Knowledge exchange strategies and tools for coworking spaces managers.
A knowledge base approach to coworking

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Abstract:

The rise of the creative industries as an important economic power in today's economy, the increasing role of digital technologies, as well as the changes in structural and cultural conceptions of work redefined the way people in the creative industries interact with each other. These changes that put forward the inherent precarity present among creative workers and the relevance of network and knowledge as resources for creative industries creation process, motivate creatives industries to cluster, leading to a phenomenon emerging, the coworking spaces. The coworking spaces give the creative workers access to an environment prone to knowledge exchange and connection with fellow entrepreneurs with related skills. Because of the relevance of coworking space in fostering this exchange of knowledge has been noted, academic attention has been given to the processes happening inside coworking spaces. Different aspects of coworking spaces have been researched, such as notably the concept of community inherent to most of the spaces or the managerial strategies put in place. Nevertheless knowledge in relation to the coworking spaces is addressed relatively vaguely in research. This study argues that a more detailed framework of knowledge is needed to understand the intricacies of knowledge exchange in coworking spaces. By mixing bodies of research from the geography research, the coworking research, as well as management research, I developed my research question:

What kind of knowledge is exchanged in coworking spaces and how are managers facilitating this process ?

A subsequent model explaining the different knowledges shared in coworking spaces as well as their facilitators and moderator (in the form of trust), was provided. The knowledge base approach is used as main element to develop the theoretical framework of this research. A thematic analysis was used to interpret the results gathered through ethnographic research methods, namely semi-structure interviews and participant observations. This method shed light on the dual nature of knowledge share in coworking spaces. Synthetic and symbolic knowledge appear to be the dominant knowledge shared in coworking spaces. The results also emphasise the role of the manager and their interaction strategies on the successful instalment of an organisational culture of sharing. This paper contributes to the coworking debate by providing the application of a novel knowledge framework to the coworking research, and points out possible further directions of research.

Keywords: Coworking, Knowledge exchange, Manager, Interaction, Knowledge Bases

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1) Introduction

The creative industries have become particularly profitable industries in the recent years, thanks to the new communication technologies, the cultural switch of the economy and the increasing production of signs, with cognitive content or aesthetic content, rather than material objects (Lash & Urry, 1994, p.15). The recent term 'creative industries' has been pushed forward, as these industries, that often produce signs or cultural products, are becoming an important cornerstone of today's economy, and workers in the creative industries are numerous.

Flew (2002) attributes the rise of the creative industries to three trends, the increased role of cultural and public policies for economies, the emergence of the knowledge based economy and the shift towards an employment dominance of the service industries as opposed to the manufacturing industries. The British Department for Digital, Culture, Media and Sport (DCMS) (2019) defines the creative industries as "those activities which have their origin in individual creativity, skill, and talent, and which have the potential for wealth and job creation through the generation and exploitation of intellectual property" (DCMS, 2019). This definition is rather broad and can encompass a wide variety of activities. The DCMS also tells us that jobs in the creative industries account for the eleventh of the whole UK job market (DCMS, 2019).

Due to the evolution of the digital technologies, in the form of editing and design websites like Adobe Illustrator, but also video and music sharing platforms like Youtube, new forms of creativity and expression are being created, new professions emerge and others evolve, often leading to economic growth (Pratt & Jeffcut, 2009). Creative industries are now a determinant driver of managerial and organisational innovation as they are often the first to implement new practices and experiment, most of the time successfully, with new managerial strategies (Lampel & Germain, 2016). The new position of the creative industries that is reinforced by capitalism and marketisation of every product, and the rise of the knowledge economy gave rise to an increase in the employment of people working in the cultural and creative industries.

A report from the European Union shows us that a third of cultural workers were self employed in 2017 and this number reached 47% in the Netherlands (Eurostat, 2017). Although the creative industries can appear as a great opportunity to succeed, De Peuter (2014) denounces the image of a 'role model' that is attributed by the Neo-liberal capitalism to the self-employed workers in the cultural industries, and explains that in fact the aspects of flexibility and freedom of employment allowed the exploitation of workers.

Many researchers have pointed out that a large part of the creative workers are subject to precarity (Bridgstock, 2008; Capelli & Keller, 2014; De Peuter, 2014; Hesmondalgh & Baker, 2010). Because self-employed workers have to rely on themselves to find jobs instead of relying on the organisations that employ

you full time like in traditional industries, they often lack the job stability inherent to other industries. Coupled to this, the high and growing competition among creative workers sometimes impede them to have a stable employment and revenue. Instead they have to rely on projects and sometimes do work that does not correspond to their sectors. This characteristic of the creative industries makes them extremely different from regular industries.

Jeffcut (2004) argues that part of the reason for this differences stems from the fact that creative processes involve "a complex cycle of knowledge flows, from the generation of original ideas to their realisation, whether as products or performances" (Jeffcut, 2014, p. 69). Knowledge is a crucial component in these industries as the creative process is transacted through different networks and knowledge relationships. Having a network of entrepreneurs around you can be extremely beneficial for your creative process. One of the key principles in the creative industries, the 'motley crew property' dictates that a group of individuals with different but complementary skills can enhance the creativity and bring forth capacities that could not be reached alone. (Caves, 2003). Furthermore, a recent research by Banshing, Wijngaarden and Hitters (forthcoming) showed an increase in entrepreneurial identity when being co-located with successful entrepreneurs. This increase was also valid for the artistic identity if people were co-located with highly artistic entrepreneurs.

Being surrounded by fellow entrepreneurs or creative workers from different trades is crucial for people working in creative industries. Establishing a network can become the key to find new projects, acquire new skills, new knowledge, and grow professionally. However knowledge is difficult to transmit, and its nature is often unclear, or rather hard to define. Although knowledge is shared between creative workers, understanding what kind of knowledge it is, and how it is exchanged, can give us further direction of research.

Since forming networks and exchanging knowledge between each other can help creative workers, grouping together would be a solution to get access to relevant people. Research based on geographic studies have shown that creative industries 'cluster' around creative cities, or hubs, in which the amount of creative workers is many times higher that outside these hubs (Lazaretti, Boix & Capone, 2008; 2012). The lack of adequate policy to support creative workers is also one of the reasons behind the precariousness (Murray & Gollmitzer, 2011) and the clustering of creatives (Kong, 2014).

Because the term 'creative industries' is rather recent, and because the creative industries are evolving constantly and encompassing emerging professions, relevant institutional policies that would counter this precarity are not yet devised, although attempts are made (Murray & Gollmitzer, 2011), and the policies vary greatly according to the countries. The precarity inherent to the creatives often forces them to opt for being co-located with other workers in order to reduce costs, as regular offices, often high priced, do not allow the workers that rely on projects among a growing competition to have a stable revenue.

The access to a physical space that fosters creativity and supports the creative process is extremely valuable for workers. Martens (2011) showed the important role of the physical space as a symbolic and instrumental support for workers. Having a space that allows for open interactions with other creatives requires

it to be flexible. Places need to provide the workers with enough openness to be able to express their creativity without hindering it.

Subsequently, many creative workers attempted to start such initiatives that would promote open spaces to foster collaboration and provide an alternative of working from home at accessible prices, providing opportunities for workers living in precarity to grow, meet people and expand their network.i The coworking spaces that arose a few years proved to be extremely resourceful places for creative labourers, as they could meet with other labourers and exchange ideas, but also enlarge their network, which is crucial in knowledge intensive industries. Gandini (2015) reviews in his article the main literature on the coworking phenomenon and explains the sudden rise of coworking spaces. His primary argument is that workers find in coworking spaces an alternative to traditional organisational structure that allow them to combine both flexibility and stability. The creative workers are also highly interested in adding a social component to their otherwise isolated work, and do not view other workers in a competitive manner but rather as forming part of a community based on cooperation and collaboration.

Furthermore coworking spaces are often populated mostly by creative workers, and these creatives workers have a myriad of different yet similar skills. Lazaretti, Domenech and Capone (2009) explain that workers in the creative industries many times have different skills and knowledge, however due to their knowledge often being based on technologies, as well the differences between related professions sometimes being negligible, workers are able to have successful exchanges. Also, the access to people from different trades can lead to an increase in entrepreneurial skills and personal development according to Bouncken and Reuschl (2018) .

As people in the coworking spaces have the opportunity to exchange knowledge with coworkers and improve their skills through learning processes, it is important to understand what is considered knowledge and why it is so important for creative workers. It was previously explained previously that in the last decades, the cultural and creative industries were put in the spotlight for their contribution to the global economy, their positive relationship to innovation and creativity enhancement. Nonetheless, in a parallel manner emerged the knowledge economy, which is closely linked to these creative industries as well.

Because the knowledge economy refers to all activity that are mostly based from intellectual capabilities (Powell & Snellman, 2004), the activities in the creative industries, which are highly reliant on knowledge (Jeffcut, 2004) are part of it (Brinkley & Lee, 2006). Most creative workers rely on intellectual capital as their main source of advantage. Knowledge becomes thus a key capital for organisations, however knowledge is hard to define and even harder to measure.

Among the different schools of knowledge research and knowledge management research, the most prominent one would argue that there are two dimensions of knowledge. The explicit knowledge which is often codified and obtainable through texts or artefacts, and the tacit knowledge, harder to transfer but way more valuable for creative workers (Fernie, Green, Weller & Newcombe, 2003). Since the tacit knowledge, which often refers to know-how and expertise skills that are acquired through experience, is shared through

social networks and is highly dependent on the individual context of the person, it is thus extremely hard to transfer and needs a dedicated social space to facilitate this process.

Nevertheless, Gertler (2003) tackled the concept of tacit knowledge in relation to geographic proximity, and tried to assess the importance of being physically there in order to allow a successful transmission of tacit knowledge. Because this type of knowledge is harder to communicate, as it relies on awareness or consciousness of having a particular knowledge, and the difficulty to express this knowledge in accurate enough words, it can be an arduous task to share it from a distance, through tools and communication devices. Due to this kind of knowledge being often obtained through experience as we mentioned before, it is largely embodied (Blackler, 1995) and context reliant. Therefore, even though it is at the core of creating innovative products, it is harder to transmit. Although some research has shown that technologies could potentially be transmitters of tacit knowledge, many of the scholars argue that tacit knowledge is transmitted only through face-to-face interaction, or at least require a certain level of closeness in the interactions, enough to be able to enable the context surrounding the tacit knowledge to be enacted again (Gertler, 2003).

Nevertheless, the dichotomy between tacit and codified knowledge may be too vague to distinguish the knowledge in the context of the creative industries. More recent frameworks have been devised and used in the context of creative workers. Asheim, Boschma and Cooke (2007) devised a framework based on regional and geography studies that classifies knowledge in a more specific manner. The theory of knowledge bases that they develop is based on a classification of knowledge into 3 different categories. The analytical knowledge referring mostly to knowledge generated through scientific methods, the synthetic knowledge based on experience and skill related, and the symbolic knowledge which is context dependent. Although this framework is established to work on a regional level, it has proven successful in understanding knowledge creation and sharing processes in smaller contexts (Pina & Tether, 2016; Plum & Hassink, 2014)

Spinuzzi (2012), one of the most cited and precursor researcher on the topic of coworking spaces showed that indeed interactions, and the ability to obtain and share knowledge from other members constituted valuable and attractive assets, hence pushing the members to use the spaces. Nevertheless, scholars' views differ as to whether the physical proximity between workers alone is enough to account for the increased interaction, collaboration and exchange in coworking spaces. Capdevila (2014; 2015), Merkel (2015) and Parrino (2013) support the assumption that co-location is a factor important enough for interaction and relationships to emerge naturally. These authors also explain that facilitators are needed in order for these processes to emerge fully. Managerial and organisational strategies are able to reinforce these processes. Implementations such as space arrangements and decorations (Weijs-Perrée, Van de Koevering, Appel-Meulenbroek & Arentze, 2019), or facilitating peer interaction through events and shared activities (Brown, 2017) have positive effects on the community knowledge sharing.

Trust also plays an important role in building a community and establishing dialogues between members in an organisation (Ardichvili, 2008; Holste & Fields, 2010) and coworking spaces are similar to traditional organisations in the sense that an organisational culture is developed as well. Although the workers are not part of the same organisation, people still meet on a daily basis in a specific place, with specific

rules, symbols and codes. Slowly, shared culture and values are created and disseminated among the 'organisation', or the coworking space, in a way similar to what would happen among a company in traditional industries.

Coworking spaces can have plenty of advantages to offer to the creative workers if the organisational and managerial culture is oriented towards community building and enhancing knowledge exchange. Despite recent research on coworking spaces and managerial profiles (Ivaldi, Pais, Scaratti, 2018) and the fact a considerable amount of the literature on coworking spaces agree that people indeed exchange knowledge and expertise among coworking spaces (Assenza, 2015; Castillo & Quandt, 2017; Merkel, 2015; Spinuzzi, 2012), very few define in detail the type of knowledge that is transmitted through these interactions, and the concept of knowledge presented is often abstract in what it refers to. Similarly, although previous research show the increased knowledge exchange (Bouncken & Reuschl, 2018; Parrino, 2015, there is actually few proofs of the impact of the managerial strategies of coworking spaces managers on this process. A framework that would us to understand the effects of these managerial strategies, and the components that enable these strategies, on knowledge exchange would provide a possible alternative for understanding the knowledge dynamics in the micro-clusters, and could possibly applied to other types of micro-clusters.

In order to develop a framework that would be more appropriated to understanding the knowledge exchange processes happening inside coworking spaces, a more specific framework than the ones discussed by Gertler (2003) and Fernie, Green, Weller and Newcombe (2003) is needed. I argue in this paper that the classic dichotomy of codified and tacit knowledge that prevailed until the beginning of the 20th century is not adapted to understand the intricacies of knowledge exchange in today's context. Instead, I use the knowledge base approach (Asheim, 2007; Asheim, Boschma & Cooke, 2011; Asheim, Coenen & Vang, 2007; Pina & Tether, 2016) to understand what kind of knowledge is created and shared in coworking spaces, and how the managers can influence this process, thus presenting the research question of this paper:

What kind of knowledge is exchanged in coworking spaces and how are managers facilitating this process ?

Furthermore we develop in our theoretical framework a model based on literature from different bodies of thoughts, that would capture all the interrelated concepts surrounding the sharing of knowledge and the role of the managers. I use qualitative research methods to answer the research question, namely semi-structured interviews and participant observations. The data gathered through these qualitative methods will then be coded, and a thematic analysis will be conducted. The report of the results from the thematic analysis will shed light on themes that rule the dynamics of knowledge exchange among coworking spaces.

This research's relevance stems on the verification of the usefulness of the knowledge base approach in understand the knowledge dynamics in creative industries and more specifically in coworking spaces. The knowledge base approach has been proven to be particularly relevant in making sense of the complex and diversified nature of knowledge processes and its effect on innovation. Applying it to the coworking spaces, real hubs of creativity and innovation where micro firms are interacting and creating constantly, can provide

a novel approach to examining the knowledge intricacies among them. This research indeed demonstrates that the knowledge base approach is suitable to understand knowledge in the context or the creative industries and more specifically knowledge exchange in coworking spaces, thus determining various possible directions of research for future studies.

Furthermore, the model that is developed in this research could conceptualise more clearly the relationship between managerial strategies and knowledge in coworking spaces, and explain more thoroughly the role managers have in the knowledge exchange.

