were interviewed from various industries, and with a diversity of coworking experience (from 2 months to 4 years).

The interviews were **semi-structured**, lasting between approximately 13 and 32 minutes. The interview protocol contained questions about a typical day of a member at the coworking space, motivations to work there, how the physical space is used, examples of interaction, and questions on outcomes of such interaction. In the following empirical section the effectiveness of the projected strategies for interaction and innovation will be analyzed.

Table 6 | Sample characteristics (Source: author)

Coworking Space	FreedomLab	A-Lab
Respondents	8	10
Avg. Age	39	43
Membership type of space:		
-Desk in open space:	3	0
-Seperated office	5	10
Industry:		
- Strategic Consultancy	3	n/a
- Data Consultancy	1	n/a
- Software Development	1	3
- Copywriting	1	n/a
- Community Services	n/a	1
- Architecture	n/a	2
- Online	n/a	1
- Animator	1	n/a
- Research	1	n/a
- Photography	n/a	1
- Journalism	n/a	2

4.4 | Data Analysis

The collected data was analyzed to find out how different coworking strategies lead to interaction and how they facilitate innovation. For the purpose of this paper, the authors have adopted a descriptive narrative with salient quotes, rather than empirical style to summarize the most important findings which emerged from this study. The

findings were interpreted **per coworking space** to have a better understanding of the importance of the different employed strategies for the members of the coworking spaces. Each case starts with a short description of the coworking space, followed by an analysis of the strategies, and ends with outcomes for the members. Figure 16 depicts a schematic illustration of the key findings.

4.4.1 | FreedomLab

The FreedomLab Campus was inaugurated in 2013 and is located in Eastern Amsterdam and currently hosts 100 members. FreedomLab offers two membership options: Guesthouse and Freezone memberships. Guesthouse memberships are mainly meant for innovation and creative members who seek a hang-out to continuously be inspired by latest trends and technologies. They get access to all facilities but rent separated office spaces. Freezone seats are spaces which can be rented in large shared spaces.

For all members FreedomLab hosts conferences and organizes workshops covering an array of themes. Additionally, FreedomLab runs a programme called the “FreedomLab Crossover Innovation College” where workshops are offered to externally recruited clients regarding the topic of social innovation and responding to social change.



Figure 12: Shared office spaces at FreedomLab (Source: FreedomLab.org)



Figure 13: Example of a space for workshops and the innovation college (Source: FreedomLab.org)

4.4.2 | Strategies for Interaction

The following part discusses the results of interviews held with 8 members of FreedomLab. The results are organized per strategy and the most significant quotes will be revealed to illustrate the effectiveness of the concurring strategy.

Coworking space manager as connector: Interaction between members mostly occurs in order to have access to various types of knowledge and resources. The community manager plays an important role in identifying these, both internally and externally. To become fully integrated and aware of the community, the manager focusses on visibility and integration by sitting on different locations every day. The manager lunches with the members every day and interacts with them. The bridging function works because the manager is an integral part of the community, and becomes aware of the skills, activities, developments, and problems of the members. Consequently, the manager sees and exploits opportunities for members to connect and detects how members can be of value for each other.

“The role of the community manager is crucial for the members. She is really among us and constantly sends the signal “talk to each other, talk to everyone.” Copywriter

When FreedomLab recruits external clients for its innovation college, a customized toolbox is offered and connections are made to internal members for the delivery of the service. Subsequently, FreedomLab plays a bridging role in connecting members to external companies, which expands the scope of business opportunities for various members.

"At FreedomLab we set up a design thinking method to help children think about world problems. FreedomLab recruited a health care institution and after being introduced to each other we are now looking into applying our method to their patients." **Managing Director**

Director

The process in which members cooperatively perform tasks for a client, induces close interaction between members and intensifies interaction. As a result, insight is created in skills and capabilities of the various members and the flow of information is facilitated in these networks.

"I was asked to deliver the imaging for a corporate client of FreedomLab and worked closely with other local members. This led to deeper connections which go beyond the simple lunch talks. You really get insight in what other people are doing around here!"

Creative Director 1

Regulate the mix of workers: At FreedomLab there is no specialization policy regarding the professional background of members. However, the management attempts to regulate disciplines with a focus on complementary rather than overlapping disciplines. There is an onboarding procedure in which members are screened for having open attitudes and shared interests with regards to innovation and social issues. According to the respondents, common denominators among workers are curiosity, openness, extrovertedness, and accessibility. The respondents share that all members have an interest for the future and are focused on innovation, which makes establishing contacts an easy process.

"At FreedomLab there is a variety of people with mixed backgrounds. But everybody who walks around here is really good in his or her field .This is really inspirational!"

Creative Director 2

Interestingly, having a variety in expertise is highly valued. It works inspirational and entices interaction. Members expressed that the learning process is strengthened as a result of having a diverse set of specialisms. A respondent even mentioned that having people around who are very close to one's own business is not interesting and too traditional.

"It really becomes interesting to find out if a specific technology works in a completely different industry. I spoke with people here who are active in education and now we are discussing how we can apply virtual reality in the educational context." **Creative Director 1**

Interior design for interaction: At FreedomLab there are shared spaces and separated office spaces. The different types of spatial lay-out lead to different types of interaction. Respondents mentioned that workers who have desks in open shared

spaces and are regularly present have frequent interaction with other members because they see each other often and get to know each other quicker. On the contrary, members who are in separated offices or spend less time at the coworking space have less interaction with other members of the coworking space.

“The biggest part of the week we are working at the clients so when we are finally in our office we really need and want to update each other and know what has happened. We spend most of the time together in our office.” **Strategic Consultant**

Clever design of the entrance to the building, with one door and one corridor stimulates the convergence and intersection of members. Moreover, facilities such as the coffee machine and printer are also managed smartly. Both are placed at the entrance and are shared by all members. As a result it creates good places for short, yet, superficial talks.

Many members use the walls of the large spaces to expose the work they are active with. Respondents expressed that many people who pass by comment on it and therefore interaction can be promoted.

“I saw a poster hanging from X and saw that the phrases used in it were not catchy nor captivating. I addressed it and helped them to improve it. In my field of work I know how to capture the attention of an audience. I didn’t charge them anything for it!” **Copywriter**

Tools for networking: FreedomLab has various tools to entice networking. These can be divided into formal networking events, such as presentations and workshops, and informal network events, such as collectively organized lunches, improvisation classes, yoga, and meditation sessions.

Many respondents expressed that whenever works allows them to, they try to attend various formal and informal sessions, allowing them to obtain valuable information and access to important knowledge, but also to get to know each other in an (in) formal way. The frequency of having and attending these events influences the level of interaction between members. One member emphasizes that attending various events creates insight in the potential role of other members.

“Attending various activities is really important because you really get to know who is around here. I attended an improvisation course which was really fun. I got to know people I’ve met in other events even better! The more of these touch-points, the better you get to know people!” **Creative Director 1**

Most respondents mentioned that the free lunch policy plays a big role in encouraging networking behavior. Lunches are served at fixed times resulting in collective

moments where most members come together. Large tables stimulate members to sit next to each other and interact. Respondents mentioned that this is crucial to (in) formally meet other members. Additionally, during the lunches members or external parties get a stage to present what they are working on. These are moments which lead to exposure of the undertaken activities which entices people to react and interact regarding the performed business activities.

“During lunch I met a strategist who helps start-ups in setting up their business. He really gave me some insightful tips on how to run my business.” **Copywriter**

There are various digital networking tools used at FreedomLab (Facebook, Slack, and WhatsApp) to promote interaction. Respondents expressed that the employed digital social networking tools can work informative but entice interaction to a lesser extent. People share information which goes beyond what is happening within FreedomLab and despite the fact that some respondents see the added value of it, most categorized it as entertainment. Respondents expressed that the positive side of digital social network tools are that they project an overview of the members within the campus. However, mostly it functions as a post factum tool and not an interaction tool.

4.4.3 | Innovation

None of the respondents in the sample started new projects with other members. However, many workers mentioned being open for embarking on new entrepreneurial ventures. On the other hand, many members did express having accessed new clients and suppliers. When FreedomLab recruits clients for its innovation college many internal members are hired for delivery of the service which for many means access to new clients. Additionally, as a consequence of having members working together intensively for recruited clients, the value of the individual members is exposed which has led to many new client-supplier relationships.

“I used company X to visualize my mission and vision after having worked with them for one of the clients recruited by FreedomLab” **Creative Director2**

The narratives of the respondents support the idea that social capital is positively affected by having many networking events. During these organized moments, the value of members is revealed leading to valuable insights, ideas, and awareness of skills and expertise. Respondents expressed that this reduces search time when looking for potential suppliers or additional knowledge. Furthermore, having no specialization in the mix of workers has positive effects regarding getting new knowledge or ideas. Having diverse specialisms, shared interests and attitudes make workers approachable and accessible for specific knowledge or solutions. With

regards to the interior design of FreedomLab, the possibility to display work has a positive impact on interaction and knowledge exchange which in turn can lead to new ideas.

4.4.4 | A-Lab

A-Lab was established in 2013 and is housed in the former Shell laboratories at the banks of the IJ river, in the northern part of Amsterdam. It currently hosts 80 members. It offers 5000sqm where users can rent separated desks, offices or inspiration spaces and by means of various themed laboratories (e.g. journalism, culture, music) it connects the various occupants. Coffee house “The Coffee Virus” is housed in the ground floor in the lobby and serves as an in-house canteen and as a space for events. In recent years, the neighborhood where A-Lab is situated has been vacated by large industry and is now in full transformation towards being one of the prime locations of Amsterdam. The management body of A-Lab is fully aware of the rapid urban development around it and is in close contact with the municipality, surrounding businesses and neighbor university regarding cooperative initiatives.

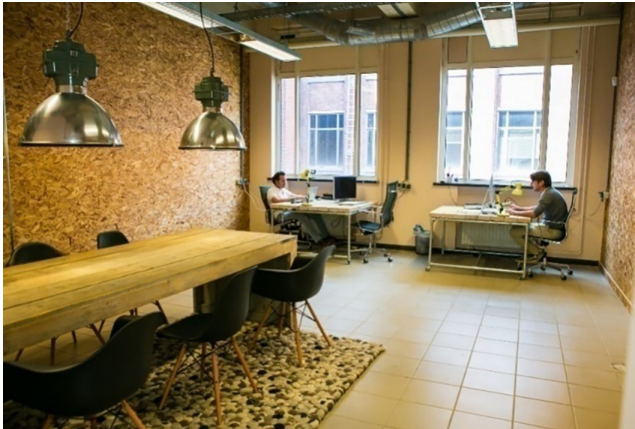


Figure 14 | Example of an office space at A-Lab. (Source: author)



Figure 15 | Coffee House “The Coffee Virus” at the entrance of A-Lab. (Source: author)

4.4.5 | Strategies for interaction

The following part discusses the results of interviews held with 10 members of A-Lab.

Coworking space manager as connector: The management of A-Lab sits in a separate office and is not amid members. Integration with the community is promoted by the open-door policy resulting in members walking in and out of the office addressing management with issues, questions, or requests. The manager walks around the building, talks to the members and shows engagement, participation, and interest in the members and their activities. Having awareness of the business activities is crucial and highly valued by members who often depend on others for their business. Members often seek short-term solutions to problems or opportunities or have long-term strategic decisions to make. By being aware of the needs of the different members, the manager can quickly connect members to relevant others.

The manager also crosses the physical boundaries of A-Lab by connecting external parties to the internal members. A-Lab constantly tries to arrange meetings with high strategic value, and tracks developments and opportunities in the external environment, which can lead to long-term opportunities for the members. This leads to an extension of knowledge domains and as a consequence can lead to new business opportunities. Members expressed that this role of management is highly valued.

“We develop applications and for one of our clients we needed an animator. We addressed our community manager and he introduced us to one of the other members here who are specialized in this. Another project which we are working on is an app which connects geolocations to the open data of the Amsterdam city archive. This

originated here and was facilitated by A-Lab who connected us to an internal member with links to the municipality.” **App developer**

“One of the strong points of A-Lab is that management here thinks on a high strategic level. For instance, they connected us to a group of Hungarian journalists with connections to the BBC. As a result we are now meeting regularly to think about the topic of Journalism and Innovation. They also invited a fund which stimulates journalism and now we meet them regularly. The management here is really important for meeting others. They really think about what is best for us.” **Journalist 1**

Regulate the mix of workers: The policy of A-lab is to have a focus on the creative and technology industries. Yet, this still results in a vast diversity in professional background, specialisms and interests. Various respondents expressed that it is a positive aspect of A-lab to have members with complementary skills and backgrounds. Despite of the professional diversity, the cognitive bases are close which is a good foundation for interaction. Especially, having members geographically close is perceived as useful and facilitates interaction. From the practical point of view, problems or opportunities can be dealt with in short terms. The following quote illustrates the practicality and value of diverse backgrounds in the coworking space:

“Sometimes I need a photographer or a music producer. It's really great that I don't have to search a lot for them. They are all here inside this building.” **Owner multi-media agency.**

Even though diversity in professional background is valued, it is useful for start-ups in early stages of development to have other workers around from the same industry. One respondent expressed that it can be particularly valuable for learning purposes and brainstorming.

“Sometimes we really do miss experienced people from our field. We are a relatively young company and we miss people to discuss issues which are related to our industry.”

Architect1

Furthermore, the narratives revealed that there is a large mix of members regarding their business development phase. There are many start-ups and there are various companies in more mature phases. Start-ups benefit from brainstorming with each other because they deal with similar generic start-up issues such as e.g. how to effectively set up accounting systems or whether extra people should be hired. This learning process is facilitated by geographical proximity, visibility and awareness of other members. At the same time, the learning process is stimulated by having more experienced businesses within a coworking space which can have educational value in generic business development.

Design for interaction: The building is designed with circular hallways with entrances to the separate offices which are rented entirely or shared. There are no large shared open spaces. Various respondents expressed that as a result of the spatial layout and design of the building there is a lack of visibility and accessibility. As a consequence, face-to-face interaction is not stimulated. Respondents expressed that companies who rent an entire office tend to remain inside their offices whereas smaller companies who share space interact more and leave offices more regularly to seek interaction in the hallways.

One of the design characteristics which strongly contributes to making personal connections is the coffee house. It has a role of a central hub enabling the formation of networks. The shared physical space has an informal atmosphere which supports people's opportunity to share knowledge and experiences. Most respondents expressed that the coffee house is a locus for (business) lunches and an important central place where much interaction takes place and new projects can start. Several respondents mentioned that because workers interact there in an informal manner this often leads to exchange of valuable knowledge which can lead to new opportunities. One example was the following:

"The coffee house is a place where we sit very often to chat and joke about new fun projects which would connect us all here within A-Lab. It was there where we invented the "Coffeicopter". A drone which brings coffee to the members. It started as a fun idea but it became an A-Lab project which involved 4 members. Next month the BBC is coming to use it for a new program they're starting." **Creative Director3**

Tools for networking: A-Lab organizes various events where workers can meet and interact. Most respondents mentioned the monthly drinks and the monthly "lunch roulette". The monthly drinks are organized in the coffee house and are meant for all members. During this event members can interact informally and have face-to-face contact with other members. Respondents expressed that most members who come to the drinks are open to conversations and therefore interaction with new members takes place regularly. Several members expressed that this event strongly enhances the coworking community. At the "lunch roulette" free lunches are offered to members who apply for it. Members are coupled to (ir)relevant others and have one-on-one lunches. Couples are made at random or are pre-defined by the management of A-Lab.

"The lunch roulette is very good to make useful contacts. I was matched with an owner of a multi-media agency who is now going to make a video for one of my new products which I will have to pitch soon at a fair." **Director Web studio**

Even though the attendance at events show patterns of irregularity, respondents expressed that serendipitous contacts occur frequently and often lead to fruitful discussions and meetings. Consequently, the strength of network ties between members is enforced during events. Furthermore, the events facilitate awareness creation of the activities of the various companies within A-Lab.

4.4.6 | Innovation

The interviews revealed one example of a new project. This originated in the coffee house of A-Lab during a Friday afternoon drink. During events at the coffee house different companies within the A-Lab network get connected, which otherwise might have stayed unconnected. When new ideas occur inside A-Lab and workers express that additional skills and knowledge is needed, the role of the management becomes important. Management has an overview of the internal members and strategic external contacts and can therefore make the right connections. Having an internal diverse mix of members with a broad range of expertise facilitates this process. Concurrently, the process in which management connects various companies leads to many new clients or suppliers for the distinct members.

“When we invented and developed the Coffeecopter we used Bright TV/RTL Z to make a video and shoot an item about it. They are one of the members here in this building. A-Lab helped us in making this connection. This went very easy. Now our film already went viral!” **Creative Director3**

Several respondents mentioned that having direct access to a large range of companies that can provide complementary skills and capabilities can lead to many useful suppliers. Often these suppliers show high willingness to help or service other members and generally for competitive prices.

“Having all these different people around here makes work really easier. Whenever I need a photographer or an editor I can find one here. And even better, we can have things done cheaper here.” **Owner multi-media agency.**

A recurring point is that it is beneficial in conducting business to be aware of the internal users and what they are capable of. Awareness can be created and is enforced by attending multiple networking events. As a result the value of the members gets exposed which can foster the creation of networks and forges a broader base of potential bridges to available clients, suppliers or knowledge. The design of the premises also facilitates awareness. Creating visible and accessible spaces fosters interaction and knowledge spill-overs. For instance, having work displayed in hallways facilitates the awareness of what different members are active with. As a

consequence members address other workers and react to their work. In turn, these interactions can lead to new knowledge or ideas for both parties.

Interestingly, respondents expressed that the availability of human resources is an important advantage of being in A-Lab. One respondent even expressed having moved to A-Lab to specifically look for qualified staff. The importance of the internal social network page was also revealed herein. This platform is used by internal members to share that they are searching for additional staff or interns. Other benefits of the social network site lays in providing opportunities for internal and external exposure of the members and their activities.

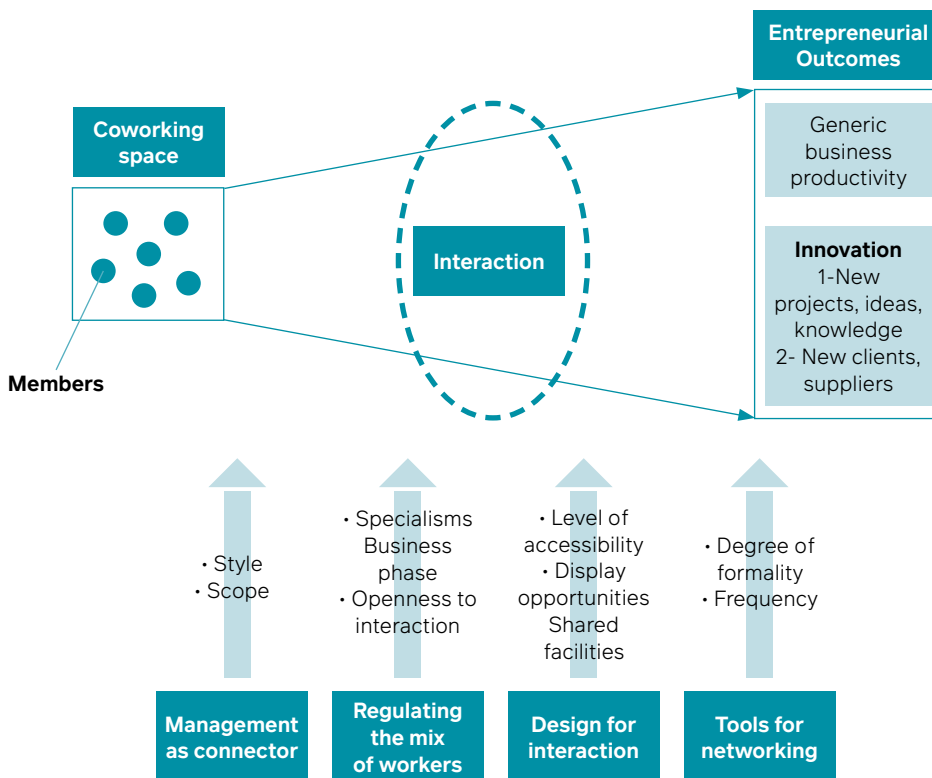


Figure 16 | Schematic illustration of key findings: forces affecting interaction and entrepreneurial outcomes. (Source: author)

4.5 | Conclusion

This paper described and analyzed four strategies which coworking spaces can employ to entice interaction and foster innovation: coworking space manager as connector, regulate the mix of workers, interior design for interaction, and tools for networking. Two coworking spaces in Amsterdam were analyzed on how these strategies are applied and it was explored how they can benefit their workers. Both literature and our evidence suggests that co-locating people does not automatically lead to interaction nor to innovation. Co-locating people in a coworking space can help but applying the right strategic tools can enhance the effect.

