PRAGUE UNIVERSITY
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Coworking as a model to support precarious workers: An overview

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1. Introduction

Coworking spaces are commonly shared, flexible office environments (Merkel, 2015; Babapour et al., 2018) that are predominantly used by self-employed knowledge workers (Waters-Lynch & Potts, 2017; Nakano et al., 2020), remote working individuals (Leclery-Vandelannoitte & Isaac, 2016; Clifton et al., 2019), and small teams (Bouncken et al., 2018; Cabral & Winden, 2020).

Early coworking environments had started to develop in the 2000s but swiftly gained popularity following the 2008 financial crisis (Orel & Dvouletý, 2020). Socioeconomic changes which ensued during the post-crisis period have drastically reshaped the labour markets of knowledge workers, with the number of self-employed seeing a rapid increase in most Western economies (Henley, 2017). On the other side of the employment equation, many organisations had begun to restructure to cut costs. In contrast, others seek possibilities to enrich their employees with access to new knowledges and collaboration (Goermar et al. 2020). These changes and the simultaneous advancements in telecommunication technologies helped to fuel the surge in distance working.

From the onset of these labour and mobility-related changes in the post-financial crisis society, knowledge workers whose tasks were solitary nevertheless demonstrated a tendency to group into collaborative spatial settings. Given this dynamics, coworking spaces have contributed to users' well-being by constructing a sense of community and belonging (Garrett et al., 2017), while this arrangement has also enhanced 'users' productivity (Bueno et al., 2018). Furthermore, coworking environments are frequently associated with the new ""sharing economy"" that promotes peer-to-peer based access to services and the co-usage of various goods (Grazian, 2019). Accordingly, economic models which emerged from the financial crisis, such as the sharing economy, have contributed to popularisation of membership-based workspaces where resources and information are exchanged liberally (Bouncken & Reuschl, 2018).

However, in early 2020, the world came to a sudden and largely unexpected halt, when the World Health Organization declared the novel coronavirus (or ""Covid-19"")

outbreak to be a pandemic on March 11th 2020 (WHO, 2020). Shortly afterwards, countries started to curtail social and economic activity, and enforced mass closures to stem the spread of the virus, with most non-essential knowledge workers being confined within the walls of their homes (Webel & Freeman, 2020; BBC 2020).

With the abrupt shift in how knowledge workers operate, coworking spaces sought to adapt to global efforts to stem the spread of the virus. Some facilities closed their doors entirely for the duration of the first wave of the pandemic, while others remained open (McBride & Tan, 2020). However, coworking spaces that stayed open in the face of a potential health hazard were confronted with the task of purposely transforming their open-plan office spaces into semi-closed work environments. ""'Social distancing"" would require maintaining safeguards between users who had previously been encouraged to interact freely (Gibbens, 2020). Given these constraints, the coworking model had been reduced to a shared office infrastructure, without the usage benefits (namely the sense of community and belonging) that had originally led to workers preferring these settings over working from home. Yet, coworking spaces may not be able to physically operate in an unmodified way, thus inviting the question of how can the benefits of coworking spaces be provided in the ""post-Covid"" reality.

The following report will, therefore, go through various definitions of coworking spaces and do its best to view them from an 'individual's perspective. Coworking environments have evolved and have been becoming more team-focused over the recent years (Orel & Dvouletý, 2020). It is thus important to narrow down the focus on the usage by precarious and self-employed users. Second, the report will look into unalike usages of the coworking model throughout the world and touch upon the basis of diversified types of these collaborative work environments. More importantly, the section will follow upon the (possible) future forms of coworking spaces and discuss the virtual coworking environments that will likely become highly popular in the near post-Covid-19 future. Lastly, the report will scan through policy mechanisms to support individual entrepreneurial development within coworking spaces and focus on three successful use cases that have long-lasting policy effects.

The methodological framework is set on the narrative review with two exceptions. First, the paper develops a debate where needed (e.g., on the expected development and coworking usage trends in the post-pandemic society) and underlines these debates with preliminary findings of a study that authors are conducting (i.e., the future development of digital/virtual coworking spaces). Second, the part on policy mechanisms contains a structured interview with a director of European Coworking Assembly. The latter has been conducted as the literature on the 'assembly's work is basically non-existent. The interview sheds the much-needed light on the approach of self-governance of coworking and other flexible workspaces.

With that in mind, the aim of the following report is to understand how coworking spaces have developed over the last couple of years, how they became support hubs for precarious and self-employed users, and more importantly – how they will most likely develop further in the near future. Or as Ramon Suarez (2014), an author of the first handbook on coworking space usage would call it – the community of coworking individuals is what makes coworking spaces sustainable and supportive entities in the long run. Understanding this bears much importance for the precarious and self-employed individuals and their usage of coworking spaces in the post-pandemic world.

2. The use of a coworking space - An individual 'users' perspective

""The number of coworking spaces worldwide in 2018 doubled from '2015's total. This tells us that coworking is more than a fad; 'it's an unstoppable international phenomenon"."
–Yifu Huang, Coworking Resources

2.1 The coworking model explained

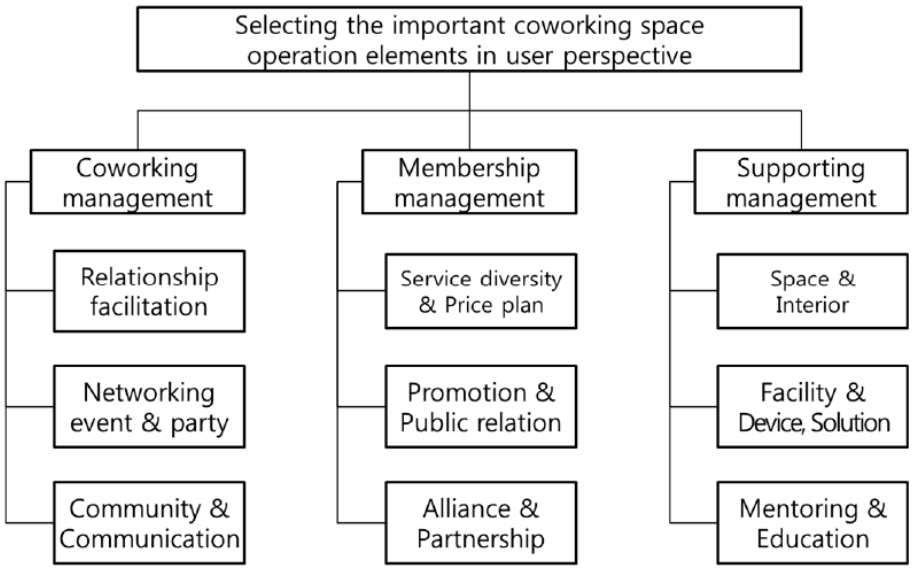
Coworking spaces have started to develop in 2005 when a San Francisco based programmer Brad Neuberg shas set the first facility in the .S.U.S. at that time (Spinuzzi, 2012; Rus & Orel, 2015). Waters-Lynch & Potts (2017) argue that 'Neuberg's intention has been to establish a new kind of workspace that would support the development of an inhouse community and offer a basic infrastructure to support the knowledge work of self-employed individuals who previously had a tendency to work from home. At this stage it is important to note that Neuberg has not been the one who has coined the word"""coworking" as some sources falsely claim (e.g., Josef & Back, 2018) but has merely set the first office infrastructure and called it a coworking space[1] – hence the recognition of being a father of contemporary coworking (Orel & Dvouletý, 2020).