Also, this research will be of relevance to managers of coworking spaces as well, giving them a framework to select strategies according to their members knowledge bases, to maximise the interaction and exchange of knowledge among members. The strategies mentioned in the research are effectively sharing different types of knowledge, understanding them could potentially provide specific ways for managers to enhance the exchange of one specific type of knowledge. This research adds to the debate on coworking spaces and their role for firms innovations, by adding a new framework into the equation and confirming its relevance in accurately understanding the knowledge transmission happening in the spaces.

2) Theoretical Framework:

A) Creative Labour and Precariousness:

The introduction explained that the creative industries experienced in the last decades a strong switch, or rather upgrade, in their position in the economy. The economically strongest countries in the world recognised the importance of the creative industries not only for their cultural relevance, as the creative industries encompass all the cultural industries (Cunningham, 2002; Garhnam, 2005), but also for their increasingly important role in fostering innovation across sectors outside the creative industries (Huws, 2007; Muller, Rammer & Trueby, 2009; Oakley, Sperry & Pratt, 2008). The growing number of creative workers around the world as well as the increasing recognition that creative industries experienced lately

suggests that working in the creative industries can be the way to achieve an economically successful, creative and rewarding career .

Nevertheless, this increasing attention and growing research on these always evolving industries pointed out that the situation for creative workers is not as bright as it seems. There are many points of difference between workers in the creative industries and those from outside industries. Bridgstock (2008) examined in her research the career orientations of creative workers, and pointed out the recent changes in career theory, mainly due to knowledge workers and by extension, creative workers. Workers in these industries do not rely on companies for a stable employment anymore, and instead, have to rely on themselves to forge their careers, through unstable and shorter employments.

These differences in career have drastic implications for workers in the creative industries. The working conditions in these industries are tough due to the high and still growing competition, and precariousness is often extremely present among workers. The growth of the research on creative workers also sheds light on their working conditions. Gill and Pratt (2008) examined the origin of the precariousness in the cultural industries by mixing different bodies of ideas on precarity and labour, and pointed out the 'immaterial' and 'affective' nature of creative work. These trait of creative work often pushes workers to accept an overload of work or projects. Gandini (2015) in his literature review explains the precarity among creative workers by the unstability of employment central to the work in creative industries. Because workers tend to work on many different projects and have to take care of their career themselves, they sometimes spend months without working, which is unfortunately the norm in these industries (Capelli & Keller, 2014). This erratic working schedule often does not allow the creative workers to earn a stable revenue.

Due to the changes in the creative industries, research has given attention to the evolving employment conditions of the creative workers and their intricacies.. De Peuter (2014) attempts to question the image of 'model worker' that capitalism associated to creative workers and instead points out the oppositional position of creative workers towards said capitalism and Neo-liberalism. Instead, the author uses cases to show different strategies and projects that allow workers to counter this current and make a place for themselves in the economy of today. Murray and Gollmitzer (2012) take a different approach to find a solution to fight the lack of security among creative workers. They tried to classify the existing policy instruments for creative industries and established a classification. According to them, strategies to help creative workers already in place are not enough to really respond to the needs of the workers and they suggest a different approach that strays away from the Neo-liberalism and focuses on cultural, social and labour aspects of the work. Hesmondalgh and Baker (2010) obtained similar findings in their study across three cultural industries. Although highly ambivalent, the answers of the respondents across the three industries showed some issues with regards to the pay, working hours and union, uncertainty and insecurity and social isolation. The increased competition among creative workers pushes people to work more hours while getting less paid, notably because of the new entrants in the market that are desperately in need for a job. Because people work

more hours for less, less people are in need for different projects, thus reinforcing the insecurity and uncertainty among creative labourers.

B) The Clustering of Creative Industries:

All these factors are pushing forward a phenomenon that is becoming more and more prominent nowadays, the clustering of the creative industries. As we mentioned before, the creative workers are far from being the model workers that earn a high wage and have the freedom and entrepreneurial mindset that people expects them to be (De Peuter, 2011). Hesmondalgh and Baker (2010) mention social isolation as one of the principal concerns of creative workers, and the research by Moriset (2014) support this assumption.

The nature of work has changed due to "the globalization, the rise of the service industry and the advances in information technology" (Major & Germano, 2006, p. 13), and people can now work from remote places. Although they can be beneficial, these changes can also lead to the isolation of the workers. Due to the possibility of communicating remotely, workers do not need to meet with other workers anymore in order to finalise their projects. Creative workers that are often self-employed or freelancers are often part of these people that work from home, due to the costs of renting out working spaces coupled with their sometimes erratic revenue (Bridgstock, 2008; Capelli & Keller, 2014).

Highly context dependent factors are also influencing the clustering industries. Four factors, according to Lazaretti, Capone and Boix (2009), are the main drivers. Cultural heritage influences the artistic component of the creative process, thus workers will tend to concentrate in cities rich in monuments, art, and history. The traditional concept of agglomeration economies, that refers to the advantages in resources or costs brought by spatial agglomeration also motivates the concentration of creative workers. Nonetheless, the authors put forward the concept of related -variety, as another important driver. Due to the cognitive proximity between industries in the creative industries, people are able to communicate, exchange and learn successfully from each other. Also, because of the inherent importance of human capital for the 'creative' part of content creation, having access to people with relevant creative skills is fundamental for creative workers.

More recent research argues that other drivers are not considered in previous research. Instead, in addition to the agglomeration economies, the spin-off formations and the institutional support would be more appropriate appropriate motivators of the clustering of creative industries (Gong and Hassink, 2017). Creative workers can develop skills through different manners, in universities and through a corporate environment. By acquiring knowledge from these 'parent' establishment, people are able to more successfully build their own business than people with less prior experience. This spin-off process generally leads to clustering as they spin-off remain in the network of the parent organisation. Formal institutional support, as well as informal institutional support stemming from prominent networks are causing organisations, and independent workers to cluster together.

The frameworks previously mentioned are at regional levels, nevertheless, the four drivers presented by Lazaretti, Capone and Boix (2009) could also be present in a smaller context, showing that this clustering

of creative industries can take place in coworking spaces, as they act as small agglomeration economies, reducing the working costs of working by being colocated, they are situated in creative cities (Gandini, 2015) full of cultural heritage, where creative class, comprising students, is abundant, and people are able to exchange due to the cognitive proximity of they industries industries .

The digitisation of the creative class and the tools they use allowed the rise of an incredible amount of self-employed workers and freelancers, and allowed knowledge workers to remove the constraints of physical location on their profession. Nevertheless, these improvements came with other constraints that we mentioned previously, such as social isolation (Hesmondalgh and Baker, 2010), instability of employment due to the high competition (Gandini, 2014; Capelli & Keller), or lack of awareness on policies and institutional support (Hesmondalgh & Baker, 2010; Murray and Gollmitzer, 2012). These conditions pushed forward the rise of a new place for creative workers, a place that could allow them to escape from a potential social isolation, and that could resolve many of the concerns that they normally face: the coworking spaces.

C) **The Emergence of Coworking Spaces:**

With the rise of the creative class and the creative industries, a new kind of workspace started to appear. The coworking spaces provide an alternative for the workers that could resolve the social isolation and help them escape a precarious situation. Due to the inherent instability of being a freelancer or self-employed worker, it can be hard to find a location to work other than their own home. Nevertheless, the recent years, notably due to the economic crisis of 2008, saw the rise of the sharing economy, which fundamentally transformed the way customers consumed, as well as many socio-economic conditions that were taken for granted (Cheng, 2016). The coworking spaces answered perfectly the needs of creative workers that were looking for alternative and more flexible ways of working and escape from isolation and poor working conditions.

Furthermore, the coworking spaces are becoming key tools in the urban regeneration of many cities. Through the reuse of abandoned buildings, coworking spaces are able to rejuvenate their neighbourhoods, and attract innovative firms and start-ups that foster economic development (Fiorentino, 2018). By bringing activity to the neighbourhood, they become drivers of social, spatial and economic changes needed for urban regeneration (Ostanel, 2017). The economic potential of the coworking spaces is expected to become considerable, due to the increasing number of autonomous workers (Chuah, 2016) and their ability to foster economic development through ways different than the dominant capitalistic and Neo-liberal economic development, such as promoting social equality, ecological concerns and focusing on collaborative initiatives (Jamal, 2018)

Due to the increased academic focus on coworking spaces in the recent decade (Gandini, 2015), further effects and benefits of coworking have been addressed. Their impact on local economic development (Chuah, 2016; Jamal, 2018) as well as their influence in the urban regeneration and social change in cities (Mariotti, Pacchi & Di Vita, 2017; Ostanel, 2017) already positions the coworking spaces as key initiatives

for the development of creative industries. Furthermore, other research has shown that coworking spaces increased organisational flexibility (Raffaele & Connell, 2016) when implemented, they boosted the entrepreneurship development of its members (Fuzi, 2015; Fuzi, Clifton & Loudon, 2015), provided the members with many different forms of beneficial interactions such as feedback, advices, encouragement and peer support, (Spinuzzi, 2012), that would be more difficult to find in organisations from traditional industries due to the inherent difference in the nature of the work (Gerdenitsch, Scheel, Andorfer & Korunka 2016).

While these benefits alone would justify the success of coworking spaces, not taking into account the many other advantages such as low prices, network opportunity, and social support, the main reason that researchers found for the success of coworking spaces was the community based approach that most was adopted by most of the spaces .

D) The Collaboration and the Community:

We mentioned previously that the rise of the creative industries, or rather, their recognition for the global economy, changed drastically the creative workers' work experience as well as expectation with regards to their career and future, The advent of coworking space allowed the creative workers to develop their skills and find ways to develop themselves. These spaces provides workers with social support and a solution to isolation, as they are able to interact with other creative workers around them, they boost their entrepreneurship skills, and gives them access to a larger network . These benefits are enabled thanks to the strong focus that almost all coworking spaces share, the community. Although all coworking spaces are different from each other, all of them put forward the community-aspect that they can provide to the members. Spinuzzi (2012) differentiated in his research two types of coworking spaces based on their collaboration. On one side, he found coworking spaces who had a community that was formed due to the collaboration between members on different work related projects, and on the other side he found coworking spaces where the community was based on an effort from all members to contribute to the space they were in and create a pleasant working community. Although we can see that the community can stem from economical needs and profit, we can also find communities that are motivated by the conscious need of members to deepen their social networks, to communicate and collaborate with peers.

The word community has been used extensively throughout the research on coworking spaces. Nonetheless, Rus and Orel (2016) argue that the community that we find in coworking spaces is different than the community that has been theorised and researched earlier. Instead of focusing on the shared trait of the members to establish belonging to a certain community, the community discussed in relation to coworking spaces relies on the diversity of the members with different backgrounds and spaces, that promotes openness to outsiders of the community, and innovation. When the initial trait that were used when defined community are added, such as sharing, reciprocity and trust are added, we obtain the community found in coworking spaces that promotes sharing of knowledge and collaboration between members. The authors call

this concept the community of work. As opposed to the traditional communities that are closed to the outside, a community of work is oriented globally and its main goal is to construct a global and collaborative network, even outside the community.

The research by Spinuzzi (2012) showed that the communities could be formed because of profit, or because of a conscious need to form a 'community of work', as Rus and Orel (2016) call it. Nonetheless, collaboration is found among both types of communities. Castillo and Quandt (2017) decided to follow Spinuzzi's research and attempted to differentiate different types of coworking by examining the differences in collaborative capabilities between different coworking spaces. Although coworking is seen by certain authors as primarily motivated by the space, as well as the possibility to escape isolation for members, Castillo and Quandt (2017) disagree, or rather complement on this by adding that members are attracted to coworking spaces because they are in a sense obligated to collaborate with other workers. Because many creative workers are highly dependent on projects to make a living, they often need to collaborate with other creative workers that have different skills which are required for the project. The coworking spaces provide the creative workers with a physical space where they can meet these other workers that will potentially help you with projects, or find resources and networks that they would not be able to find in other ways (Water-Lynch et al., 2017).

Collaboration is a core value of coworking spaces (Merkel, 2015), nevertheless it can be hard to define collaboration with relation to coworking spaces due to the difference among them. Different coworking spaces promote different types of collaboration based on their vision and values. Capdevila (2014) took a different approach from Castillo and Quandt (2017) and devised different approaches that ruled coworking collaboration. The author establishes three categories of collaboration, the cost-based collaboration that is motivated by the reduction of costs, the resource based collaboration that is driven by the intention of the workers to learn new skills and have access to new resources, and finally the relational collaboration that is motivated by the search for a synergy in their community. These differentiations complement the classifications made by Castillo and Quandt (2017). We could expect coworking spaces that fall under the 'convenience sharing' category to have a cost-based collaboration between the members, whereas the 'community building' type of coworking spaces would have a resource-based or relational collaboration, as the former would not allow them to form a 'community of work'. Of course, for my research, I would prefer to focus on the latter, as it is clear that I would find more instances of interaction and community building among coworking spaces more socially and sustainably oriented. Although coworking spaces oriented towards profit are proliferating, as they are convenient for workers even without the added aspect of community, I doubt that they have the potential to really foster the capabilities, and identities of its members.

Butcher (2015) clearly explains that despite the more 'sustainable' and 'humanistic' orientation that most coworking spaces adopt, they still follow unknowingly a certain conventionality that most organisations in a capitalist era adhere too. Instead, according the the author, the solution would be to transform or rather, lead the coworking space to become a habitus that relies on mutuality and cooperation between members. If it is achieved, such habitus that emphasises heavily on shared symbols and rituals would lead to the establishment of a community that promotes sustainable entrepreneurship and growth of its members.

The terms community and collaboration are used extensively across coworking research, and although the definitions provided by different authors are relatively close to each other, there is no strict definition of community that could allow us to clearly differentiate between different spaces that call themselves coworking spaces apart from few attempts, such as Rus and Orel (2016) or Butcher (2015) that we mentioned previously. Some authors also denounce the term community, as it is increasingly used as means to attract workers towards a specific place (Jakonen, Kivinen, Salovaara & Hirkman, 2017) and is used by larger organisation to foster loyalty among their members (Peuters, Cohen & Saraco, 2017). Community is a central word in the coworking world, nevertheless it can be appear devoid of its original meaning and be an empty word. Coworking spaces's approach to community can give us expectations towards the intensity of knowledge exchange taking place.

Because community and collaboration are such important concepts for the coworking research, as well as for the owners and members, it is necessary to be have an adequate framework that can help us understand them in the context of coworking spaces. Spinuzzi, Bodrožić, Scaratti and Ivaldi (2019) in their recent research attempted to develop a typology to better understand these concepts in relation to the different types of coworking spaces. By modifying the typologies of communities of Adler, Kwon and Heckscher (2008) in order to be applicable to coworking, they developed their own framework. Although their classification has some similarities to other research mentioned before (Capdevila, 2014; Spinuzzi, 2012), they anchor their framework with a clear definition of the communities and the type of collaboration that they are researching. They define two categories, the Gesellschaft community, and the collaborative community, that are classified according to the nature of the relationship between the managers and the members, between members, as well as the division of labor and the structure. Although most of the previous literature points out that community exists many coworking spaces, the authors argue that most of coworking spaces fall into the category of Gesellschaft, in which there is still a dominant actor that benefits from the knowledge creation and the nature of the members' relationship is largely based on the the institutional values of the space.