We developed a framework which linked four strategic management tools to interaction and innovation. At the widest level of generality, we have seen that interactions between members can be built on the strategic effort made by the coworking space. We have seen that many connections between members are constructed around the need for capabilities and technologies of other members. The role of a coworking space can be to facilitate the transfer of value from those who have the capabilities and technologies to those who seek to use them. In highly complex coworking networks, a successful coworking space is one which has a very clear idea of its mix of members, and how it is broken down to basic, distinctive, internal and external needs and how these relate to the requirements of others. We emphasize that for coworking space managers the ability to strategically manage the space and assemble a package of basic product and services and tailor that package to the requirements of the workers is a key element of its competitive strategy. To support this, there are a number of issues regarding the proposed strategies which we shall revisit here and emphasize their importance.

The role of management is important for detecting in- and external opportunities for its members. In line with earlier research, many members depend on others for new business opportunities and the connecting role of management facilitates this process. However, members have different needs requiring different types of connections. These needs can vary between short-term solutions or opportunities, such as needing a supplier or seeing a potential sales opportunity, and long-term opportunities, such as the need for help in strategic growth decisions. Thus, a coworking space manager should have a clear and broad scope of in- and external networks and have the ability to accommodate the distinct needs of different members, both on the practical and strategic level.

In managing the mix of members it became clear that achieving the right mix in a space is a challenging task. A main finding is that diversity plays a role in enticing interaction. Members with different backgrounds and expertise can be valuable to each other by offering opportunities to apply technologies or new knowledge in

different or unfamiliar contexts. Yet, having people around with comparable levels of expertise can also be important for exchanging experiences and related knowledge. Diversity also relates to business development phases of companies. Start-up companies can learn from the experience and knowledge from more developed companies. Concurrently, large companies benefit from unsuccessful start-ups in the sense that they may provide human resources. In determining the mix of workers it is also paramount to understand the reasons for workers to choose a coworking space. Assessing motivations can reveal whether members just need a location to work, a test environment for ideas, or a location to grow as a start-up. Different intentions lead to different levels of interaction. To assure a good mix of members, managers may apply entry- and exit policies related to different forms of diversity. Assessing intentions of members, attitudes, interests, skills and capabilities are examples of characteristics which can be taken into consideration.

As far as promoting interaction, the design of a coworking space plays an important supportive role. In line with earlier research, having common physical areas were perceived to entice interaction. When coworking spaces are designed with separate rooms, interaction is not promoted and depends more on attitudes and willingness of the members. The attractiveness of the spaces (features ranging from playful aesthetical design, themed rooms, relax areas, art display) as well as having a central shared meeting hub is an important characteristic. Despite difficulties in measuring or defining attractiveness, the value for internal users and external visitors was recognized and supported in many ways (Oksanen and Stahle, 2013). Interaction is also enforced when knowledge is made visible and accessible by having work of members exhibited or displayed.

Having sufficient tools for networking helps to “push” members to connect with each other. We must reiterate the importance of having a series of networking activities since it increases awareness of other workers' activities and capabilities which in turn supports interaction. However, we stress that coworking spaces should take a portfolio approach of networking activities including both formal and informal networking events. Informal events stimulate workers to get to know each other better and enforce inter-member relationships and formal events induce professional awareness and value.

With regards to innovation, the most significant outcomes which were revealed are access to new clients, new suppliers, and access to new knowledge and ideas. A new advantage which was revealed is that coworking spaces provide valuable access to human resources. It became clear that the social context of coworking spaces supports knowledge exchange but that it is a long-term process which requires multiple “touch-points” amongst members. Combining the right interaction strategies with a sufficient number of networking tools can facilitate the process

of innovation. Further research is needed to test this process and to find out how coworking spaces can facilitate more joint projects between members. Yet, for the practicing manager of coworking spaces, it is also important to emphasize that many workers view coworking spaces as one of many locations which can be chosen for generic business productivity.

In light of the limited nature of literature which address strategies to differentiate between successful and unsuccessful interactions, this research has attempted to make a first step in clarifying this. Managerially, this research offers insight in how coworking space managers can manage their spaces to reap the benefits of success. Theoretically, a specification of the linkages between interaction strategies and innovation can provide a useful framework for future research. The empirical part narrated here provides a first attempt to better understand coworking strategies and how they contribute to the success of workers.



CHAPTER FIVE

‘Coworking spaces: places that stimulate social capital for entrepreneurs’

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Abstract

This study examines how social networking facilitated by coworking spaces help entrepreneurs. Drawing on previous research in the different social science disciplines, a conceptual model is proposed that links coworking space interventions to social capital, and performance benefits. The model distinguishes three coworking interventions, i.e. design of the physical space, facilitative tools, and community management. Furthermore, the model differentiates bridging and bonding social capital. Nineteen interviews were conducted with entrepreneurs who work in three coworking spaces. The findings confirm the relationship between coworking space interventions, bridging and bonding social capital, and performance benefits. Theoretically, this study contributes in developing further knowledge about the increasing social value of coworking spaces. Managerially, this study highlights how the curation of collaborative workspaces can help promoting social capital as well as better conditions for individuals who seek to work in social environments.

5.1 | Introduction

The importance of the role of social networks for entrepreneurs is highly acknowledged (e.g. Elfring and Hulsink, 2003, 2007). Various studies show that a network is one of the most powerful assets that entrepreneurs can possess, as it provides access to information, power and capital, as well as to other supplementary networks (e.g. Burt, 2004). The overall assumption is that a more developed network, in terms of the number and quality of the ties, is more beneficial to an entrepreneur than a less developed network (Oviatt and McDougall, 2005; Kiss and Danis, 2010).

To foster social network development of location-independent entrepreneurs, there has been a rise in the number of coworking spaces in many cities around the world (Deskmag, 2019). In this paper, coworking is defined as individual work done in curated office spaces that are shared by unaffiliated entrepreneurs (Spinuzzi, 2012). Coworking seems to be a response to the rise of start-ups and self-employed workers who want to work in social settings, and also reflects the shift towards flexible work approaches by firms in modern knowledge economies. According to coworking space managers, coworking spaces are interesting workspaces because they provide “coworking communities” which, in turn, provide benefits for their users (Spinuzzi et al., 2019).

From the point of view of social capital theory, coworking spaces are relevant cases because they have the potential to accommodate social interaction; specifically, the collaboration that takes place within such coworking communities (Gerdenitsch et al., 2016; Balakrishnan et al, 2016). The social networks of people in coworking spaces can consist of various individuals with whom one has different types of contact, varying from low frequency/intensity to high frequency/intensity. These ties, defined by Granovetter (1973) as either weak or strong, can subsequently lead to so-called bridging and/or bonding social capital (Putnam, 2000). Entrepreneurs using coworking spaces might need a combination of both forms of social capital, yet, for different reasons and at different times (Davidsson and Honig, 2003).

Although there has been an increase in the number of studies describing coworking spaces (Spinuzzi, 2012; Cabral and van Winden, 2016; Fuzi, 2016) and how they can function as a source for social networking, increased productivity, and value creation (Gerdenitsch et al., 2016; Balakrishnan et al, 2016, Bueno et al, 2018, Bouncken et al., 2018), there is no published empirical work that explores social capital in coworking spaces and whether this can act as a resource for its users. This study contributes to research in this area in two ways. Firstly, management interventions in coworking spaces are analyzed in order to examine if and how these interventions foster social capital. Thus, the existing field of research on coworking environments as new emerging work environments that may promote social capital (e.g. Johnson,

2012, Smith et. al, 2017) is extended. Secondly, social capital dynamics and their value for individuals using coworking environments are explored. Hence, this study contributes to research on the value of social capital by investigating its presence in a new context: the coworking space.

In this paper, a model is proposed that aims connecting coworking contexts to social capital and associated performance. There are three aspects to the model. First, the coworking space context is analyzed as a facilitator of social capital. Three coworking interventions are identified that might affect social capital formation in a positive or negative way, i.e. physical design for interaction, facilitative tools, and community management (e.g. Fuzi, 2016). Second, bridging and bonding social capital are distinguished from each other; each one contributing in a unique way to the entrepreneurial process (Putnam, 2000). Finally, the focus is on performance benefits for entrepreneurs as a result of social capital (Elfring and Hulsink, 2003).

This paper takes an embedded case study approach. The main unit of analysis in this study is the coworking space, and emerging ventures within such spaces are analyzed. Data was collected by interviewing entrepreneurs at three different coworking spaces. The focal point of interest was how entrepreneurs use personal networks, business networks, and the coworking space to develop and create the conditions for optimum business performance. In this paper, the main research question is “How do coworking spaces stimulate entrepreneurs through bridging and/or bonding social capital?”

The paper is organized as follows: Initially, relevant literature is reviewed and three coworking space interventions that can promote social capital are identified. Next, the effects and benefits of coworking interventions on bridging and bonding social capital of entrepreneurs are explored. This is based on nineteen interviews with entrepreneurs who work in three coworking spaces. The paper concludes with a discussion based on data collected from the interviews.

5.2 | Literature review

5.2.1 | What are coworking spaces?

In the past two decades there has been a rise in the number of coworking spaces: new workspaces which facilitate productive activity alongside social interactions (Gandini, 2015, Deskmag, 2019). Coworking spaces can be defined as “open-plan office environments where workers work next to other unaffiliated professionals for a fee” (Spinuzzi, 2012, p.399). The practice of coworking is rapidly rising in many cities, especially in “creative cities” (Florida, 2004). Coworking seems to be a response to a

change in the structure of labor where firms take more flexible approaches to where work can be performed, also referred to by several scholars as boundaryless work, remote working, or distant working (e.g. Felstead et al., 2003). At the same time there is a rise in the number of “digital workers” such as self-employed, micro-enterprises, or freelancers who are not bounded by constraints of the traditional office or factory-based work thanks to new mobile technologies. For many of these workers there is the need to be inserted in social networks since this brings benefits for their business performance (Burt, 2000, 2017). To stimulate the exchange of knowledge, sharing of resources, and to alleviate the relative isolation of running a business from home, urban planners increasingly consider establishing spaces for meeting and coworking (Folmer and Kloosterman, 2017).

5.2.2 | Coworking space interventions for networking behavior

The management of coworking spaces can deploy an array of interventions to foster interaction and networking behavior amongst their users. This paper examines three interventions: the design of the coworking space, facilitative tools, and community management.

The first intervention relates to the physical design of coworking spaces. There is a vast body of literature that suggests a relationship between interaction, networking behavior and physical proximity (Feldman, 1994; Oksanen and Stahle, 2013; Pancholi et al, 2015). Sailer and Penn (2007) show that the spatial configuration of an office shapes the formation and structure of intra-organizational networks, i.e. different office layouts corresponded with distinct network structures. In an academic environment, research shows that network structures are influenced by the physical proximity of individual workers to each other, as well as by the location of individuals' workspaces in relation to the entire office space (Wineman et al., 2009). Other studies focus on how spatial design influences interactive human behavior. Williams (2013) introduced the ‘engage/disengage’ model. ‘Engage’ relates to engaging with people, information, and ideas by actively looking for them as well as by having serendipitous situations. Physical environments that enhance engagement are communal areas, lounge corners, canteens, coffee corners. ‘Disengage’ relates to distancing from others to stimulate thinking and focus through silent and private solo-work. Spaces for disengagement are private booths with small single-user tables in corridors, or quiet relax areas.

The second intervention relates to facilitative tools. Facilitative tools are curated coworking mechanisms that promote opportunities to network or even “push” interaction and collaboration among members (Capdevila 2013; Parrino 2015). Some studies focus on the role of facilitators, moderators, and/or community managers in coordinating members and connecting them to each other for the purpose of new

product or service generation (Cabral and Van Winden, 2016). Others have focused on tools such as networking events, corporate presentations, and business pitches (e.g. Parrino 2015). Such tools encourage participants to interact, network, share knowledge, and learn from each other.

The third intervention relates to community management. Studies on network management suggest that the management of users in organizations, influences interaction practices which in turn can enable business performance and contribution to cross-fertilization (Parrino, 2015). Management of the community is often curated by coworking spaces by having selection procedures, admission processes, and promoting related or unrelated industry variety amongst users (Moriset, 2013, Fuzi, 2016; Frenken et al. 2007). Since many coworking spaces want to help in achieving successful communication and learning amongst users, the curation of the community is used to assure that the cognitive bases of actors are close to each other (Boschma and Lambooy, 1999). People with similar knowledge or expertise may learn from each other in an efficient way and at the same time they can extend their cognitive scopes (Nooteboom, 2000). Careful selection of users facilitates community-building and the sense of belonging (Spinuzzi, 2012). Against this background, one of the sub questions in this study is through which management interventions do coworking spaces foster social capital?

5.2.3 | Coworking spaces and social capital

Coworking spaces often promote themselves as community-enhancing spaces (Spinuzzi, 2012; Spinuzzi et al., 2018). Typically, coworking spaces help users in their business process by creating social conditions in which people can see and share each other's work processes. Consequently, people interact and share opinions. Implicitly, the social environments in coworking spaces help entrepreneurs in their social network needs and stimulate social capital (e.g. Olma, 2012).

Social capital is described by Bourdieu (1986) as all resources owned by an individual because of his or her social contacts. While researchers give different views as to what exactly social capital consists of (Adler and Kwon, 2002), there is a broad consensus that its' value stems from access to resources attained through social relationships, networks, and memberships (Coleman; 1988; Portes, 1998). Social capital can help to create value for entrepreneurs in the sense that individuals can take advantage of 'strong ties', such as family and friends, and 'weak ties' such as acquaintances, customers, suppliers, or colleagues (Granovetter, 1973). Granovetter (1973) mentions that strong ties are important because they often create strong trust, are more accessible, and are willing to be helpful. Weak ties, on the other hand, can be particularly useful to retrieve information which cannot be accessed through strong ties. Though social capital is generally seen as a good asset, there are downsides to social capital

for entrepreneurial activity, such as free-riding of network members, opportunistic behavior (Portes, 1998), and the formation of market bubbles in which communities are excluded from social and economic benefits (Waldinger, 1997; Portes, 2014).

Putnam (2000) made the distinction between bridging and bonding social capital. According to Putnam (2000), “bridging” social capital is inclusive and entails heterogeneous networks that often have traversing characteristics (e.g. communities that bring people in contact with people from other sections/segments of societies). Bridging social capital occurs when individuals from different backgrounds have interactions between social networks. As such, bridging social capital is associated with spanning social networks through having contact with weak ties and this often results in generating positive externalities such as broadening social horizons, or creating opportunities for information or new resources. A disadvantage of bridging social capital is little emotional support and mobilization of resources. Weak ties in coworking spaces are important for entrepreneurs because they may provide access to various sources of new information and offer opportunities to meet new people. In turn, these connections may open the door to new entrepreneurial options (Granovetter, 1973). Several scholars have outlined various ways of weak tie development in coworking spaces that in turn can stimulate bridging social capital, e.g. network development by temporary co-location (Parrino, 2015), access to mentors, coaches, and external industry specialists (Cohen and Hochberg, 2014), participation in social events (Cabral and Van Winden, 2016), and community managers who connect users (Merkel, 2015).

Conversely, “bonding” social capital is associated with closed (homogeneous) networks. Bonding social capital is often associated with isolated communities or networks that intensify inward-focused behavior, reduce exposure to new ideas, and exacerbate existing social cleavages (Paxton, 2002). According to Putnam (2000) bonding social capital is therefore exclusive. It occurs when strongly tied individuals provide emotional or substantial support to one another. A downside of bonding social capital is insularity and out-group antagonism. Strong ties are also important for entrepreneurs and emerging firms since they provide access or reduce the search for critical resources. Aldrich et al. (1998) discuss the importance of family socialization, as well as the delivery of personal networks that provide valuable resources. Various studies have discussed characteristics of coworking space that can stimulate strong tie development which in turn favors bonding social capital, e.g. the aim to build tight communities (Capdevila, 2013, Moriset, 2014), long-term co-residency leading to intensified interaction and trust (Fuzi, 2016), and industry-specialization to stimulate “like-mindedness” (Spinuzzi, 2012). These studies show that there are characteristics of coworking spaces that promote interaction amongst entrepreneurs which increases the likelihood of emotional support, access to scarce or limited resources, and the potential to mobilize solidarity (Williams, 2013).

Williams (2006) conceptualized bridging and bonding social capital. He developed social capital scales to measure both types of social capital in online and offline contexts. In his work bridging social capital consists of four components: (1) outward looking attitude, (2) contact with a broader range of people with different backgrounds, (3) viewing oneself as part of a larger group, and (4) diffusing reciprocity with a broader community. Conversely, bonding social capital is less focused on including people from other backgrounds. The effect of bonding social capital is more relevant to emotional support and access to scarce resources. In conceptualizing this, Williams (2006) determined the following components of bonding social capital: (1) emotional support, (2) access to scarce or limited resources, (3) ability to mobilize solidarity, and (4) out-group-antagonism. In this vein, another aim of this study is to answer the sub question how do entrepreneurs benefit from bridging and bonding social capital in coworking spaces?

5.3 | Conceptual framework

The focus of this study is on how coworking spaces stimulate entrepreneurs through social capital. There is an array of spaces that provide coworking space characteristics, such as accelerators, incubators, coworking spaces, and FabLabs (Schmidt et al., 2014). However, to understand the social capital potential of coworking spaces, the focus is not on spaces that are being used by entrepreneurs who are affiliated through corporate or university programs. This is often the case with incubators. In addition, the focus is not on spaces that are being used by entrepreneurs who are following fixed-term or cohort-based programs. This is often the case with accelerators (e.g. Cohen and Hochberg, 2014). Thus, the specific focus of this study is on public coworking spaces. In this study, public coworking spaces are defined as curated office environments where entrepreneurs and small-sized firms work next to other unaffiliated professionals (Spinuzzi, 2012). Regarding the coworking context, three types of interventions are distinguished from each other, i.e. physical characteristics, facilitative tools, and community management (Cabral and Van Winden, 2016; Fuzi, 2016). Two forms of social capital are differentiated: bridging and bonding. These follow from Putnam's (2000) description and William's (2006) conceptualization. Finally, the focus is on performance benefits for entrepreneurs as a result of social capital (Elfring and Hulsink, 2003). Burt (1992) describes that bridging social capital affects entrepreneurial performance through the exploitation of new opportunities by bridging between disconnected contacts. Alternatively, bonding social capital amongst customers and suppliers may facilitate revenue growth because these ties are more motivated to interact and are more available for instrumental cooperation (Granovetter, 1982). Against this background, this study focuses on objective performance, i.e. growth in sales, new projects, new clients,

new investments as well as subjective performance, i.e. new business contacts, new knowledge or ideas (Franco, 2011). Figure 17 shows the conceptual framework.