Since 'Neuberg's San 'Francisco's based coworking space, the model has seen a swift popularisation. Gaidis & Liebman (2020) reported that the coworking workspace model accounted for almost 5 percent of all U.S. office space by 2019, and has helped to drive the srevitalisation of progressive urban districts by fostering so-called ""centres of innovation"." Europe has experienced a similar trend. By the end of 2018, most larger European cities witnessed an increase in demand for coworking spaces by an average of 20% (Betancourt, 2019). Towards the end of 2019, industry experts predicted that the coworking industry would continue to grow over the next several years, with a steady increase in demand for coworking spaces and other flexible working environments (Ali, 2020). Coworking spaces and hybrid office environments were quickly becoming the new workspace norm.

[1] The word ‘‘coworking" originates in 1999, when Bernard De Koven, a US programmer used the term to describe the work between individuals within the same team as equals (Orel & Dvouletý, 2020).

However, the varied efficiency of coworking spaces brought a complex managerial model. The operationalisation aspects are best explained by Seo et al. (2017). As shown in figure 1, the study built its findings on the most common operationalisation aspects of coworking space where three perspectives are the key to daily operations: managing space and organisation behind the coworking space, management of members and supporting or supportive management.

Figure 1. The generalised operating system behind coworking spaces



Note. The figure and the conceptualisation behind the operational aspects of coworking spaces have been taken from Seo et al. (2017, 5).

First, coworking management contains relationship facilitation attributes with activities that support users to form relationships and collaborative interactions. Second, networking events stand behind activities that involve events to interact with individuals who possess a specialised knowledge and are willing to exchange both information and skills with members. Third, community and communication correlate with continuous online and offline communication channels for formal and informal interaction, collaborative work, and the exchange of information. Bouncken & Reuschl (2018) mark communication and uninterrupted flow of learning the base for creating professional and highly skilled communities that serve as pools of knowledge, skills and ideas. The latter is especially important when a coworking space sets to build a supportive network that later morphs into a collaborative community (Gandini, 2016; Ivaldi et al., 2018; Spinuzzi et al., 2019).

Under the membership management, Seo et al. (2017) outline three main sub-attributes. First, service diversity and price plan are parts of the development and management strategy that establish a sustainable revenue model for member acquisition and customer needs. Second, a sub-attribute of promotion and public relations contains the activities that are intended to indirectly support and promote 'users' businesses and ventures. Third, the alliance and partnership segment bears an importance for activities that connect and interact with other coworking spaces and similar flexible/collaborative space services to expand the 'users' benefits and their outreach.

Least by not last, coworking spaces are built upon the foundation of the support management. Space and interior are precisely curated and micromanaged to improve work efficiency and coworking ambience through various spatial arrangements and designs. According to several authors (e.g., Balakrishnan et al., 2016; Orel & Almeida, 2019; Yan et al., 2019; Micek, 2020) maintaining a festive, collaborative ambience is the key of having a healthy and supportive coworking environment. Orel & Almeida (2019) built a study on the importance of coworking space ambience that found that the diversity in worksurfaces results in user's satisfaction and encourages them towards informal and unintended interaction. What is more, in the case of predominantly open-plan coworking spaces, modular and highly adaptable furniture elements allow spatial intervention and reconfiguration of the workplace that can be subsequently adaptable towards the 'users' expectations and needs – the latter will bear a high importance in the post-pandemic world when indirect moderation and networking will be crucial to (re)build supportive networks.

Returning to the last two organisational aspects of supportive coworking space management, Seo et al. (2017) emphasise having a facility that enables coworking space managers to maintain the supporting equipment and services that directly or indirectly benefit users. Least by not last, mentoring and education contain programs that improve 'members' business capabilities such as knowledge and specialised skills. The better these programs are curated, the higher level of collaboration orientation a particular coworking space will posses (Rese et al., 2020).

That said, according to most scholarly sources, the notion of collaboration is what divides a traditional office environment and coworking spaces. Bianchi et al. (2018) see that coworking spaces are a focal point of solidarity that emerges as a byproduct of the professional collaboration between the knowledge workers. Bilandzic et al. (2013) write that collaboration which emerges within the coworking environments directly supports the cross-pollination of skills and creativity. Coming from this, Cabral & Winden (2016) found that efficient coworking strategies for interaction enhance the probability of collaborative relationships that can result not solely in knowledge transfer and promoting new business opportunities as mentioned before, but also actively support the innovation and general innovation tendencies amongst coworking space users.

However, the collaboration may not be the only perceived benefit of a coworking space usage by precarious and self-employed individuals. Various studies show different attributes that appear to be tipping points when these individuals select a particular workspace as their daily driver. These studies are addressed in the following segment of the report.

2.2 The benefits of coworking space usage for precarious and self-employed users

Coworking spaces have been initially designed for precarious self-employed workers who were predominantly using telecommunication devices as their daily work tools and worked from either their homes or public areas such as cafes and libraries (Gandini, 2015; Rus & Orel, 2015; Bouncken & Reuschl, 2018). While the majority of scholarly debate on coworking spaces start with discussing how self-employed individuals could be seen as the ignition source for the development of a model, there is no particular source that would specifically discuss which type of precarious workers would have a stronger preference towards the usage of a coworking space. Kanjuo Mrcela & Ignjatovic (2015) attempted to determine each type of flexible employment position according to the relationship between work / time, working condition/employment opportunities, and preferred form of a flexible work environment. The following table lists the most common types of precarious self-

employed individuals (that primarily revolve on knowledge work tasks such as programming, visual / service design, music production, etc.) according to the level of their flexibility/precariousness that tend to use a (local) (co)working environment.

Table 1. Common types of precarious workers, their work conditions and preferred workspace

Time	Work conditions	Preferred workspace
Fixed-term work Work with abbreviated working hours - permanent x temporary - fixed x variable Post-retirement workers Workers with flexible working hours Seasonal workers Zero-contract/gig workers	Division of labour/job Combining tasks of a larger number of jobs Job rotation Contracts for work performed Independent workers in the free professions (freelancers) Independent contractors / independent entrepreneurs (independent contractors / portfolio work) Consultants Workers hired through employment agencies Borrowed workers, workers of others companies to which individual companies 'export' individual sets of tasks Auxiliary, replacement workers State-subsidized workers Workers hired from a group of employers Interns Collaborative employment	Flexible office space (e.g., shared serviced office, hackerspace, internet cafe) Home office / Work from home Teleworking centre Coworking

Note. The table is based on work by Kanjuo Mrcela & Ignjatovic (2015).

The preferred work environment can be selected based on an actual need of an individual worker. Fixed-term employees may choose a coworking space due to the lack of an optimal office space that includes relevant office utilities (e.g., internet access, printing services, etc.). At the same time, post-retirement workers may seek informal interactions with other peers to affect their well-being positively. On the other side, gig-workers would opt for a coworking space due to the need for a network that would secure them additional gigs. Appel-Meulenbroek et al. (2020) have recently explored user preferences for coworking spaces in Germany, The Netherlands and the Czech Republic, and found that individuals may select a

particular workplace due to the personal reasons that range from productivity, work-family conflicts, networking to well-being.

That said, a handful of scholarly sources do identify the *reasons* for the usage of coworking spaces. Merkel (2015) reports that there are both a set of social advantages and a financial incentive for solo self-employed professionals to rent a commonplace within a coworking space over an individual and isolated office unit, and share it with others daily. Using a coworking space could be seen as a strategy for minimising the individual's risk as coworking environments tend to match the financial situation, knowledge base and work flexibility of their workers with resources for sustaining freelancers and self-employed individuals in a volatile labour market. Waters-Lynch & Potts (2017) called this phenomenon "a focal point model of coordination".