Despite many coworking spaces claiming to have established a real community of work, the reality is often far from what the author names the collaborative communities, in which coworking spaces promotes sharing and creation of knowledge to the benefits of all, instead of following the logic of the market. Even though many of these Gesellschaft communities had some traits of collective communities, they were still not the dominant logic driving the coworking space. The typology developed by the authors is relevant to study coworking spaces as it addresses the importance of knowledge creation and exchange to create a community.

Another research takes a different approach to studying coworking spaces and focus on the managerial strategies Ivaldi, Pais and Scaratti (2018) focus their research on the different managerial strategies in coworking spaces, and base their research specifically on managerial and organisational studies, nevertheless, although knowledge creation and sharing appear as a key aspect to define their typologies of coworking spaces, they do not define in depth what they consider knowledge, and although they specify certain strategies used by the managers to run the spaces, very few attention is put on the processes of knowledge transfer.

Even though the frameworks of Ivaldi, Pais and Scaratti (2018) is relevant due to their development of a typology of coworking spaces that includes managerial strategies, a focus on knowledge, which is key in my research, is also lacking.

Among the aforementioned research on community and collaboration, many of them address an important aspect that is key to coworking spaces and the communities, the knowledge transfer. Many scholars such as Spinuzzi (2012), Gandini (2014), Capdevila (2014; 2015) or Merkel (2015) established that the transfer of knowledge between members of coworking spaces is one what attracts creative workers to such spaces, and communities in coworking spaces are able to create an atmosphere that fosters such transfer (Rus & Orel, 2016; Castillo & Quandt, 2017). Nonetheless, in order to develop a model that will allow us to understand how the transfer of knowledge happens in coworking spaces, it is necessary to understand the concept of knowledge in the concept of creative workers and coworking spaces.

E) Knowledge in the Creative Industries and its Transfer inside the Coworking Spaces:

Thanks to the development of new technologies since the mid 20th century, knowledge and information started becoming another kind of capital that would give rise to the growth of the knowledge-economy and changed fundamentally the nature of work. Nonetheless, the concept of knowledge economy has become increasingly used in recent research and can cover a wide variety of activities. Powell and Snellman (2004) established a definition based on previous research. For them, the knowledge economy refers to reliance on intellectual capabilities when creating products or services. These products that are often intangible have slowly become a key component of the economy and one of the main focus of the majority of firms. The authors argue however that it is hard to measure or quantify knowledge. Patents would be a way to quantify knowledge into one kind of intangible knowledge capital, however this option would still be extremely restricting, as there is a great amount of knowledge that could not be quantifiable through said patents . Technology in turn would allow the knowledge to be transferred, among certain organisational communities for example. Although the article from Powell and Snellman (2004) provides a good introduction of the knowledge economy, it is focused on the economical part of the knowledge economy and its relation to industries such as computer technologies and biotechnologies.

Even though other authors do not follow their approach in examining the knowledge economy, they still consider it as a shift in terms of economy. Smith (2002) tackles in his article the fact that knowledge as related to the knowledge economy is extremely elusive and its meaning often changes implicitly, even though most researchers do not take that into account. So it is needed to define clearly knowledge.

Blaker (1995) offers a definition of the term in the context of organisational studies, and critically analyses the current body of work on knowledge and knowledge. The organisational research at the time dif-

ferentiated five types of knowledge, respectively the embrained, embodied, encultured, embedded and encoded knowledge. Although these classifications are relevant and based empirically, the author argues that this framework is not able to follow the change in the nature of knowledge caused by the new technology. New forms of knowledge are being produced and tools allow the production of knowledge that is blurred between these distinctions. He also addresses another leading theory in the knowledge work, the distinction between tacit and explicit knowledge and the interaction between the two that are the main components of knowledge creation among companies. Nonetheless, these interactions involve complex processes of communication, language and symbols. Blaker (1995) thus proposes to recede with the term knowledge and instead focus on the process of knowing, which for him is more appropriated to the context of organisations. Based on three bodies of idea, the author proposes an approach to understand how people know rather than focusing on the knowledge. Knowing is mediated, through the new technologies appearing as well as the economic developments and changes in structure. Knowing is also situated, meaning that the context, the surroundings and communities also influence the processes of learning and knowledge creation. Another component of knowing is its provisionality, in the sense that it is always in development and can emerge from the sometimes unintentional tensions caused by technology and organisational changes. Knowing is finally pragmatic, and contested, as in this age when symbols are created and clash constantly, new knowledge arises from these tensions and conflicts, pushing the knowledge work forward. In places where workers are surrounded by other people that have different point of views, backgrounds and skills, such as coworking spaces, these tensions happen all the time. The openness of the coworking spaces allow workers to voice out their principles and push forward symbols and values they adhere to, and put them in conflict with others' symbols. Through this conflict and deliberation between people, the skills, knowledge and values of the workers are challenged and evolve. Coworking spaces provide a physical space where these tensions can happen.

Asheim, Boschma and Cooke (2011) propose a policy model to enhance innovation at a regional level. This model gives forth interesting concepts that we mentioned previously, such as the related variety (Lazaretti, Domenech & Capone, 2009), or the knowledge bases. According to them, the related variety between professions in sectors closely related through technology for example, allows for a successful knowledge spillover. This effect happens when workers have slightly different competences but are still able to communicate and interact, thus exchanging knowledge. Although the research by Asheim, Boschma and Cooke (2011) was at a regional level, we think the concept of related variety could partly explain the knowledge spillover happening inter-organisationally and at a micro context. Because the slight difference in knowledge and skills between creative entrepreneurs enables them to exchange, or spill successfully knowledge even if they are from different trades, this concept appears to enter in effect even at the individual level, thus it is highly possible that inter-organisational spillover is explained, albeit partly, by this concept. The next concept discussed by the authors is the concept of knowledge base. This concept proved to be extremely powerful in providing a more complex and broad approach of interactive learning (Asheim, 2007; Asheim & Coenen, 2005; Asheim & Gertler; Asheim & Hansen, 2009) that takes into account a large amount of actors. Three types of knowledge are distinguished, the analytical knowledge that is generated via

scientific methods and is highly coded in nature, the synthetic knowledge that stems from the combination of existing knowledge during interactive processes and which is highly tacit due to the reliance on know-how that is difficult to transmit, and finally the symbolic knowledge, specific to many of the artistic and cultural professions, that is highly context-dependent and intangible. The three types of knowledge bases differ from each other on many points, and are related to specific sectors that are highly reliant on one of the types. The artistic community for example values the symbolic knowledge knowledge more, whereas people working in crafts would appreciate interactive teaching that would allow them to incorporate synthetic knowledge, both tacit and explicit, and the science based industries relies strongly on analytical knowledge.

The knowledge base approach would allow us to classify the knowledge transmitted and negotiated in broader ways than the dichotomy of tacit and codified knowledge, and would be relevant for the creative industries that rely on synthetic and symbolic knowledge as a base for their product and services. In a more recent article, Asheim, Grillitsch and Trippl (2017) delved further into the knowledge base approach and applied it at the micro level of inter-organisational interaction, and explain that although sectors or industries will rely on one particular type of knowledge among the three mentioned before, most activities rely on a combination of knowledge from different bases, and combinatorial knowledge, or knowledge formed through the combination of two or more types of knowledge are extremely relevant as they are important knowledge based capital, innovation and growth.

All types of knowledge are relevant in today's economy, and the symbolic knowledge, which was added later to the framework testifies of the importance of the cultural and creative industries for the economy even though goods and services among them are often intangibles. The authors also mention Pavitt's (1984) taxonomy that sees the synthetic knowledge base as concerning "supplier-dominated and production-intensive categories" (Asheim, Grillitsch & Trippl, 2017) that fits the profile of the creative industries perfectly. We can expect the creative workers to rely on synthetic and symbolic knowledge bases for their projects. Plum and Hassink (2014) applied the knowledge base model to a group of video game developers in order to see from which knowledge bases they take their inspirations and ideas. Their findings suggest that indeed, creative workers will rely on synthetic knowledge bases as tacit knowledge that is acquired through experience and by repetition is extremely valuable in the creative industries, and on symbolic knowledge as they rely heavily on symbols and aesthetic elements that are extremely context dependent, as well as tacit. The previous research mentioned (Capdevila, 2014; Castillo & Quandt, 2017; Merkel, 2015; Spinuzzi, 2012) points towards the direction that tacit knowledge is the main knowledge exchanged in coworking spaces, the synthetic and symbolic knowledge should thus be the principal type of knowledge that circulates between members.

Asheim, Coenen and Vang (2007) propose two interesting concepts, or mechanisms that were increasingly being used as principal ways of transmitting knowledge: the face-to-face interaction and buzz. After reviewing the theory on these concepts and attempting to demystify wrong assumptions about the terms, the authors link these concepts to the knowledge base framework. Face-to-face refers to the interaction that happens when two people are at touching distance from each other and allows multidimensional

communication, or in other words, speaking, and seeing the other person. Many scholars argued that face-to-face interaction was the only reliable way to transmit tacit knowledge, whereas other researchers claim that geographical proximity is nowadays not a barrier anymore to transmit tacit knowledge as other traits such as relational proximity or communities of practice can account for a successful transmission of tacit knowledge. Asheim, Coenen and Vang (2007) argue in turn that the importance, or relevance of face-to-face communication for tacit knowledge transfer depends on the type of knowledge base they take from. The concept of buzz that they review as well is also an interesting concept for the inter-organisational knowledge transfer, especially in the context of creative workers and the creative industries, as there is a heavy reliance on networks and know-how to gain new tacit knowledge. It refers to the kind of communicative and informative system that stems from a clustering of creative workers that are often spatially close, in which information is exchanged constantly, and thus knowledge is being shared in a non deliberate manner. Because people are in the same place or part of the same community, they are able to benefit from the multitude of information that is being exchanged by everybody in an informal manner.

The authors then link face-to-face interaction with mainly the synthetic knowledge base, because of the high reliance of tacit knowledge for industries relying this knowledge base. In these industries, it is crucial to acquire know-how, that is often in the form of tacit knowledge. Face-to-face is also important for industries relying on symbolic knowledge bases, although buzzing is the key process for artistic workers. First of all, buzzing can occur mainly at gatherings and events, all which comport face-to-face interaction, secondly, many of these symbolic industries are also based on craft. Because crafts often rely on technical skills that can not be acquired solely through codified knowledge, tacit knowledge that can be taught thanks to face-to-face interaction often becomes key. We can thus expect workers in co-working spaces to rely heavily on face-to-face interactions and buzzing as ways of acquiring new knowledge.

Pina and Tether (2016) highlighted the relevance of the knowledge base approach for organisational and inter-organisational social processes. The authors proposed a pioneering approach to understanding knowledge intensive business services (KIBS). Through differentiating the KIBS according to the framework of Asheim et al. (2017), a classification of firms based on their primary knowledge base was established. After defining the main knowledge bases of the firms, they found that the results were different from expected. Knowledge intensive firms which were expected to use synthetic knowledge as their primary knowledge base instead have proven to rely or strongly on analytical knowledge, or on symbolic knowledge. The researchers point out the limitation of the research and explains that the tacit and underlying nature of synthetic knowledge may be the reason for the lack of presence of mainly synthetic firms. The author nevertheless supports the assumption that most firms rely on all types of knowledge bases to a certain degree, and that further research is needed on differentiating them. This research provides a new view on the knowledge base approach and can be of great support to research on coworking spaces. Because coworking spaces are populated by many small organisations that work in knowledge intensive industries, the knowledge base framework can be appropriate to understand which knowledge base coworkers use and which one do they share with others. The research by Pina and Tether (2016) suggests that workers rely primarily on analytical

or symbolic knowledge, and that synthetic knowledge is often a second, inferior dimension. In contrast, the research by Asheim, Coenen and Vang (2007) argues that face-to-face interactions and buzz are more frequently used to transfer knowledge by industries using tacit knowledge such as synthetic and symbolic knowledge. Expectations can be formed thanks to the research. Coworking spaces will contain people using all three knowledge bases, and we can expect all three knowledges to be shared among them.

Other approaches on the knowledge exchange that happens in co-working spaces has already been undertaken. Capdevila (2014) for example attempted to examine the knowledge dynamics in coworking spaces by considering them as micro-clusters in which organisations collaborate between each other for different reasons. This collaboration will in turn lead to inter-organisational knowledge exchange as firms can benefit from collaborating with each other, be it cost based benefits (reducing of capital needed for a project, or direct profit) or relational benefits (benefits based on acquisition of network, or simply on the knowledge acquired). After developing a distinction of the types of collaboration among co-working spaces, the author argues that two types of collaboration, namely the resource based collaboration that states that workers colocate in order to have access to new resources such as networks and knowledge, and the relational collaboration in which people want to achieve a synergic sense of community, with people that are close in vision to them, will both facilitate knowledge sharing processes.

Parrino (2015) studied the effect of physical co-presence on the knowledge sharing processes in coworking spaces. After dividing coworking spaces according to their configurations for knowledge exchange, the author indeed found results that showed the benefits of colocation and proximity for knowledge sharing processes. The proximity of being co-located can give the access to face-to-face interactions and buzz that allow tacit knowledge to be shared. Nevertheless, the author supports that organisational mechanisms and actions to facilitate the interaction are needed to fully develop this process. Assenza (2015) in turn, looked at the influence of spatial configuration on the workers' cognitive and social capabilities, and on the knowledge spillover happening in coworking spaces. She developed a theoretical model which states that the presence of an effectively designed physical space, coupled with a social place or a place that acts as a network for interactions, and an individual place that allows the workers to express their identity and develop autonomously, would lead to effective collaboration and a resulting knowledge spillover would happen. Soerjoatmodjo et al. (2017) examined through interviews how the knowledge sharing processes happened in coworking spaces. They found out that workers share tacit knowledge during lunch or at the coffee makers, at places where people can join and discuss, exchanging knowledge informally, about their expertise or personal information.

As I mentioned knowledge exchange often needs to be facilitated through spatial configuration (Assenza, 2015) and opportunities for buzz and face-to-face interaction (Asheim, Coenen & Vang, 2007) in places such as the kitchen or the coffee makers, during lunch or breaks (Soerjoatmodjo et al., 2017). Desouza (2003) proposes his solutions to facilitate tacit knowledge exchange. According to him, although IT solutions

could be a way to increase knowledge exchange by increasing communication among members, instead organisational management needs to be present to set the example and install an atmosphere that promotes collaboration and interaction. This need for a certain kind of managerial and organisational push points us to another important concept in my research, the concept of "manager, or host" as they are called in some coworking spaces (Gandini, 2015; Spinuzzi, 2012; Merkel, 2015)

F) The Manager and his Role in the Transfer of Knowledge:

With the rise of the knowledge economy, and the growing importance that knowledge and knowledge workers took in the economy, the research on the discipline of knowledge management emerged. Scholars have attempted to develop different theoretical frameworks in order to foster knowledge creation and exchange among firms, to boost innovation processes. We can find different strategies that can be used to regulate knowledge. The technocratic schools of thought focus on IT and communication technologies to share knowledge, whereas managers using behavioural strategies will focus on creating communities and use spatial configurations to facilitate the transfer of knowledge (Earl, 2001). The behavioural schools of thoughts propose strategies that could be applicable to coworking spaces, as planning, networking and decision making. These strategies, despite originating from traditional management theory, are powerful tools at the disposition of the managers in coworking spaces to create a community fostering knowledge exchange. Because a lot of creative workers in coworking spaces use extensively new technologies, strategies relying on communication based technologies and online interaction could also prove to increase knowledge sharing.