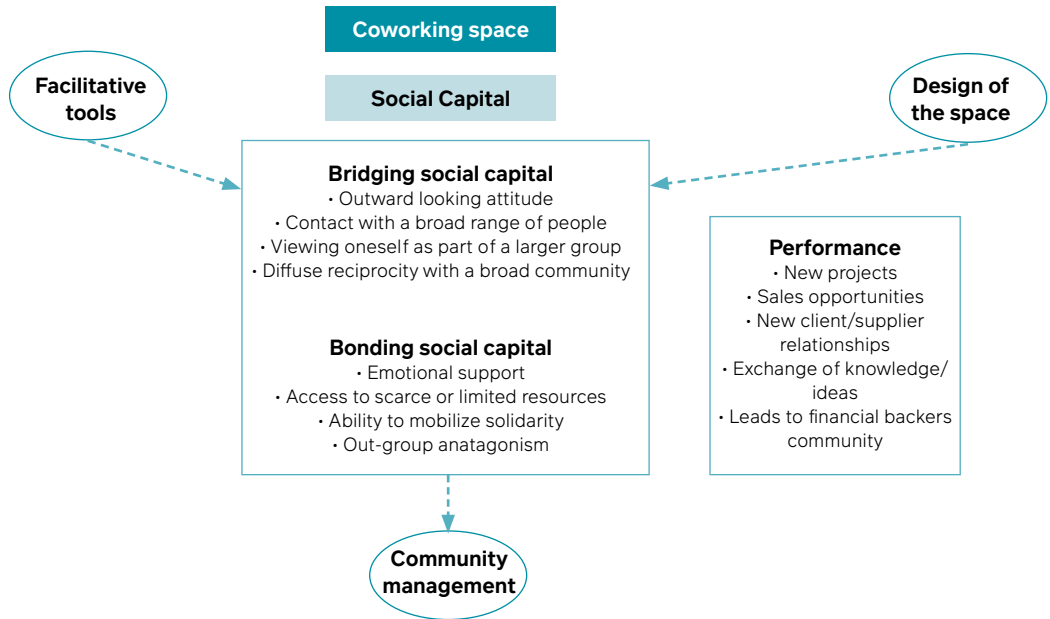


Figure 17 | Conceptual framework (Source: author)

5.4 | Methods

The objective of this exploratory study is to contribute to theory-building regarding the causal linkages between coworking contexts, bridging and bonding social capital formation, and performance benefits for the entrepreneurs who use coworking spaces. A qualitative approach was taken in order to explore how coworking spaces function, how coworkers experience such spaces, and how the interactions shape their relationships in a manner as real as possible (Dey, 2003; Robson, 2002; Bogdan and Biklen, 2006). By taking this approach, the aim is to contribute to our understanding of human social behavior, experiences, and cultures within coworking spaces (Saunders et. al, 2009)

In order to have a broad representation of coworking contexts, three coworking spaces were selected and visited in Amsterdam (the Netherlands): A-Lab, Broedplaats de Vlucht, and Prodock. Three different spaces were selected in order to assure a variety in the coworking resources related to physical design, facilitative tools, and community focus (Saunders and Lewis, 2012). All three spaces met the

criteria of offering shared workspace and having an explicit curative platform to entice social interaction. The spaces that are subject of this study are not meant to provide statistical cause/effect relationships between the different constructs in the model but will present opportunities for future research directions and questions (Lauer and Asher, 1988).

Next, nineteen semi-structured interviews were conducted with entrepreneurs or owners of companies. In selecting participants, priority was given to heterogeneity in the respondents' professional profiles, time spent at the coworking space, and age of the company. The community managers at each of the sites provided assistance with this process. However, concretely, in choosing the nineteen respondents a reconciliation had to be made by the people present and willing to assist. The interviews were conducted between March 2019 and July 2019 by the researcher and lasted between 20 and 60 minutes. Table 7 displays the respondent characteristics.

The different elements of the research framework were incorporated into the interview protocol and analyzed as follows. First, to find out how the coworking space specifically helped in the formation of bridging and bonding social capital of the respondents, interview questions were asked that were adapted from bridging and bonding constructs (Putnam, 2000; Williams, 2006). For instance, related to the bridging social capital construct 'outward-looking attitude' respondents were asked "Does talking to people inside this coworking space make you curious about other business activities?". Related to the bonding social capital construct 'emotional support' respondents were asked "Are there any people inside the coworking space that you trust to help solve your (personal or business) problems? Next, respondents were asked to evaluate coworking space characteristics, i.e. physical space, organized group activities, and/or if the coworking community contributed to their social networking process. As an example, respondents were asked "How does the coworking space community contribute to create an environment of trust and support?". Finally, the respondents were asked to describe how they felt the firm had performed since being present at the coworking space, and specifically how the space and community contributed to the performance. For example, respondents were asked "Have you gained new knowledge/ideas as a result from working in the coworking space?"

Table 7 | Overview of respondent attributes (Source: author)

Entrepreneur	Industry	Age of the company	Time at the coworking space	Nr. of employees	Type of space hired	Nr. of days/week at the coworking space
Entrepreneur 1	Transportation services	1 year	10 months	0	Private office	5
Entrepreneur 2	Vertical Farming	2 years	18 months	3	Shared office	5
Entrepreneur 3	Maritime technology	1 year	10 months	0	Private office	5
Entrepreneur 4	Robotics	2 years	18 months	0	Private office	5
Entrepreneur 5	Data analytics	2 months	2 months	0	Desk	5
Entrepreneur 6	Vertical Farming	4 years	3 years	9	Shared office	3
Entrepreneur 7	Transportation services	1 year	12 months	0	Private office	5
Entrepreneur 8	Composite solutions	1 year	12 months	3	Private office	5
Entrepreneur 9	Internet services	10 years	4 years	3	Private office	3
Entrepreneur 10	Internet services	8 years	5 years	0	Desk	3
Entrepreneur 11	Audio Visual	9 years	5 years	3	Private office	3
Entrepreneur 12	Music production	9 years	6 years	4	Private office	4
Entrepreneur 13	Video services	7 years	5 years	8	Private office	5
Entrepreneur 14	Content Marketing	5 years	2 years	1	Desk	3
Entrepreneur 15	Video services	7 years	3 years	4	Desk	4
Entrepreneur 16	Video services	15 years	4 years	0	Desk	4
Entrepreneur 17	Chemicals	7 years	2 years	20	Private office	5
Entrepreneur 18	Office rental	8 years	2 years	30	Private office	5
Entrepreneur 19	E-commerce	6 years	2 years	0	Desk	5

Next, interviews were transcribed and analyzed by using Atlas.ti. This analytical tool was chosen since it allows for the uncovering and systematically analyzing complex phenomena hidden in text (audio, multimedia, and geospatial) (Silver and Lewins, 2014). This seemed particularly relevant when analyzing the coworking space context from the perspective of physical characteristics, facilitative tools, and community dynamics. In this process the first step was to analyze the quotations of respondents that were related to each social capital construct. Network views were created for each of the social capital elements and key words and quotations were subtracted that corresponded with the bridging and bonding elements. Next, in order to answer the first sub question, it was important to understand the context in which respondents spoke about bridging and bonding social capital elements. The context was analyzed by creating co-occurrence tables that revealed quotations that combined bridging and bonding social capital codes with codes related to the coworking interventions (i.e. physical characteristics, facilitative tools, community management). For instance, the following quotation combined the code “Facilitative Tool: Community Manager” with the Bridging social capital code “Contact with a broad range of people”: The role of X (the community manager) is really important. She brings in many people and companies from outside into the coworking space. This way you get in touch with so many different companies.” Afterwards, in order to analyze the second sub question, it was important to get an understanding of the performance outcomes that respondents got from being in coworking spaces. This was also done by creating co-occurrence tables that revealed quotations that combined bridging and bonding social capital codes with codes related to performance. For instance the following quotation combined the code “Performance: leads to financial backing” with the Bridging social capital code “Contact with a broad range of people”: “I meet so many different people here at the canteen (contact with broad range of people) and one of them gave me an email address of a potential investor (leads to financial backing)”. In all tables, codes that co-occurred more than 10 times were highlighted and considered as relevant. Finally, in order to visualize how the codes were linked semantically, network views of semantic linkages were created related to each research question.

5.5 | Results

Results revealed that coworking spaces provide access to both bridging and bonding social capital. However, they are not mutually exclusive and were expressed in a rather oblique way.

5.5.1 | The coworking space and bridging social capital

Regarding bridging social capital, most respondents mentioned that they feel part of a larger group: the coworking community. The coworking space plays an important role in promoting social interaction within the coworking community and stimulates an outward looking attitude. The outward looking attitude translates itself into individuals having contact with a broad range of people, such as: other coworkers, potential investors, industry specialists, and external corporations. Most of the coworkers are introduced to coworking individuals through coworking space interventions. Mostly through the organization of social and formal events. Being physically close to others also creates possibilities to observe and understand what others are doing. Often, this leads to social interaction, exchange of knowledge, and business development opportunities (e.g. finding new suppliers, new customers, new projects). Results showed that this is particularly interesting for firms that are in early business phases.

Interestingly, some respondents owning relatively mature businesses and who had spent more time in the coworking space mentioned that, as time progressed, the outward-looking attitude extended beyond the coworking space. The longer that entrepreneurs stay in a coworking space, the more likely they are to be aware of which coworking ties are valuable for both social and business purposes. Experience of what others are capable of leads to entrepreneurs making selections in who can be sustainable partners and/or suppliers of resources.

"In the beginning when you are starting up your business and you choose to work in a coworking space, you focus on the people inside this coworking space. Why should I spend time looking for a web designer, when there is just one at the end of the hallway? But as you grow as a business, you basically need to start making money and pay off your debts. Then you go for the better and cheaper options and the coworking network becomes a plan B." **Owner of an audio-visual firm**

Regarding the diffusion of reciprocity, being around other entrepreneurs (irrespective of the industry), generates a feeling of "togetherness". Various respondents described this as mutual understanding of commonalities in business issues that many entrepreneurs go through, which in turn leads to sympathy and willingness to help each other out whenever needed. Most of the respondents perceive this exchange as an ongoing business networking process, and in general did not have direct expectations for help in return.

When analyzing the management interventions in relationship to bridging social capital, it is noteworthy that the outward-looking attitude and its' associated connection with a broad range of people is actively promoted through facilitative

tools. The results revealed that community managers play an active bridging role. For instance, one of the activities of one specific community manager was to invite companies from outside the coworking space and to connect these companies with the in-house entrepreneurs. This is valuable for entrepreneurs who must fine-tune their business models, need potential partners, and/or are looking for leads to financial backers. Open days also promote an outward-looking attitude and connect entrepreneurs with a broad range of people. One coworking space organizes such days regularly attracting investors, external corporations, and other regional stakeholders. The outward-looking attitude is also stimulated through social and formal events organized by the coworking space. Often, at these events external firms are invited to mingle with the coworking community. This mingling/exchange can lead to entrepreneurs becoming more open minded, and more comfortable challenging one's precepts. In addition, the outward-looking attitude is also stimulated by physical design of the space, such as having open spaces, and communal lunch- and coffee areas. Finally, having a diverse mix of entrepreneurs from various industries also promotes an outward-looking attitude and the feeling of being part of a larger group. The following quote exemplifies how a combination of physical space and the mix of entrepreneurs promoted an outward-looking attitude:

"I met X at the coffee house. His company provides all types of products made with their composites. I have been talking to him to see if I can use their material to strengthen my underwater drones. I also met Y there who makes e-scooters. I've been talking to him to see if I can use his shock absorption technology for my underwater drones." **Start-up in maritime technology**

However, there were also instances of entrepreneurs who did not embrace the outward looking attitude. Several entrepreneurs either wanted (or already had) personal office space. This was mostly the case for entrepreneurs who needed space that enabled concentration and/or needed space to manage business growth. Personal office space generally hinders contact with others, because it creates physical barriers. The level of interaction then depends on spatial and personal levels of openness and accessibility.

Figure 18 synthesizes the semantic linkages between the codes related to bridging social capital and coworking space interventions.

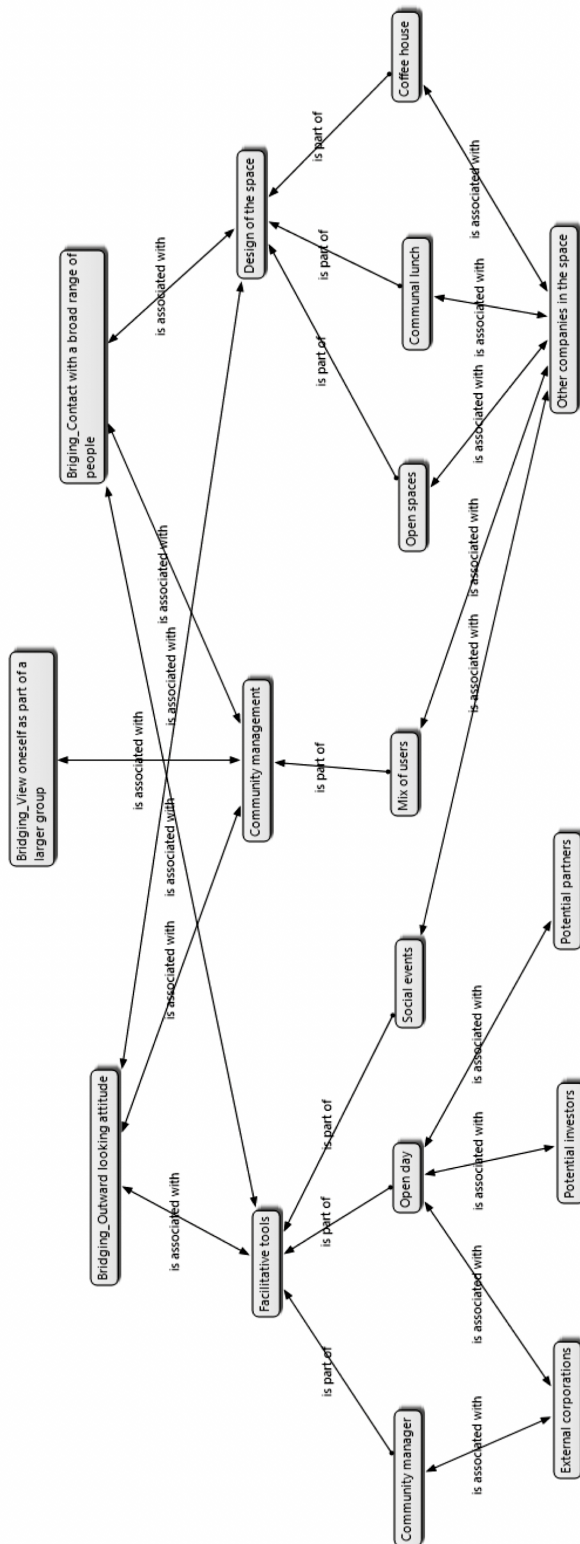


Figure 18 | Semantic linkages between bridging social capital constructs and coworking space interventions (Source: author)

5.5.2 | The coworking space and bonding social capital

With respect to bonding social capital, the interviews revealed that emotional support is highly important for entrepreneurs. Most of the times entrepreneurs need people they can trust to help them solve problems, give advice, and offer support in personal issues. Entrepreneurs who were in early stages of their business development feel that family and friends are crucial. Some entrepreneurs stated that without the support from friends and family they would not have become an entrepreneur, and that on a frequent basis, business issues are discussed with them. Inside coworking spaces, interacting with weak ties (i.e. other entrepreneurs) who deal with recognizable business issues is also seen as a great form of support. This supportive feeling is created by a sense of solidarity and mutual understanding between entrepreneurs regarding typical “entrepreneurial issues”.

“It is very nice to be surrounded by other start-ups who are also struggling and trying to make it work. Everybody here is very understanding and supportive and whenever I can, I try to help other people as well.” **Start-up in robotics**

Self-employed workers and entrepreneurs who were further along in the business-development stage communicated a need for very specific support and knowledge. Access to ties providing these resources were often found outside coworking spaces.

Several respondents mentioned that, generally, ties inside coworking spaces become stronger on a personal level and, and as time passes, less so on a business-functional level. Simultaneously, negative aspects of being part of coworking communities is experienced. Working in coworking communities may lead to affect-based conflicts (e.g. conflicts about hygienic principles, being loud, respecting privacy) and can even lead to departures of members from the coworking space if difficult situations are not managed effectively by coworking space managers.

Regarding the mobilization of solidarity for entrepreneurs, results show that those who have not yet established themselves solidly in coworking networks have more problems in mobilizing solidarity. In these cases, the management of the coworking space is needed to facilitate this. As an example, one entrepreneur stated that in their coworking space were many start-ups in need of information about how to setup an online shop. With the help of the coworking space management, a tailor-made workshop was organized. When it comes to access to resources, most entrepreneurs expressed not to expect additional resources besides a basic social place to work, build, and test products. They do believe that being in coworking communities will facilitate finding leads to new employees, partners, or funding. For instance, several entrepreneurs mentioned to have received referrals from either the coworking

community or coworking staff to potential investors, potential employees, and new projects.

As far as management interventions that stimulate bonding social capital, the interviews revealed that emotional support is facilitated through access to a broad mix of individuals. Several entrepreneurs mentioned that the curation of the coworking community leads to a broad mix of people, which, in turn, is very beneficial because it often leads to useful and supportive conversations about commonly experienced problems.

“Some time ago I met a guy here who was making earphone plugs. Completely unrelated to what I do. I did not know how to file for a patent, and he completely helped me out because he had done it before. He told me what the cheapest way was and how to do it step by step. He had no interest in my business and just wanted to help me.” **Start-up in transportation services**

In all coworking spaces, the coworking staff also provided emotional support. One of the coworking space founders applies an open-door policy and welcomes entrepreneurs to walk in with any type of question. In other cases, coworking staff works amongst the coworking community, which generates a feeling of trust and assurance that there are people to help solve problems or to turn to for advice.

It is noteworthy that emotional support is also promoted through interventions that cross the boundaries of the coworking space. In one instance, a respondent expressed that the coworking space provided a reoccurring event called “office hours” in which personalized project management support was given by external specialists. Sharing of such knowledge and support also occurs when coworking staff members have links to corporate networks or other personal networks and display supportive attitudes. In the interviews respondents also mentioned that some coworking spaces facilitate access to specialized online platforms where entrepreneurs can turn to for help or advice.

Figure 19 displays the semantic linkages between the codes related to bonding social capital and coworking space interventions.

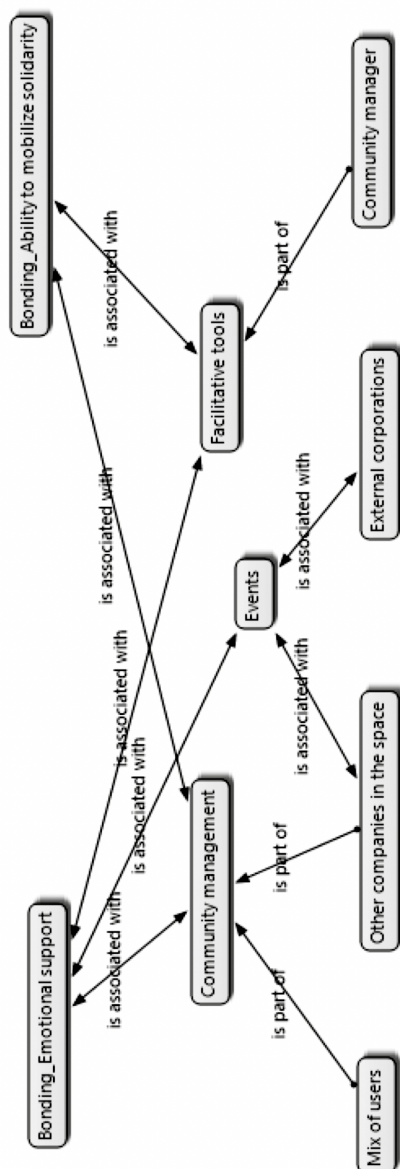


Figure 19 | Semantic linkages between bonding social capital constructs and coworking space interventions (Source: author)

5.3 | Social capital and performance

Entrepreneurs that use coworking spaces can expect a range of network performance benefits from being part of coworking communities. Most respondents mentioned performance results related to both bridging and bonding social capital. The performance benefits that occurred most were: exchanging knowledge, getting trusted feedback, discussing new ideas, getting leads to potential financial backers, and providing access to suppliers.

Having contact with entrepreneurs from different backgrounds stood out as potential moments to get new ideas, learn new things, or for refining business ideas. One entrepreneur who had vast experience in building data labs but did not have a clear business direction yet, took a turn to building data systems for vertical farming. He had done this because of discussing mutual opportunities with an in-house vertical farmer. Generally, entrepreneurs did not mind discussing opportunities, sharing knowledge, or giving feedback to others.

“When somebody helps me, I also want to give something back. In human relations there is an exchange of favors. I would love to say that I only help people because it makes me feel good and because I like it, but to be honest, I also expect that if I ever need something that that person would help me out. I know that if I help people as good as I can, that eventually it will come back to me.” **Start-up in vertical farming**

Additionally, entrepreneurs that play an active role in the coworking community (e.g. by being responsive in a timely and helpful manner to questions or requests) make a positive impression on coworking management and other firms. This leads to an overall feeling of good-will, emotional support and reciprocity from coworkers towards active members, should they request feedback or assistance.

For entrepreneurs that find themselves in early business development phases, a main concern is the need for financial backing. Regarding the search and acquisition of funds, none of the respondents had received financial investments from any party within a coworking space. However, most of them mentioned having received suggestions or leads to potential investors by the coworking space management staff. Self-employed workers or entrepreneurs in other business stages stated that there are many opportunities to exchange knowledge about how to manage growth. Even though firms in later business stages often have established their own external business and consultancy networks (both on and offline), coworking environments provide good additions to such networks.