As we will discuss later in the report, early coworking spaces have been built on heterogeneous communities of like-minded users who have been searching for a collaborative workplace to socialise, secure their productivity and tune their chances to secure a (work) gig. The social isolation of self-employed and precarious individuals has been discussed from the mid-1980s when Olson & Primps (1984) opened a scholarly debate on the subject. Both social isolation and decreased visibility on the job market reduced the knowledge sharing and obsoleted the mutual support from peers. Basines (2002) reported that precarious workers working alone at home meant that training and learning opportunities were virtually non-existent. What is more, social isolation and a regular work from home practice can lead to a drop in productivity due to broad spectrum of home-based distraction elements (Hartman et al., 1991; Kossek & Ozeki, 1999).

However, one of the most pressing issues of self-employed workers who tend to be isolated due to working from home is the juggle of residence (i.e., family) and work obligations (i.e., work-related deadlines) and becoming a subject of work-family conflicts (Loscocco, 1997; Hardill & Green, 2003). The later is especially an issue for self-employed women with children who are a subject of limited spatial autonomy and lack the resources of keeping work and home obligations separate (Annink & den Dulk, 2012). Sundaresan (2014) reported that the combination of work-family

conflicts and isolation result in an imbalance of an individual's life and leads to an increased chance of burnout. Other negatives that can be found concerning the discussed subject are a lack of professional development opportunities, increased gender inequalities, and work effectiveness/level of productivity (Moen & Yu, 2000; Beauregard & Henry, 2009; Annink et al., 2016).

That being said, the regular use of a (local) coworking space can help to tackle these issues. Ross & Ressia (2015) reported that coworking as an emerging workplace choice led self-employed individuals to a broader pool of work opportunities for both sexes and generally improved individual's work-life satisfaction mainly due to the mediated workplace relationships. Moreover, Clifton et al. (2019) report that increased productivity, innovation and growth opportunities are tangible coworking outcomes for self-employed individuals. Finally, both Annink (2017) and Orel (2019b) found that coworking environments are perceived as optimal workplaces by self-employed individuals to find stability and scale their social networks within. In addition to that, the continually evolving user interactions resulting from effective mediation mechanisms let workers find emotional support, increase productivity and exchange relevant skills that can enhance their opportunities on a labour market.

These positive trends have contributed to the swift growth of coworking spaces and popularised their use amongst self-employed individuals and other workers who tended to work on a remote basis within a selected time period. In contrast, a recent survey by Morning Consult on behalf of 'Prudential's Future of Work Initiative (2020) which measured the effects of a pandemic on the perception of home office work found that 47% U.S.-based full-time knowledge workers expressed a preference for working from home for a portion of time over returning to a traditional office or any other type of office. The survey revealed that those aspects of remote work previously perceived negatively could diminish over time, as 59% of respondents indicated that they maintained the same level of productivity despite the sudden switch between work environments. Yet, the study also reveals that the same respondents appear more stressed (46%), isolated (55%) and are generally working more hours than before (47%), due to an inability to transform their homes into an optimal workspace.

On the other hand, remote workers with a single employer tend to be members of distributed teams, thus they are regularly involved in collaborative processes managed from a distance. Using teleconferencing technologies such as Zoom, Microsoft Skype, Google Meet and other communication platforms, they tend to engage in daily virtual interactions despite working from a home office, reducing the sense of isolation (Bartel et al., 2012). However, that might not be the case with freelancers who frequent coworking spaces to seek interactions and relations with other knowledge workers who are similarly positioned in the market.

As documented by the study ""The State of Freelancing During Covid-19"," conducted by Payoneer, a New York-based financial company, the trend toward freelancing is expected to accelerate in a post-pandemic world (Payoneer, 2020). The competition among freelancing workers will increase, and those who can adapt to shifting demands of markets by obtaining new knowledge, skills, collaborative capacity, and work efficiency will be the ones most likely to prosper. These observations enable us to draw parallels with the state of freelance knowledge work in the post-financial crisis world of 2009. Consistent growth in the number of remote workers after 2009 – both in full-time employment and on a freelancing basis – was accompanied by an increase in coworking spaces during that same period (Merkel, 2015).

There are several factors which help to account for this trend. First, as mentioned in the previous section, coworking spaces' physical structure supports the learning processes and everyday entrepreneurial practices of remote workers (Butcher, 2018). Second, coworking spaces are structurally and organisationally designed to support cooperative mindset among users that positively contribute to their psychological well-being and emotional state (Avdikos & Iliopoulou, 2019; Talmage et al., 2019; Bouncken et al., 2020).

Third, collaborative work environments facilitate new production arrangements due to the non-hierarchical structure of coworking spaces (Gandini, 2015; Constantinescu & Devisch, 2018; Blagoev et al., 2019; Vidaillet & Bousalham, 2020). Lastly, evidence from past studies suggests that coworking settings enhance their daily users' networking capacity and innovative potential (Cabral & Winden, 2016). For the preceding reasons, coworking environments seem to offer a vast array of benefits for

remote working individuals. As Schuermann (2014) puts it, in the wake of the recession which followed the financial crisis of 2008 and 2009, coworking spaces were transformed into a business model for ""*plug' 'n' play*"" workers. That being said, as summarised in the following table the perceived benefits of coworking space usage for precarious and other self-employed users are a handful and are integrated in 'individual's life expectations (Rus & Orel, 2015).

Table 2. The perceived benefits of coworking space usage for precarious workers

Networking opportunities within the onsite or within the digital counterpart of a selected coworking space
Possible increased productivity within the distraction-free environment
Emerged collaborative opportunities with other individuals who frequent particular coworking spaces or are a part of its extended network
Workspace flexibility with commonly freely allocated desks and workstations
Positively impacted well-being
Tackling the work-life balance and the work-family conflict with the more apparent division between formal and informal life activities
Access to amenities such as printing, internet access and others

Note. Perceived benefits have been summarised based on findings by Spinuzzi (2012), Merkel (2015), Rus & Orel (2015) and Gerdenitsch et al. (2016).

In their pre-Covid-19 study on psychosocial and health-related benefits of using flexible work environments, Robelski et al. (2019) found a strong preference for coworking spaces among their users – both by individuals who work remotely on a full or part-time employment basis and by individuals who are pursuing other forms of flexible work arrangements. These findings can be associated with a common belief that coworking spaces are neither office nor home (Ross & Ressia, 2015), but can be viewed as a hybrid social environment embracing components of both (Morisson, 2018; Weijs- Perrée et al., 2019; Yang et al., 2019). Thus, coworking spaces form a third-social place of sorts, supporting the user's engagement in both formal and informal social relations.

2.3 Various coworking model for focal coordination of precarious workers

Earlier in 2020, Whitehead (2020) published an autoethnographic note on experiencing isolation when working from home as a self-employed musician. He reported a lack of collaborative opportunities to work on joint projects, share knowledge on music production and possibly exchange instruments for composing

soundtracks. While author's note contains a reflection on the situation that has arisen due to the Covid-19 pandemic, a similar trend of work from home isolation of precarious workers with specialised knowledge could be found throughout the 1990s and early 2000s (e.g., Guptill & Golem, 2008; Leyshon, 2009; etc.).

While coworking spaces first developed around heterogenic communities of self-employed knowledge workers, the early 2010s have seen first spin-offs in specialised coworking environments. Gray (2014) was one of the first who reported on shared rehearsal spaces that have extended their purpose and opened-up for solo self-employed musicians. Besides having access to a supportive network of like-minded peers, the coworking spaces for musicians can – or at least could before the pandemic – serve as a performance venue, a room to exchange ideas, a place to get contacts for gigs, and a space to share (and exchange) relevant instruments.

Other purposely built coworking spaces include so-called food coworking spaces or coworking spaces for cooks. Food-focused coworking spaces are shared (work) environments for caterers, pastry chefs, packaged food product sellers, bread manufacturers, and other businessman working solo in the food industry. Food coworking spaces enable them to share kitchen space with professional appliances, build networks and exchange knowledge/work skills (Moreno, 2020).