Asllani and Luthans (2003) take the research of Earl (2001) as a basis and try to demystify the role of knowledge managers, and explain clearly what they do. Because knowledge management is composed of a multitude of disciplines, as the review of Earl (2001) lets us see, the authors divide the managers into two categories. The explicit knowledge manager, who will use information technology to facilitate the transfer of codified knowledge, and the tacit knowledge manager, who will rely on face-to-face communication, differ in their roles, although managers will usually take part in both management. Nonetheless, the tacit knowledge manager would fit better the context of creative industries in which workers rely more on tacit knowledge, know-how and network (Asheim, Coenen & Vang, 2007). This type of manager focuses on creating a setting of interaction and exchange, and is able to arrange the network of workers in a specific manner that would allow workers to find knowledge easily through experts. Managerial strategies are this the principal tool of the tacit knowledge manager. Hence, they organise networking events to connect workers between each other, and undertake traditional management activities.

Furthermore, they use communication technologies in order to hasten the many organisational processes, such as online boards, group communication tools or workflow management. Thanks to the many tools at their disposition, managers can now spend more time on face-to-face communication and activities that require physical proximity, hopefully promoting knowledge exchange (Asllani & Luthans, 2003). Nonetheless, the communication tools are not only dedicated to ease the organisational processes. Earl (2001) already pointed out that technological strategies can be facilitators of knowledge exchange in many ways, and

Ardichvili (2008) examined how communities could be formed online, via communication technologies. According to the latter, a successful platform for online sharing on 'Virtual Communities of Practice' can only be achieved if enablers are present. A supportive organisational culture, motivated by leadership, a knowledge based and institutional trust in the leader and the organisation, as well as tools, are needed for virtual communities of practice to lead to co-creation and sharing of knowledge. The coworking spaces appear to be a suitable place to implement such a strategy, as managers of coworking spaces are able to implement an organisational culture (Waters-Lynch, Potts, 2016). Various tools are also accessible for coworking hosts. Bilandzic, Schroeter and Foth (2013) shows us that certain programs such as 'Gelatine' can provide an increase in the sense of space of the users, and can in a sense make the socio-cultural traits of the members visible. This transforms the space in a public space where everybody can potentially talk to people and learn from each other. Members can thus look for people in their area of expertise, or people that have complementary skills from them.

Ardichvili (2018) discusses the importance of trust in motivating the participation in virtual communities. Trust in the institution and trust in the manager will lead the workers to participate in the community to improve first of all the community, but also their careers and skills. Holste and Fields (2009) looked at the relationship between trust, and the knowledge sharing and using among professionals. Their study revealed that affect based trust, or trust based on emotional links and concerns between workers, and cognition trust, which is based on professional reliability, both influence positively tacit knowledge exchange, as these trust are often based on numerous face-to-face interactions and on considerable working relationships. Chow and Chan (2008) also found out that social trust between employees and shared goals influence positively the intention and the attitude towards knowledge sharing. The more trust there is between workers, the more easy it is for them to exchange knowledge (Fong Boh, Nguyen & Xu, 2013). A good leadership is also a great enabler of knowledge transfer. Xue et al. (2011) and Arnold, Arad, Rhoades and Drasgow (2000) introduce the concept of empowering leadership where managers coach and involve the workers. All the conditions for successful virtual communities of practice can be potentially present in coworking spaces, as such it is expected that managers use both traditional and technology based management strategies to create communities and facilitate knowledge exchange

Research on managers and their role in the coworking spaces has already been undertaken. Capdevila (2014) Examined the collaboration between organisations in coworking spaces, as well as the dynamics of innovation in coworking spaces (Capdevila, 2015). He supports that the role of coworking managers is to foster these dynamics of innovation between coworkers with events, projects and spatial arrangements. Merkel (2015) defines the position of manager as 'host'. She classifies the 'hosts' into two types, the service provider, focused mainly on providing a good service and pleasant environment, and the visionary who is motivated to enable a fruitful communication and collaboration among coworkers. She defines the role of the coworking space host as a curatorial practice. They use different physical and social strategies to foster collaboration. Brown (2017) reuses this term of curating and instead defines the role of coworking managers as mediators. By using the term of communities of practice, she places the concept of communities at the heart of the coworking space debate and draws attention on the learning processes that happen inside

these communities, furthermore he establishes the hosts as intermediaries, who use tools of engagement to curate a place that embrace knowledge sharing.

Ivaldi, Pais and Scaratti (2018) develop an interesting typology of coworking spaces according the management strategies that host employ and the objectives of the coworking spaces. After reviewing the framework from Cunliffe (2014) that defines the different profiles of managers from previous management research, they identify through their typology four different types of coworking spaces. The infrastructure oriented coworking spaces are characterised by the economic sustainability orientation of the managers. The host's objective is to provide good service to the members at the best cost possible. The manager does not influence the interactions between members, as they often consider physical proximity enough to facilitate the social interactions. The network coworking spaces manager is in a sense the gatekeeper that connects the coworking community to external networks and provide networking opportunities for the members. The main objective of the space is to promote social interactions, partnerships and collaboration. The welfare coworking space in turn refers to spaces that aim at resolving social and cultural issues in society, and are often hosts of social organisations. The principal role of the manager in these spaces is to promote an ethical culture that will motivate the members to achieve social project and that will foster collaboration between related projects.

 Finally, Ivaldi, Pais and Scaratti (2018) define the last type of coworking space as relational. This type of space would be the most interesting to explore for this thesis, as the focus of the managers in these spaces is on providing conditions for social interactions and facilitate learning from each other. Organising events and activities, and provide spatial or online platforms for interactions are some of the ways managers in relational spaces are able to promote knowledge sharing and the creation of social relations. Relational spaces would supposedly give us more insights into the knowledge exchange processes in coworking spaces as the organisational culture of the coworking space is oriented towards that goal. Is is thus to be expected that members of relational space share knowledge in different forms, at different occasions. Nonetheless, I expect all types of spaces to be subject to some kind of knowledge exchange processes, thus no distinction was made.

Based on the knowledge base approach, as well as the knowledge management research and the research on coworking spaces typologies, I developed a model that aims at explaining the influence of the management strategies aimed at inter-organisational knowledge transfer in coworking spaces on the knowledge bases which members rely on. Through enhancing the interaction between members, the different managerial strategies can enhance the three knowledge bases of the members. The effect of trust on the effectiveness of these strategies is also included in the model. The model is provided in Appendix 1. The model is expected to provide an explanatory framework that should explain how different managerial strategies, such as organisational strategies, or social networking practices such as events, lead to an increased interaction between members. This increased interaction should stimulate knowledge exchange, and different managerial practices should make people exchange knowledge from different knowledge bases.

Furthermore, the research question of the study is presented again:

What kind of knowledge is exchanged in coworking spaces and how are managers facilitating this process ?

3) Method:

The previous theories mentioned in this paper, on the concepts of community, or knowledge transfer, all point towards the direction that the knowledge transferred in coworking spaces is mainly tacit knowledge (Assenza, 2015; Capdevila, 2014; Parrino, 2013; Soerjoatmodjo et al., 2017). We expect face-to-face communication and buzz to be one of the main interactions to facilitate transfer of knowledge among coworking spaces, as they are known enablers of this transmission process. Because the tacit knowledge is difficult to transfer in the first place (Desouza, 2003), quantitative research would not allow grasping entirely the processes of knowledge transfer, and capturing what facilitators and enablers the managers use. Because I expect some of the strategies to foster knowledge exchange to be based on face-to-face interactions and buzz (Asheim, Coenen & Vang, 2007), on trust (Chow & Chan, 2008 ; Fong Boh, Nguyen & Xu, 2013; Holste &

Fields, 2010) and on events and projects (Capdevila, 2014; Merkel, 2015), qualitative analysis will provide better insights on the processes. If the knowledge shared in the context of creative industries had been explicit knowledge, quantitative research would have given us more reliable information. Although using qualitative research methods establishes certain limitations for the research, such as the possible lack of breadth due to the detailed study of an extremely specific topic, qualitative methods are mainly used to understand interactions and social processes, thus they fit perfectly the topic of knowledge exchange in coworking spaces, since the processes are mostly based on social interactions and communication. The growing research on coworking spaces has used extensively qualitative research in order to have an in depth understanding of the processes happening inside them (Cabral & van Winden, 2016; Soerjoatmodjo et al., 2017; Spinuzzi, 2012; Spinuzzi, Bodrožić, Scaratti & Ivaldi, 2019). Especially semi-structured interviews have been used because of their ability to provide extensive data and their flexibility.

I thus opted to conduct semi-structured interviews to answer the research questions. Nevertheless, Kvale (2007) points out the complexity of getting information from a certain type of respondents, that will not easily provide information more rich in context and insightful for the research. Because people can have issues expressing their ideas and opinions, or because they are sometimes not aware of certain processes that they do, it can be difficult to understand what truly happens. We decided to complement our qualitative research with participant observation, as we believe more ethnographic methods could bring forward processes and practices that are underlying, and that would not be understandable through interviews only.

Observing the interactions in addition to reporting what the interviewees think about the knowledge transfer happening in the coworking spaces provides an insight into how the knowledge transfer is facilitated, which kind of knowledge is shared, and the role of the manager in this intervention. This combination of qualitative research has proven to reveal many insights from coworking spaces and their effects. Spinuzzi (2012) one of the pioneers in the research on coworking spaces, used the data from semi-structured interviews as well as participant observation data, such as picture from the work environment, the spatial disposition, notes, as well as its own experience of the coworking space. I believe that this method is accurate to delve further into the topic of coworking spaces, especially on social practices such as knowledge transfer that stems from communication and interaction.

A) Research Design: Semi-structured Interviews and participant observation.

I decided to study four coworking spaces in the Netherlands, from the major cities where creative workers are concentrated. Thus, two coworking spaces were selected from Rotterdam as different policies are being implemented to transform it into a creative city (Trip & Romein, 2009) , one from the Hague (Russo & Van Der Borg, 2010), and one from Utrecht (Marlet & Woerkens, 2007). I think four coworking spaces will allow me to gather enough data for this research, as previous research of bigger scales such as the

one from Soerjoatmodjo et al. (2015) used ten coworking spaces for their research. Furthermore, the mixed methods used will provide rich data to analyse.

The participant observation consisted of spending at least 40 hours in the coworking spaces in order to take notes on the places, as well as on the interactions between members, as well as between the managers and the members. At the sime time, eight interviews were conducted, two in each site. Four interviewees were the owner or managers of the place, and the other four interviewees were respectively members from each space, and one of the interviews was conducted with both owners of the space (Flolab Collab). The semi-structured interviews took place during the first day of observation at each coworking space, and I presented myself as a student researcher gathering data for a Master's thesis, as I did not see any issues with presenting my real identity. There was a risk that the reactivity of the research would have been compromised, as there is a chance that the managers and the members would give me non-accurate information due to being in a research setting (Sangasubana, 2011). This could be an issue for the interviews with the managers, as they could glorify the transfer of knowledge to show a better image of their coworking space. However, the integration of participant observation allowed me to disregard, or rather to see more than what the respondents told, and how they acted.

As I wanted to obtain slightly different information from the managers and the regular members of the coworking spaces, I decided to develop two different topic lists for the interviews. The topic lists which are provided in the appendix aimed at finding out the different ways in which managers facilitated knowledge, and also which kind of knowledge was transferred. I hence developed 20 questions for the managers, and 16 questions for the members. Since these interviews were semi-structured, the order of the question was sometimes changed according to the flow of the interview, and follow up questions were added if necessary. I operationalised the different kinds of tacit knowledge according to the knowledge base approach. Because I looked at the knowledge transmitted during face-to-face interviews, as well as during buzz, I expected synthetic and symbolic knowledge to be the main element transmitted. Although I still tried to obtain information on explicit knowledge during the interviews as well, because creative workers rely mainly on tacit and symbolic knowledge for their work I decided to focus more upon these aspects. By asking questions related to the certain technical skills or experiences that are exchanged between coworkers, or a specific know-how, I was able to get the respondents to share their own opinion of the processes that happened.

Because community has been discussed in previous research to be such an important component of the dynamics of coworking spaces and their success in growing entrepreneurs (Capdevila, 2014; Castillo & Quandt, 2017; Fuzi, 2015; Spinuzzi, 2012; Spinuzzi, Bodrožić, Scaratti and Ivaldi, 2019), I decided to see as well with the questionnaires how the community was constructed or viewed by the managers, and how the members approached the concept of community. The research supports that communities in coworking spaces are often a far cry from what the managers claim them to be, and the manager is many times the central point of the concept of community they propose, hence affecting the degree to which people collaborate and exchange knowledge . Thus we attempted to see which type of communities were present in the coworking spaces. To this aim, I developed questions related to the creation of knowledge and that examined the

position of the manager towards the knowledge created. If the managers were the main beneficiary of the collaboration between workers and of the knowledge creation, we could expect to find a Gesellschaft community.

Also, based on the literature on online knowledge management (Ardichvili, 2008), I want to observe if certain communication technologies and certain online tools would be able to transmit tacit knowledge as well. I thus looked at communication technologies that were institutionalised by the management of the space, such as Slack, Seats2meet or programs similar to Gelatine (Bilandzic, Schroeter & Foth, 2013), and also the communication technologies used by the users, in order to compare if the members adhered to the community by themselves, or if the strategies of the managers had influence on them. Questions related to these managerial and organisational strategies and tools were added to the topic list, which is provided in Appendix 2.

B) Research setting: The coworking spaces

Four coworking spaces were selected for this research. In order to get access to the spaces to conduct my research, I used a purposive sampling. I contacted coworking spaces from major cities in the Netherlands, such as Amsterdam, the Hague, Utrecht and Rotterdam and asked for permission to research the coworking as well as interview the owners or managers of the spaces, and the members of each respective space. Then I visited the coworking spaces, got to know the owners and managers, who introduced me to the members. I then selected among the members that were willing to dedicate part of their time for my research, or that the managers directed me towards. During the time spent at the space, observations and notes regarding participants interaction in the rest areas, during lunch time, and manager-worker communication were taken. I also spent time working in the space to feel like a member and see if certain features such as spatial arrangements allowed for knowledge of transfer or at least communication between people. Although I was interested in what Spinuzzi, Bodrožić, Scaratti and Ivaldi (2019) call the collaborative communities, or rather what Ivaldi, Pais and Scaratti (2018) name the relational coworking spaces, as they are the type of spaces and communities among which the knowledge transfer is presumably higher, I still contacted spaces that fit the four categories developed by Ivaldi, Pais and Scaratti (2018) in order to compare the types of spaces according to their knowledge transfer processes. The spaces were composed of members from a vast array of professions, from the creative industries as well as from outside industries, a list of the spaces and an anonymised list of respondents will be provided respectively in appendix 3 and 4.

C) Data Analysis

In this research, I combine the findings from the semi-structured interviews with notes and data from the participant observation. Because the aim of the research is to find the strategies through which managers allow the transfer of knowledge, as well as the kind of knowledge that people share based on the knowledge

base approach, I believe that a thematic analysis is the appropriate method to analyse the data at hand. Thematic analysis is one of the widely used methods of qualitative research. Braun, Clarke, Hayfield and Terry, (2019) support the argument that there are a myriad of ways to conduct thematic analysis according to the type of research, or the context of the study. Because it is one of the most flexible methods in qualitative analysis, people have argued that thematic analysis is not rigorous enough. Nevertheless, I believe that thematic analysis is appropriated to answer the research question of this study. The different themes developed can possibly give us insights on the knowledge base of the knowledge that is transmitted in coworking spaces, as well as the different factors that enable the exchange of knowledge from one of the three types.