When entrepreneurs have spent considerable time in a coworking space, the feeling of having access to emotional support increases. Several entrepreneurs revealed

that by being surrounded by other firms that have shown business success provides a feeling of trust and confidence when discussing growth issues (e.g. hiring staff, diversifying business, patent requests). Additionally, coworking spaces staffed by experienced management professionals who are willing to share knowledge provides growth firms potential access to emotional and practical support.

“X and Y are part of the management team of this coworking space and every time I have a question about my business, I search for them. I almost see them as my mentors. That’s what happens here. There are many people approaching them for help and advice. It is not their job, but they do it with pleasure.” **Owner of an internet services firm**

Providing entrepreneurs with access to a potential network of suppliers is an important contribution of coworking environments. However, the interviews revealed that such networks seem to play a more prominent role for start-ups than for more established firms or self-employed workers. In start-up stages, entrepreneurs rarely have the knowledge or experience about which suppliers to collaborate with. In such cases, coworking networks facilitate the search for and access to suppliers. However, for self-employed workers or mature firms, the focus goes further than just coworking communities. Coworking communities then become a “back-up” network of potential suppliers, which one can access with relative ease.

“I’m part of a national network that includes around 75 entrepreneurs. For instance, whenever I need an accountant, I mention that in the group. That works phenomenally. But if there is somebody within this coworking space that can help me out with something for a fair price, I will definitely make use of that.” **Owner of a video services firm**

Figure 20 displays the semantic linkages between the codes related to bridging / bonding social capital and performance indicators.

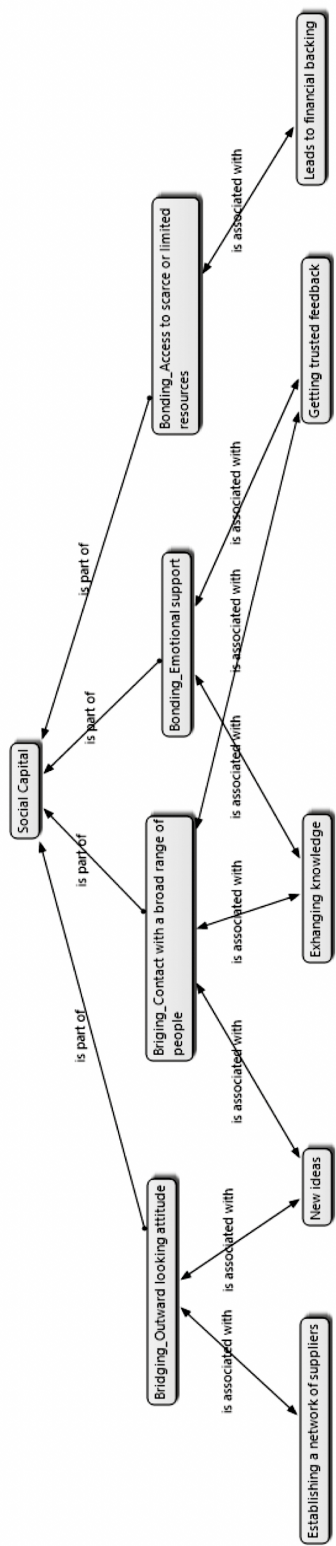


Figure 20 | Semantic linkages between social capital and performance (Source: author)

5.6 | Discussion

Coworking spaces are social office environments for entrepreneurs and the numbers of such spaces is showing a rapid increase across the world (Deskmag, 2019). One main reason why entrepreneurs choose to work in such spaces is the opportunity to have access to social networks (Spinuzzi, 2012). This study explored if and how these spaces stimulate entrepreneurs through social capital.

In keeping with previous studies on coworking space descriptions (Spinuzzi, 2012; Cabral and van Winden, 2016; Fuzi, 2016), this study included three management interventions that can explain the formation of social capital: physical characteristics, facilitative tools, and community management. In line with research on spatial design for interaction (e.g. Oksanen and Stahle, 2013; Pancholi et. al, 2015), the results confirmed that open workspaces and communal areas in coworking spaces stimulate social networking behavior. However, this study also revealed that within coworking communities, there are many entrepreneurs who have relatively low need for social space. Mostly, because they need to focus and/or are experiencing business growth and therefore need private space. It seems that if coworking spaces want to meet the wishes of these entrepreneurs, but at the same want to stimulate the sense of being part of the community, a careful design is paramount that promotes both space for production as well as space for social engagement (Williams, 2013).

Furthermore, studies on strategic management tools for interaction and collaboration amongst coworkers conducted by Capdevila (2013), Parrino (2013), Fuzi (2016), explain that facilitative tools are useful in promoting social structures within coworking contexts. The findings in this study are consistent with this view and demonstrate how facilitative tools contribute to social capital. Specifically, coworking spaces that issue regular invitations to firms and other stakeholders (in the form of open days, events, workshops) and organize social events involving management/community members, promote having contact with a broad range of people (bridging social capital). In addition, coworking spaces that can provide specialized workshops/consultation moments for self-employed workers or entrepreneurs who are in mature business stages, contribute in stimulating bonding social capital. Such tools in combination with involved coworking space staff create a form of emotional support that many entrepreneurs need.

Similarly, this research shows that the curation of communities fosters successful communication and community building (Boschma and Lambooy, 1999; Nooteboom, 2000; Spinuzzi, 2012). Regarding social capital formation, this study demonstrates that having a diverse pool of coworkers promotes bridging social capital by stimulating entrepreneurs to have contact with a broad range of people. Interestingly, having entrepreneurs that are in similar business stages favors ties getting stronger (bonding

social capital). Such weak ties are beneficial and show bonding characteristics because of the ability to exchange knowledge on shared experiences that traverse product or industry. This seems to be in line with the literature on homophily in social structures (McPherson et al., 2001).

The research model of this study analyzed performance benefits resulting from social structures in coworking spaces. Existing research on coworking spaces thus far has mostly focused on coworking spaces as a source for social interaction, increased productivity, and value creation (Gerdenitsch et al., 2016; Balakrishnan et al, 2016, Bueno et al, 2018, Bouncken et al., 2018). The findings of this study contribute to prior studies by demonstrating how social capital affects the performance of the entrepreneurs who are working in such environments. For entrepreneurs in start-up stages, coworking spaces provide settings that enhance knowledge exchange on how to build a business and where to find leads to investment opportunities. Noteworthy is that high levels of community involvement were associated with high levels of knowledge exchange. For self-employed workers and relatively mature firms, being part of coworking communities benefits them with respect to the exchange of knowledge on how to manage growth. However, for most of them no direct objective returns were expected. More importantly, the coworking community provided a pleasant work environment (often including strong ties), and access to supplemental back-up networks.

In addition, this study confirmed the indications provided by Davidsson and Honig (2003), who stated that as ventures progress there are different types of social capital needed. Entrepreneurs who were in start-up stages disclosed that family and friends play an important bonding role for entrepreneurs (Lerner and Malmendier, 2013). This study provides a new perspective by showing that in coworking environments, weak ties (such as other start-ups/firms in later stages/coworking management members) also have the potential to provide bonding roles. In coworking spaces such ties provide possibilities to exchange knowledge, give feedback on business ideas, and trusted feedback. In part, this is because coworking spaces offer conditions that stimulate learning, validating opportunities, and a “we are in this together” feeling amongst members. For entrepreneurs/SMEs in mature business stages there is a higher need for contractual and strategic relationships with suppliers and partners (Van de Ven et al., 1984). Mostly, these ties were sought for and found outside the coworking space.

The results of this study also provide indications that there are downsides to social capital (Waldinger, 1997; Portes, 2014). Social ties within coworking spaces that have yielded social capital in the past may not necessarily provide social capital in the future. Leenders and Gabbay (1999) call this “social liability”. Within coworking spaces, social capital translates into social liability in at least two ways. First,

establishing business ties with other coworkers may restrain an entrepreneur by limiting their resources to that specific tie, potentially discouraging that entrepreneur to form ties with alternative ties (Leenders and Gabbay, 1999). For example, a firm that has had a long-term relationship with a supplier within the same coworking space might be inhibited to search for alternative suppliers. Second, entrepreneurs sharing the same space with “negative ties”, might be unfavorably affected in their opportunities. For instance, coworkers who share space with other individuals who do not comply with basic coworking standards (e.g. hygienic principles, noise management, (dis)respecting privacy), might as a result be negatively affected by being affiliated with such negative ties. This seems to be in line with the idea that there is a dark side of entrepreneurship in coworking spaces (Bouncken et al., 2018).

Some other over-all patterns that emerged from the results are the following. Firstly, there is a perceivable link between actual time spent in the coworking space and the number of weak ties. In short, more time spent by workers in the coworking space results in a higher number of weak ties. Additionally, having active curation platforms in coworking spaces helps individual workers in expanding the number of weak ties more rapidly. Secondly, the longer individuals stay within a coworking space that includes curative platforms, the more coworking groups become cohesive. In such cases, weak ties tend to transform into strong ties, creating trust and its' associated bonding social capital.

This research has several implications. From a theoretical perspective, it contributes to the development of knowledge about the increasing value of coworking spaces. In addition, this study lays a foundation for research on the value of social capital in a relatively new context, namely, the coworking space. From a managerial perspective, this study highlights how the curation of spaces and application of management interventions can help to promote social capital and better conditions for people using or considering using coworking spaces.

5.7 | Limitations and future lines of research

The focus of this study was on the value of social capital dynamics within coworking spaces as one of the many resources for the performance of entrepreneurs. However, other forms of capital (financial, information, human, intellectual, etc.) are equally indispensable for entrepreneurs to thrive with their businesses. Therefore, it is encouraged to further investigate how coworking spaces stimulate the development of other forms of capital for its users.

In addition, this study looked at objective and subjective performance as a result of being involved in social structures in coworking spaces. The performance benefits

that were analyzed ranged from growth in sales; new projects; new employees, to new business contacts; new knowledge and/or ideas. However, for many socially- and sustainably driven firms there are alternative views on benefits. Such firms mostly strive to create social rather than financial value (Weber and Kratzer, 2010). Further research could consider measuring social and sustainability performance indicators in the context of coworking space environments.

Future studies should consider validating the conceptual model in order to improve the empirical reliability and validity. In addition, future studies should consider expanding the number of coworking spaces and sample size, in order to generalize the results.

5.8 | Concluding remarks

Exploring the value of coworking spaces as work environments that stimulate social capital is a relevant and current topic. However, to date, no research has been found that has specifically looked at coworking spaces in this context. This study has been an attempt to contribute to this field of knowledge. To explore how coworking spaces provide benefits to its users, this study proposed a framework that distinguished three types of interventions, i.e. physical characteristics, facilitative tools, and community management. The model also differentiated two types of social capital: bridging and bonding social capital.

The findings provide useful information for revealing how coworking spaces stimulate social interaction and social capital formation. Overall, this study confirms that coworking spaces are suitable places that ignite social interaction, stimulate exchange of knowledge, and provide leads to new opportunities. In this respect, coworking space managers, start-ups, self-employed workers, and SMEs can benefit from these findings and curate coworking spaces in such a way that promotes social capital formation.



CHAPTER SIX

‘The reaction of coworking spaces to the COVID-19 pandemic. A dynamic capabilities perspective.’

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Abstract

The COVID-19 pandemic has led to many firms reassessing how to deal with their communities. In this study we focus on a coworking space and examine how the management staff and its coworking community reacted to the pandemic. The uniqueness of coworking spaces is that the community is both the paying customer and it is an integral part of the coworking value proposition. For this paper a case study in Amsterdam was analyzed and the symbiotic relationship between the coworking space and one of its key resources (the community) was examined. We build on dynamic capabilities theory to identify the processes of how a firm and its community maneuver through the pandemic. We propose that in vibrant times, firms and communities should work in close alignment in order to sense, seize, and transform resources and opportunities.

Keywords: Dynamic capabilities, COVID-19, Coworking Spaces, Sensing, Seizing, Transforming

6.1 | Introduction

The COVID-19 pandemic is an unprecedented global crisis situation with severe impact on many organizations. Recent research finds that in the services sector many industries face enormous challenges and that the negative effects of the outbreak might last for years (Cameron and Morath 2021; Gia Hoang et al. 2021). Moreover, the pandemic has led to dramatic changes in how businesses act and consumers behave (Donthu and Gustafsson 2020). This paper analyses how the COVID-19 pandemic affects coworking spaces, a relatively recent social workplace concept that has proliferated in the last two decades.

The unique service of coworking spaces lays in the opportunities they provide for self-employed people and businesses to have access to flexible office space and simultaneously benefit from being embedded in coworking space communities (e.g., Moriset 2013; Gandini 2015). Whereas coworking spaces and embedded communities used to be location-bound in physical spaces, COVID-19 has forced their clientele to move into new hybrid (digital/physical) arenas. This paper examines how coworking spaces have reacted to the COVID-19 pandemic. For this, we apply dynamic capabilities (DC) theory, which is a frequently used lens in management research (Shilke et al. 2018). Helfat et al. (2009 p.1) describe DC as “..the capacity of an organization to purposefully create, extend, or modify its resource base.” Dynamic capabilities enable firms to address changing external and internal environments (Teece et al. 1997). The COVID-19 pandemic is an example of a sudden and radical change in the environment that has forced a rapid change in the conditions in which coworking spaces and communities were used to maneuver.

A coworking space presents an interesting case because due to COVID-19 the nature of the services that coworking spaces offer is changing. Around the world, their physical layout is being altered to accommodate fewer people, and the communities are partly shifted to digital realms. We are specifically interested in the response of the coworking community, i.e. the members/clients of the coworking space.

Despite the plethora of insights produced by DC research, there have not been studies that highlight the mechanisms of how firms that encounter themselves in vibrant environmental situations, manage key resources of which they only have partial control. In the case of coworking spaces, the community is a key resource and part of its value proposition (which, to some extent, can be controlled and can be called upon as a source of ideas and information) but also at the same time it is the coworking spaces' market and client (with uncontrolled market-based behavior that is influenced by many external factors). Even though there have been various studies that have looked at clients as a market-based source of information or innovation for firms (e.g. Payne et al., 2008; Kurtmollaiev et al., 2020), there have not been studies

that examined how firms deal with their resources (in this case the community) in situations of drastic change, and when there is only limited control. Thus, it is not obvious from prior research how DCs in newly emerged business contexts enable firms to identify opportunities, integrate and build resources, and reconfigure them when there are hybrid (firm-client) resources. To address this gap, we take a DC lens to explore how coworking spaces and communities reacted to COVID-19 and subsequently, how DCs evolve when they are not only situated in a firm but also in a community at large.

Our main research question is: **How did the dynamic capabilities of coworking spaces evolve in reacting to the COVID-19 pandemic?**

The nature of this research is exploratory. We adopted a case study approach to make an in-depth analysis of one coworking space in Amsterdam, the Netherlands: StartDock. We conducted expert interviews with the managers of StartDock, and with users/tenants. Moreover, we performed a content analysis of conversations among the coworkers, retrieved from a mobile chat application used by the tenants.

This paper provides an empirical and theoretical contribution to the literature. Empirically, it offers an analysis of how a specific type of organization, coworking spaces, have reacted to the COVID-19 crisis, from the lens of DC theory. Theoretically, this paper contributes to DC theory by further exploring the role of the user community in the firm's capacity to renew competencies so as to achieve congruence with the changing business environment. We explore in detail how the community, in an intricate interplay with the coworking space management staff, contributes to the three main process components of the DCs: sensing, seizing, and transforming (Teece 2007).

The paper is structured as follows. First, we discuss what coworking is. Second, we present a contextual situation of the coworking space industry in relationship to COVID-19. Third, we discuss dynamic capabilities. Next, we introduce our frame of analysis. Next, the StartDock case is analyzed through the DC lens of sensing, seizing, and transforming. Finally, a discussion is held and future lines of study are proposed.

6.2 | Literature review

6.2.1 | What are coworking spaces?

In recent years, there has been a rise in the number of coworking spaces (e.g., Gandini 2015). Coworking spaces can be defined as “collaboration-enhancing office environments where workers work next to other unaffiliated professionals for a fee”

(Spinuzzi 2012). Coworking spaces are becoming ubiquitous in many cities, especially in “creative cities” (Florida 2004). Coworking responds to changes in the labor market where many firms take more flexible approaches to where work can be performed (e.g., Felstead et al. 2003; Spinuzzi 2012). In parallel, there are more and more ‘digital workers’ who are not bounded by constraints of the traditional office. For many of such workers there is the need for office space whilst having access to social networks, since this can enhance their business performance (Burt 2004 2008). Coworking spaces are work environments that respond to such trends (Leclercq-Vandelannoitte and Isaac 2016). The opportunity to exchange knowledge, contacts, ideas, insights and industry information is the lure that attracts increasing numbers of people to coworking spaces. Spinuzzi (2012) examined coworking spaces in Austin, Texas, and detailed the following groups of coworking customers: owners of small businesses (often self-employed), business consultants, and people working on contract for larger companies. According to Salovaara (2015), the main benefits of working in a coworking space are: efficiency (productivity), communication, inventiveness, and being part of a community.

6.2.2 | Coworking spaces and COVID-19

COVID-19 has been an abrupt exogenous shock for societies and economies worldwide. Most actors central to shaping the economy would admit that the COVID-19 pandemic has been an unpredictable event of great significance and severe consequences that dramatically changes the political, social, and economic environment (Winston 2020; Cameron and Morath 2021). Likewise, coworking space managers experience COVID-19 as a disruptive, unexpected shock that has been impacting their business heavily. A survey amongst 14,000 coworking spaces in 172 countries revealed that shortly after the outbreak 72% of spaces had witnessed a significant drop in the number of people working from their space (Konya 2020). Also, 41% of coworking spaces experienced a negative impact on membership and contract renewals since the outbreak (Konya, 2020).

Events as COVID-19 evidently impact the competitive edge of firms and the service that they were used to provide (e.g., McKinsey 2021; Wang et al. 2021). Due to the COVID-19 pandemic, governments have forced many social spaces to rapidly adjust their spaces in line with regulations that stimulate social distancing, implying less people being physically present. Also, governments prohibit or dissuade the organization of social physical events where large groups of people gather together. Coworking spaces had to adjust to such imposed regulations, altering their model that always revolved around building communities based on physical proximity and interaction (e.g., Parrino 2015; Cabral and van Winden 2016; Spinuzzi et al. 2019). A clever adaptation of the coworking space business model and associated strategic choices (e.g., redefining the physical and digital realms) is fundamental to sustain

and guarantee a coworking space success, both during and after COVID-19. In this process, coworking space managers need to make judgments concerning current and future coworking space demand and responses associated with hybrid coworking space trajectories (hybrid forms of network infrastructure that includes both a physical environment and a virtual component (Sechi et al. 2012)), and also around the pay-offs from investments in new physical and digital assets and its effect on perceived coworking space communities. Adjusting the coworking space to an ecosystem that produces the necessary social services which are needed by coworkers, is crucial to overcome the detrimental effects of Covid-19 (Belso-Martínez et al. 2020)

The COVID-19 pandemic also presents opportunities for coworking spaces. Firstly, COVID-19 has instigated shifts in workplace arrangements, accelerating organizational developments towards short-time working, and flexibilization in work location and hours (e.g., Spurk and Straub 2020). Many firms see the crisis as an opportunity to economize on real estate, and in order to provide workplace solutions for employees who seek social work environments, some firms provide subscriptions at coworking spaces (Amsellem 2021), a concept that has been coined 'corpworking' (Golonka 2021). Second, the pandemic happened in a moment when there is ample technical infrastructure available; a variety of video conferencing tools already existed, and were rapidly improved to provide worldwide solutions for individuals and firms; e.g., platforms such as Skype, Whatsapp, MS Teams, Google Meets, Zoom. Considering that many activities (had to be) moved to the digital realm, the availability of such platforms provides opportunities to seek for its applicability to the coworking space model.

Recent industry reports and studies foresee growth opportunities for coworking spaces (e.g., Ceinar and Mariotti 2021). Coworking Resources (2020) estimates that the number of coworking spaces worldwide will pass 40,000 by 2024, up from 20,000 in 2020. Worktech academy (2020) expects that approximately five million people will be working from coworking spaces by 2024. Against this background, the dynamic capabilities of coworking spaces (which we describe in the next section) lay in the ability to sense and recognize opportunities and threats and make informed decisions about the path ahead. Over time, a successful coworking space will deploy new (hybrid) structures, assets, rules, and routines that are both profitable and provide sustainable community aspects to coworking space users.