The last example of purposely-built coworking spaces are female-focused coworking environments. These are specifically designed to tackle female-related issues of self-employed or remote working female workers as discussed in the previous point. One specifics that is common to all female-focused coworking spaces is an in-house childcare service that enables women to focus on their work related tasks while bringing their children alongside to a selected coworking space (Wood, 2020). While specialised coworking spaces have started to thrive in the last years, the recent pandemic has put their further development to a virtual halt.

With all of the health measures in place and with coworking offices being the subject of a possible transformation, a significant question emerges: how do users of coworking spaces experience Covid-19 prevention? And perhaps more importantly, what features would enable their users to retain the social and collaborative benefits

of a coworking space in the environment where they would be most likely to work if they could not visit a physical workspace for the duration of a pandemic?

If remote working trends following the pandemic begin to echo those that emerged from the post-2009 financial crisis, demand for coworking spaces might rebound to pre-pandemic levels. However, social distancing and other preventative measures will place collaborative workplaces in a paradox – individuals might seek a shared workspace to meet their needs. Yet, these working environments will be expected to enforce social distancing within the space to control the spread of Covid-19.

With that in mind, it is essential to understand how coworking spaces have evolved from free movements to organised infrastructure that has first been built on the foundation of individual-purposed workspaces and have latter traversed to a larger, team-purposed coworking environments. This overview holds much importance as the usage of coworking spaces may dramatically change over the next few years.

3. Use cases throughout the world

"The spirit of coworking allows you to find co-workers who are worth working with."
–Cynthia Chiam in Entrepreneur

3.1 From free form movements, Jelly events to organised coworking infrastructure

With going through unalike coworking models, we are bounded to provide a historical overview of actual coworking use cases and how these highly flexible, collaborative workspaces gradually developed from predominantly used by self-employed individuals to becoming a trendy offices for a corporate use.

As mentioned in the previous section, most workplace scholars agree that the first contemporary coworking space was set by Brad Neuberg back in San Francisco in 2005. However, while this has indeed been the first coworking space that has been addressed as such, there is a rather intriguing history behind the historical development of a coworking model. First workspaces that would roughly resemble the infrastructure and the community framework of modern coworking environments

have been workshops of 15th-century Renaissance Italy. Also addressed as ""bottegas", these workshops had evolved around master artists who supported their younger peers by allowing them to use the same workspace and collaborate with them on particular locations within a predetermined period (Formica, 2016).

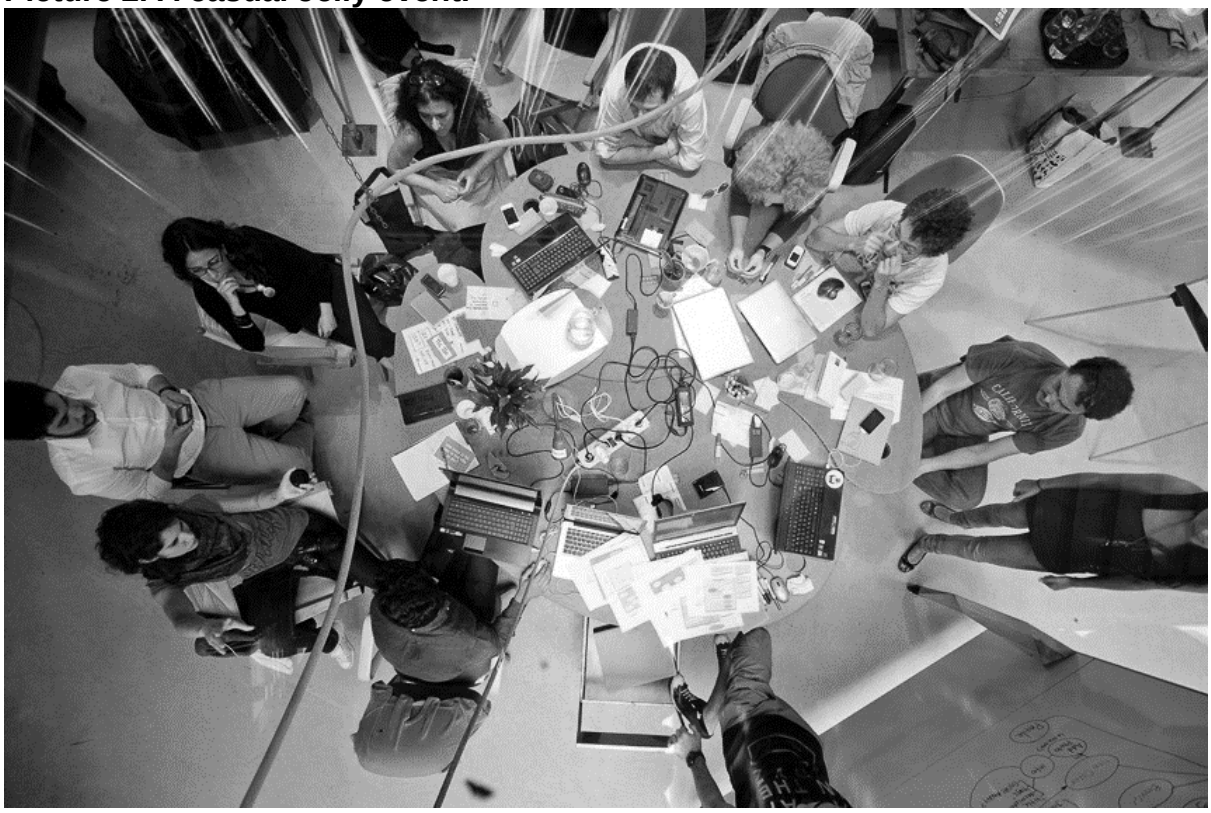
With these early types of collaborative workspaces being long gone, Orel & Dvouletý (2020) reported that similar types of environments could be found a few centuries later when local cafés such as Le Café de Flore and Les Deux Magots in the 'Paris' Saint-Germain-des-Prés district and the Cabaret Voltaire in Zurich became a social junction for artists and writers. These cafés have later become a model for developing socially and collaboratively orientated gathering spaces such as The Writers Room – a collaborative workspace for writers who had the tendency to share expertise, knowledge on a particular subject and looked for possible co-authors (Uda, 2013).

Picture 1. The Writers Room.

Note. The contemporary set-up of The Writers Room, a collaborative workspace and a"""colony" for writers set in an open office, partially divided by half-set cubicle walls that enable individuals to withdraw to a focus area or socialise in group settings. The picture has been taken from The Writers 'Room's archive.

The pre-Neuberg coworking space has been – and 'it's still operational as in December 2020 – set in Vienna, where a group of local knowledge workers started so-called Schraubenfabrik, a collaborative office space that opened its doors for other individuals who sought a refugee from a home office. Nevertheless, the 'Neuberg's coworking space from 2015 has been the first that opened its doors solely for those who were willing to share it. His attempt has been short-lived as he has been forced to close his coworking space doors three years later. By 2008, the world has been struck by a raging economic crisis that raised numbers amongst ranks of precarious knowledge workers. Around the same period, individual workers started to initiate Jelly events – a casual, temporary get-to-gathers of likeminded individuals who have set a collaborative work setting in a local café, library or 'someone's home. Orel & Dvouletý (2020) reported that these temporary coworking spaces could be perceived as an indicator of several societal changes that pointed towards reshaping the knowledge work and the rise of work flexibility.

Picture 2. A casual Jelly event.



Note. An example of a casual Jelly event set in the local cafeteria. Individuals formed a closed circle that enables them to enhance collaboration due to the spatial proximity. The picture is the intellectual property of Creohouse (2015).

Whatever is the case, many workplace scholars (e.g., Putra & Agirachman, 2016; Bilandzic & Foth, 2017; Bouncken, 2018) agree that Jelly events have been the base milestone that popularised the coworking movement. First, individuals have been able to gather in creative communities and subsequently open a local coworking space. Second, these creative communities resulted in the development of supportive networks that benefited precarious and self-employed workers in several ways. Third, the creation of coworking hubs has (in most cases) positively impacted the development of local areas or rural regions by attracting a bulk of highly skilled workers. These aspects have resulted that larger companies and venture funds (e.g., Asif Ventures, Luminar Ventures, VCCEdge, etc.) started to invest and supported the development of larger, corporate orientated coworking spaces that have been primarily designed for remote working teams. Coworking chains such as WeWork, HubHub, IWG (Spaces) and others became the predominant player in the coworking industry with smaller, independently run coworking spaces losing their initial primate in urban areas.

Picture 3. A large, contemporary coworking space.

Note. An example of a larger, structured and membership-based coworking space as taken by Alton (2019). In comparison with the more organic, non-structured approach of a Jelly coworking gathering, this example shows more spatial dynamics and a structured approach towards the daily usage of the space.

However, the Q1 of 2020 has seen significant disruption of the market that has shaken and stirred these trends. The enforced (and much needed) social distancing resulted in the closing of many larger spaces which have not been resiliently built to withstand significant social changes. On the other hand, the pandemic has accelerated the development of digitalised workspaces – starting a new, up-and-coming socialisation trend and collaborative work practice.

3.2 The unexplored case of virtual coworking spaces

To explore the new, up-and-coming types of digitalised coworking environments – also named as virtual/digital coworking spaces – the preliminary findings of a parallel study should be discussed. In May 2020, the authors of this report have commenced on a study of the pandemic effects on a perceived productivity and subjective well-being in using coworking environments during the first and subsequently the second wave of the Covid-19 pandemic.

The still on-going (as December 2020) study draws on data collected through participant observation and semi-structured interviews with the coworking 'spaces' managers and members. Four different coworking spaces in the Czech capital of Prague have been selected for an ongoing study that explores the transformation of the coworking model in the setting of a post-pandemic world. Non-obstructed participant observation is being carried out in these spaces since May 2020. The study's objective is to understand the changes around: i) spatial configuration; ii) mediation mechanisms; and iii) frequency and form of interactions. As the Covid-19 situation is evolving with the Czech Republic finding itself in front of a tenable second wave, the study intends to capture measures and changes in the sample of selected coworking spaces as experienced by workspace users.

All four properties have taken similar courses of action by promoting social distancing through the limitation of physical contact between users, requesting that users wear a face mask while in the space, disinfecting common areas, and cutting down on activities that require human mediation. According to managers (n=4) of the selected spaces, daily usage dropped in March 2020 and slowly started to pick up

again in May 2020 when the study began. The level of daily informal interactions between regular users has declined, but has been growing and is expected to get closer to pre-pandemic levels in the coming months, provided the contagion will remain limited.

On the other side, the study has conducted an in-depth semi-structured interviews (n=26) with users of the four selected coworking spaces in the aftermath of the first and the beginning of the pandemic's second wave in the Czech Republic. Most of the interviewees have expressed that they found preference to work from home during at least half of the workweek. Moreover, a key finding in the preliminary data suggests that a physical workspace's digital counterparts can replicate the sensation of using a shared, collaborative environment and provide the benefits sought in physical coworking spaces.

Two cases in particular – involving a freelancer and an employee – revealed that the selected coworking setting represents the majority of their social lives. While they both expected that the quarantine period in March, April and early May 2020 would have a negative impact upon their social lives, productivity, and well-being due to having to work from home, the coworking space that they usually frequented had created a virtual counterpart to the physical office. Not to be confused with the term ""virtual office"," the virtual coworking space could be defined as a digitally supported online work lounge, using telecommunication technology to replicate the benefits of a highly flexible, physical workspace and the supportive processes therein.

For these informants tuning into a virtual coworking session at a specified time creates a sensation of community-supported work. These sessions operate with the use of telecommunication software that runs in the background at the time that replicates ""pre-Covid"" physical coworking sessions.

Despite not being able to see their fellow workspace members, the virtual coworking session creates a feeling that – as one of the correspondents put it – they ""were not alone in there"," while also giving structure to the at-home work-day. These sessions thus created workspace that is delimited not physically, but temporally. This is documented also by virtual coworking sessions having been oftentimes based on the

so-called *Pomodoro technique*, a collaborative time management method, where individuals have running work sessions of 25 minutes, after which there is a short break when they purposely chat around informal topics.

""I thought this would completely destroy my productivity, but it 'didn't really because of these virtual groups that… and seeing someone…and we usually do it in a way that we did before which is everybody says what they were 'gonna' work on and then work on that and then say how they did afterwards. So doing it over the phone or the chat, particularly over Skype or Zoom, meetings and things like that, I think it works extremely well actually. I feel 'it's even more personal and more feeling like someone is there, that 'you're accountable to do something.
[The virtual working sessions] helped to keep my work-life balance, so I was communicating with and seeing the same people I would here. The ones that I would see most regularly, I would still see them"."
(Informant 1, freelancer copy-writer)

As illustrated by the 'informant's account, tuning into these sessions has contributed to a sense of community for the individuals involved, which positively impacts their well-being and shields them from a sense of isolation. Structured work sessions have enabled them to maintain an established routine resembling that which they had previously practised in a physical office, allowing them to separate work from non-work temporally. According to the correspondents, their level of productivity was mostly unaffected by the introduction of these sessions. This appears consistent with prior observations that working from a home office allows individuals to achieve comparable productivity levels to that which is experienced in a traditional workplace.

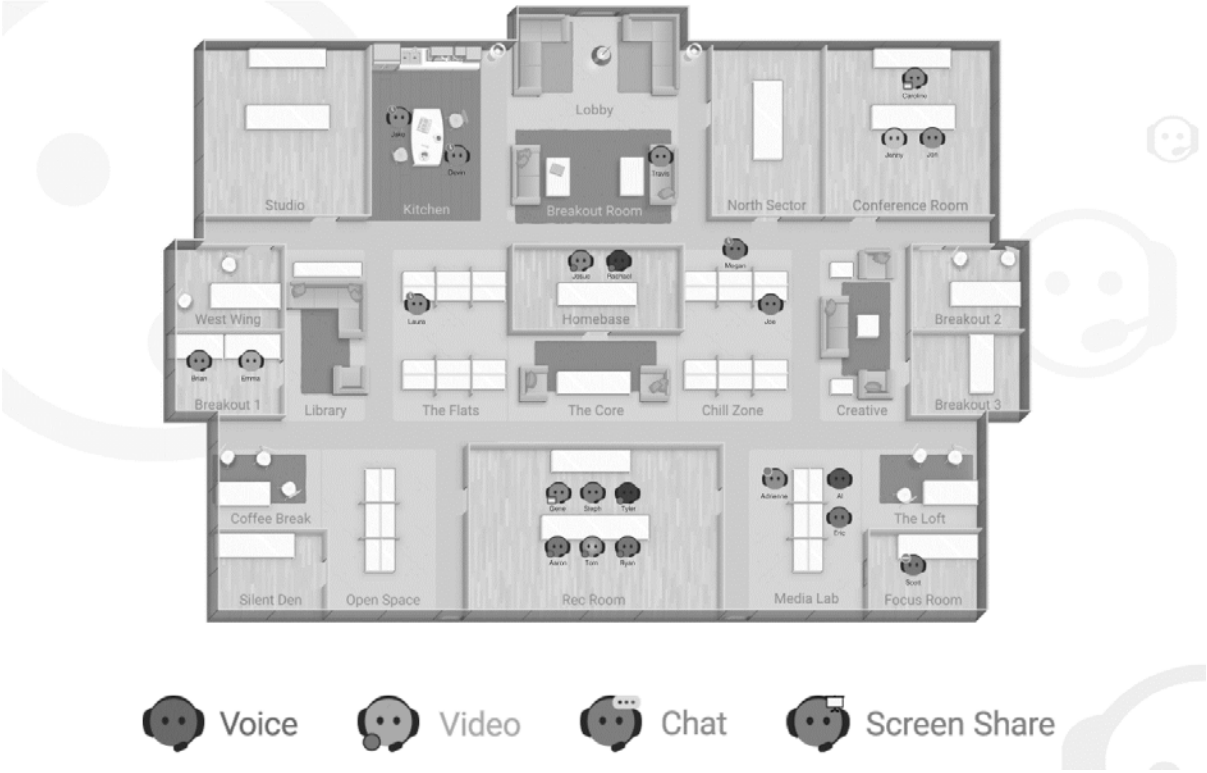
However, positive perception towards tuning in a parallel or remote virtual coworking session may not always be the case. Depending on the individual, style of work, personal perception towards productivity and other related factors, an individual may perceive inclusion in a virtual coworking session as a distraction.

""I guess that xx could bring more structure to the work day, but for me specifically probably no just because the nature of work, you know when you get deep into work, especially programming you 'don't want to just break it off and have disturbances, right. I did, you know, try Pomodoro ways of that, but that just 'didn't work for me, because, yeah, they can put you off and then you start thinking 'oh, I 'didn't take a 'pause' and the idea 'I should take a 'pause' starts to interfere with your focus.
I 'don't think I would gain much from that. Then it would be more of a disturbance.
(Informant 2, freelance programmer)

It is noteworthy that only one of the four coworking spaces within the sample offered such virtual coworking sessions. Significantly, this particular coworking space is focused almost exclusively on independent knowledge workers, who, as described above, are the ones who most benefit from the social aspects of coworking and who, for not being members of a team, are most at risk of isolation. While the data collection is still in its early phase, it can be said that there will be variations of the virtual coworking dependent upon the type of work being done by the members.

Nevertheless, according to the available industry solutions, office managers have several options to enhance the user experience so that it more closely resembles that which they would enjoy in a physical workspace. Sococo, for example, is an online platform that enables individuals and distributed teams to collaboratively work alongside each other by using a visualised office floor alongside of virtual meeting rooms and an open-plan space.

Picture 4. An example of virtual (co)working space, Sococo.



Note. The following picture has been taken from the products website and used to visualise the discussion topics above.

Similarly, Remo provides a cloud-based software service that utilises a sdigitised workspace that can be personalised to match a physical office environment's

attributes. Individuals can select part of a virtualised office according to their needs, mood, and the work process in question. Therefore, focused work can be undertaken by clicking on an empty chair behind the virtual table that is located in a dedicated room. Suppose an individual prefers to take a break and discuss informal manners with other users. In that case, he or she can virtually ""sit"" on a digital sofa in a café area, or a porch by a cyber beachfront. Regardless of the selected space, individuals are linked to a chat window with other individuals who have chosen the same digital room.

The following discussion suggests that one of the future paths within developing a coworking model might be fully digitalised/virtual counterpart of an onsite coworking space. While the latter will most probably continue to develop with a significant pace, their digital counterparts will – in the likely scenario – become a digital sanctuary for home/remote workers and a collaborative point for precarious, self-employed and other individual workers. The latter is a discussion point for the next section.

3.3 Towards the digitalised future on the go

In the last decade or so, most coworking spaces have become adept at using digital services such as chat forums and closed messenger groups to support the development of formal and informal relationships (Blagoev et al., 2019; Orel, 2019a). Nourishing complex social-spatial interaction is commonly moderated onsite through the use of various mediation mechanisms. These are seen as necessary to form strong ties between regular coworking space users, thus providing them with the sought benefits (Brown, 2017; Luo & Chan, 2020). Online communication activities played a supportive role in maintaining these ties and relationships when individuals were absent from the physical space, through the participation in networking processes managed by human mediators.

In an ideal scenario, these chat rooms and other virtual communication instruments can thus partially replace physical forms of communication and enable individuals to maintain their relationships with other users, thereby keeping up a high level of attachment to the workspace and preserving a sense of community. However, since many members choose to work in a coworking space to separate work from home,

the virtual workspace can also supplant this ""separative"" role of the physical workspace itself by separating work from home in a temporal (rather than physical) way. The role of the virtual workspace thus goes far beyond the supportive communicative role but rather creates a sense of comradeship and community, similar to those in an onsite coworking environment. The following example as seen in the picture 5, represent how the probable future collaborative workspace will look like.

Picture 5. Virtual (coworking) office of the (possible) future.

Note. The projected image of a possible (near) future (coworking) office as envisioned by Facebook and its subsidiary Oculus, a manufacturer of .R.V.R. devices. The new technologies enable the individuals to co-create a home office within the extended reality space that allows them to collaborate with peers and share visual resources at the same time. The picture is the courtesy of Designboom (Stevens, 2020).

The findings reported in the upper section on virtual coworking spaces are preliminary and are based on an ongoing research. More research is necessary into the possible variations of this phenomenon and should in particular be carried out within the sample of independent knowledge workers who seem to draw most benefits from this kind of virtual coworking. However, variations across various types of remote work (e.g., employees working in remote teams) should also be explored. Nevertheless, the examined data correlates with industry sources that are reporting on a rising number of experimental cases with virtual coworking settings that are

taking place in tandem with a physical workspace (e.g., Roussel, 2020; Wallace, 2020).

In practical terms, coworking spaces have several options to enhance the user experience so that it more closely resembles that which they would enjoy in a physical workspace. The visual component of a joint work session would seem promising. Focused work could be, for example, undertaken by clicking on an empty chair behind the virtual table that is located in a dedicated room. If an individual would prefer to take a break and discuss informal manners with other users, he or she could virtually ""sit"" on a digital sofa in a café area, or on a digital porch. Regardless of the selected space, individuals would be linked to a chat window with other individuals who have chosen the same digital room.

Suppose digitised counterparts of collaborate workplaces are not able to replicate the sort of communication and interaction which takes place within the walls of a physical office. In that case, virtual coworking environments might not have a bright future, at least not in the short run. But in light of unexpected developments in the global health situation, the dislocation of labour markets, and technological advancements which support remote work processes, coworking spaces – as much as other service industry providers – will need to evolve and adapt to meet the expectations of their users, now and in the future. That said, we can draw early – yet uncertain – conclusion that onsite coworking environments will remerge after the pandemic. However, virtual (coworking) spaces have started to pick up the pace and it makes sense to expect that these spaces will co-exist with one and another, especially till the immersive technologies will be developed to the level that they will enable users a high degree of realism.

Despite the uncertain future course and several possible developmental scenarios of coworking spaces, it is important to understand how local environments can support the implementation of these flexible offices within their localities and directly or indirectly assist their operations. With that in mind, the following section will oversee some of the examples of successfully policy mechanisms and indirect support frameworks that have had a direct effect on the growth of coworking spaces.

4. Policy mechanisms for support of individual entrepreneurial development

""A sustainable world means working together to create prosperity for all.
–Jacqueline Novogratz

4.1 Policy support: The voucher systems behind Coworking Milan and Think Vermont

The following three sections will present different approaches that can influence future policy decision in the direction of supporting coworking spaces, its communities and users within the selected geographic region. Orel et al. (2020) have recently published a policy report paper that divided these mechanisms between the groups of active and passive schemes that either directly or indirectly incubate new and existing (co)working spaces and other types of collaborative (work) environments that have a profound effect on their users. While direct financial contributions are rare and commonly deployed in the scope of larger, supranational levels (e.g., Erasmus+, Norway Grant, etc.), the indirect mechanisms are much more common as they tend to support a particular part of the coworking industry and/or 'users' demand. There are two cases in particular that need to find a spotlight in our report.

First case that we will examine is the one of the foremost policy support mechanisms that has seen the light of the day and made a significant impact on the local (Italian) coworking industry. The initiative, funded both by regional and federal funds, has supported a rather unique voucher system (Nisi, 2013). The first set of vouchers has been set directly for potential coworking space users – these were predominantly precarious knowledge workers who have been mainly working behind the walls of their homes – who had the ability to spend a predetermined set of hours at one of the 'Milan's coworking environments that have been included in the scheme. On the other side, the second set of vouchers have been purposed directly for coworking space operators who have in return lowered the membership fees and subsequently gained the ability to invest the surplus of resources elsewhere – e.g., to knowledge-sharing events, active community management and alike. The voucher system has been first lunched back in 2013 and subsequently inspired the development of other

similar initiatives such as the ones in the regions of Puglia, Sardinia and Tuscany (Orel et al., 2020).

The second case of more of a recent nature that needs to be discussed is the case of Think Vermont policy initiative. In contrast with the Coworking Milan initiative, the Think Vermont has been built both on the scope of monetary and expert support to help attract new business to coworking spaces in Vermont. Being a landlocked state in the northeastern United States, Vermont has been known for its remoteness and being rich in natural resources. On the other side – and again in contrast with the city of Milan – it lacked the urban infrastructure, especially in particular rural areas that would attract entrepreneurs. The Think Vermont has been a direct initiative to change this.

That said, in 2019 the Think Vermont started to offer a financial compensation to eligible remote workers who moved to the state with the aim to srevitalise 'Vermont's aging workforce by attracting highly skilled tech workers. The state has distributed the available funds on the first-come, first-serve basis and promoted coworking spaces' active use (Garfield, 2018). Orel et al. (2020) reported that the programme indirectly benefited the operators of the local coworking spaces, who have seen their memberships grow as a result. On the other hand, the Think Vermont supported coworking space operators with knowledge-exchange activities and guidelines on setting and running a community-based coworking space.

Although said vaguely - what has been done right in the Think Vermont case is a detailed guide on how to set up a coworking space in a selected area. While most check-up guides would indicate the allocation of the facility as a starting point of the coworking environment, the initiative predominantly supported the bottom-up approach. The summary of a formalised check-list can be seen in the following table.

Table 3. A bottom-up approach towards opening a coworking space in Vermont

Section	Waypoint
Build community	1. Host a Jelly event 2. Organise a networking session 3. Host a formalised pop-up coworking space

	4. Open preregistrations
Carry out background research	1. Float a background survey to assess the community interest 2. Seek secondary data sources 3. Host focused discussion
Write a business plan	1. Define the market 2. Develop membership and revenue targets 3. Create a budget 4. Host focused discussion
Allocate	1. Identify the facility 2. Rent and equip the newly established space
Marketing & partnership	1. Branding 2. Partnership identification
System deployment	1. Registration process and membership programme 2. Usage protocol(s)
Lunch	--- The operational start ---

Note. The summarised checklist has been an integral part of an official starter guide on how to set-up a coworking space with a presence of a strong supportive community in the area of Vermont. It thus represents a unique policy document that structurally follows an early model of an independent, community run coworking space. The checklist is a courtesy of Vermont Center for Emerging Technologies, VCET (2020).

While these two presented initiatives have been profound in the effects that they have achieved, it is important to note that similar programmes are incredibly rare. With that in mind, it is salient to understand how the policy intermediary actions can influence the decision makers to evolve active programmes that would support the development of the coworking industry in a selected geographic area.

4.2 Policy intermediaries: The case of European Coworking Assembly

The third presented case that we need to consider is the case of European Coworking Assembly that acts as a policy intermediary entity to facilitate effective implementation of evidence-informed policies and practices. European Coworking Assembly (or ECA in short) has been actively present in Europe to support the development of mainly independent coworking communities and other collaborative sites. The assembly rounds up their intermediary efforts by a) facilitating exchange of information and skills between coworking experts and policy-experts, b) approaching policy-makers to design efficient policy practices that would support the future development of coworking spaces in a sustainable way, and c) directly addressing relevant stakeholders (e.g., coworking space operators, individual users of coworking spaces, etc.) and supporting them in their cause (e.g., community actions, non-profit projects, etc.).

To give a more informative approach to the work and projects behind the European Coworking Assembly, we have approached (I) Jeannine van der Linden (J.L.), the director of the assembly. The talk has commenced at the beginning of December 2020 and has outlined the impact statement that the assembly has on the European theatre of coworking spaces.

Interview with Jeannine van der Linden, Online, 11th December 2020

I: Thanks, Jeannine for agreeing to have answer a couple of questions that will enable us to understand the work behind the European Coworking Assembly (ECA). Could you briefly describe the goals behind the assembly?

J.L.: *The pleasure is all mine. Independent coworking has the largest and most powerful network in Europe, and ECA is positioned as a part of a growing and changing entrepreneurial ecosystem. The idea behind the 'assembly's network is quite simple – we want to leverage this network for good. To do that effectively we aim to speak with one voice and make decisions as a body about out part in the future of work. That said, the ECA is committed to this network of peers which is improving Europe in an open, collaborative and horizontal way. We were originally founded in July 2013 as a Belgian nonprofit sorganisation and intended to lobby European governments to support the coworking movement.*

I: What are the main sorganisational perspectives of ECA?

J.L.: *We follow the four core principles. These are collaboration, openness, sustainability, community and accessibility.*

I: And what is the structure behind your organisation?

J.L.: *The ECA is intentionally operated on a ""flock-of-birds"" management principle. There is no command-and-control structure to speak of. We are project based and each project has a leader whose job is to move it forward, and a team in support of it. It is part of the 'team's job to figure out how to fund it as well as how to go about it. There are projects with no leader; these generally are in an early stage and we bring them up every week until a leader emerges or is recruited.*

I: How does that work?

J.L.: *We believe that distributed leadership is the future. Humans seek a controlling body or authority, as it is what we are used to. The response to the question, ""Who controls this"?" is generally a person or entity. In flock of 'birds' management there is no one in charge but the people committed to the project. The response to the question ""Who's in charge?" is "We are".*

I: You are trying to say that no one is in charge? Are you following the same sorganisational ethos as the early coworking spaces?

J.L.: *Yes, kind of. There is no lead bird or lead fish in nature. All that is needed is a shared goal, and clear principles under which to act. Extensive study and modeling have shown that each bird in the sky follows three simple rules: (1) move to the center, (2) follow your neighbor, and (3) do not collide. Having a small number of agreed upon principles for action enables each bird to act. independently while ensuring the group acts cohesively. There are three principles in regards to this: (1) To connect – Stay in touch with the assembly (move to the center), (2) To support – Support each other's project (follow your neighbor) and (3) To tell – Tell people when you need help of when they are approaching boundary foul (do not collide). That is about it.*

I: Understandable. In the line of that and for the purposes of our report on coworking and the precarious work, what are your main projects that we would need to learn about?

J.L.: *Despite the year that has revolved around the pandemic, the assembly has been quite active as we have a handful of running project.*

First, the "Inclusion, Diversity, Equity, and Accessibility project" aims to promote these values within coworking movement and is touched upon in all our projects, namely the code of conduct, workbook, recruitment and memberships, and camps and other event organisation.

Second, the "Coworking Library" is a platform where academic and industry research can be uploaded and searched. The Coworking Library enables researchers to advance their own research, share findings and for industry people go deeper on their understanding of the industry. Allied with the Research Group for Collaborative Spaces. Every year we take part in the RGCS and the Coworking Symposium that has been initiated by the Prague University of Economics and Business.

Third, the "London Coworking Assembly" (LCA) is the U.K. counterpart of the European Coworking Assembly. The LCA has been born in 2014 after the Coworking Europe Conference and after becoming an official ECA project has grown into a community that connects independently owned coworking space owners and community managers to each to each other and works organisations, like the Mayor's Office. During the first COVID lockdown in 2020 the London Coworking Assembly ran two weekly group calls to help members navigate everything from supporting their workspace members to business rates support from the government and sorganised collective action.

Forth, "The Cowork Tools" project is a collaboration with a challenger bank and its mission is to create banking and compliance products suited to the needs of the collaborative and sharing economies. The ECA has developed a module for GDPR compliance, one for AML/KYC compliance, and one for collaborative payments.

Fifth, "The Love Matija" is a project that is named in honor of one of our colleagues, Matija Raos, leader of Coworking Croatia, who passed away at a very young age after a long fight with cancer. The coworking community came together to help him with his lost income and medical bills, but this kind of voluntary giving does not solve

the structural problem. This project proposes to allow coworking spaces and freelancer groups to administer a local mutual assistance fund.

Lastly, the "Coworking Values Podcast" is a podcast that interviews people from around Europe who run coworking projects or spaces. We look for stories from people who working on in local and independent settings to share their stories and connect people.

I: That probably sums it all. Thank, Jeannine.

The interview with the ECA's director has been set to illustrate as many practices and effect that these enactments can achieve. What is important to understand here for future practices is that policy intermediaries need to have a strong, supportive network of peers that can directly or indirectly influence policy makers in the selected area. The latter can be achieved by actively aiding the individuals from active coworking communities across the particular region (of Europe – at least in this specific case) to (inter)connect different networks. These (joint) networks then can act together and raise the voice where (and when) needed.

The ECA is currently one of a kind on a global scale. There are several other similar, yet smaller initiatives of policy intermediaries across the globe. However, these still seemingly do not have the same ability to influence policy actors and other relevant stakeholders as in the case of the ECA. With that in mind, other initiatives can potentially copy the ECA's framework and its programmes that could be replicated in other areas of the world.

4.3 Policy recommendations and waypoints for the post-pandemic period

Within the upper paragraphs, we have presented three cases that are seen by the authors of this report as somewhat deemed for the basics of understanding what direct, indirect or intermediary policy acting can do to support the a) steady and sustainable growth of coworking spaces in a particular local setting, and b) individual workers (or possibly team of workers) who would like to use a selected coworking space at an accessible rate. That said, the following recommendation for the local policy makers are:

1. Establish a voucher system. As observed in the case of Coworking Milan, an active voucher system can enable coworking spaces to thrive as they get indirect financial support from a local government. On the other side, individual users who would not necessarily be able to afford the usage of a selected coworking space would have the ability to do so.
2. Round up a grant scheme. A directly purposed grant scheme could enable coworking centres to lower their costs and expand their operations. As observed in the first section of this report, coworking spaces are often faced with high operating costs resulting from excessive rents, lofty utility costs, etc. The support-purposed grant scheme could enable local, predominantly independent coworking communities to apply for financial support and use these to cover a proportion of costs. The latter would enable them to invest a higher share into additional support services such as community mediation, active networking, learning, etc.
3. Set up a group of experts. Approach local coworking initiatives to identify key experts in networking, facility operations and other knowledge areas that are beneficial for coworking communities. Support these experts with financial compensations and establish a pool of experts that could be identifiable sources by coworking spaces when needed.
4. Identify relevant coworking support networks. It is a typical case that traditional offices disguise themselves as coworking spaces, but lack to offer any benefits (as seen in table 1) to independent workers. With that in mind, it is vital for policy actors to identify key stakeholders in the coworking industry and group them according to their areas of a) expertise and b) experience. Small, independent coworking spaces may have a much larger impact on precarious and self-employed workers than larger, corporate coworking spaces.

The four recommendations are only the core of what could be done in the support of the local coworking scenery. Every (European) coworking locality is different with unique attributes and unalike stakeholders (e.g., cities of Prague and Bratislava have the only coworking spaces in Europe that operate solely with crypto currencies and subsequently attract technological orientated individuals, etc.) and it is important to identify those who have the highest impact on a particular social segment. That said,

the well thought strategic framework is needed before deploying any financial schemes. Intermediary policy actors such as ECA should be recognised as the key stakeholders and included in developing policy strategies that will support the development of a coworking scenery in a particular environment.

5. Concluding thoughts

The following report has aimed to understand how coworking spaces have developed over the last couple of years, how they became support hubs for precarious and self-employed users, and more importantly – how they will most likely develop further soon.

First, the report went throughout the various definitions and milestones of a contemporary coworking model. We have seen that coworking management contains the attributes of relationship facilitation with activities that support users to form relationships and collaborative interactions. Networking events stand behind activities that involve events to interact with individuals who possess specialised knowledge and are willing to exchange both information and skills with members. Community and communication correlate with continuous online and offline communication channels for formal and informal interaction, collaborative work, and the exchange of information. Coming from this, we agreed that coworking spaces are a complex managerial entity that demands a significant amount of input to achieve an optimal level of performed operations.
What is more, the collaborative activities – that are very much sought by precarious, self-employed and other independent workers – is what divides a traditional office environment and coworking spaces. The increased collaboration and a higher level of supportive interactions can be achieved by deploying a set of mediation techniques and establishing a closely knit network of peers. Thus, coworking spaces form a third-social place of sorts, supporting the user's engagement in both formal and informal social relations.

Second, we have learnt that coworking is a compound phenomenon that has gradually developed over time. We have discussed the early shapes of a coworking model that materialised in the form of free movements and later resulted in a more

complex and organised open-office space infrastructure. While the number of coworking spaces have been almost doubling on a yearly basis, the spread of the Covid-19 pandemic caused a halt to this trend. If remote working trends following the pandemic begin to echo those that emerged from the post-2009 financial crisis, demand for coworking spaces might rebound to pre-pandemic levels. The social distancing and other preventative measures will place collaborative workplaces in a paradox – individuals might seek a shared workspace to meet their needs, yet these working environments will be expected to enforce social distancing within the space to control the spread of Covid-19. With that in mind, we have explored the previously unexplored case of virtual coworking spaces and shown – by presenting some early evidence from an ongoing study – that digitalised coworking spaces may see a fast development in the not-so-distant future.

Third, we have agreed that despite the uncertain future course and several possible developmental scenarios of coworking spaces, it is important to understand how local environments can support the implementation of these flexible offices within their localities and directly or indirectly assist their operations. With that in mind, we have discussed three examples of successfully policy actions and indirect support frameworks that have had a direct effect on the growth of coworking spaces. Finally, we have set four core recommendations for the policy makers that should be followed when supporting the development of local coworking scenery.

Coworking is still commonly addressed as a relatively young phenomenon. However, that might no longer be the case. Over the last decade or so the coworking model has matured and developed in various ways and in unalike fractions. The recent pandemic has seemingly put the entire (coworking) industry to the abrupt halt, but it may be that it has only restarted the lifelong cycle of the industry itself. That being said, the near future will most likely bring us the (re)emerged independent coworking spaces that will support the work of precarious, self-employed and other independent workers. In parallel, we will see a higher percentage of digitalised, virtual (co)working environments that will gradually gain significant importance. The use of these and the effects on precarious, self-employed and other independent workers will open up a large number of research questions that will need our attention.

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