Furthermore, Braun and Clarke (2006) argue that thematic analysis can be rigorous as long as a methodological procedure is strictly selected and adhered during the whole analysis. The authors propose a plan to conduct thematic analysis based on six different phases, that would supposedly allow us to obtain a rigorous analysis of the data at hand. I will follow the six steps defined by Braun and Clarke (2006) to conduct the thematic analysis of the data obtained through interviews and participant observation.

I first transcribed the different interviews from the managers of each space and reviewed what I saw during the participation observation, in order to familiarise myself with the data. This process allowed me to already think about certain topics that emerged, and find similarities and repetitions across the data. The central role of the manager(s) in the organisations for example, was recurrently discussed in the interviews and appeared throughout the participant observations as well.

Then, initial codes were developed for each segment of text. 238 initial codes were developed that related to different aspects of the study. Codes such as 'collaboration emerging from few individuals', 'contribution of the members towards the space', 'attraction of similar minded individuals', or 'repeated interaction between members diminishes manager role' were. The definition of these codes was mostly guided by theory, in order to see if the framework developed based on previous research can be applied to the context of knowledge exchange in coworking spaces. The codes were thus addressing aspects of research mentioned such as the knowledge bases of the managers and members, the type of communities among the coworking spaces, or the different managerial orientation of the spaces' managers. Nevertheless, the amount of codes was numerous, thus they were reduced in order to be more easily grouped into relevant units of analysis.

I followed the recommendations of Braun and Clarke (2006) and started looking from themes among the codes. The codes were grouped into initial themes and sub themes according to patterns in the data. Different relevant group of codes such as 'community centred around the managers', 'organisational culture as driver of interaction', 'trust as cause and consequence of interaction', or 'multi-faceted role of synthetic knowledge.

Then the themes were reviewed in order to increase the internal homogeneity and external heterogeneity. The data extracts related with each theme were verified in order to see if a pattern was present among the data, and the themes were applied to the data set to see if they represented accurately what is transmitted through the data.

Subsequently different major themes and subthemes were were then renamed. A coding tree mapping the different relations between themes and subthemes will be provided in Appendix 5.

4) Results:

A) The manager as connector:

The role of the manager was central to this research, as the research led me to consider them one of the main enablers of the knowledge transfer in coworking space. The data showed that indeed managers do

have an important and multifaceted role in this process. The primary function of the managers according to research and according to them is to create a community. Janira, the owner of Goodplace2work explains that her main objective is : "to build here a professional community with female entrepreneurs where we actually really help each other to grow." And Ines, from Canvas says:

"I consider the space as a community of people from all kinds of professions that share a vision of how the workspace should be."

Both managers interviewed viewed the community as the central theme of their space. However, their definition of community is different from what the data shows us. Although both the managers and the members interviewed felt sense of belonging to a community, or what we could consider a larger organisational setting encompassing various organisations, the role of the manager appears more of a connector between members. The community functions as a network of people that interact daily, but the manager takes a central position in the links between members. Ines for example explains:

"Yeah I really do feel like being a part of the community, but I do feel I am the connecting person,
so   it's not the way I would like to see it, but I think it is the way it is."

The manager would like to detach herself from this central position in the community as it can inhibit the exchange between members and a laidback position can also provide the opportunity for members to exchange by themselves. Nevertheless, a proactive attitude from the manager is often needed to facilitate the exchange. Suzanne for example tells us that collaboration and exchange of knowledge happen often:

"We had a yoga sensuality coach here and a yoga teacher that had just started that day. (..) Over the
        period of the lunch, by the end of the lunch, she was participating in a workshop that she
was putting   on (..) we want to introduce business breakfasts as well"

Even though this exchange of knowledge happen, notably in the form of interactive learning, a specific context, or situation favourable to exchange must be put forward by the managers. Through specific events such as grouped lunch or meet-ups, the members are encouraged to interact.

a) Manager as internal connector:

We could expect the members of a community to be able to interact between themselves without referring to the management, as the spatial proximity has been argued to be a sufficient factor for communication, and members in coworking spaces indeed interact with each other with ease.
Laura explains:

"Of course I interact with other members, the atmosphere here is really relaxed and people are eager to talk if they have the time or are not busy with a task. And we see each other everyday, and we get along well together so we are talking constantly."

However, although coworkers indeed exchange, because daily social interactions are often composed of common knowledge or personal information, the conversations can stay relatively basic in the sense that they do not provide opportunities for professional learning and acquisition of new knowledge. During the participant observation during lunch time when coworkers were gathered together, the conversations were indeed mostly based on personal information such as conversations on family, on holidays, or on information from the news. Such conversations rarely lead to successful exchange of professional knowledge, even though they reinforce the bonds between members. Managers have to find ways to push the exchange and conversation to a more professional level where workers can exchange valuable knowledge. They can achieve that by identifying the different synergies between members and potential opportunities for collaboration. Janira realised that finding these synergies was one of her abilities:

"I see a lot of opportunities for the members, through connections but also in the way they do their business"

Connecting members that have related or complementary skills can allow for a successful communication, as their sectors share some similarities and are ruled by similar concepts, thus the entrepreneurs have the opportunity to learn from each other. The role of the manager would be here to be an anchoring point that coworkers would go to in order to find the appropriate expertise needed for a project, or simply for learning new skills. Janira cited instances in which she connected members together that ended up collaborating on projects :

"There's another activity I host here and we call it "Intervision group". We put a group of entrepreneurs together and they help each other with their sales, and the idea is that they keep each other proactive. The idea is: What have you done, what do you need to do, and why do you need help? so they actually go through this process, and they help each other."

The manager here appears to be the central point that allows the people to be connected within the organisation if they want to improve their skills and get help. The concept of community, or rather community of work here revolves around the manager. A Gesellschaft community appears to be the dominant model of community, as Carla reveals:

"we were working on a new website and we had someone in the workspace and we found out he was a designer and has his own developing team. So we asked him to write a proposal and we accepted"

The manager, or rather and the coworking space seems to be one of the main beneficiaries of the knowledge creation. Thanks to the access to the network of the space, the organisation is able to benefit from

the different skills to access relevant knowledge. A Gesellschaft community would be less centred on knowledge exchange than collaborative communities, where the knowledge co-creation is in the hands of the members.

Nevertheless, through the access to the community, and understanding of the skills and synergies between members, managers are able to connect effectively members with affinities. The role of connector here depends on the ability of the manager to establish relevant links between members that will lead to knowledge exchange or collaboration. The members are aware of the crucial help that managers can provide, and know they can reach out to him or her when looking for knowledge based resources. Laura considers the manager as a broker of information that can resolve her needs:

"Ines (the manager) is the person to go to if you need any tips or something. If you're looking for a web designer, or somebody who is good with branding, she will tell you who is the best here for your task"

This central position to the interaction and collaboration between members requires the manager to be aware of the skills of the members and their social profile in order to lead to positive exchange. face-to-face interaction is the preferred way used to interact by the managers and members alike, as all respondents answered that they went to talk to the person face-to-face when members needed guidance or indications towards an expertise knowledge. Ines explained:" The members come see me at my desk whenever they have issues with something, like they need some help on a program or look for somebody to do their webpage"
And Janira also considered that these types of interactions were numerous:

"They exchange about everything, from private to business-wise, bookeeping systems, Accounting, all those type of things, the kind of programs they use for mailing, how to create a post on linkedin, where to create a video. (It happens) constantly."

The interaction between members appears to happen mainly at the space in the form of face-to-face communication. Nevertheless, the managers can be connectors in other ways. By organising events and grouped activity, they encourage members to meet other members that they don't know and enhance the social relations in the coworking space. By organising grouped events, the manager can bring together a larger amount of coworkers together and make them communicate and interact.

During the observation at Flolab Collab, the lunch appeared as the selected time to share their needs and ask for advice if needed. Yannis, one of the members, explained his problem with one of the programs he was struggling with, and one of the interviewees, Mags, decided to explain as she had worked with the same sofware. These events can not only foster the social link between coworkers and their sense of belonging to the community, they can also push the workers to collaborate. Events can bring together the workers and push the role of the manager further. If the manager manages to find people with good professional and

social compatibility, a successful collaboration can ensue and workers are able to learn from each other's experience. Furthermore, they can build a professional and social relationship that will not require the involvement of the managers anymore. Managers can lead to autonomous exchange between workers and can make the members involve themselves in the organisational processes. Janira explains that thanks to the successful events, her participation to the grouped activities is not needed:

"I started attending less, as I started doing one on one coaching sessions, But I always get regular invites to join the groups and share knowledge but they also do it by themselves, and that works very well since."

By actively establishing platforms of exchange and interaction, such as events, can foster autonomy among the members. The model predicted that managerial strategies influenced interaction and knowledge exchange, the data shows that social networking practices can lead to increased interaction and collaboration. Strategies of network managers are also increasing interactions and knowledge exchange similarly to relational managers. The access of relevant knowledge inside the space is transferred from the managers to the members, and activities of networking, and connecting people become blurred. By acting as a relational manager, the role of the manager evolves simultaneously with the members' needs. However the networking practices are still required in the process of knowledge exchange.

b) Managers as external connectors:

The managers can act as the cornerstone of the community inside the coworking spaces, nevertheless they are also the gatekeepers to the exterior. Although the managers are able to facilitate the interaction inside the coworking space by connecting the members with affinities, they also have further resources at their disposition. Thanks to the often high amount of turnover among coworking spaces, the managers often have access to a large network. Because they have also access to the network of previous coworkers as well as the current coworkers, they have access to people from a vast array of professions, and can provide the members of the space with information or contact on relevant experts. Ines mentioned:

"I've worked as a coach for quite some time now and I've met quite some people I would say. When people (members) ask me for help, if I can't find anyone here to help them, I surely find them among my network."

A network external to the coworking space also appears to be an extremely relevant resource for coworkers. It would mean that alternatives to being an internal connector exists. The main advantage of managers that connect people inside the coworking spaces is to link related workers, or workers that need a certain expertise. Nevertheless, a large external network can also bring the opportunity to connect with professionals with relevant abilities. By connecting with people from outside their own networks, members have

the opportunity to interact with people that often come from a different organisational setting as them, providing them with the chance to interact and learn new knowledge.

The events can also be used to facilitate the interaction between the members of the community with an outside network. Maria explains:

"All of these events are drawing people who have been to the meetups here to reconnect them to people they met before and perhaps some new people as well."

The events provide the opportunity for managers to connect the members with a network that surrounds the coworking space. The members are not only benefitting from the network of the space, they become a cornerstone of the space. By connecting the members with the network, the managers successfully link the members' networks to the coworking space's. Through enlarging the network this way, managers, by acting as gate-keepers, or external connectors, ensures that the network grows and new knowledge is exchanged between the space and the outside of the organisation.

B) Types of Knowledge:

The central component of this research is undoubtedly the knowledge. I attempted to understand which knowledge was transmitted in coworking spaces, and research provided different expectations with regards to the knowledge base from which knowledge was transmitted. Although the role of the manager as a connector was shown previously, it is necessary to look at the data more in detail to understand which knowledge is shared. The analysis showed that the strategies and the communication between the managers and the members, as well as between the members lead to mainly the symbolic and the synthetic knowledges to be exchanged.

a) Symbolic knowledge - A shared culture

The presence of a shared vision between the members of the space was notable. Both members and managers had a certain shared sense of values. Janira for example points out a shared social concern that drives the coworking space:

" We can help each other. I honestly believe if we help each other we all will grow, that's the philosophy."

The response from the interview suggests that the culture of helping each other is shared by the members, which is the case, however the members are not always sharing the ideology of the managers from the beginning. instead, the manager has to use different ways to establish this vision in the community. Managers appear to use events to build a shared vision, as Maria mentions:

"Yeah we started building our community in July last year (..) we started doing the weekly meetups in July and used that as a way to find the people that we were looking for to serve with this project"

Managers of the space try to attract members with shared values, or try to construct shared values together, which results in symbolic knowledge to be exchanged. Through events and interactions about personal values, managers are able to create a community of like minded individuals with whom they will be able to exchange. By recombining different knowledge through exchange and interaction, the managers are able to create new signs and cultures. Janira for example shows that the belonging to the community is part of the personal culture of the members:

"I always say, once a good placer always a good placer. it means that the connection we have is still

valid and it means that these ambassadors, so ex-good placers, we still connect with them".

The shared culture of the space becomes a part of the members and influences their personal values as well. The organisational culture of the coworking space evolves along with the members and this culture is shared through interactions and contact. It suggests that managers are able to influence the way people work through sharing their organisational values.

The theory about symbolic knowledge points out that it is highly dependent to the everyday culture of the community. Exchange about symbolic knowledge should happen during the everyday interactions between members and managers. Interacting with members on a daily basis can be a strategy to reinforce membership to the community, and subsequently enhance the interaction. Carla explains that daily interaction are an inherently natural part of the role of the manager:

"We don't call it a strategy, but I think it's just a normal human factor, (..) welcoming everyone, being enthusiastic, asking about, well, what are your plans for the weekend? What are you working on today ?"

Engaging actively in interactions, in the form of social support, or personal interactions are seemingly a way to reinforce community and transmit sharing of symbolic knowledge, and it appears that face-to-face interaction is the main strategy to for that. The research also suggest that buzzing is an important tool for sharing symbolic knowledge, as buzzing draws on network to find relevant people to obtain symbolic knowledge from.

The analysis points out that lunches and shared events where people can interact and buzz appears, results in an increase in trust between the members, which led them to share more openly with the members. Suzanne tells us that having shared moments allows people to connect and share different kinds of knowledge :

"It's a big thing that we have a set lunch hour where we sit and we try and eat together as much as

possible. Not always, everybody doesn't always join, but that's exactly where the kind of

information   transfer happens"

The everyday interactions and transfer of knowledge are highly dependent on physical presence, and it appears that symbolic knowledge that is highly transmitted during group events and buzzing session can only be shared when certain criteria are met. Although interaction and physical presence are required, the managers have to use their own symbolic knowledge in order to establish a sharing environment. Jacob mentions when talking about why he is able to interact quite easily:

"Just the way the shared workspace is set up, and it's the vibe, the idea of sharing, whereas wework
doesn't have this idea of vibe and sharing and contributing to the community. No one's there
for free   (at wework) and so no one is sharing you know"

The idea or value of sharing is expressly communicated by the organisational culture, and implicating the members to have a shared value can reinforce the sense of belonging to the community. But also spatial arrangements contributed to the increase in the interaction and sense of community. During the participant observations, the spatial disposition of the sitting arrangements, as well as certain areas such as the coffee machine or the couches, favoured the exchange between people. Because the sitting arrangements are made in a way that everybody can see and talk to each other, people exchange about their personal lives and get to know each other.

The model developed in the theoretical framework of the research forecasted managerial strategies to influence the interaction between members, the data showed that symbolic knowledge was mainly exchanged from the managers to the members, through face-to-face interactions as well as events that reinforce the social bond, but also through spatial disposition that facilitates exchange of ideas and values.