6.2.3 | Dynamic capabilities

Dynamic capabilities (DC) refer to the ability of firms to sense, pursue, and reconfigure opportunities and resources in response to quickly shifting environmental situations (Teece et al. 1997). DC has been defined as "the capacity to renew competencies so

as to achieve congruence with the changing business environment..." by "...adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies." (Teece et al. 1997 p.515). DC allow firms to create new products and processes and respond to changing market circumstances (Teece and Pisano 1994). In essence, a dynamic capability can be described as a systematic means that entails the capacity to carry out activities in a practiced and patterned manner in order to deal with change (Shilke et al. 2018).

According to the DC literature, successful firms are the ones that have the dynamic capabilities to adapt current routines (Ludwig and Pemberton 2011). Successful organizations are able to purposefully adapt a resource base in order to better deal with external challenges. Even though there are different views on whether DC directly affects the success of firms or whether it is how a firm 'uses' dynamic capabilities, there is wide agreement that improving DC of firms in order better deal with changes coming from both inside and outside a firm, positively influences firm performance (Drnevich and Kriauciunas 2011).

Eisenhardt and Martin (2000) discuss that even if firms have appropriate resources, competitive advantage will not be sustainable if firms do not have the processes necessary to identify and reconfigure resources to pursue new opportunities and adapt to shifting environments. From the point of view of DC, these processes comprise three main components: sensing, seizing, and transforming (Teece 2007). These capabilities enable firms to identify (sense) opportunities, integrate and build (seize) resources, and reconfigure (transform) resources in order to deal with external threats or exploit market opportunities (Winter 2003).

The DC literature recognizes that that capabilities related to such processes do not only derive from a firm's own asset base (Eisenhardt and Martin, 2000; Augier and Teece, 2009), but also from external actors such as clients or stakeholders (Kurtmollaiev, 2020). This resonates with concepts from strategic marketing and innovation literature such as crowdsourcing (Schenk and Guittard, 2011), service co-creation (e.g. Grönroos and Voima, 2013), and open innovation (Chesbrough, 2003), that all acknowledge that resources, ideas, and innovation often emerge in the interplay between firm-internal resources and communities of users.

Relatively few attempts have been made in the DC literature to further elaborate and scrutinize how the three specific DCs process (sensing, seizing and transforming) play out in the interaction between the firms and its user community. Coworking spaces are a good setting to explore this, as the coworking community is a key element in their value proposition. When it comes to identifying opportunities, integrating them, and reconfiguring parts of the coworking model, DC literature has not yet delineated the role of a community as a resource in such newly emerged working contexts.

Especially in crisis situations when there is only limited control of a resource. In the next part, we revisit three process components (sensing, seizing, and transforming) as defined by Teece (2007) applied to the coworking context.

Sensing Due to the COVID-19 pandemic, consumer behavior, consumer needs, and consumer segments of coworking spaces, showed drastic changes (Konya 2020). For coworking spaces to be aware of these changes, Teece (2007) describes the DC process of sensing as an activity related to identifying new opportunities and threats by scanning, creating, learning, and interpreting the environment. Therefore, to recognize opportunities, coworking spaces must constantly examine technologies and markets. This involves understanding customer needs and technological possibilities, but also the evolution of industries and markets. In sum, the process of sensing involves identifying opportunities and threats, and passing on the information to those who are able to make sense of it.

Seizing Teece (2007) states that once a new opportunity is sensed, it must be tapped into through new products or services. The process of addressing such opportunities by investing, developing, and commercializing activities is defined as seizing. Seizing opportunities and investing in activities to address changes that resulted from the COVID-19 pandemic, require strategic choices. And just as any other strategy, it encompasses uncertainties due to unsure market acceptance. Therefore, in this phase it is important for coworking spaces to create a business model that demonstrates where its commercial and investment priorities lie. Investment often involves committing (financial) resources based on assumed (incomplete) information about the technological and marketplace future. The tasks for coworking space managers is to make judgments in uncertain circumstances around future demand and coworking community responses. In doing so, coworking space owners/managers need to take into account the pay-offs from making investments in (in)tangible assets.

Transforming Teece (2007) describes that the successful identification of technological and market opportunities, the development of new business models, and the dedication of resources to investment opportunities, can cause a firm to grow and become profitable. In order for coworking spaces to ensure profitable growth, it is important to recombine and to reconfigure assets as the coworking space grows. Transformation is needed to maintain evolutionary fitness (Wilden et al. 2013). To increase the likelihood of successful transformation Teece (2007) suggests that firms should have decentralized structures for the purpose of flexibility and quick responsiveness towards consumers. Teece (1986) also introduces 'cospecialization' for successful firm transformation processes. Cospecialisation relates to continuous realignment between strategy, structure, and processes within firms.

Table 8 synthesizes the Dynamic capabilities process components as defined by Teece (2007), as well as the descriptions, and examples of firm dynamic capabilities.

Table 8 | DC process components, description, and examples of dynamic capabilities
(Source: author)

Process component	Description	Examples of dynamic capabilities
Sensing	The process of identifying new opportunities and threats by scanning, creating, learning, and interpreting the environment (Teece 2007).	Processes to identify target segments and changing customer needs; processes to tap into developments and technology; processes to tap into supplier and complementor developments.
Seizing	The process of addressing opportunities by investing, developing, and commercializing activities (Teece 2007).	Selecting target customers; designing mechanisms to capture value; designing revenue structures; assessing appropriability; demonstrating leadership; recognizing values and culture.
Transforming	Reconfiguring a firm's asset structure, in order to accomplish the necessary internal and external transformation (Teece et al. 1997).	Integration and coordination skills; knowledge transfer skills; managing strategic fit amongst assets; incentive alignment across various parties.

6.2.4 | Frame of analysis

We focus on the question on how the dynamic capabilities of coworking spaces have played out and evolved in responding to the COVID-19 pandemic. We build on the three processes components as described by Teece (2007): sensing, seizing, and transforming. Based on insights from DC literature, and recent studies on the impact of COVID-19, we identify potential threats, opportunities, and strategic issues that are relevant for coworking spaces. Figure 21 shows our frame of analysis.

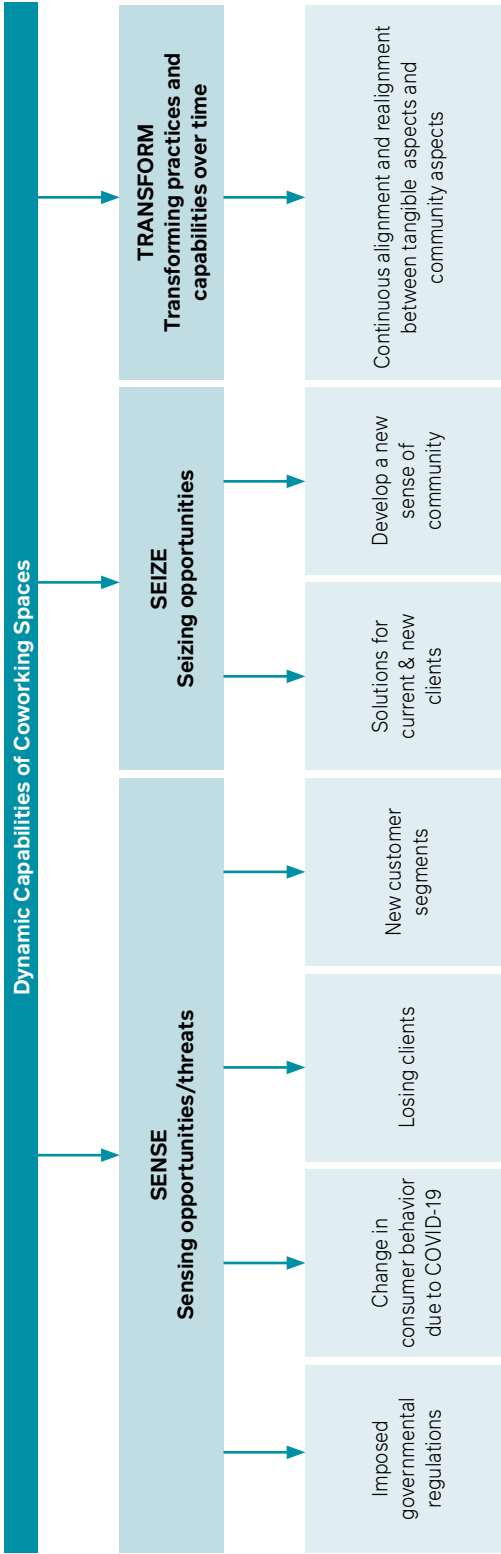


Figure 21 | Frame of analysis (Source: author. Adapted from Teece 2018)

6.3 | Research Setting, and Methodology

6.3.1 | Setting

Our research was conducted at StartDock, a coworking space in the center of Amsterdam, the Netherlands. StartDock embodies the typical aspects of coworking spaces, offering a flexible office concept including a variety of network-enhancing activities and facilities for entrepreneurs and independent workers. StartDock was launched in 2016 by 5 young entrepreneurs that looked for proper office space, and were interested in being with other start-ups, to share physical resources, knowledge and ideas. The founders started to run a 300m² coworking space. The vision of StartDock is providing workspaces, but also to facilitate co-creative communities based on the principles of “joint growth, friendship, and entrepreneurship” (Startdock.nl 2020). By 2020, StartDock had grown to two locations in Amsterdam, and one in Rotterdam. It now offers various types of office spaces, business and social events, and a coworking community. In 2018, StartDock was awarded “the best coworking space of Amsterdam” at the Coworker Members’ Choice Awards (CMCA) (a global coworking industry competition to recognize the top coworking spaces in each city). StartDock embodies the typical aspects of coworking spaces, offering a flexible office concept including a variety of network-enhancing activities and facilities for entrepreneurs and independent workers.

6.3.2 | Methodology

Qualitative data was collected through semi-structured interviews. We conducted two in-depth semi-structured interviews with one of the owners and the community manager of StartDock. The choice was made to interview only one of the owners and not all five, since this would lead to data saturation. By interviewing both an owner and a community manager, we aimed at getting insights regarding 1) strategic choices made by the coworking space in dealing with COVID-19 and 2) StartDocks’ point of view as far as the reaction of the coworking community to the pandemic. In the interviews we discussed how the COVID-19 pandemic impacted the coworking space, and how attempts were made to rebalance the coworking space. In addition, to have the perspective of one of the key resources of the coworking space (i.e., the coworking community), we conducted interviews with 5 tenants (owners of start-ups, self-employed workers, employed workers). In these interviews we examined how the users of the coworking space experience the impact of COVID-19 on coworking. At the time of selecting the respondents and planning the interviews, the researchers faced the situation of very few coworkers working at StartDock, mainly due to governmental advice to stay at home as much as possible. However, in order to include this data source and to assure diversity in views on the impact of COVID-19 on coworking, we interviewed coworkers who still decided to work at StartDock and

were willing to cooperate, but also found a coworker who decided to work from home. All interviews lasted between 15 and 30 minutes.

Furthermore, we had access to unique and first-hand data from a mobile chat application used by the members, that contains short conversations, mostly informal, in which about 125 members react to events (both external and internal to the coworking space), share experiences, and exchange ideas and suggestions. This data offers unmediated access to the reactions, emotions and behaviors of the coworking space community regarding the pandemic. Table 9 displays the different data sources.

Data of the interviews and of the chat application was analysed by using Atlas.ti. This analytical tool was selected since it allows for the uncovering and systematically analysing phenomena hidden in text (Silver and Lewins 2014). This was particularly relevant when analysing how the coworking space and users/tenants are dealing with and reacting to COVID-19. Codes were developed a priori involving the three DC process components and coworking themes that resulted from the literature review. During data analysis, the list of codes was expanded with posteriori codes. Examples of emerged codes include: 'home delivery stations', 'registration of users', 'financial impact', 'digital couponing service', and 'need for community'. The next step was analyzing quotations per DC component and examine the associated emerged codes.

Besides the different data sources, one of the authors gained additional knowledge about this co-working space: in the 12 months prior to the pandemic, for the purpose of another study, he worked at StartDock for 1 day per week, interacted with the member community and the owners/managers, and attended workshops and other common activities. Also during the first months of the pandemic the researcher continued being a member at StartDock. This helped to understand and interpret how the coworking space changed after the pandemic broke out. Moreover, being a member facilitated getting access to respondents, as well as having access to internal websites (such as the event webpage and community webpage which were consulted on a continuous basis), and the chat application tool.

Table 9 | Overview of the different data sources (Source: author)

Key informant	Type of source	Source description	Description of data
Community Manager	Semi-structured interview	2 years active as community manager and responsible for day to day community management, on-boarding, and organization of events	Interview audiotaped at StartDock on 18 September 2020.
Co-founder	Semi-structured interview	One of the 5 original co-founders and responsible for business development.	Interview audiotaped at StartDock on 18 September 2020.
Tenant 1	Semi-structured interview	Employed worker in education: joined StartDock during Covid-19. Uses a flex-desk.	Interview audiotaped at StartDock on 10 December 2020.
Tenant 2	Semi-structured interview	Self-employed: Owner of an E-commerce shop. Has been working at Startdock for the past three years. Uses a flex-desk.	Interview audiotaped at StartDock on 10 December 2020.
Tenant 3	Semi-structured interview	Startup: CEO/owner of a marketing services provider. Has been working at Startdock for the past two years. Has a private office with 3 employees.	Interview audiotaped at StartDock on 17 December 2020.
Tenant 4	Semi-structured interview	Employed worker in software development. Joined StartDock several months before Covid-19. Uses a flex-desk.	Interview audiotaped at StartDock on 7 January 2021.
Tenant 5	Semi-structured interview	Self-employed: Service designer. Has been working at Startdock for the past 18 months. Has a private office.	Skype interview recorded (audio) on 11 January 2021.
Mobile chat application	Content analysis	Digital messaging service with approx. 125 members	Content analysis of 1,548 texts lines in the period 03-2020 until 09-2020
Researcher	Direct observation	Continuous observation by the researcher at the workspace, and during (online) events.	Approx. 240 hours presence at the premises before, and during the pandemic.

6.4 | Results

This section describes how StartDock developed and used dynamic capabilities to create a responsive approach during the COVID-19 pandemic. The case study narrative is organized into three phases to describe the processes involved in the reaction to COVID-19: sensing, seizing, and transforming (Teece 2007). The analysis of our data analysis is summarized in Table 10. Table 11 synthesizes and visualizes the most prominent changes in the configuration of the coworking space as a result of COVID-19.

6.4.1 | Sensing opportunities and threats

The immediate impact of the COVID-19 pandemic on StartDock, was related to national governmental regulations that were aimed at social distancing and at dissuading social gatherings. StartDock's staff had to consider how to reorganize the space layout. As far as the office configuration, before the pandemic there were two types of workspaces: offices (mostly rented by SMEs) and flexible workspaces (mostly rented by individual entrepreneurs and self-employed people who enjoy the flexibility in workplace and time). In addition, there were communal spaces, i.e., places where people could gather, have lunch, or which could be hired for events by the coworking space community or by externals. In deciding how to reorganize the space, the most important implication of the regulations was to respect 1.5 meter social distancing. This meant that, mainly in the flexible work areas, StartDock could provide less work desks, which, in turn, meant that less tenants could be accommodated simultaneously.

Considering that social gatherings had always been a key pillar of StartDock, the community manager quickly started to consider alternatives of how to provide viable substitutes and evaluate those amongst the community. Close contact with the community and the possibility to run pilots allowed for detecting alternative means to continue providing formal and informal events.

An observed effect of COVID-19 was that it instigated a shift in consumer work patterns. The StartDock management noticed that more and more tenants started to work from home, mostly to avoid social contacts. In parallel, workers moved to the digital realm to sustain their social contacts. In order to remain in touch with the community that was not physically present anymore, the community manager played an important role in assessing community needs. On the one hand, she held many talks with the community in order to collect opinions, and to examine the well-being amongst the community. On the other hand, the availability of a mobile chat application, on which most community members are present, provided valuable information and enabled getting indications on current issues amongst the community.

One of the consequences of the pandemic was that various tenants wanted to discontinue renting a desk because they were not (able or willing to) using it anymore. To address this threat, StartDock started assessing how to extend the coworking space into the homes of the tenants. The next step for StartDock was the development of a viable solution that continued providing basic office amenities to the tenants and by doing so, continued delivering a core StartDock promise (office amenities).

The COVID-19 crisis also had a harsh financial impact on (many) tenants. For them, company survival was a key priority, which for some entailed that it became harder (and sometimes not equitable) to continue renting a desk. Considering the fact that in the past StartDock had always aimed at having diverse community (including having tenants from financial and legal backgrounds), the StartDock staff and the community started assessing if and how such community members could be helped in times of crisis. The variety of financial and legal knowledge available in the community in combination with the availability of digital platforms to convey support, generated opportunities to provide aid, guidance, support, and sustain such tenants.

During the COVID-19 pandemic, the staff of StartDock also sensed that on the long run, an increasing need from corporates started arising to hire desks at coworking spaces. One of the ways that this was sensed resulted from the variety of established contacts of staff members with external parties (who often hire event spaces, or provide workshops to the community). From a corporate firm perspective, one of the arguments to rent a workspace at StartDock is that employees can be close to sources of innovation, which are embedded in the many start-ups that are available. For firms, an additional argument that emerged during COVID-19, was that coworking spaces provide a good alternative for workers who (partly) reduced on commuting but still desired a social working space close their homes.

“We increasingly see that people working for large firms want to work closer to home. As a result, there are firms that provide a type of pass that allows employees to work from a coworking space near home. This provides benefits for both the employees, such as, less travel time and more effective working hours, while firms can reduce on office space. At StartDock we will have to see how to deal with this.” **Co-founder**

Even though the flexibility in organizing the space for such cases in combination with the financial attractiveness, a next step for StartDock is to consider whether this fits the StartDock principle that was always aimed at independent workers or small-sized companies.

In sum, sensing opportunities and threats was a process in which there was close alignment between StartDock and the StartDock community. In this process, the

community functioned as an important 'sensing device' for the management of StartDock.

6.4.2 | Seizing opportunities

In adjusting the physical space, a key issue for StartDock was to ensure that current clients have a place to work whilst taking into account the social distancing measures and the physical boundaries of the coworking space. In order to deal with this, StartDock organized talks and surveys among its user community to assess the 'modifiability' (i.e., the flexibility of the space to support a versatile range of activities and collaborative ways of working) of the coworking space. In close collaboration with the community, it learned how to transform the available communal and event spaces into workspaces (which were hardly being used as a result of the pandemic), in order to continue delivering the required work spaces to tenants. Also, in order to have a systematic overview of available spaces, StartDock put a technological reservation system in place (showing which desks are available and which ones are occupied by whom).

To further service the tenants during COVID-19, StartDock started a home delivery service of workstations. This ensured that tenants who were not willing or able to go to StartDock, could continue their business whilst having basic office amenities. In a period where many tenants were considering cancelling their contracts, this service aimed retaining such clients.

"Tomorrow the StartDock team will help you to create a temporary ergonomic workplace at home, with your StartDock furniture! We can come and bring your StartDock-desk, StartDock-chair and/or StartDock-screen to your house. Obviously we also foresee that we can keep working from the StartDock-buildings, but with a lower frequency and high level of caution. The StartDock team is working on a process to further lower the risks of contamination within our premises. Would you like to get your inventory delivered at home by the StartDock team? Please complete this link: X. Team StartDock." **Announcement by StartDock in the mobile chat application.**

A condition to receive the workstations was to remain a member of the coworking space during the period of working from home. Around seven percent of the tenants made use of this service.

Regarding the events, StartDock adjusted the organizational approach during the pandemic. In the physical realm, StartDock still continued organizing a limited number of events under the condition that social distancing rules were met, i.e., only a limited amount of people attending the events, and 1.5m distance between people should be guaranteed. To organize this, StartDock implemented a registration platform with a

'first-come-first-serve' principle. In the digital realm, in the early days of the pandemic, StartDock organized a few informal events, but these efforts were unsuccessful: participation was limited. By contrast, formal events turned out to be better transferable to the digital realm. Throughout the entire pandemic, StartDock maintained a weekly offering of online formal events on business- and non-business related themes. The COVID-19 situation stimulated and accelerated this new means to be perfected and professionalized, and StartDock also managed to reach bigger audiences. Most events used to be offered only to the StartDock community, but increasingly such events were also streamed through publicly accessible platforms to non-community segments.