Nonetheless, the strategies used by the managers to establish a shared culture also influence the knowledge exchange of another type of knowledge

b) Synthetic Knowledge - Access to relevant skills

It was discussed previously that the data showed the influence of certain managerial practices on the diffusion of a sharing culture by the manager. Through establishing connection between the members, in the form of daily interactions , and events, the manager is able to promote a shared vision that encourages the autonomous interaction between members. And apart from interacting to enhance the social bonds of the community, exchange with members from different industries. The members are able to interact with workers from both related and unrelated industries. Janira explains that her space is composed of varied workers: "It's quite diverse at the moment, we have layers, architects, communication people, marketing, psychotherapists, writers, website builders, so a lot of different areas which we cover"

The space gives the members the ability to connect with a motley crew inside the coworking space. Through the repeated interactions with members of the coworking space, the members are able to create social bonds with workers with varied skills. Reinforcing social bonds between members will motivate them to exchange knowledge, and give them the opportunity to interact of collaborate with each other.

Although there are differences in the industries of the workers, the members of the space are able to exchange successfully knowledge between each other because they share similar traits, such as vision. Ines comments:

"We are all entrepreneurs of course, so that's a very important part of the mindset, that you are open
        for everything that happens, hum that a little bit the mindset but also we understand each
other or   something like that."

The status of entrepreneur creates a similar mindset that pushes people to exchange as much as possible. Due to certain aspects of entrepreneurship being similar across different industries, people forming part of communities that encourage knowledge sharing will tend to share knowledge. The vision and the similarities of certain skills between the entrepreneurs lead them to actively engage in the different knowledge sharing processes. Because they belong to the community, the members will put their skills and experience at the service of the other members. Through providing others with knowledge, the members reinforce the bonds among the community, and expand the knowledge base of the whole community.

Thanks to the various skills in the coworking spaces, the members can have access to skills, advice or knowledge relevant to their needs. Laura explains:
"also we are talking sometimes, people are asking, advice about branding, then of course I will help them with that, and if I have a question they will do the same."

The exchange of knowledge which appears often in the form of face-to-face interaction often concerns professional or job-related knowledge. Members share knowledge they are confident in. Because the profession in the creative industries are often relying on synthetic knowledge as a central part of their production process, it may appear that knowledge exchanged between members appears in the form of synthetic knowledge. By giving advice based on experience, on know-how, and on technical skills through interaction, members are able to make each other mutually grow by filling each's own deficiencies.

The members appear to be able to exchange synthetic knowledge by themselves, as the exchange happen similarly, in the form of interaction. The interactions are not always facilitated by the manager, as the members strongly tied to the community do not exclusively rely on the manager to interact with other members. The role of the manager is reduced when the members are able to interact by themselves, and the members are able to share expertise and know-how without needing for the facilitation of the manager. Laura explains that the daily interactions between the members consist of experience and tips:

" It's a combination of expertise, but also personal development, of course there are coaches, but I
        think, like I said, we are all entrepreneurs, so we have all the same issues, also about that we
are   sharing for example, where do you do your administration, or what kind of app do
you use for   mailing or other stuff"

Because members are part of the same organisation, and because they share similarities in skills, the role of the manager is not needed to identify possible avenues of knowledge exchange or collaboration. Since the members know they are surrounded by entrepreneurs, they know that they can access synthetic knowledge through the members autonomously.

Although this process appears as natural, and the exchange of synthetic knowledge happens between members, the manager can also decide to take a more active role in fostering transmission of know-how. Through events specifically tailored to allow for sharing of knowledge, the managers are able to stimulate an interactive learning environment and make members interact in groups. Even though the responses from the interview suggest that the knowledge exchange happens informally during daily face-to-face interactions, the analysis reveals that the role of the manager is considerably more important than expected. With the use of personal interactions coupled with the organisation of knowledge sharing events, the managers establish required platforms to build relationships that go further than simply exchange of personal knowledge. During the participant observation at the Social Impact Factory, the manager established the connection between two workers as one of them required some advice in programming but didn't know who to ask.

After interacting with the member to learn as much as possible about his needs, the manager established the contact with the relevant members and interacted around the coffee machine to see whether the members could help each other. The manager's main strategy to promote exchange of synthetic knowledge is through interaction, as the interaction provide the benefits of improving trust, and thus willingness to share. Promoting transparency about the knowledge and skills in the coworking space is a central mission for the managers, as it will lead to autonomous exchange and mutual help. Ines explains that the sharing happens if the members are aware of each other:
"People know from each other what they are working on. So they be like: hey do you have a moment, can I share this with you"

Interaction is at the base of the managers activities, as it is required to build transparency in the community. If the manager does not promote to individual members values of sharing and transparency, it is less likely that members will exchange by themselves. Nevertheless, due to the efforts of the managers, synthetic knowledge is transmitted during inter-organisational communication. Contrary to the expectations, mainly symbolic and synthetic knowledge are transferred among coworking spaces, although research from knowledge bases suggested that firms relied on mainly one knowledge base, analytical or symbolic. The analysis demonstrates that social networking practices are the main tool used to increase interaction and subsequently the exchange of synthetic knowledge base

C) Interconnectedness of Trust and Interaction

Despite the managers using social networking practices to foster interaction, the tendency to adhere to the community and subsequently to share knowledge with other members of the community is mediated by another component discussed by research. Trust has been considered by research as a strong facilitator of tacit knowledge exchange. The data reveals that indeed trust affects positively the interaction. Ines explains when asked about the the relationship between the trust of the members and their openness:

"I think they trust me as a person (…) people experience the space as a very safe environment where they can share and experiment and grow, so that's one thing for sure"

The emotional trust felt by the members is important and determines the belonging to the community and the intensity of the interactions. Because they trust the manager as a person, they will believe in their vision and the community they are creating.

Trust in the manager can appear beforehand, through networks. Members often have previous contacts with the space before joining. By seeing if the atmosphere and organisational culture of the space is suitable, members already attributed a certain sense of trust in the space. Maria from Flolab Collab presents methods to integrate the members to the atmosphere before they join:

"It's really important that we are consistent and also as part of the on boarding process when somebody wants to become a member, we have an application form for them to fill out and one of the questions is, is there anything we need to know so we can support you better ?"

Trust is established through the social involvement of the managers. By breaking the professional boundary and establishing a more personal relationship, managers can build emotional trust with the members. Nevertheless this emotional trust is more regularly transmitted and enhanced through personal interactions. Laura explains that trust towards the manager needs to be built through communication in physical proximity:

"I came here because of a friend of her and a friend of me, so that was the connection also, and of course you feel trust as well, because your friends knows her and tells you it's okay (…) But when I talked to her the first time, we drank coffee downstairs, it was a really nice talk."

Here the respondent shows that face-to-face communication is a more effective way of building trust, as exchange of personal communication can give a sense of transparency. shows that Nevertheless, repeated interactions seem to be required to maintain or increase this trust. Because trust depends on reciprocity, a mutual exchange is needed for the relationship to be entertained.

Cognitive trust thus appear to play an important role as well according to the analysis. Successful communication can also rely on cognitive trust, as believing in coworking members' skills can also increase the knowledge sharing between people. Because members are looking for professional advice or are in need of help, the level of skills and the suitability of the workers is of paramount importance. Because they are looking to increase their synthetic knowledge base in order to better their creation process of finish a project, the relevance and validity of the knowledge obtained has to be high, thus cognitive trust in people in the space would ensure that the skills are meeting the needs of each member. Managers can put forward ways to ensure cognitive trust between members. Janira explains:

"How do you reach out, connect with people, build relationships, so that people are going to see you as trusted partner who you can do business with. So that's what I am going to teach next week and it's basically, all things I know, I've learned, I've done myself"

The manager is able to use his own synthetic knowledge to establish cognitive trust, by providing the members with the knowledge to form this trust themselves. Furthermore, through sharing the knowledge with the members, the cognitive trust of the members towards the manager increase. Previous research pointed out that the process of building trust relies on repeated interactions and professional physical proximity during a lengthy time-frame. The analysis show that indeed repeated interaction can increase the trust towards the leader. Laura shows that interactions confirmed in a sense her trust towards the manager: "I think I'm a little bit intuitive as well, so it felt like yeah also it felt like she really knew what she was going about you know, what she wants. Later on, when you see it's true, it reassures you."

Even though trust can be built out of network, personal interaction and physical proximity are able to enhance cognitive trust on a stronger manner. Other research also pointed out that virtual communities of practices (VCOP) necessitate different elements. A supportive organisational culture and well as trust in the leadership, and tools of communication are needed to form a successful VCOP. The analysis of the data demonstrates that the supportive organisational culture in the form of symbolic knowledge, as well as cognitive and emotional trust are able to form communities among coworking spaces. Nevertheless the tools at the disposition of the members do not appear to lead to virtual exchange.

D) The contested role of technology

This research had expectations with regards to the role of technology in the process of knowledge exchange. Previously mentioned literature point out the ability of virtual communities of practice to promote knowledge sharing among members. Nonetheless, the results of the analysis demonstrated that communication technologies were not a relevant enough asset to invest resources in it. Most of the interactions happen face-to-face although communication through information and communication technologies happen. However, the communications via Facebook or what's app stay relatively occasional for two reasons according to data. The excess of communication through online means can become a brake to the relationship. Laura explains when asked about her online interactions:

"When I'm here yes, and also in the WhatsApp group, but only when it is necessary, because you have a lot of social things, and you don't want to be all the time on the phone, so it's only, we use it when necessary, or to tell about events"

The communication technologies appear as a rare substitute to the face-to-face interaction. Even though members are aware of the existence of the online ways of exchange, they do not seem to exchange relevant knowledge that go further than planning related or marketing related activities. Rather, when they are used in excess, they slow the process and can interrupt work. Literature on knowledge bases points out

that synthetic and symbolic knowledge is mostly transferred through face-to-face interactions even though other research supports the fact that online communication technologies are able to transmit tacit knowledge. The analysis of the data reveals that even though some technologies are put in place by some spaces, their use is still superficial. Carla from Social Impact Factory mentions regarding their communication technologies:

" If we have important things to say or whatever, we have an email group and we can send them an email. But, but no, no one wants Whats'app, either, we've asked a few times"

The use of communication technologies to stay involved in the communication with members of the space appear as too demanding in resources for the members. Because they have a lot of responsibilities, and because they want to establish boundaries between their professional and their personal life, the members do not see interest in using the communication technologies as they can interact in the space through face-to-face interaction. Research on creative workers show that network is a key asset for acquiring know-how, and research on knowledge bases explain that network, or contact with person with relevant skills could happen during buzzing, when people are in spatial proximity and are able to benefit from the exchange of ideas or contacts. This could explain why the analysis of the data didn't find notable exchanges of network, experiences or skills.

However, some technologies to promote transparency of skills were used. Previously mentioned research presented the case of a technology allowing to map the workers and their skills. One of the spaces studied included such technology. The usage of the technology served as a check-in platform as well as a platform to share your capabilities. The workers use the software to find the relevant person, however the exchange of knowledge is done through face-to-face interaction. Carla explains:

"perhaps it starts with the digital version and then you say, hey, okay, you're very good at the marketing. Okay I need some help. Can we have a coffee? And then it becomes physical"

The platform here serves more as a gate-keeper, similar to the internal connector between members. The research on coworking spaces and managerial strategies explains that smaller sized coworking spaces such as relational coworking spaces will tend to rely more on the managers to be the connectors, but infrastructure coworking spaces, bigger in scale can have more difficulty tracking all the members and their skills by memory. This can explain why the use of this technology can act a substitute to a connector manager. Although the use of technologies was one of the strategies that influenced the interaction between members in the model proposed before, their role stays quite limited and they are often complemented with other strategies to lead to results. Face-to-face interaction remains the motivating driver behind knowledge exchange.

5) Conclusion:

In this research, I aimed at examining one of the processes fundamental to the coworking spaces, the knowledge exchange. The coworking spaces, recent initiatives that stemmed from the phenomenon of clustering of the creative industries and the creative workers, became key places for entrepreneurs to grow, learn and acquire new skills. As such, increasing academic attention has been given to the processes occurring inside the spaces as well as their effect on creative workers and the outside space (Capdevila ,2014; 2015; Merkel, 2015; Parrino, 2013; Spinuzzi, 2012). Knowledge being one of the main components of creation for creative entrepreneurs, coworking space research have examined if knowledge was shared and in what context (Brown, 2017; Weijs-Perrée, Van de Koevering, Appel-Meulenbroek & Arentze, 2019). Surprisingly, few research has attempted to examine the exchange of knowledge with a stronger focus on distinguishing the type of knowledge more thoroughly, although all researchers agree that knowledge transfer do happen inside coworking space. Furthermore, managers have been proven to influence the knowledge exchange in their coworking space through a variety of ways (Assenza, 2015; Ivaldi, Pais & Scaratti, 2018), nevertheless the research didn't distinguish between the types of knowledge that were facilitated through managerial interactions.

This research thus aimed at providing a theoretical framework that explains the relationship between managerial strategies and interactions, on knowledge exchange, as well as the mediating effect of trust in this relationship. By mixing different bodies of research from the coworking space literature with geography research and management research, a research question was developed:

What kind of knowledge is exchanged in coworking spaces and how are managers facilitating this process ?

A model based on the theoretical assumptions developed from research was established. The research by Spinuzzi (2012) suggests that interactions in the coworking spaces appear as advice, feedback and peer support. The results of the analysis confirm that interactions, both from manager to member and between members appear in the form of social support and reinforcement of community bonds. Furthermore The data showed that reciprocity, shared vision of work, sharing and trust, all elements of a a community of work discussed by Rus and Orel (2016), seem to be present.

Although senses of belonging to community were present in the space, the data showed that collaboration was often oriented towards the managers of the spaces. Castillo and Quandt (2017) also classified coworking spaces according to their collaboration, and contrary to expectations, collaboration appears linked to the coworking space and rather than between members. These results suggest that the communities observed would be closer to what Spinuzzi, Bodrožić, Scaratti and Ivaldi (2019) define as a Gesellschaft community, in which the main beneficiary of the knowledge creation is the space or manager. Nevertheless, the data suggests that some traits of collaborative communities are also present in the spaces. Because the managers are able to install devices or enablers of interaction, collaborative capabilities can appear.

The role of connector arose as a salient topic in this research. Ivaldi, Pais and Scaratti (2018) discuss in their research the different managerial strategies that drive coworking spaces. The data demonstrated that managers act both as network and relational managers. Because the managers act as gate-keepers through external networks, they are able to provide points of access to relevant keepers of knowledge through events and their own network. Nevertheless, their role of relational manager is born from the need to foster the belonging to the organisation and to increase interactions between members. According to Ivaldi, Pais and Scaratti (2018), relational managers rely on events and platforms for interaction to provide opportunities for learning and knowledge exchange. The analysis however, reveals that while the events and physical platforms for interactions do increase the exchange of notably know-how, their principal role is fostering a shared vision and reinforcing the community. Although knowledge is exchanged happen during specific sessions, the process of interaction and reinforcing of the community leads to lasting interaction between members, and thus, more frequent knowledge exchange. The role of the manager as connector appears to be mixed with his role, or duty to establish a community of shared values and support. We find traits of welfare managers as well as they managers are often at the heart of the social support and exchange in the spaces.

The knowledge exchanged thanks to the actions of the the managers is closely linked to the concept or related-variety (Asheim, Boschma & Cooke, 2011; Lazaretti, Domenech & Capone, 2009;). Nevertheless, although the members were able to exchange knowledge thanks to the similarity in certain aspects of their profession, the data showed that a shared vision of work and entrepreneurship was also required for the related variety to enter in play. The contact and exchange between workers relied more on their expertise on the knowledge needed than on the similarity of skills between members. So the exchange could happen between opposed industries.

The theory of knowledge bases (Asheim, 2007; Asheim & Coenen, 2005; Asheim, Coenen & Vang, 2007Asheim & Gertler; Asheim & Hansen, 2009) however proved to be relevant in differentiating the type of knowledge shared in the space. The results of the analysis pointed towards the direction that events, and face to face interactions, and social networking practices are relevant strategies for exchange between members.

Symbolic knowledge is expressed through a shared organisational culture, and requires active participation from the manager. The research on knowledge bases led me to expect the transfer of symbolic knowledge to happen between members, as buzzing practices and face-to-face interactions are ways to transfer it. However, the analysis showed that managers are most of the time involved in the transfer of symbolic knowledge. By being the main diffusors of the organisational culture of the space, the managers are able to influence the workers's values and encourage sharing. The transfer of symbolic knowledge appears as a key component that is required for transfer of synthetic knowledge to appear.

This research found out that the increase in symbolic knowledge also led to an increase in synthetic knowledge. Because the managers are using their own symbolic knowledge to promote sharing, the members are able to find opportunities to exchange experience, know-how and advice with each other. The activities such as grouped events in the form of lunch, meet-ups, and the spatial disposition that encourages knowledge exchange serve both as a community and shared vision builder, and as a platform for knowledge exchange of synthetic knowledge. Analytical knowledge was expected to be sparsely shared among the spaces, as it is rarely tacit and mainly tacit knowledge is shared in coworking spaces and among creatives workers. Furthermore as analytical knowledge is often in codified form (Asheim, Coenen & Vang, 2007), its this research considered it as secondary to the knowledge exchange in coworking space.

Although some research points out that entrepreneurs in relation to creative industries base their activities primarily on analytical and symbolic knowledge bases (Pina & Tether, 2016), The analysis of the extracts instead showed that symbolic and synthetic knowledge are the dominant type of knowledge exchanged. This fits with the expectations developed by Asheim, Grillisch and Trippl (2017), that predicted that activities from the creative industries will be based on different knowledge bases for their creation processes. Furthermore, the study by Plum and Hassink (2014) already pointed out through their case study of video game developers that creative workers rely on synthetic and symbolic knowledge bases primarily.

The physical proximity and spatial disposition played a key role as expected by previous research (Assenza, 2015; Merkel, 2015; Parrino, 2015; Soerjoatmodjo et al.,2017), however this research pointed out the role of these enablers as strategies for the members to facilitate community. Through the use of spatial disposition and physical proximity, coupled with active engagement of the manager, a communitarian space that fosters collaboration can be created, nevertheless this process needs managerial intervention to happen.

the importance of digital technologies as strategy from the management to support knowledge exchange was ambiguously supported. Although connecting and transparency technologies such as the one discussed by Bilandzic, Schroeter and Foth (2013) were found in the space, their role was limited in the sense that they appeared as substitutes to other strategies instead of being fully influencing factors of knowledge

exchange. The technology was used to create the connection, but the processes of knowledge exchange remain dependent on face-to-face interaction.

Although trust is created through face-to-face interaction (Holste & Fields, 2010), the results of the analysis showed that the presence of a shared culture, a trust in the leadership, and digital tools at the disposition of the members (Ardichvilli, 2018) are not enough to motivate the members to participate and exchange online.

This research demonstrated however the positive influence of trust on the different strategies used by the managers. Xue et. Al (2011) discuss empowering strategies as ways of building trust. The data demonstrated that managers are actively engaging the members in the organisational culture and the interaction platforms which results in both emotional and cognitive trust being developed. Repeated interaction between the members through events can also lead to increase in trust between the members, and the exchange between members can become autonomous, without requiring the intervention of the manager.

One of the key findings of this research was the importance of social networking practices, face-to-face interaction and events as relevant strategies for managers to foster interaction and knowledge exchange between the members. The interaction and events promote a shared vision and organisational culture that will increase the sense of belonging of the members and promote a certain symbolic knowledge. The interactions and events also allow the managers to connect relevant members together for successful synthetic knowledge exchange to happen. By connecting the members together actively and repeatedly, the members become close enough to understand who has the relevant skills and experience to help them.

The theory used appear relevant to observe knowledge in the context of the coworking space, as the expectations formed according to research were confirmed by the data. Nevertheless, certain limitations to this theoretical framework appeared during the research.

The knowledge base approach provided relevant insights into the type of knowledge bases used and shared by the members of the coworking spaces. Synthetic and symbolic knowledge appeared throughout the analysis. However analytical knowledge only appeared sparsely in the analysis. Although research suggests that workers in creative industries rely mostly on tacit knowledge, workers in the spaces were not always purely from creative industries and were sometimes only related to them. Thus, activities based on analytical knowledge should have been present on the space, and it can be natural to expect analytical knowledge to be shared. A reason behind this absence could be the tendency of analytical knowledge to be related to confidential data that could be sensible to share. Another reason could be that the exchange of knowledge appears only in the form of tacit knowledge in coworking spaces, or that the spaces studied were not representative enough to provide data on the transfer of analytical knowledge. Further studies applying the knowledge base approach to inter-organisational knowledge transfer between analytical based activities could give us more insights on the reach of the knowledge base approach and its capacity to distinguish accurately knowledge.

The method of thematic analysis appeared as useful in understanding how the knowledge was transmitted and making sense of the distinction between knowledge. Qualitative research provides insights into

the meaning making processes behind social interaction, which fitted the purpose of this research, nevertheless, some aspects of this research could have been improved with more resources. The amount of coworking spaces observed could have been increased in order to increase the applicability of the research outside of the context. Most of the coworking spaces researched were relatively small in size, which would result in relational managers. Infrastructure coworking spaces and welfare coworking spaces could have been included in the analysis to have a broader range of manager and members. More members could have been selected in each space, as multiple views on a space could potentially give a clearer picture of the aspects of community and knowledge sharing than the opinion of only two people, including the managers.

A more specific participant observation could also provide more insights. The participant observations provided useful data in this research, however a considerable part of the observations were filled with silence or non-related to professional work. A participant observation conducted during specific knowledge exchange or networking events could provide clearer insights on the processes.

Nevertheless, ethnographic methods appear as relevant to observe social processes such as knowledge exchange. The main tools of the managers seem to be the interaction and the organisational culture in their job, thus meaning is constructed and evolves constantly through these interactions, thus, this research only provides a presentation of the strategies used by the managers and their effect on knowledge under a specific context. Further research replicating this method could reinforce the generalisation of these strategies and see if the knowledge shared by these strategies in other places correspond to knowledge bases found in this research.

A last limitation of this research is the relatively few information shed on the potential of information communication technologies for knowledge exchange. The knowledge base approach does not appear to be fully adapted to understand the process of knowledge exchange through digital means. Because the classification of knowledge in the knowledge base theory is highly reliant on face-to-face interaction and exchange of knowledge in the context of spatial proximity, its relevance for online knowledge exchange seems limited. Additional research that would integrate online knowledge exchange theory mode deeply would perhaps provide future directions for the coworking research and useful strategies for coworking space managers.

This research ads to the coworking debate by taking a distinct approach to knowledge and addressing the role of the managers and trust in this process.

References:

Adler, P. S., Kwon, S. W., & Heckscher, C. (2008). Perspective—professional work: The emergence of collaborative community. *Organization Science*, *19*(2), 359-376.

Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-   sharing communities of practice. *Journal of Knowledge Management, 7*(1), 64-77.

Arnold, J. A., Arad, S., Rhoades, J. A., & Drasgow, F. (2000). The empowering leadership questionnaire: The construction and validation of a new scale for measuring leader behaviors. *Journal of Organizational Behavior, 21*(3), 249-269.

Asheim, B. (2007). Differentiated knowledge bases and varieties of regional innovation systems. *Innovation, 20*(3), 223-241.

Asheim, B. T., Boschma, R., & Cooke, P. (2011). Constructing regional advantage: Platform policies based on related variety and differentiated knowledge bases. *Regional Studies, 45*(7), 893-904.

Asheim, B., Coenen, L., & Vang, J. (2007). Face-to-face, buzz, and knowledge bases: sociospatial implications for learning, innovation, and innovation policy. *Environment and Planning C: Government and Policy, 25*(5), 655-670.

Asheim, B., Grillitsch, M., & Trippl, M. (2017). Introduction: combinatorial knowledge bases, regional innovation, and development dynamics.

Asllani, A., & Luthans, F. (2003). What knowledge managers really do: an empirical and comparative analysis. *Journal of Knowledge Management, 7*(3), 53-66.

Assenza, P. (2015). If you build it will they come? The influence of spatial configuration on social and cognitive functioning and knowledge spillover in entrepreneurial co-working and hacker spaces. *Journal of Management Policy and Practice, 16*(3), 35–48.

Bhansing, P.V., Wijngaarden, Y. & Hitters, E. (2019). *Identity work in the context of co-located creative entrepreneurs: how place influences professional identity*, 1-28. Forthcoming

Bilandzic, M., Schroeter, R., & Foth, M. (2013, November). Gelatine: making coworking places gel for better collaboration and social learning. *In Proceedings of the 25th Australian Computer-Human Interaction Conference: Augmentation, Application, Innovation, Collaboration* (pp. 427-436). ACM.

Blackler, F. (1995). Knowledge, knowledge work and organizations: An overview and interpretation. *Organization Studies, 16*(6), 1021-1046.

Bouncken, R. B., & Reuschl, A. J. (2018). Coworking-spaces: how a phenomenon of the sharing economy builds a novel trend for the workplace and for entrepreneurship. *Review of managerial science*, *12*(1), 317-334.

Bridgstock, R. (2008). Follow your bliss' or 'show me the money'? Career orientations, career management competence and career success in Australian creative workers. *Australian Policy Online*.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic analysis. *Handbook of Research Methods in Health Social Sciences*, 843-860.

Brinkley, I., & Lee, N. (2006). The knowledge economy in Europe. *Work Foundation*, 21

Brown, J. (2017). Curating the "Third Place"? Coworking and the mediation of creativity. *Geoforum*, *82*, 112-126.

Butcher, T. (2016). Co-working communities: Sustainability citizenship at work. *In Sustainability Citizenship in Cities* (pp. 113-123). Routledge.

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

Capdevila, I. (2014). Different entrepreneurial approaches in localized spaces of collaborative innovation.

Capdevila, I. (2015). Co-working spaces and the localised dynamics of innovation in Barcelona. *International Journal of Innovation Management, 19*(03).

Cappelli, P., & Keller, J. R. (2013). Classifying work in the new economy. *Academy of Management Review*, *38*(4), 575-596.

Castilho, M. F., & Quandt, C. O. (2017, June). ´Convenience Sharing´ or´ Community Building´: Collaborative Capability in Coworking Spaces. In *ISPIM Innovation Symposium*. The International Society for Professional Innovation Management (ISPIM).

Caves, R. E. (2003). Contracts between art and commerce. *Journal of economic Perspectives, 17*(2), 73-83.

Cheng, M. (2016). Sharing economy: A review and agenda for future research. *International Journal of Hospitality Management, 57*, 60-70.

Chow, W. S., & Chan, L. S. (2008). Social network, social trust and shared goals in organizational knowledge sharing. *Information & management, 45*(7), 458-465.

Chuah, V. (2016). Beyond the Core: The Role of Co-working Spaces in Local Economic Development (Doctoral dissertation, Columbia University).

Cunliffe, A. L. (2014). *A very short, fairly interesting and reasonably cheap book about management*. Sage.

Cunningham, S. (2002). From cultural to creative industries: theory, industry and policy implications. *Media International Australia incorporating Culture and Policy*, *102*(1), 54-65.

DCMS Sectors Economic Estimates 2017: Regional GVA. (2019). Retrieved from https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2017-regional-gva

De Peuter, G. (2014). Beyond the model worker: Surveying a creative precariat. *Culture Unbound: Journal of Current Cultural Research, 6*(1), 263-284.

Desouza, K. C. (2003). Facilitating tacit knowledge exchange. *Communications of the ACM*, *46*(6), 85-88.

Earl, M. (2001). Knowledge management strategies: Toward a taxonomy. *Journal of management information systems, 1*8(1), 215-233.

Fernie, S., Green, S. D., Weller, S. J., & Newcombe, R. (2003). Knowledge sharing: context, confusion and controversy. *International journal of project management*, *21*(3), 177-187.

Flew, T. (2002). *Beyond ad hocery: defining creative industries.*

Florida, R. (2002). *The rise of the creative class (Vol. 9)*. New York: Basic books.

Fong Boh, W., Nguyen, T. T., & Xu, Y. (2013). Knowledge transfer across dissimilar cultures. *Journal of Knowledge Management, 17(*1), 29-46.

Fuzi, A. (2015). Co-working spaces for promoting entrepreneurship in sparse regions: the case of South Wales. *Regional studies, regional science, 2*(1), 462-469.

Fuzi, A., Clifton, N., & Loudon, G. (2014). New in-house organizational spaces that support creativity and innovation: the co-working space.

Gandini, A. (2015). The rise of coworking spaces: A literature review. *ephemera*, *15*(1), 193.

Garnham, N. (2005). From cultural to creative industries: An analysis of the implications of the "creative industries" approach to arts and media policy making in the United Kingdom. *International Journal of   Cultural Policy, 11*(1), 15-29.

Gerdenitsch, C., Scheel, T. E., Andorfer, J., & Korunka, C. (2016). Coworking spaces: A source of social support for independent professionals. *Frontiers in Psychology, 7*, 581.

Gertler, M. S. (2003). Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there). *Journal of Economic Geography, 3*(1), 75-99.

Gill, R., & Pratt, A. (2008). In the social factory? Immaterial labour, precariousness and cultural work. *Theory, Culture & Society, 25*(7-8), 1-30.

Gong, H., & Hassink, R. (2017). Exploring the clustering of creative industries. *European Planning Studies, 25*(4), 583-600.

Hesmondhalgh, D., & Baker, S. (2010). 'A very complicated version of freedom': Conditions and experiences of creative labour in three cultural industries. *Poetics, 38*(1), 4-20.

Holste, J. S., & Fields, D. (2010). Trust and tacit knowledge sharing and use. *Journal of Knowledge Management, 14*(1), 128-140.

Huws, U. (2007). The spark in the engine: creative workers in a global economy. *Work Organisation, Labour and Globalisation, 1*(1), 1-12.

Ivaldi, S., Pais, I., & Scaratti, G. (2018). Coworking (s) in the plural: Coworking spaces and new ways of managing. *In The New Normal of Working Lives* (pp. 219-241). Palgrave Macmillan, Cham.

Jakonen, M., Kivinen, N., Salovaara, P., & Hirkman, P. (2017). Towards an Economy of Encounters? A critical study of affectual assemblages in coworking. *Scandinavian Journal of Management, 33*(4), 235-242.

Jamal, A. C. (2018). Coworking spaces in mid-sized cities: A partner in downtown economic development. *Environment and Planning A: Economy and Space, 50*(4), 773-788.

Jeffcutt, P. (2004). Knowledge relationships and transactions in a cultural economy: analysing the creative industries ecosystem. *Media International Australia incorporating Culture and Policy, 112*(1), 67-82.

Kong, L. (2014). From cultural industries to creative industries and back? Towards clarifying theory and rethinking policy. *Inter-Asia Cultural Studies, 15*(4), 593-607.

Kvale, S. (2007). Analyzing interviews. *Doing Interviews,* 102-120.

Lampel, J., & Germain, O. (2016). Creative industries as hubs of new organizational and business practices.