In all decisions, a key concern for StartDock was how to sustain or develop a new sense of community in a situation when people are not physically present at the coworking space. For this, StartDock took various decisions. First, it included the community in the building of the online coupon marketplace: 'CollabNow', an online marketplace where every member of the StartDock community has the opportunity to offer services with a discount. A main objective of this platform is to financially support the tenants. However, it also had as a by-product the emergence of a community-feeling amongst all people involved in building it.

"Although we were working from home more, I did get to know the StartDock team and some other people a lot better because I helped them with CollabNow. Through CollabNow everybody was doing a lot of positive things. This enhanced the StartDock experience and brought a lot of good energy into the group. Something that is really needed in these unusual times." **Tenant 5**

Second, StartDock started making communities tangible through increased physical and digital visualization of the community (pictures, testimonials and the like) to endorse a sense of community. Third, StartDock optimized the event platforms to enhance a community feeling and to increase the possibility of online interaction between tenants.

On top of the above-mentioned decisions to promote community, the mobile chat application also was a platform that enabled the enhancement of a community feeling. On the platform a variety of initiatives emerged by the community itself. These were mostly voluntary initiatives related to the offering of skill-based services (e.g., marketing, finance, or legal advice in dealing with COVID-19). In general, in the chat application it seemed that an empathetic stance within the community was recognized based on a "we are in this together"- feeling.

"Fellow Dockers, In the last few days I have been setting up an initiative to help entrepreneurs like you. For this reason we founded hulpisonderweg.com (hulpisonitsway.com) completely selflessly and without a commercial agenda.

Marketers with a good heart who want to help, can post an offer to help entrepreneurs in need. Companies with an issue can place a call or make use of an offer on this platform. In addition, StartDock is an ambassador of #hulpisonderweg for both Flanders and the Netherlands because helping each other knows no boundaries.” **Post by a community member in the mobile chat application.**

To sum up, the activities that were executed by StartDock in this phase happened in close involvement and coordination with the community, which helped StartDock making informed strategic decisions.

6.4.3 | Transforming practices over time

To sustain profitable growth, transformation is needed to maintain evolutionary fitness. For StartDock, a key to sustained profitable growth is the ability to recombine and to reconfigure assets and structures as the coworking market evolves. Even though it is too soon to assess this, we observed a number of developments.

During COVID-19 the labor market showed many changes in working behavior (e.g., increased remote working, increased usage of video conferencing platforms etc.). There are various indications that post-Covid-19 many of these changes will remain. It is likely that also StartDocks' clients will continue working in hybrid forms (partly from the coworking space/partly somewhere else/partly in the digital realm). This means that StartDock can examine more flexible approaches towards a (hybrid) offering of the coworking promise as a whole.

StartDock gained vast experience in the management of the workspace by implementing a workplace reservation system. For StartDock the system gave market insights regarding which tenants used the coworking space and when. For tenants such insights might be valuable since it provides an overview of which knowledge at which moments is available at the coworking space. Also, by adopting the home delivery service, StartDock experienced the effect of expanding the coworking space into the homes of tenants. The result was sustaining clients and providing flexibility in workplace location for the tenants. On the long run, StartDock might investigate cospecializing, i.e., investigating both the reservation system and the home delivery system; the complementary value of these assets in conjunction might be value enhancing for StartDock and the tenants.

When it comes to offering online events, the production and organization thereof was lifted to a new level during COVID-19. Compared to the period before COVID-19, StartDock had little experience with online events (yet, vast experience in organizing offline events). Now, StartDock developed skills and experience in delivering off- and online events in parallel. The participants responsible for delivering such

events (event manager, community manager, interns) gained experience in using new methods and ways of organizing the events and service provision. A next step for StartDock might be developing further integration capabilities to sustain such offering and evaluate control and performance systems to increase effectiveness on the long run.

“Well, we definitely want to keep offering the online events. This way we can appeal to a larger target group than just the people who are physically present here (at StartDock).”

Community Manager

A key topic for StartDock in the coming period is restoring a sense of community. During COVID-19 it was identified that it was challenging for StartDock to deliver community aspects. Social encountering was more difficult, whilst from the tenants side there continued to be a vivid desire for community, fed by both social and economic needs. When looking at the future design of the physical space, StartDock has to await what governments will allow in terms of social distancing.

As far as desk layout, StartDock has solutions to accommodate more tenants in one space (and thereby increasing chances of social interaction), by having f.i. see-through screens between the desks. However, according to StartDock, this is at odds with the concept of ‘coworking’. As far as the communal areas, StartDock got confirmed during the pandemic how important such spaces are in promoting serendipitous encounters between tenants. When allowed, StartDock will restore the communal spaces from work areas to social areas. Key capabilities in this lay in both the learning of how space impacts community feeling as well as the knowledge-transfer thereof to current and future StartDock staff members.

“Well we are back to the cubicle principle now. It is feels very isolated, yet, for me that works right now because I need to call a lot so that gives me more privacy. So in the future you could dedicate a floor for those people needing more privacy and one floor just open-plan. That’s where I see it going.” **Tenant 5**

As far as the digital space, it became clear that it provides a relevant and sufficient alternative to physical settings. However, StartDock realized that a downside of online events is that in online environments interpersonal engagement and informal interaction is not promoted, which is important to sustain a community feeling. During online events it has been a challenge to organize smooth transitions between formal events and informal social ‘after-events’. In offline settings this used to be easily organized by StartDock, which commonly stimulated social bonding. StartDock also realized that in the online sphere there are still undefined social norms on how to behave during online events (e.g., how to use a camera and/or microphone; how to behave once an event has ended). This often leads to decreased levels of social


engagement compared to offline events. When the objective is building (online) communities and promoting online interaction, coworking spaces might examine ways to improve levels of social presence, which can be fostered by, for instance, considering characteristics of the coworkers. This implies that organizing digital events should come with new under-explored mechanisms that are preferred by users and also promote community-building.

Table 10 | Three DC process components, key issues, dynamic capabilities, and representative quotations from the StartDock case. (Source: author)

DC process	Key issues	Dynamic capabilities	Representative quotations
Sensing	Need for change in office layout to meet social distancing	Sensing and shaping the modifiability of the physical space	"We would like to know how you experience the various facilities, hospitality and activities within the StartDock community! We would also like to know how you are doing in this strange period and what you think of StartDock's approach to the corona measures. We've made small customer satisfaction survey and hope that you're willing to fill it out." (Announcement by StartDock in the mobile chat application)
	No physical social gatherings/events	Considering alternatives, learning, and evaluating amongst the coworking community	"When COVID-19 hit us, me and two colleagues of which one is an event host, started working on a more professional approach towards organizing online events. We tried various events and by receiving continuous feedback of our members, we really able to improve it." (Community manager)
	Change in consumer behavior (working remotely, increasing online presence)	The role of the community manager in assessing customer needs	"What we are really strong at is at having conversations with our members. Since COVID-19 we really put a lot of effort into that, and that really saved us from getting the worst of this whole situation." (Community manager)
	Losing clients	Processes available to mitigate risks (knowledge available in the community; support platforms)	"Let's take care of each other, share knowledge and expertise and help the ones that need this most. The StartDock team would like to setup groups. First online (right now), later offline (after the threat) to share best practices, links, ideas, company-measures to survive in case of emergency and governmental regulations concerning this outbreak." (Announcement by StartDock in the mobile chat application)
	New customer segments	Ties with externals	"We are in touch with many corporations. And what we see is that employees are working more from home and want to work closer to home. If people commute less they can have more effective working hours. We might be a solution for such workers." (Co-founder)

DC process		Key issues	Dynamic capabilities	Representative quotations
Seizing		Reconfiguration of the physical space (layout; reservation system; home delivery service)	Recognizing client needs vs. economic trade-off; demonstrating leadership	"We made a responsible decision and that is to keep delivering workplaces to our clients. Adjusting the communal areas might mean that there will be temporarily less 'coworking' ". (Co-founder)
		Professionalization of online platforms for events	Selecting technology and product architecture; assessing appropriability; and target customers	"The online formal events are actually still good for the exchange of ideas and knowledge. That goes pretty well online with small groups. You just don't hang out afterwards. That is what you miss now. Online you get to the point and you just want to finish the call." (Tenant 3)
		Building a coupon service	Designing revenue architectures to help and sustain clients	"The upcoming months are nothing like we have ever experienced before. We wouldn't be us if we didn't try and do something about it. We are a community of almost four hundred young entrepreneurs and small companies. We sell coupons for our services, with a discount, to use at any time in the future. It is the support-your-locals-movement for entrepreneurs." (CollabNow website "Our story")
		Develop a new sense of community	Including the community in coworking space initiatives; visualizing community; availability of platforms that enable community initiatives from within the community	"A: We can probably all use some extra help right now. For that reason I created an online version of 'Wants & Haves'. I made this in (Platform X), but I'm sure that someone else might think of a better solution for this. B: Such a great initiative! Yes, we can combine it with the idea of X! C: This is really impressive! Nice thinking outside of the box!" (Interaction on the mobile chat application)
Transforming		Hybrid offering of office space and events	Developing integration skills; Examining co-specialization	"The market is showing a lot of changes. But during COVID-19 we developed a lot of experience. For instance in providing online events. We can now host an event and stream it live at the same time." (Co-founder)
		Rebuild community	Learning; knowledge transfer; developing online community building mechanisms	"During online events people can do just something else. They can just switch of their camera during a presentation, which is not nice for the speaker. I think that in this particular aspect you do not create a community feeling. We need to find ways to get the community feeling back, but this is difficult." (Community manager)

Table 11 | Adaptation of the physical and digital space. (Source: author. Screenshots made from the StartDock community webpage. Pictures taken by the author).

Space type	Before COVID-19	Since COVID-19	Impressions
Physical space	<ul style="list-style-type: none">- Optimization of office space in order to fit as many individuals and small firms as possible. Designed to entice interaction.- Event rooms used both by internals and externals.- Socially-oriented lunch and meeting areas- Informal offline events in communal spaces- Formal offline events in event areas and communal spaces	<ul style="list-style-type: none">- Limited number of desks restricting the number of people using the space.- Event rooms transformed into offices to accommodate existing clients.- Lunch areas with smaller tables servicing smaller numbers of people.- Meeting areas with restrictions.- Home delivery service of work stations- Formal and informal events with restrictions (limited number of people, registration, occasionally with participation fees)- Increased visualization of the coworking community	 <p>Communal space</p>  <p>Social event</p>  <p>Workspace</p>  <p>Adjusted Communal space</p>  <p>Event space used as workspace</p>  <p>Workspaces with reduced spots</p>
Digital space	<ul style="list-style-type: none">- Community webpage- Limited number of formal events- No online social events	<ul style="list-style-type: none">- Professionalization of online formal events- Offline events also offered digitally- Online events go beyond coworking community borders and include externals through public streaming services- Limited social events online- Digital coupon service 'CollabNow'	 <p>Community webpage</p>  <p>Formal event on the event page</p>  <p>CollabNow</p>

6.5 | Discussion, conclusion, and limitations

COVID-19 is having a deep (and probably lasting) impact on work practices and office locations. In this paper we examined how the pandemic affected a coworking space, a flexible office concept that is often associated with 'coworking communities' and which has become ubiquitous in the last decade. A unique aspect of coworking spaces is that the paying customer (the person hiring a desk at the coworking space) is also a key resource of the coworking space; coworking communities are an integral part of the value propositions of coworking spaces. We analyzed the reaction of coworking spaces to the pandemic from the lens of DC theory, studying how the three key process components (sensing, seizing and transformation) shaped the response of coworking spaces to the crisis.

Our case study convincingly shows that sensing, seizing, and transforming capabilities are not only situated within the management of the organization, but play out in close alignment with the user community, that acted as key resource notably in the sensing and seizing processes.

With regard to sensing, the coworking community acted as a crucial sensing device for the management to understand what the emerging threats of the crisis were, and how they would play out. This seems to be in line with the concept of crowdsourcing or service co-creation (Schenk and Guittard, 2011; Grönroos and Voima, 2013), where the management staff can obtain ideas from an evolving group of customers. The community played a crucial role for the coworking space to rapidly discover, test, and validate new opportunities. More specifically, the community provided continuous input regarding alternative uses of the spaces and the development of new virtual concepts that could partially substitute for physical interaction. Through surveying and provoking community feedback, StartDock sensed how the physical space could best be used in dealing with safety regulations. Based on iterative feedback loops and close alignment with the community, it became clear that by using communal and event spaces as workplaces, there was a trade-off between being able to deliver the promised workplaces to clients versus an associated negative impact on community feeling and a possible miss of revenue streams.

When it comes to seizing opportunities, again there was a dense interplay between management and community; in fact, many of the new investments that sustained the coworking space were initiated and implemented by the user community rather than by the management. It was the close reciprocal relationship between the management staff and the community, and in parallel, the openness for community ideas that facilitated such processes. In this, a key stance for StartDock was to permanently have a tenant-centric orientation, which proved critical in garnering loyalty and commitment towards the community (Spinuzzi et al. 2019). Evidently,

StartDock had a strong business interest in investing in new structures and architectures that would keep clients on board and feed the community. The coupon service, for example, helped to address the threat of losing clients who were at the verge of going bankrupt (because for many start-ups during the crisis there was a reduced need for their services). However, the collective and inclusive approach to dealing with the pandemic, led to various investments that contained mutual benefits.

Other parts of the trial-by-doing activities were more directed to the transformation of StartDocks' capabilities across settings and time. The tools for the delivering and evaluation of online events were continuously developed for both formal and informal settings, gradually increasing the knowledge needed to successfully develop this service across time. Event after event, the event- and community managers learned more about a number of important barriers and enablers that require attention, as well as about the social norms needed to stimulate social interaction. Indeed, this is still a relatively under-studied phenomenon, but this is not to say that StartDock hasn't developed basic skills and knowledge in order to improve this over time. The continuous trial-and-error of events and continuous interaction with the community, both physically as well as through the mobile chat application has turned out to be important providers of information, while at the same time it has been a way to include the community in all the transformative steps during the pandemic. This seems to indicate that including the community in transformation processes may lead to customer loyalty and engagement as important by-products (De Vreede et al., 2013).

From the outset, the StartDock management staff is aware that the community are not only paying clients but also constitute a fundamental component of the product/service that they offer. As such, part of StartDock's dynamic competence is situated within the community. A key concern of both the management and the coworking space members in reacting to the pandemic was "How to sustain a sense of community?"

On top of the many efforts by StartDock to enhance a community feeling during the pandemic (e.g., by organizing formal and informal digital events), the community itself started to unveil a strong desire for community. In the mobile chat application a cornucopia of community-enhancing initiatives were revealed, especially in the first months of the pandemic. Remarkably, in a period of a few weeks the organization of community-enhancing initiatives expanded from StartDock staff assisting tenants, to tenants helping other tenants, to tenants helping the coworking space staff in return. In general, it seemed that at StartDock such reciprocal behavior is recognized, and as a result, different forms of community involvement are expressed. The mobile chat application has been a key facilitator during the pandemic for establishing quick effective social interaction amongst community members. Also, the role of the community manager has been paramount (in line with Cabral and Van Winden,

2016). The community manager acts as a bridge between StartDock and the tenant and provides value by finding solutions that meet common interests (e.g., providing platforms for entrepreneurs who are in need of business solutions and linking them with an audience. In turn, for StartDock this enhances the value of the coworking promise). The bridging role is executed by the community manager in both the physical and online sphere. This boundary spanning activity proved crucial in the sensing and seizing processes (Burt, 2008). Notably, it are the interpersonal relationships between the coworking space management staff members and the community members which are conducive to productive dialogue and help in identifying opportunities (see also Salvato and Vassolo, 2017). Our study thus underlines the strategic importance of dealing with the community as a dynamic capability that can inform and shape the offering of coworking services.

A strategic concern for StartDock is the decision to be made regarding 'corpocoworking' (Golonka 2021) and what the impact will be on community. It is likely that in the coming periods, post-COVID-19, there will be an increasing need of corporations and employees/teams to work remotely at a coworking space. In this, an important capability relates to incentive alignment (Teece 2007). Indeed, there is likely to be benefits associated with corporations being embedded in coworking communities, mainly due to physical proximity between start-ups/self-employed people and established corporations. At the same time, the question arises if and how corporate workers might contribute to the community, a key resource, as we have seen in this paper. In scenarios in which corporations have multiple workers at one specific coworking space, it is likely that there is some form of emotional connection between those workers based on shared history, and as such, this might manifest itself in social networks displaying bonding social capital with exclusive characteristics (Putnam, 2000) which would consequently impede integration with the coworking space community. For coworking space owners/managers it is important to consider what this would imply for eventual (pre) selection and number of new corporate members. Earlier studies show that effective selection/admission mechanisms increase the chance of fruitful interaction and community building (Van Winden et al. 2012).

Our study modestly contributes to the dynamic capabilities literature by showing that dynamic capabilities go beyond the ability of managers to create, extend, and modify the ways in which firms can cope with dynamic environments (e.g., Salge and Vera 2016). In fact, our study showed that in the case of coworking spaces, clients are a key source of information that can provide ideas to the coworking space management staff (as in e.g. Grönroos and Voima, 2013; Schilke et al., 2018; Kurtmollaiev, 2020). But they are not only a key resource; they are also part and parcel of the dynamic capability of the coworking space itself. One which during the pandemic shaped the coworking service that is both offered, created, and consumed by the coworking community. Therefore, the case revealed that when communities play a crucial

role in influencing and shaping the product, a symbiotic relationship between firm and communities is paramount in order to sense and seize opportunities and/or to create competitive advantage. We conclude that the community must be considered as a hybrid resource (both internal and external) into the concept. Managerially, the study highlighted how the curation and interventions of coworking spaces can help coworking space owners/managers to deal with drastic external influences, such as the COVID-19 pandemic, and create better services for people using or considering using coworking spaces. In addition, it provides insights for the design and use of coworking networks to overcome the pandemic (in line with Belso-Martínez et al 2020). By elucidating the StartDock case, we contribute to a more comprehensive understanding of coworking space dynamic capabilities and to a broader view of resource characteristics (as in Barney 1991).

If we make an attempt at looking at post-pandemic coworking, there are a number of indications that follow from this study that are relevant for both coworking owners/managers and for people working in coworking spaces. First, when looking at the physical space of coworking spaces, the flexibility of space came to the forth as a crucial element (as indicated by Oksanen and Stahle, 2013), because it increases the possibility to be adaptive to change. As we have seen, changes can be instigated in the internal coworking environment (e.g. the needs of the coworking community regarding space for engagement/disengagement appears not to be static) and/or in the external environment (e.g. governmental regulations imposed by governments during the pandemic). For coworking space owners/managers it is paramount to investigate if flexibility of space can be in line with coworking business models that are both economically- and socially sustainable. Second, the future will most likely entail more hybrid ways of working. As a result, people might spend less time in coworking spaces because technological advancements might present alternative solutions. If this will be the case, it is worth considering whether there are types of proximity (as in Boschma, 2005) that can substitute or compensate for the decreased level of geographical proximity of coworkers in order sustain similar levels of community as before the pandemic (e.g. investigate how to enhance social proximity). Third, in terms of offering events (a key pillar of coworking spaces) the digital realm proved to be a useful alternative space for physical events. Now that the value and possibilities of this underexplored space has been touched upon, this will undoubtedly be a coworking facet that will be further investigated by coworking spaces.

Several investigative limitations of this study set directions for future research. First, because of the pandemic the Dutch government strongly demoted traveling and people going to work. This had an impact on the number of people going to StartDock and, as a result, there were fewer people present than normal. This means that the StartDock population was not entirely represented in the research which limits generalization and inference making. Second, this study analyzed one coworking

space in Amsterdam, that was dealing with local regulations and symptoms related to COVID-19. Future studies could consider expanding the number of coworking spaces, and contrast different characteristics and approaches in order to enrich and/or generalize the results. Third, the findings confirmed the evolution of 'corpworking' by both firms and coworking spaces. We encourage to further investigate how coworking space owners/managers deal with the curation in terms of the type of firms, the size of firms, and where such firms are situated inside the coworking space. In this line, we also favor researching profiles and professional circumstances of corporate workers and it's link with coworking community development. Fourth, future research could also explore whether coworkers adopt 'hybrid' approach of coworking (i.e., partly physical at the coworking space and partly from home with online participation at events). In particular, this may yield insights into alternative effects on coworking community dynamics, usage of space, and coworking revenue models. Lastly, future studies could consider validating the conceptual model or introducing other DC models in order to improve the empirical reliability and validity of our findings.



CHAPTER SEVEN

General conclusion

This dissertation investigated how coworking spaces function by focusing on such spaces in Amsterdam, a city with a highly developed knowledge-intensive urban economy (Kloosterman, 2013; Shaker Ardekani, 2016). In a general sense, this study confirmed that coworking spaces embody an emerging spatio-organizational format that can be observed in modern cognitive-cultural economies (Scott, 2011; Scott, 2012; Folmer and Kloosterman, 2017). The trends identified in chapter two: the increasing use of ICT; more flexible approaches to work both with respect to space and time (Chatterjee and Crawford, 2021; Holliss, 2021); a much broader variety of labor positions which blur the boundaries between employee and self-employed (Friedman, 2014; Todolí-Signes, 2017); and the increasing importance of project networks in knowledge-intensive activities (Grabher, 2004) in modern knowledge economies have been examined throughout the various studies that were conducted in Amsterdam.

In terms of organizational set-up and employed mechanisms, the study presented in chapter three contributes to our understanding regarding the variety of collaborative workspaces. Along with this, chapter three examined four categories of collaborative workspaces (accelerators, incubators, coworking spaces, and fablabs) and explored which benefits are attached to these different spaces.

Prior work discussed the rise of new types of workspaces that promote productive activity and innovation alongside social interactions, such as 'localized spaces of collaborative innovation' (Capdevila, 2013), 'innovation spaces' (Oksanen and Stahle, 2013), and 'innovation and creativity labs' (Schmidt et al., 2014). Although these earlier studies explored a variety of work environments, no systematic evidence existed 1) regarding the diversity among collaborative workspaces and 2) which benefits these different categories of workspaces may offer to their potential users. The findings of chapter three reveal that the examined categories of spaces are positioned differently towards their users, ranging from places to work, learn, experiment, and grow as a business. For affluent workers, who have the capacity and desire to work from flexible workplaces while being integrated into social networks, the insight into the variety of places can be of value when deciding on a workspace. Notably, despite their differences, all types of spaces claim that they offer a social environment conducive to the formation of social networks which may facilitate business development. Therefore, for collaborative workspaces it is paramount to carefully promote the points of difference regarding how users are accommodated in their day-to-day work. Chapter three provides two key dimensions: 1) the relationship between the differentiation of spaces to the level of facilitation in business development for members (serendipity vs. organized facilitation) and 2) the different foci of community management (internal vs. external communities). For flexible workers in cognitive-cultural economies who want to select a workplace that actively strives to insert them in social business networks, such an overview and insights can be helpful.

Chapter four aimed at a more in-depth understanding of what role coworking space interventions play in fostering social interaction and how this affects the workers in these coworking spaces. Even though there is a large body of literature on how social interaction can be fostered and what the potential results are of such interaction, focused research on how coworking spaces can be effective in fostering social interaction and how they contribute to perceived value amongst the tenant base has been thin on the ground. To plug this gap, chapter four proposed an analytical framework in which, first, aspects of coworking spaces were established (the availability of a community manager, the characteristics of the tenant base, the design of the interior, the availability of formal and informal events that promote social networking), and secondly, how such interventions are linked to social interaction and potential innovation.

The findings of chapter four highlight the value of coworking spaces as loci where value can be transferred from those who have specific capabilities and access to particular technologies to those who seek to use them. A notable finding is that in the process of transferring value and facilitating interaction amongst members, the role of coworking staff is paramount in detecting internal and external opportunities for their members. Another finding of this chapter is that diversity along particular dimensions within the tenant base enticed social interaction (e.g. diversity in business background; diversity in business development phases). Coworking spaces that aim to create a more diverse tenant base can apply entry policies through which user characteristics such as attitudes, interests, skills, and capabilities can be assessed. The cases examined in this chapter seem to align with the findings that some cognitive distance amongst coworking space users increases the potential for learning because of dissimilar knowledge bases. However, the distance should not be too extreme and some cognitive proximity is required in order to ensure effective communication (Boschma 2005; Boschma and Frenken, 2011; Appel-Meulenbroek et al., 2021).

Additional findings in chapter four stress the importance of a physical design of coworking spaces that promotes interaction amongst coworkers. Having a central shared meeting hub is a characteristic in coworking spaces of which the value for internal users and external visitors was especially recognized and supported in myriad ways. Lastly, chapter four emphasizes the importance of having a wide range of formal and informal social networking events (e.g. business feedback moments, workshops, sports activities) since it adds to increasing awareness of other workers' activities and capabilities which, in turn, promotes social interaction.

The purpose of chapter five was to examine how social networking benefits entrepreneurs who work in coworking spaces. In this chapter, a theoretical framework was presented linking management interventions to social capital constructs:

bridging and bonding social capital. Coworking spaces were analyzed from the point of view of social capital theory because such spaces have the potential to foster social networking and connections with individuals with whom one can have different forms of contact, varying from low frequency/intensity to high frequency/intensity. In social capital theory, these ties are referred to as weak and strong ties, and these may eventually lead to bridging and bonding social capital (Putnam, 2000).

The findings of this chapter reveal that coworking space environments generate a faster process of bonding social capital formation that results from careful community management. This, in turn, leads to the building of (business related) trust and situations in which entrepreneurs help each other out. In parallel, having a range of management interventions in place (e.g. various types of formal and informal events, an interior design that promotes social gatherings; tenant selection policies), stimulates the formation of bridging social capital and associated broadening of views, as well as exchanging ideas with other coworkers, and the like. At the same time, the study also provides insights regarding social capital downsides in coworking environments. The findings show that entrepreneurs can get into 'coworking space bubbles' (Waldinger, 1997), and/or can be hindered in opportunities by co-association with activities of other entrepreneurs.

Chapter six analyzed how the COVID-19 pandemic affects coworking spaces. This is particularly interesting because due to the COVID-19 pandemic the nature of the services that coworking spaces offer are changing. During the pandemic, the physical layout was altered to accommodate fewer people and now communities have been shifting to digital realms. It was a main aim of this study to explore the response of the coworking community to these changes. The study takes a dynamic capabilities (DC) lens, and scrutinizes how three specific DC processes (sensing, seizing and transforming) play out in the interaction between the coworking space and coworking community.

Results of chapter six show that that sensing, seizing, and transforming capabilities are not only situated within the management staff of the coworking space, but also play out in close alignment with the coworking community, which acts as key resource, notably in the sensing and seizing processes. The coworking community can act as a source of input for the management staff to understand what the emerging threats of the crisis are and how the coworking space can best react to the pandemic. The case (in chapter six StartDock was the case in point) revealed that when communities play a crucial role in influencing and shaping the product, a symbiotic relationship between firm and communities may be paramount in order to sense and seize opportunities and/or to create competitive advantage.

7.1 | Coworking spaces: office solutions for people with workplace flexibility?

In the introductory chapter, I described how in cognitive-cultural economies the production systems display fundamental changes. A notable change in such economies is that there is an increasing number of workers that have the flexibility to work where and when they want (as described in chapter 2.4 and 2.7). This does not only refer to the large number of self-employed people and start-ups, but ever since the COVID-19 pandemic also (to an increasing extent) to employed people (Hubbard et al., 2021). The first groups already had, in principle, more flexibility in the choice of where (and when) to work, but for employed people this changed rather drastically since the outbreak of the pandemic. After all, the conventional predominant mode of working for the majority of employed people (despite many attempts to introduce new ways of distant working) was being present at their workplace for a specific time (typically eight hours in many cases) for five days (Freeman, 2018). However, the pandemic has triggered a boost in the use of digital technologies which enable distant working. More generally, the outbreak has advanced a mind-shift regarding the meaning and value of 'work location', and ever since the pandemic more and more people (both employed and self-employed) have increased flexibility in choosing where to work (Kossek et al., 2021).

When looking at the group of workers who can work remotely, it is becoming clear that beyond a place to work (whether this is in a conventional office, home office, coffee house, business lounge etc.), it is also important to have environments where one can socialize and meet other people ('a third space', Oldenburg, 1989). This is especially the case when workers seek an 'entrepreneurial vibe' or want to have their creativity stimulated in order to come up with new ideas (Csikszentmihalyi, 1996). Therefore, it is important to have office environments that continuously provide new stimuli, stimulate creativity, and broaden one's cognitive scope.

In order to accommodate such workers, social milieus are needed where entrepreneurship and social networking can be cultivated and channeled (e.g. Cohen, 2013; Scott, 2014; Schmidt et al, 2014). One of the ways in which this has been addressed is through a variety of collaborative workspaces that have appeared lately, which provide a set of characteristics that enable dealing with the workplace needs of people who operate in flexible labor markets. However, the rise of these spaces is a relatively recent phenomenon and despite the recent attention by both scholars and practitioners, the role of these places still remains rather unclear for many people. The results of this dissertation add to existing bodies of literature by granting a look inside the coworking space and by opening parts of the 'black box' of these workspaces.

Earlier work already described the development of collaborative workspaces in modern economies and introduced frameworks related to work, learn, and play needs of cognitive-cultural workers (Waters-Lynch et al., 2016). Other studies highlighted the stimulus regarding processes of innovation benefits of collaborative workspaces due to interior designs that foster knowledge exchange (Oksanen and Stahle, 2013), the physical concentration of workers (Capdevila, 2013), and the inherent openness of collaborative workspaces to social networking (Schmidt et al., 2014). The findings of this dissertation add to these bodies of literature by showing how collaborative workspaces can provide benefits for cognitive-cultural workers. The following two sections elaborate on this. In doing so, I provide clarification in the increasingly complex realm of social workspaces in which most, to some extent, promise social workspaces where one can be entrepreneurial, develop a businesses, have access to people, equipment, and knowledge.

7.2 | Aspects of coworking spaces that foster social capital

This dissertation aimed at extending the existing field of research on coworking environments as loci that consciously and explicitly promote social network formation. In this section I highlight findings related to social capital in coworking spaces.

As a starting point, it is important to reiterate that social capital can be defined as value stemming from access to resources attained through social relationships, networks, and memberships (Granovetter, 1973; Coleman, 1988; Portes, 1998). Findings in this dissertation revealed that coworking spaces facilitate the creation of such social relationships, networks, and the consequential flow of information from one person to another. Therefore, by its very nature, the coworking space can be seen as a milieu that facilitates social network development. By bringing individual workers together in coworking spaces and encouraging social interaction by means of different management interventions, coworking spaces facilitate the chance of social networks to evolve and for information to flow across (otherwise unconnected) people. The bridging function whereby connections made are mediated through the coworking space, is one of the core values and benefits that coworking spaces can deliver to its users. When dissecting social capital according to key dimensions (Narayan and Cassidy, 2001; Putnam, 2000), the following outcomes of this research were revealed in coworking spaces:

Group characteristics. Important group characteristics that seem to enhance social capital in coworking spaces include frequency in participation, involvement in decision making, and group heterogeneity/homogeneity. First, it is likely that the frequency

in which the coworking space is attended by coworkers is an important driver of social capital. As was hinted in chapter five, there is a perceivable link between time spent in the coworking space and the number of interactions/connections made in the coworking space. Second, having coworkers as part of the decision-making processes (e.g. having online or offline events; how to structure physical and digital space) is an important social capital-enhancing group characteristic (which was highlighted in chapter six). When it comes to decision making, having a reciprocal relationship between coworking staff and coworkers, results in a stronger embeddedness by coworkers in the coworking space and consequential feeling of community, in which different forms of involvement are expressed. Finally, having diversity along various dimensions seems to be an indicator that makes social capital more profound (Grootaert and Narayan, 2000). Diversity may refer to business background (chapter four), business stage (chapter four and five), and the corporate/non-corporate ratio of the coworker member base (chapter six). On the other hand, the dissertation also provided indications that it is important to have some homogeneity amongst coworkers in terms of the type of activities that one is engaged with. A careful balance between homogenous and heterogenous characteristics seemed to play an important role (see also Boschma and Frencken, 2011 on 'related diversity', and Appel-Meulenbroek et. al, 2021 on 'moderate diversity').

Generalized norms. A normative social capital component that came to the fore in study six is 'helpfulness of people'. During COVID-19, many coworkers (and non-coworkers) were dealing with various negative effects that resulted from the pandemic, and as a reaction many community-enhancing initiatives emerged. Generally, there was the general norm of supporting each other and making community members feel supported by the coworking space environment. Initiatives were initiated by both the coworking staff members as well as the coworkers themselves and were aimed at providing practical, moral, and/or financial support to those in need (often also to extended ties of coworkers. Chapter four provided indications that before (and probably also after) the pandemic, such norms also existed.

The pandemic also introduced new ways of working (chapter six), which naturally led to an evaluation and/or introduction of new norms related to such ways of working. Especially when the aim of a coworking space is to build communities and encourage the formation of social capital, it is important to assess and establish norms that relate to interacting in the digital realm. This relates to e.g. engagement of people in group talks or discussions; how to use the video camera (having it on or off); and how to use the microphone. Regarding these topics, there are still undefined social norms regarding how to behave during online or hybrid gatherings (which seem to become increasingly adopted forms of meeting each other). These undefined norms may lead to decreased levels of social engagement (and therefore social capital) when compared to offline gatherings (chapter six).

Togetherness. Having a feeling of togetherness can enhance social capital in coworking spaces. A feeling of togetherness is often witnessed in coworking spaces in the many forms in which reciprocity is diffused amongst coworkers. In coworking spaces, reciprocity often manifests itself in coworkers exchanging knowledge, giving feedback on business ideas/issues, and providing each other with trusted feedback. The proclivity towards reciprocal behavior has its foundation in a feeling of “we are in this together”. Chapter five indicated that many coworkers have a mutual understanding of commonalities in business issues that many entrepreneurs go through, which often leads to sympathy and willingness to help each other out whenever needed. This, in turn, positively influences levels of social capital.

Bridging and bonding social capital. The social networks that are promoted in coworking spaces can consist of different types of ties, of which each tie has varying characteristics (depending on e.g. frequency and intensity level of the connections), also referred to by Granovetter (1973). When looking more closely at bridging social capital, it emerged that within coworking spaces, social events play a significant role in the formation of this type of social capital. Specifically, thematic events (and these can be formal or informal events) that unify management staff, community members, and external stakeholders tend to promote bridging social capital. This is in line with the notion that community-enhancing projects (for instance, sports and other types of leisure events), encourage people to interact and expand each other's scope, regardless of origin, background, or economic status (Misener, 2013). On a daily basis, coworking space aspects that have shown to play a relevant role in promoting bridging social capital are the community manager and the physical design of the coworking space. Regarding the community manager, one of the key tasks that is embedded in this role is the constant effort to bridge structural holes (Burt, 2002, 2004). The community manager often acts as a mediator between different coworkers and can therefore contribute to making interpersonal connections and transferring information from one person (or group) to another (Burt, 2004), and by doing so, expand the scopes and contacts of the individual coworkers. When looking at the physical space, findings in this dissertation underline the importance of open spaces, such as communal work, lunch, and coffee areas. These open spaces tend to physically bring people together. This in turn stimulates people to socialize with each other which often ignites a shared outward-looking attitude (a key component of bridging social capital) and subsequent benefits for individual coworkers. As seen in Boschma (2005), physical proximity amongst coworkers can eventually lead to performance benefits.

Regarding bonding social capital, it is important to recapitulate that this type of social capital normally occurs amongst strong-tied individuals who have the proclivity to provide emotional and/or other type of substantial support to one another (Putnam, 2000). In coworking spaces, typically, the largest segment of coworkers

are not related to each other, neither personally nor professionally (Spinuzzi, 2012) (of course, in case of a startup or SME with multiple employees, those individual employees would be affiliated to each other professionally). Typically, these types of relationships do not lend themselves to bonding social capital. However, in chapter five it was shown how various configurations may foster bonding social capital. First, as discussed earlier, the frequency in which coworkers attend coworking spaces has an impact on the quality of the social bonds that coworkers have with each other and with the coworking staff. Generally, the more people see each other, interact, and get familiarized with what others are doing (chapter four), the more likely it is that people will develop trust amongst each other (an indicator of bonding social capital) and the more bridging social capital will convert into bonding social capital. This development seems to be in line with the notion of 'elective affinities' (Weber, 1946) in which coworking spaces provide the circumstances (as far as physical space and people making use of such spaces) that promote feelings of sympathy or connection with one another. Second, when coworking spaces provide individual business consultation moments, e.g. in the form of specialized workshops or private business support for members (because a coworking staff member has relevant skills or experience and is willing to share it), then the chances that these moments translate themselves into useful and trustworthy feedback occasions increase (which are indices of bonding social capital). Third, the business phase in which entrepreneurs find themselves in seemed to play a role in the development of bonding social capital. More specifically, having entrepreneurs that are in similar business stages favored ties becoming stronger (i.e. bonding social capital). Chapter five demonstrated that when a coworking space has a group of entrepreneurs that are coping with (for each other) recognizable business struggles (certain struggles are often inherent to specific business phases. For example, in early stages, many entrepreneurs and start-ups deal with funding and supply chain issues), that these entrepreneurs showed bonding social capital characteristics. In such cases, bonding social capital is instigated because of the ability to exchange knowledge on shared experiences and the ability to provide trusted feedback. This, in turn, is closely related to the feeling of 'togetherness'. These insights underscore the strength of weak ties (Granovetter, 1973) (which would be the way to categorize the types of connections between unaffiliated coworkers), even though in this case by showing strong tie characteristics.

7.3 | The value of coworking communities

Regarding the value of social networks in coworking spaces, chapter four, five, and six, provided indications that the more social capital is embedded in coworking networks, the higher the chance of it being of value for entrepreneurs (see also Stam et al., 2014). In line with what was described earlier, the value lays in the presence and

physical proximity of weak ties, as well as in the ability that coworking spaces have to promote social interactions.

When highlighting the value of a coworking community for people making use of coworking spaces, we can distill that, in line with Stam et. al (2014), the social capital-performance link is indeed positive, whereby diversity in coworking space populations play a big moderating role (as in chapters four and five). Chapter four showed that the particular value of coworking communities is access to new clients, new suppliers, new knowledge, and occasionally access to human resources. Chapter five added to this by demonstrating that important performance benefits relate to receiving trusted feedback and getting leads to potential financial backers. However, performance benefits may depend on contextual conditions such as the age of small firms (chapter five), the industry, and institutional contexts in which they operate (Stam et. al, 2014)

Communities also provide value for coworking-space managers, particularly as a source of information. Communities provide valuable insights regarding how they experience the coworking space. For instance, communities play an important role in informing coworking managers regarding the effective usage of the physical space (chapters four and five) and digital space (chapter six). Regarding physical space, communities can be a source of input that contribute to determining how to design the space, especially when it comes to designing effective engagement/disengagement areas (Williams, 2013). This division is important for coworkers as there is a need for both types of areas (chapters four, five, and six). When focusing on the digital space as an available realm for coworking (one which has developed rapidly in recent times), coworking space managers face various challenges regarding how to effectively use the tools and platforms which have become widely available (and each with different advantages/disadvantages). Platforms such as WhatsApp, Zoom, MS Teams, Google Meets, Slack (to name a few) have professionalized rapidly (some of which had the pandemic as driving force of their rapid development) and provide an alternative realm in which coworkers and coworking space members can maneuver. Such platforms provide opportunities to meet, find information, share ideas, ask for help, and organize formal and informal events (chapter six). For these platforms to be used effectively, the community should be seen as a source of input regarding important barriers and enablers for effective (virtual) coworking. In sum, for both coworkers and coworking space managers there is value to be obtained in the coworking ecosystem. However, in general, to get the most out of coworking it is advisable to have a dense interplay between coworking space management and community

7.4 | Coworking space management strategies for social networking (practical application)

The findings in this dissertation have a number of practical implications that might aid coworking space proprietors, especially those that aim at facilitating more efficient and effective knowledge transfer processes of people working in coworking spaces. Chapters three and four focused on the input of collaborative workspaces and hold several implications for managers focused on creating a clear image of the spaces, the respective offerings, and the points of differentiation in order to attract clients, notably SMEs, startups, and scaleups. Chapters five and six, focused on processes at coworking spaces and have implications that are important for coworking space proprietors in the areas of social capital building and dealing with drastic changes in the external environment.

The results of this thesis provide findings and actionable knowledge different stakeholders can benefit from. For instance, the findings can inform collaborative workspace proprietors that are aiming to finetune current or future strategies to boost social interaction or connected learning within their communities. Also, future coworking space providers that are aiming to open a workspace might benefit from the insights of this dissertation. In addition, firms that want to redesign workspaces with the aim to enhance social interaction between employees/ business departments/ business units, or with the aim to boost a sense of community within the firm, can utilize elements of the coworking model. Also, universities that collaborate with incubators (or have their own incubators), to support aspirational students who are about to start their own business, can apply many of the insights that result from this dissertation. Finally, policy makers that have the aim to spur the economic performance within regions through community-based approaches, can gain from coworking space principles.

Have a clear positioning strategy. With the growth in the number of people looking for social workplaces, as well as the rise in the number of types of collaborative workspaces (chapters two and three), it is important for collaborative workspaces to be able to differentiate. In this regard, it is important to select a clear positioning strategy (chapter three). Having a clear position is particularly important to inform and attract clients who do not specifically know where to work somewhere besides their homes. When creating a position, it should be taken into account that an image and identity is a relative position, i.e. vis-a-vis alternative places. In creating a clear position, collaborate workspaces may opt to position themselves on the basis of specific attributes: presence of certain unique physical facilities (e.g. availability of space to build things, space for experiments, office/meeting rooms, 3D printers, videoconferencing technology etc.), unique services (e.g. business development

programs, workshops, business presentations, network events, social events), or social network characteristics (e.g. access to specific internal networks, external parties). Collaborative work spaces can also choose a position based on type of user it primarily aims at servicing (self-employed workers, start-ups, scale-ups, SMEs) or on how a space can be used (e.g. place for production, place for social networking, place for learning) or focus on a specific industry. In the end, collaborative workspace proprietors should consider using alternative collaborative workspaces as a frame of reference to differentiate their specific brand or collaborative workspace type (chapter three).

Ensure a careful design of the physical space. When designing a space, it is important to find a good balance between space for engagement and disengagement (Williams, 2013). When it comes to disengagement (i.e. focus on work and not on inter-member social interaction) it is important to have enough space where users can withdraw and concentrate, whether this is for solo work or for phone calls/meetings. In this specific process, it is important to listen carefully to the users (chapter six) in order to 1) be able to evaluate the current workplace situation (i.e. “Is there enough space for the different disengagement needs of the users and what are they exactly?”) but also 2) to be able to assess potential negative aspects of coworking (i.e. noise, lack of privacy, negative associations with other members, etc.) (chapter five). Conversely, when it comes to space for engagement (i.e. space that promotes engaging with people) it is important to highlight the importance of a central shared meeting hub (a public space such a coffee house or common lunch area). Also, features ranging from a convergent design of space (interior design organized in a way that brings people together), to themed rooms and social relax areas, promote social interaction. Another important characteristic that stimulates engagement is when members of a coworking space are aware of the available knowledge, skills, and activities within the tenant base. This can be visualized by exhibiting profiles of members or their respective work within the space (chapter four).

The role of a ‘connector’ is fundamental. In social coworking contexts, the role of a connector (in coworking contexts often referred to as ‘community manager’) can help in building communities. The connector can facilitate the transfer of skills and knowledge by building bridges between people who seek something and those who have something to offer (chapter four). It is key for people in such roles to have a clear idea and overview of the activities and skill sets of community members. This can be organized through on-boarding procedures that can be used for online and offline profiling of community members (wherein activities, strengths, and opportunities are communicated). Also, to enhance the chance of fruitful (business) connections it is helpful when connectors have strategic finesse (chapter four). More specifically, when connectors have a corporate background and/or experience, their roles can evolve into brokering roles and, as a result, members can be helped on a strategic

level (chapter six). In addition, connectors play a fundamental role during informal sessions, during on-boarding sessions of new members, and on the work floor by connecting new members to existing members.

Find a balanced mix between formal and informal events. In general, members of coworking spaces value informal events. Informal events are key moments where members have the opportunity to socialize and to get to know other coworking space members and where often the base for weak (and/or strong) ties is created (chapter five). Chapter five provided indications that informal events tend to make coworking groups become cohesive, which in turn stimulates bonding social capital (chapter five). However, coworking spaces also should offer an array of formal events. For many startups and scaleups, this is the lure that attracts them to work from coworking spaces. An important note is that the further a member is in the business development process, the more the need is for specialized and tailored information (chapter five). Coworking space proprietors should therefore offer a combination of both informal and formal events.

Promote a feeling of ‘togetherness’. For freelancers, startups, but also for small business owners, the studies indicated that being surrounded by other entrepreneurs is valuable (chapters three, five, six, and seven). Being in an environment where everyone is fighting for a successful business often creates an atmosphere of ‘we are all facing challenges and we are in this together’. Because coworking spaces offer an environment in which the physical characteristics promote people sharing experiences relatively easy with each other (people are physically close to others), this atmosphere is enhanced. This also became clear during the period in which the COVID-19 pandemic overwhelmed many entrepreneurs. It turned out that the alternative realms in which people maneuvered (mainly the digital realm) were places in which coworking space managers and coworking space users (who, from a business perspective, are not affiliated to each other except through the coworking space) motivated each other (chapter six). Particularly for start-ups who face many challenges in the early business development (e.g. the challenging processes of establishing reliable client and supplier networks and searching for funding), the identification with other entrepreneurs in the coworking space proved to have a motivating and encouraging effect. Therefore, for coworking space proprietors it is important to promote a sense of accessibility and ‘togetherness’ (as in ‘don’t feel that you are the only one dealing with challenges, most people are’), which can ultimately be an encouraging factor for the users of coworking spaces.

Curate the coworking population. The results of chapters three and five provided indications that aiming for a non-random mix of users in a coworking space can play a role in stimulating social interaction and the formation of social capital. Chapter three indicated that having diversity in business backgrounds of the coworking

space users plays a role in enticing social interaction. It is therefore recommended for coworking spaces to have users with different backgrounds and expertise because they often present opportunities for knowledge exchange regarding the application of technologies or knowledge in new or unfamiliar contexts. In addition, chapter five demonstrated that having a diverse pool of coworkers helps to promote bridging social capital, which in turn, stimulates social interaction and innovation opportunities (chapter three). Conversely, chapter five showed that having entrepreneurs in similar business stages favors ties getting stronger. In practice, this often stimulates the development of trust between the coworking space users. Therefore, for coworking space proprietors it is key to curate the coworking space population. Having a clear strategic vision regarding population characteristics as well as employing entry and exit policies, can be helpful in achieving a desired curated mix of users.

Coworking spaces and populations are not static. Coworking spaces and their population should not be seen as something static, but rather as something organic. On the one hand, the space (physical and digital) should be adaptable to the changing needs of users, on the other hand, there must also be a realization that the characteristics of the population are constantly changing (the business background of users, the size of the companies, the work wishes of the individual users). The COVID-19 pandemic (chapter six) is an example that has shown how physical and digital space can be adapted to deal with a new situation (redesign spaces) but also how populations change; at the beginning of the pandemic, many start-ups left coworking spaces and throughout the pandemic an increasing demand came from external corporations to rent space (and requests from corporations often entail sitting together with several employees either in the flexible areas or in an office.) It is important for coworking spaces to have close contact with the population in order to sense change. Having a community manager is crucial as this person is often the connecting link between the developments and wishes within the coworking community and the coworking staff (chapters six and seven).

It is also important for coworking space proprietors/managers to take into account that the networks of entrepreneurs evolve and that in this process different types of networks are sought. Typically, entrepreneurs rely on strong ties in early business development phases and as they evolve a growing number of weak ties are looked for, mostly because start-ups have the ambition to service new market and often they need weak ties in their search for information on business opportunities (Hite and Hesterly, 2001; Elfring and Hulsink 2007). For coworking space proprietors/managers, it is important to have insights in how the key entrepreneurial processes of their tenants evolve and to think about if and how their tenants could benefit from specific network ties (as in Elfring and Hulsink, 2003).

Coworking has downsides. Coworking is a concept that mostly appeals to people who enjoy being in an environment in which there is a lot of activity; people who have a mentality of 'together we are better off than alone'. However, the results of chapter five also show that coworking spaces are not an ideal work environment for everyone. Entrepreneurs who value privacy and do not want or cannot afford a private office, may experience disadvantages of working in communal areas. Working in communal areas implies that you can get bothered by other people and also have to deal with the occasional intrusiveness of people (e.g. interruptions during work; loud telephone calls). People who do not have a clear picture of what working in a shared space entails during onboarding procedures can become disappointed once they start working at a coworking space. However, increasingly coworking spaces provide a sufficient engagement/disengagement infrastructure to accommodate as many types of users in terms of areas for socialization and concentration.

7.5 | Avenues for future research

Entrepreneurship, knowledge-sharing, and innovation are important aspects of the global economy in which we live today. Collaborating and having social interactions in socially-oriented environments can be key drivers to stimulate such aspects. In recent decades, across the globe, we have witnessed municipalities, educational institutions, corporations, and entrepreneurs embracing the idea of having production environments that stimulate social interactions with people from different relevant backgrounds, disciplines and/or cultures. One of the reasons for such a development is that such way of producing may contribute to economic growth, entrepreneurship, and/or innovation. Worldwide, this had led to the emergence of a variety of collaborative work environments that foster collaboration and social interaction. Fabrication labs, ideation labs, maker spaces, accelerators, incubators, and coworking spaces are a few examples of the vast range of spaces that have appeared increasingly in both the urban and non-urban fabric. The aim of this research project was to provide insights about how collaborative workspaces (with the focus on coworking spaces) exemplify and embody changes in production systems. Furthermore, I have tried to demonstrate how social networking and 'being entrepreneurial' go hand in hand (as in Elfring et al., 2021).

In the first study of this book, I described four types of collaborative workspaces and how each claims to contribute to both the social capital and business performance of the people making use of such spaces. Chapter three shows that depending on the setup and spatial configuration of the space, different types of business and social benefits can be achieved. However, considering that these four spaces only represent a small fraction of spaces where people can work while having access to potential social networks, future studies may explore other emerging places that are

increasingly being used as social workplaces (e.g. 'third places' as workspaces) and contrast value propositions with the ones covered in chapter three. Another potential avenue for future research could be exploring how different collaborative workspaces adopt other aspects of the digital realm in their interaction with stakeholders (not only on websites but also by examining other increasingly adopted platforms such as Instagram, Facebook etc.).

In chapters four and five, I provided insights on employed mechanisms by coworking spaces and how these may contribute to interaction and social capital. How coworking spaces curate the space and the population seems to influence social capital outcomes. In this vein, it is important to denote that the compositions of both the coworking space and coworking population are not static and inherently change. Especially during the COVID-19 pandemic (chapter six), coworking spaces and populations showed many changes in a relatively short amount of time. These constant changes impact (directly or indirectly) the characteristics of coworking spaces and how such spaces provide value to their users. Since the separate studies for this dissertation were snapshots, the findings would benefit from complimentary longitudinal research, especially considering that the years ahead of us (hopefully in a post-Covid-19 pandemic era) promise interesting times for the coworking industry.

7.6 | Final words

This dissertation has been an attempt to provide new insights into an emergent way of working: coworking. Coworking embodies the idea of 'it's just better when we are together'. In a world that is now facing huge global challenges, the only way forward is finding and implementing breakthrough solutions by cooperating, finding the strengths in one another, and sticking together (whether this is on a group, national, regional, country, or global level). This has always been the key differentiating skill of the human species (to cooperate successfully in large numbers. Harari, 2011) and hopefully it will remain so. Findings in this dissertation assure me that also now 'collaborating' and 'sticking together' will prevail in the decades ahead to come. I hope that this dissertation inspires a next group of researchers and practitioners.

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Summary

A look inside the coworking space. The social and entrepreneurial relevance of new flexible office space environments.

In the last two decades, a rapid rise in the number of coworking spaces has taken place in many cities across the globe. Coworking spaces are shared office spaces for people who wish to pursue work in socially oriented settings. This research project aims to open the 'black box' of coworking spaces in order to gain a more in-depth understanding of what coworking spaces are and what they provide their tenants.

In this thesis, I analyze what drives the rise of coworking spaces and discuss how urban landscapes have been showing fundamental changes in the production system. I unpack a variety of elements that are related to these changes. First, I discuss how in many cities there is a noticeable shift towards the production of goods and services that are based, to a large extent, on knowledge-intensive activities. A key component of such activities is a greater reliance on intellectual capabilities rather than on physical inputs or natural resources. Second, I link such forms of production to flexibility in work practices. Flexible work arrangements seem to be an essential facet in economies that are based on knowledge production. For the purposes of this research, flexibility may refer to working conditions, time, and/or place. Third, I connect the rise of coworking spaces to a rapid increase in the number of entrepreneurs. Entrepreneurs are individuals or teams who identify an opportunity and acquire the necessary resources required for its exploitation. I specifically refer to the increase in the number of self-employed workers who are in the process of developing a start-up and/or a small-sized firm. In recent years, this form of entrepreneurship is becoming more and more prevalent in knowledge-intensive economies.

In line with these developments, coworking spaces have emerged as interesting work locations for knowledge workers and entrepreneurs with workplace flexibility. Mostly, because such spaces provide affordable office space while offering possibilities for (un)planned social interaction with peers. For example, coworking spaces stimulate the exchange of knowledge, sharing of resources, and they alleviate the relative isolation of running a business from home. Coworking spaces also promote themselves as community-enhancing spaces and the social environments may therefore help entrepreneurs in their social network needs. This research investigates coworking spaces to understand what coworking spaces promise their tenants, how coworking spaces are organized, and how the social interactions among coworking community members lead to potential business and social network opportunities.

During my fieldwork, I focused on coworking spaces in Amsterdam, the Netherlands.

First, I identified different profiles of collaborative workspaces and examined how they are marketed to tenants in terms of space, organizational setup, and community aspects. Second, I focused on the question of how coworking spaces foster social interaction. In this section, I established four mechanisms which are applied in coworking spaces with the intention of promoting social interaction, namely, the coworking space manager as a connector, the curation of the mix of coworkers, the physical interior design aimed at fostering social interaction, and formal/informal tools for social networking. Third, I explored social capital dynamics in coworking spaces and their value for the individuals working in such environments. Here, I distinguished two main types of social capital: bridging and bonding social capital. The research showed that people working in coworking spaces need a combination of both forms of social capital, yet for different reasons and at different times. Fourth, I examined how coworking spaces reacted to the COVID-19 pandemic. As a result of the pandemic, people started maneuvering into new hybrid (digital/physical) arenas, and therefore I examined how coworking spaces adapted to these changes and consequently, how coworking communities intervened and/or responded to these developments.

The findings of this project indicate that coworking spaces are increasingly relevant for self-employed workers, start-ups, and, to an increasing extent, employed workers who (at least partially) wish to be embedded in, or have access to additional professional social networks. Other outcomes of this project illustrate that in turbulent times (as during the COVID-19 pandemic), the managers of coworking spaces would benefit from working in close alignment with their tenant base in order to find new business opportunities for both the tenants and the coworking space itself, and in order to sustain a sense of coworking community. This project is a step towards re-examining the meaning and value of both work location and social networks in knowledge-intensive urban economies.

Samenvatting

Een kijkje in de keuken van de coworking space. De sociale en zakelijke relevantie van nieuwe flexibele kantoorruimtes.

In de afgelopen twee decennia is het aantal coworking spaces in veel steden over de hele wereld snel toegenomen. Coworking spaces zijn gedeelde kantoorruimtes voor mensen die willen werken in een netwerk georiënteerde omgeving. Dit onderzoeksproject heeft als doel de 'black box' van coworking spaces te openen om een beter inzicht te krijgen in wat coworking spaces zijn en wat ze hun klanten bieden.

In dit proefschrift analyseer ik wat de opkomst van coworking spaces drijft en bespreek ik hoe vooral steden fundamentele veranderingen in het productiesysteem hebben laten zien. Ik behandel een aantal elementen die verband hebben met deze veranderingen. Ten eerste bespreek ik hoe er in veel steden een merkbare verschuiving plaatsvindt naar de productie van goederen en diensten die voor een groot deel gebaseerd zijn op kennisintensieve activiteiten. Een belangrijk onderdeel van dergelijke activiteiten is een groter beroep op intellectuele capaciteiten in plaats van op fysieke input of natuurlijke hulpbronnen. Ten tweede leg ik een verband tussen dergelijke productievormen en flexibel werken. Flexibele werkregelingen zijn een essentieel facet in economieën die gebaseerd zijn op kennisproductie. In het kader van dit onderzoek heeft flexibiliteit betrekking op arbeidsomstandigheden, tijd en/of plaats. Ten derde breng ik de opkomst van coworking spaces in verband met een snelle toename van het aantal ondernemers. Ondernemers zijn individuen of teams die een kans identificeren, en de benodigde middelen verwerven om deze kans te exploiteren. Ik verwijst specifiek naar de toename van het aantal zelfstandigen die bezig zijn met het ontwikkelen van een start-up en/of een klein bedrijf. De laatste jaren komt deze vorm van ondernemerschap steeds meer voor in kennisintensieve economieën.

In het verlengde van deze ontwikkelingen blijken coworking spaces interessante werklocaties te zijn voor kenniswerkers en ondernemers met flexibel werk. Vooral omdat dergelijke ruimtes betaalbare kantoorruimte bieden en tegelijkertijd mogelijkheden bieden voor (on)geplande sociale interactie met anderen. Zo stimuleren coworking spaces de uitwisseling van kennis, het delen van middelen, en verlichten ze het relatieve isolement van het runnen van een bedrijf vanuit huis. Coworking spaces promoten zichzelf ook als community versterkende plekken en de sociale omgeving kan ondernemers helpen in hun netwerkbehoeften. Dit onderzoek analyseert coworking spaces om te begrijpen wat ze hun klanten beloven, hoe ze georganiseerd zijn, en hoe de sociale interacties tussen leden van de coworking community kan leiden tot commerciële kansen en kansen om te netwerken.

Tijdens mijn veldwerk heb ik me gericht op coworking spaces in Amsterdam. Ten eerste heb ik verschillende profielen van coworking spaces geïdentificeerd en onderzocht hoe ze richting klanten gepresenteerd worden wat betreft ruimte, organisatorische opzet, en community aspecten. Ten tweede heb ik me gericht op de vraag hoe coworking spaces sociale interactie bevorderen. In dit deel heb ik vier mechanismen vastgesteld die in coworking spaces worden toegepast met als doel sociale interactie te bevorderen: de rol van de beheerder van de coworking space als verbinder, de samenstelling van de mix van de community, de fysieke inrichting gericht op het bevorderen van sociale interactie, en formele/informele tools om het netwerken te stimuleren. Ten derde onderzocht ik de dynamiek van sociaal kapitaal in coworking spaces en de waarde voor de individuen die in dergelijke omgevingen werken. Hierbij onderscheidde ik twee hoofdtypen sociaal kapitaal: bridging en bonding sociaal kapitaal. Het onderzoek toonde aan dat mensen die in coworking spaces werken een combinatie van beide vormen van sociaal kapitaal nodig hebben, maar om verschillende redenen en op verschillende momenten. Ten vierde onderzocht ik hoe coworking spaces reageerden op de COVID-19 pandemie. Als gevolg van de pandemie begonnen mensen zich in nieuwe hybride (digitale/fysieke) arena's te begeven, en daarom onderzocht ik hoe coworking spaces zich aanpasten aan deze veranderingen, en hoe coworking communities reageerden op deze ontwikkelingen.

De bevindingen van dit promotieonderzoek geven aan dat coworking spaces in toenemende mate relevant zijn voor zelfstandigen, start-ups, en, in toenemende mate, werknemers die (tenminste gedeeltelijk) toegang willen hebben tot aanvullende professionele sociale netwerken. Andere uitkomsten van dit project illustreren dat in turbulente tijden (zoals tijdens de COVID-19 pandemie), de managers van coworking spaces er baat bij zouden hebben om nauw samen te werken met hun klanten, om nieuwe zakelijke kansen te vinden voor zowel de huurders als de coworking space zelf, en om een gevoel van coworking community in stand te houden. Het proefschrift als geheel herevalueert zowel de betekenis als de waarde van werklocaties en sociale netwerken in kennisintensieve stedelijke economieën.