Lash, S. M., & Urry, J. (1993). *Economies of signs and space* (Vol. 26). Sage.

Lazzeretti, L., Boix, R., & Capone, F. (2008). Do creative industries cluster? Mapping creative local production systems in Italy and Spain. *Industry and Innovation, 15*(5), 549-567.

Lazzeretti, L., Capone, F., & Boix, R. (2012). Reasons for clustering of creative industries in Italy and Spain. *European Planning Studies, 20*(8), 1243-1262.

Lazzeretti, L., Domenech, R. B., & Capone, F. (2009). *Why Do Creative Industries Cluster?: An Analysis of the Determinants of Clustering of Creative Industries* (Vol. 902). Barcelona: Institut d'Estudis Regionals i Metropolitans de Barcelona.

Mariotti, I., Pacchi, C., & Di Vita, S. (2017). Co-working spaces in Milan: Location patterns and urban effects. *Journal of Urban Technology*, *24*(3), 47-66.

Marlet, G., & Van Woerkens, C. (2007). The Dutch creative class and how it fosters urban employment growth. *Urban Studies, 44*(13), 2605-2626.

Martens, Y. (2011). Creative workplace: instrumental and symbolic support for creativity. *Facilities, 29*(1/2), 63-79.

Merkel, J. (2015). Coworking in the city. *Ephemera*, *15*(2), 121-139.

Moriset, B. (2014). Building new places of the creative economy: the rise of coworking spaces. *In 2nd Geography of Innovation International Conference.*

Müller, K., Rammer, C., & Trüby, J. (2009). The role of creative industries in industrial innovation. *Innovation, 11*(2), 148-168.

Murray, C., & Gollmitzer, M. (2012). Escaping the precarity trap: a call for creative labour policy. *International Journal of Cultural Policy, 18*(4), 419-438.

Ostanel, E. (2017). Urban regeneration and social innovation: the role of community based organisations in the railway station area in Padua, Italy. *Journal of Urban Regeneration & Renewal, 11*(1), 79-91.

Parrino, L. (2015). Coworking: assessing the role of proximity in knowledge exchange. *Knowledge Management Research & Practice*, *13*(3), 261-271.

De Peuter, G., Cohen, N. S., & Saraco, F. (2017). The ambivalence of coworking: On the politics of an emerging work practice. *European Journal of Cultural Studies, 20*(6), 687-706.

Pina, K., & Tether, B. S. (2016). Towards understanding variety in knowledge intensive business services by distinguishing their knowledge bases. *Research Policy, 45*(2), 401-413.

Plum, O., & Hassink, R. (2014). Knowledge bases, innovativeness and competitiveness in creative industries: the case of Hamburg's video game developers. *Regional Studies, Regional Science, 1*(1), 248-268.

Powell, W. W., & Snellman, K. (2004). The knowledge economy. *Annual Review of Sociology, 30,* 199-220.

Pratt, A. C., & Jeffcutt, P. (2009). *Creativity, innovation and the cultural econom*y. Routledge.

Raffaele, C., & Connell, J. (2016). Telecommuting and Co-Working Communities: What Are the
     Implications for Individual and Organizational Flexibility?. *Flexible Work Organizations:*
The   *Challenges of Capacity Building in Asia*, 21.

Razmerita, L., Kirchner, K., & Nielsen, P. (2016). What factors influence knowledge sharing in
     organizations? A social dilemma perspective of social media communication. *Journal of*
Knowledge   *Management*, *20*(6), 1225-1246.

Rus, A., & Orel, M. (2015). Coworking: a community of work. *Teorija in Praksa, 52*(6), 1017-1038.

Russo, A. P., & Van der Borg, J. (2010). An urban policy framework for culture-oriented economic
     development: lessons from the Netherlands. *Urban Geography, 31*(5), 668-690.

Sangasubana, N. (2011). How to conduct ethnographic research. *The qualitative report, 16*(2), 567-573.

Smith, K. (2002). *What is the 'Knowledge Economy'? Knowledge Intensity and Distributed Knowledge*
     Bases (No. 06). United Nations University-INTECH.

Soerjoatmodjo, G. W. L., Bagasworo, D. W., Joshua, G., Kalesaran, T., & van den Broek, K. F. (2015,
     November). Sharing workspace, sharing knowledge: Knowledge sharing amongst entrepre-
neurs in   Jakarta co-working spaces. In International Conference on Intellectual Capital and
Knowledge   Management and Organisational Learning (p. 259). *Academic Conferences*
International Limited.

Spinuzzi, C. (2012). Working alone together: Coworking as emergent collaborative activity. *Journal of*
     Business and Technical Communication, *26*(4), 399-441.

Spinuzzi, C., Bodrožić, Z., Scaratti, G., & Ivaldi, S. (2019). "Coworking Is About Community": But What Is
     "Community" in Coworking?. *Journal of Business and Technical Communication, 33*(2),
112-140.

Statistics Explained. (n.d.). Retrieved from https://ec.europa.eu/eurostat/statistics-
     explained/index.php?title=File:Figure_6_Self-
      employment_in_cultural_employment_and_in_total_employment,_2017_(%).png

Trip, J., & Romein, A. (2009). Beyond the hype: creative city development in Rotterdam. *Journal of Urban Regeneration & Renewal, 2*(3), 216-231

Waters-Lynch, J., Potts, J., Butcher, T., Dodson, J., & Hurley, J. (2016). Coworking: A transdisciplinary overview. .

Weijs-Perrée, M., van de Koevering, J., Appel-Meulenbroek, R., & Arentze, T. (2019). Analysing user pref erences for co-working space characteristics. *Building Research & Information*, *47*(5), 534-548.

Xue, Y., Bradley, J., & Liang, H. (2011). Team climate, empowering leadership, and knowledge sharing. *Journal of knowledge management, 15*(2), 299-312.

Appendices:

Appendix 1:

Model:
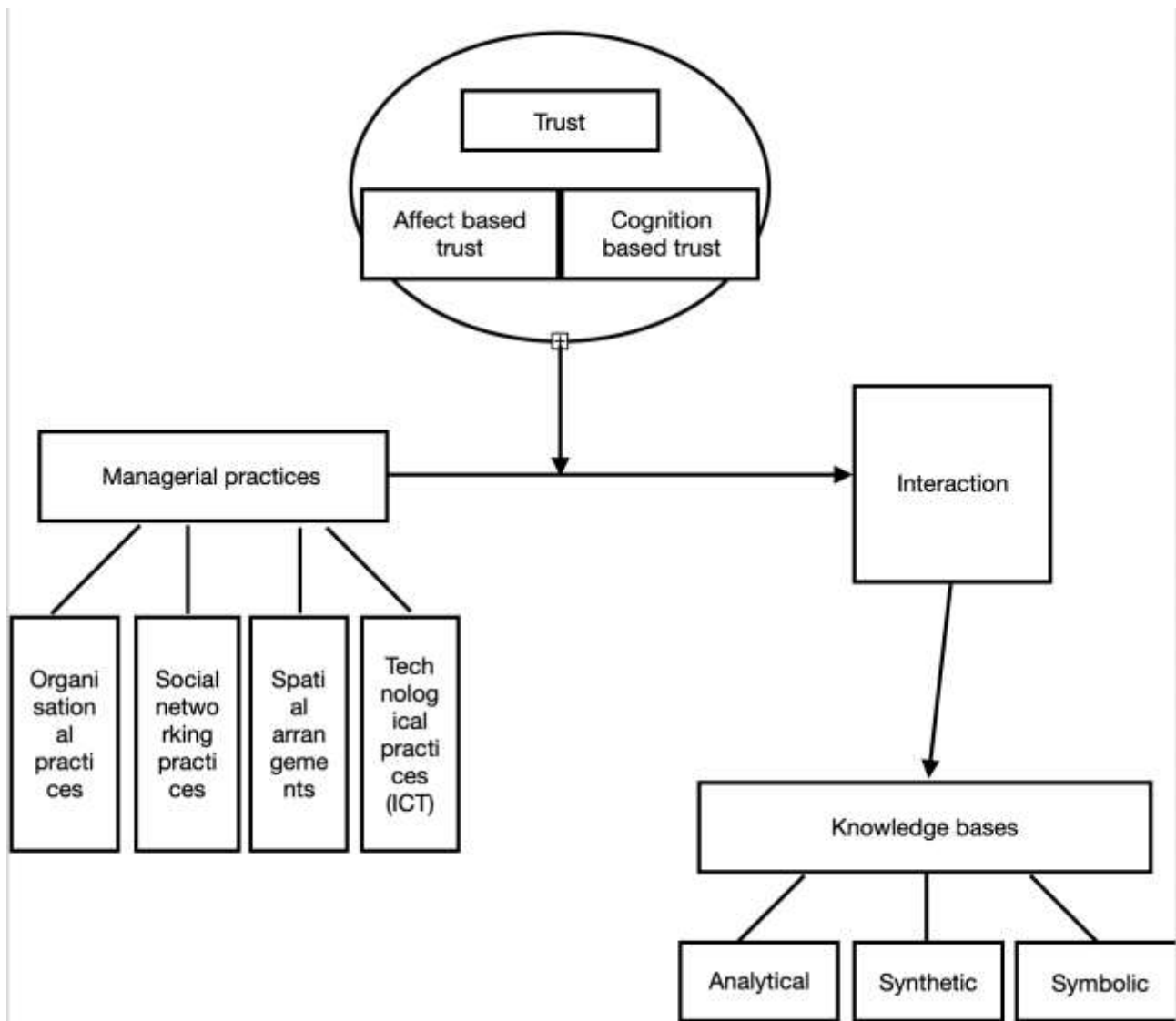
Appendix 2: Topic Lists

Topic List Managers:

How would you define this co-working space ?

Do you think you are a community ? (if so) In what ways ?

Do you interact with members ? How often ?

What do you think your role is in the space ?

How do you manage this role ?

Do you facilitate the transfer of knowledge between members ? In what ways ?

How do you interact with the members ?

How important is trust for your relationship with the members ?

Do you connect your members with people outside the organisation ?

How do you connect members together inside the organisation ?

Do you connect members from similar industries or different ones?

Do you help members collaborate on individual projects ?

Do members participate to a collective project ?

Do you organise events ?

Did you select your members based on their professions and sectors ?

What kind of knowledge is exchanged between coworkers ?

Do you rely more on face-to-face interactions with the members to exchange knowledge, or on communication technologies ?

Do you use communication technologies to facilitate the community aspect ? And the transfer of knowledge ?

Do you use any kind of spacial techniques to foster the exchange between people ?

Is the exchange between people based more on technical skills, on know-how and expertise, or on social networks ?

Topic List Members:

How would you define this co-working space ?

Do you use this coworking space for its infrastructure or for more ?

Do you think you form part of a community ? In what ways ?

Do you interact with the other members ? How often ?

Do you exchange knowledge with other workers ?

What kind of knowledge do you exchange ?

Do you share your network with other members and vice-versa ?

What does the manager do to facilitate the exchange of knowledge ?

What strategies does she use ?

Do you collaborate with other members, or do you collaborate more with people outside the organisation ?

How do the interaction happen more often, face-to-face or digitally ?

Do you use any communication technologies to exchange knowledge ?

Do you participate to the events organised by the manager ?

Do you have trust in the manager ? And in your fellow members ?

Do you think trust affects the way you share information with the fellow members ?

Appendix 3.
 Description of the spaces.

Good Place 2 Work Coworking:

I managed to get access to this coworking space by contacting the owner of the place. She created the space nine years ago and was one of the first three coworking spaces in Rotterdam. The coworking space is located in the north of Rotterdam, three kilometres from the centre of the city, in a place where we would not expect to find a coworking space. Nevertheless, the coworking space is quite renowned and counts around hundred active members, and 250 previous members which are still connected to the coworking space. The space only has sixteen fixed coworking spots, nonetheless the space also provides meeting rooms for the members, and most members do not use the space during the whole week, allowing a constant turnover of workers. One point to note though is that almost all of the members of the space are female. This stems from the manager of the space, which wants to empower female entrepreneurs, and has a vision of making female entrepreneurs' businesses grow. The Global Coworking Survey published by Deskmag (2011) shows slight differences between male and female coworkers. Women tend to communicate and interact more, and involve themselves in the community more than men. Even though this particularity is to take into account, it could be interesting to see differences between male and female entrepreneurs in this process of knowledge exchange, which would allow me to establish comparisons. Thus the coworking space was researched nonetheless.

Canvas Rotterdam:

The process of gaining access to this coworking space and the relevant people to interview was similar to the one of Good Place 2 Work. The owner and founder of the space, Iris, was contacted via email, and via WhatsApp. After explaining the topic of my research and what I required from the space and the participants, The owner agreed to let me research the space. The space originated from 2016, when the owner that also works as coach decided to open up her space to fellow coaches and entrepreneurs in diverse creative and knowledge based activities. The space provides meeting rooms and also has a management team that makes sure that the space is well kept. It is located in the centre of Rotterdam.

Social Impact Factory Utrecht

An email was sent to one of the location managers of the Social Impact Factory Utrecht who agreed to let me research their space next to the Utrecht Centraal Station. This coworking space hosts mostly social entrepreneurs but has a quite different setup than other coworking spaces. This coworking space is of larger scale than the two previous coworking spaces, as there are thirteen meeting rooms, a conference hall, and different zones. The coworking space is composed of a floor dedicated to people with fixed desks, a space

where people pay a shared desk, and finally a social lounge is found with a coffee machine, a kitchen and working spots. Surprisingly, the social lounge is free for everybody. People are however expected to pay by sharing social capital and knowledge and help each other. Although the space was started a bit more than two years ago, the members of the space are numerous, around a hundred regular members, without taking into account people that come in the social lounge. The members from various industries, due to the diversity of projects in social entrepreneurship.

Flolab Collab:

Flolab Collab is an initiative started by two entrepreneurs, with the goal of combining health and well-being practices into their coworking space. Located in the Hague, 400 meters from the centraal station, this space, which is open since approximately two months, is relatively small and has 10 members apart from the two founders. The space is comprised of a silent area, a common area where people are able to talk and music is playing, a meeting and lunch room, and an isolated room to have consultations. Members are mostly from personal health industries (nutritionist, physiotherapist) or from creative industries (editor, graphic designer, etc…). The access to the space was gained through Facebook, the owners gave me access to the space and accepted the interview and directed me towards a member.

Appendix 4: Anonymised list of respondents

Janira: Owner of the coworking space GoodPlace2Work, she works as an entrepreneurial and development coach.

Anna: Part of GoodPlace2Work, Anna is a Spanish expat that does translation for organisations in the creative industries and social organisations.

Ines: Owner of Canvas Rotterdam, work as a development and entrepreneurial coach as well. She founded the space a year ago.

Laura: Member of Canvas Rotterdam, she has been in the space almost since the creation, works as branding expert.

Carla: Location manager at the Social Impact Factory in Utrecht. Part of the space since its creation as well, her job is to make sure that everything is in order in the space, and that everybody fits.

Jacob: Lawyer from the US that migrated to the Netherlands to expand the activities of his firms. Works mostly with non-profit and social organisations. Is part of the space since 9 months.

Suzanne: Youngest of the two owners of Flolab Collab, she works as an entrepreneur in the creative industries and has a communication related background which helps her provide counselling to organisations.

Maria: Other owner of the Flolab Collab, works as coach and marketing consultant for the organisation she created. Both owners of Flolab Collab are oriented towards well-being and personal development as well.

Appendix 5:

Coding tree: