Can coworking spaces be built bottom-up?

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Abstract

Coworking is moving beyond its childhood years, and, as it's growing up, it's facing new challenges. Some questions are sparking, such as: how can coworking spaces retain their users? Is coworking involving the actual amount of users who it is saying to engage? Does the coworking movement affect cities and neighbourhoods? Can coworking spaces be built bottom-up?
The paper starts with an analysis of the nature of paradigms of contemporary work, fertile terrain for the creation of coworking spaces, which are analyzed according to their characteristics in terms of people, spaces, goods, and processes. The analysis highlights a series of information that leads us to suggest that, yes, coworking spaces could actually be built bottom-up and that this process would bring great benefits to them, especially from the point of view of the community of people within and around them.

KEYWORDS: coworking spaces, hybrid spaces, bottom-up, community, space quality

1.Framework

Work is changing

Great paradigms such as Sharing Economy, Digital Disruption, Urbanization, and Globalisation deeply and irreversibly permeated and changed the whole society, because all human systems are interconnected on a worldwide physical and digital scale, as a result of growing exchange flows which have sped up following technological development.
One of the human systems affected by this change is certainly work and its workforce.
In particular, in this moment work is experiencing its "Second Post-Fordism" phase, characterized by urban-based networked knowledge (Bonomi, 2015). In contrast to the Fordist era, characterized by the mass-production and consumption of goods, delivered by the "Heavy Economy" (Bonomi, 2015), the Second Post-Fordism leads to a "Light Economy", which is able, in a sustainable way, to adapt to an increasingly diverse and fast-changing demand.
The Second Post-Fordism is mainly animated by knowledge workers. These workers include "all workers involved in the chain of producing and distributing knowledge products"

(Mosco, McKercher, 2007), so, generally speaking, they comprise all white-collar workers. Knowledge workers make a great use of the latest technologies, so technological development enables them to work potentially from anywhere in the world.

The irony of being able to work anywhere is that there isn't anywhere designed for people who can work anywhere, so a movement formed around that and that is the coworking movement (Bacigalupo, 2014).

So: what is coworking?

2.Coworking spaces

2.1 Coworking: workspace as a service

The word "coworking" could be referred to different formats, as it's subject to constant renegotiation by its community of practitioners, the coworkers (sometimes referred to as "residents"). All these formats share the hybrid dimension of both its spaces and its community of people. We argue that coworking could be described as a new work style, combining the best features of an office environment, its camaraderie and the access to useful tools required by knowledge workers.

Coworking can be considered the leading example of a workspace as a service (Boyd, 2014). From a service design point of view, it's interesting to observe that coworking is, in fact, a package of services, including, in terms of space, the container itself, and in terms of content, target-aimed amenities. We could, in this sense, talk about coworking spaces as workspaces as a service. This means that coworking is a distributed system of people, spaces, goods, and processes.

The first coworking space, the "San Francisco Coworking Space" at Spiral Muse, was opened in 2005 by Brad Neuberg: he didn't want to lose the community and structure given by a traditional office's community, but, at the same time, he wanted the freedom and the ability to control his own life. Working at home means being flexible and autonomous, but also working alone. People often lose human interaction, suffer professional loneliness and bad habits, reaching a point in which work-life balance is ruined. Neuberg started his own coworking space and invited people to join him, so the very first community of coworkers was born in a spontaneous way.

When the coworking movement started to spread, it was just an "edge" phenomenon: there were few coworking spaces all over the world, mainly hosting a web-friendly community. These spaces' hosts and residents were inspired and relayed on a collection of core values (collaboration, openness, community, accessibility, and sustainability) in order to open new spaces. Coworking spaces were mainly animated by individuals or small groups of people developing their life projects, finding other people supporting and contaminating their ideas. There wasn't any kind of industry, nor conferences or seminars regarding the movement, to speak of.

A dozen of years later, coworking has certainly become mainstream: people are coworking on every continent, companies are trying to emulate coworking spaces, some coworking spaces started their own franchising.

Coworking has become, without a doubt, an industry.

2.2 What are the features of the coworking industry?

2.2.1 Coworking is addressed to freelancers.

Coworking spaces accommodate work practices that are typical for mobile, project-based, freelance and self-employed work (as found in the cultural and creative industries), which could be carried out "anywhere" with a computer and Internet access (Merkel, 2015). These workers value their work as meaningful and make it the call of their life. They find in coworking spaces what they need: in contrast to a typical office environment, coworkers are usually not employed by the same organization, so they don't feel the pressure of competition or the need of faking their true self; they can find a supportive and motivational diverse multi-disciplinary community; and, finally, they have complete control of their job both in terms of schedule, rhythm and most suitable workspace related to their tasks. Even though they value autonomy, they look for some form of structure in their professional life: paradoxically, some limited form of structure enables an optimal degree of control for independent workers (Harvard Business Review, 2014).

These workers are looking for spaces able to meet their needs: they are in demand of specific services or they are business people who travel a lot and look for a network of spaces they already know of and where they feel at ease.

These people's needs shape the spaces, the services and the scale of coworking spaces: places that act on the local or the neighbourhood's scale arise from the response to collective acupunctural needs, embodied by the initiative of individuals or small groups of people. Urban-scale spaces emerge from more structured ideas, resulting from the action of private and/or public actors. These spaces' contents are commonly related to culture in all its aspects and sustainability. Lastly, spaces with a national and international resonance are mainly closely related to business projects, as they are addressed to business customers who travel a lot and feel the need to find space they already know and to which they can access.

2.2.2 Extended community.

> *"The term "coworking" is often misunderstood. A network of sharing desks or rental offices lacks the crucial feature that an initiative must possess to be defined as coworking: community enrichment."*
> *(Cristina Tajani, Assessor of Labor Policy, Production Activities, Commerce and Human Resources of the Municipality of Milan)*

In 2012 Spinuzzi talked about coworking spaces as just flexible shared office spaces for creative professional "working alone together". Five years later, we suggest that one of the indispensable factors for the success of a coworking space is the building of an extended community that lives within and around it. Coworking promotes a collective, community-based approach to the organization of cultural and creative work. They can, therefore, be regarded as a new form of urban social infrastructure enabling contacts and collaborations between people, ideas and connecting places (Merkel, 2015).

An important aspect of the community of people that is created within and around coworking spaces is the creation, at different scales, of enabling environments for disseminating and exchanging of "tacit knowledge" (Pacchi, 2015).

Hence, "just by belonging to a local community, an insider will have access to the shared knowledge among members of similar but distant communities" (Capdevila, 2014, p. 2).

2.2.3 Diverse synergy.

Coworking spaces' community is mainly composed of freelancers, who don't have a common employer. Then, what keeps these communities of people together? In short: the different synergy that is created within these spaces.

> *"There's a temptation in our networked age to think that ideas can be developed by email and iChat. That's crazy. Creativity comes from spontaneous meetings, from random discussions. You run into someone, you ask what they're doing, you say 'wow,' and soon you're cooking up all sorts of ideas."*
> *(Steve Jobs)*

Sharing, belonging, reciprocity, and trust are the main features coworking spaces communities relate to. Residents also embrace openness to new people, new ideas,

innovation, and other communities. Professionals meeting and their mutual exchange of knowledge and experience lead to many synergic effects (Kubátová, 2014), that don't rely on the sameness of its members, but on the diversity of people with different skills and knowledge, that are willing to share and collaborate. Individuality and freedom of expression and action are not suppressed, but this synergy celebrates the heterogeneity of its members and their actions (Rus, Orel, 2015).

2.2.4 Open Innovation.
Coworking spaces often refer to open innovation circuits in the context of the creativity-based knowledge economy.
Open innovation could be understood as a systematic encouragement towards the exploration, the integration and the exploitation of internal and external sources for innovative opportunities through multiple channels. Capdevila (2014) argues that the physical environment and the community within coworking spaces can facilitate the implementation of different collaborative practices among co-located economic agents. Hence, coworking spaces might be great open innovation intermediaries, especially within the context of creative industries, that "include all enterprises and self-employed persons whose economic activities focus on the production, dissemination, and intermediation of artistic and cultural products or services." (von Streit, Lange, 2013).

2.2.5 Hybrid Spaces.
First of all: where are coworking spaces located?
The interesting thing about coworking spaces is that they often occupy regenerated industrial spaces in historically industrial districts, which are, therefore, re-converted into creative and innovation-driven districts.
These urban areas are revived and renewed also thanks to coworking spaces settlement in large unused and neglected spaces.
In the creative atmosphere model, the creative class tends, at least in part, to replace the working class in the places of traditional development of modern industry (Bertacchini, Santagata, 2012). Thus, the places of material production of Heavy Economy become those of the production and consumption of intangible knowledge.
Some desk analysis on the city of Milan, Italy, showed that there are coworking spaces also in more central urban areas, and they have peculiar features:
- they might be very small coworking spaces, characterized by the provision of very specific services. Therefore, they address a very specific target, often motivated by their own life projects. These spaces are generally set up in single apartments, sometimes apartments connected together by a common corridor;
- they might be very big coworking spaces, which, thanks to their economic sustainability, are able to maintain very high rental costs in prestigious locations.

Coworking spaces refer to different typologies of interiors, such as the coffee shop, the home office, and the traditional office. Their landscape is the result of the evolution of the traditional office in relation to "the changing nature of work (from a service to knowledge to creative industry), new flexible work styles, the distributed and virtual workforce, and globalization and merging of cultures" (Oseland, 2009). Thus, office interiors had to help workers with the complexity of their work and the degree of autonomy required by their tasks. As work gets more complex, it requires teamwork: so, it involves more workers and, thus, they need more flexible workstations. The flexibility of these spaces can take different shapes: workstations could be used by more people at different times or more people at the same time. Some workstations are set up with flexible objects that can be adapted to the needs of different people (for example, some scientific studies show that working at the laptop while standing is healthier than sitting).
Coworking spaces could be considered a "Club office" (Duffy, 1997), as the environment is both highly autonomous and highly interactive. Occupancy pattern is intermittent over the span of the 24 hours. In this kind of landscape transactional knowledge is emphasized and people thrive on the networks established in these spaces.

Carlo Ratti, who designed Talent Garden Calabiana Campus in Milan, well summarized this idea: "The culture of sharing ideas is not so different from that of sharing material assets."

As already said, coworking spaces can be considered a system of services involving people, spaces, goods, and processes. In terms of space, some coworking spaces occupy an entire area and provide aisles with different functions within itself, others are part of bigger projects, such as hubs or physical platforms: in this cases, coworking spaces are one of the services provided and are accompanied by others, and together they follow the project's mission.

In both cases, the "basic services" package, which tends not to be very different from one space to another, is generally constituted by the actual coworking area. Here we can find three types of workspaces: collective spaces, where most people often share large tables, individual spaces, and more traditional meeting rooms.
Beyond this area, multiple collective spaces with hybridized functions are offered: there are dedicated aisles or accessory services for specific kind of work, relax, leisure and well-being. In the case of coworking spaces belonging to larger projects, it's interesting to analyze the offered services and their spaces. The presence of multiple services ensures economic sustainability to the system (Levels, 2017).

Among the spaces and services that are related to the working sphere, we find fab labs, incubation and consultancy services for emerging start-ups, learning programs, and libraries. There are also hospitality-oriented services: lots of spaces offer a bar, cafeteria or bistrot space. Others, often smaller and informal, offer the possibility to use a shared kitchen among all residents. Bigger spaces might even offer a hostel service.
Other services that could be found in coworking spaces are dedicated to wellbeing and leisure: from green spaces used for yoga and physical exercises, to real gyms or swimming pools, and, finally, nurseries and children labs.

Coworking spaces quality

One of the most important things in terms of quality is that a coworking space (and/or the platform it lives in) must guarantee different levels of intimacy in the system of its spaces: from spaces open to the public to less accessible common areas, to private areas.

One of the great differences between a traditional office and a coworking space is that the former is still heavily tied to the 70s office model. We have already mentioned the landscape in the traditional office: summed up with the idea of a battery of tables inside a closed box, it leads to a series of behaviours of the users who live it. The most obvious behaviour is that it seems that people can talk about work just in the proximity of their desks or, if lucky, the office coffee machine. These ideological barriers block change within the offices; in contrast, the coworking spaces, which have a more recent and less bounded origin, partly succeed in overcoming this behaviour, bringing work on the sofas, in an open space, around a plant, during a happy hour.
In traditional offices, the dimension of physical well-being is rather neglected: in this sense, we can speak of both the ergonomic aspect, the sensory one, and movement. Coworking spaces have begun to explore some of these potentials. For example, mid-long rented workstations are actually equipped with ergonomic chairs, able to respond to the needs of a person sitting for many hours. Movement begins to enter into the logic of coworking spaces too: occupying an open-space creates more movement within the community, which moves to its liking within the space. Movement, however, is still little encouraged, if compared, for instance, with Michele De Lucchi's "Passeggiata" ("Walk", "Stroll"), which exemplifies a new way of conceiving the office, a gym for the mind, where the areas of sharing and meeting are more important to the workplace (Gugliotta, 2015), where creativity and physical well-being feed on each other and create synergies among residents. Some coworking spaces

encourage the idea of walking through playful environmental communication graphics. Other, more spacious spaces, offer yoga lessons and gyms.

Even coworking spaces still have to develop a better sensory dimension. For example, the lighting system is often not really efficient and does not respond well to spaces' different functions and human circadian rhythms. Noise seems to be another problem for coworking spaces: collective areas are perpetually animated by the talk of people discussing to one another, on the phone, on Skype. In this context it becomes difficult to find silent spaces: a silent room or soundproof booths could help in this regard. Other micro-services could improve air quality within the spaces or even hydrothermal wellbeing, others could make the spaces more comfortable: for example, the bathroom area is often neglected, but its quality could be increased with small services. They could be provided with actually usable showers, shelves for the support of bags, tricks, objects, and lockers for personal objects.

The relationship between indoor and outdoor spaces could also be improved: on the one hand, to communicate more with actors outside the space, on the other, so that workers are not perpetually surrounded by an artificial landscape.

In general, the area dedicated to wellbeing could be more relevant within coworking spaces, because wellbeing permeates all lifestyles thanks to the spaces quality.

3. Can coworking spaces be built bottom-up?

3.1 Insights

We have so far described the framework within which coworking spaces emerge, and we have defined and analyzed the characteristics of their system of people, spaces, and services.

Here are the most interesting insights:
- coworking spaces are mainly addressed to knowledge workers, often freelancers;
- spaces live and change around the communities that are formed within and around them, so creating a stable community is crucial and strategic;
- spaces create an active and interesting economic system within and around themselves;
- spaces are themselves a service;
- the package of services within the spaces is defined by the space managers, and it is consistent with their vision, mission, and the target they want to address;
- the package of services offered can be further refined, particularly in relation to the quality of the spaces;
- coworking spaces franchising exists, and this shows that it is possible to obtain a replicable and scalable formula in multiple spaces. This formula is made up of guidelines that are repeated (repeatable and scalable) in all spaces, which are shaped by the offered services.

3.2 Service design and coworking

Applying the principles of service design, we are led to argue the acquired insights. While a lot is being discussed regarding the way coworking affects our ways of working, it is also time to reflect upon the way it impacts cities and local neighbourhoods, and what its urban heritage is. It's necessary to look beyond what's happening inside a place and consider its local influence.

As we've already discussed, coworking spaces are a phenomenon of an emerging economy, which is able to knit technologies and people together, allowing processes of self-determination, expression and interconnection (Zuboff, Maxmin, 2002; Von Hippel, 2005; Inghilleri, 2003).

Meroni and Sangiorgi highlight how this economy "appears to be founded on three pillars:

- its social character, strongly linked with the phenomena of social innovation;
- its environmental reorientation, leading to a green revolution and to a renewed territorial linkage;
- its technological innovation, supported by an unprecedented technological breakthrough." (Meroni, Sangiorgi, 2011)

Thus, the production of value is related not only to an economic sphere but also to social and environmental issues. In particular, as a consequence of the complexity of the new artifacts and of the hybrid and interdisciplinary nature of work (Manzini 2011, Ramirez 1999), the emerging economy is characterized by a collaborative nature, which makes the active participation of people in generating value relevant, and qualifies this economy as a "co-production economy" (Von Hippel, 2005). Production for the masses has been replaced by production by the masses (Meroni, Sangiorgi, 2011).

Coworking spaces seem to be the right places where this kind of economy can emerge; but, speaking the truth, some coworking spaces hosts struggle to attract people from the outside because citizens simply do not know these spaces. There is the chance, that coworking spaces are likely to become exclusive places for certain types of users, leaving behind not-knowledge workers and those who do not have access to technology.
This situation is strongly linked to the topic of democratizing innovation (von Hippel, 2005). Von Hippel argues that information and means of production have democratized innovation, because they broadened the number of people who are capable to innovate. Unfortunately, the people attracted and engaged are normally part of a small elite of "lead-users" or domain experts (Meroni, Sangiorgi, 2011).
So, how can coworking spaces start to interact with a wider and more diverse community? On the one hand, if we think of existing coworking spaces, there is most likely room for inviting others in and generating more diversity in the space. Café areas and conference rooms are an obvious place to start. So, a starting point for democratizing innovation could be "opening-up spaces for questions and possibilities (rather than seeing innovation purely as producing novelty products to be marketed)" (Björgvinsson, Ehn, Hillgren, 2010).
On the other hand, this situation seems to suggest an interesting opportunity for building these spaces with a bottom-approach: why not allow coworkers to co-design their spaces and services?
Bottom-up design, with its own rules and behaviours, self-imposed by local communities, gives social value to spaces and increases their quality, making the spaces crucial entities that institutional policies and local authorities could effectively support to promote a sustainable local development (Meroni, Sangiorgi, 2011). This open and democratic approach leads to innovation and healthy competition, as the whole society has access to the knowledge and information of multiple organisations and markets.

This opportunity is connected to the original soul of coworking spaces: they might be a bottom-up solution to the recession and structural changes in urban labour markets, and they also attempt at renegotiating urban Commons in a process of negotiating shared spaces, resources and values (Ferguson, 2014). Similar to the artistic interventions that reclaim and reappropriate urban spaces as "sites for active and democratic engagement"(Ferguson, 2014), coworking might be interpreted as an emancipatory practice challenging the current neoliberal politics of individualization (Lazzarato, 2009). As a collective, community-based approach to the organization of cultural and creative work, it might provide an alternative space for the free flow of ideas, while enabling support networks. Thus, coworking might not just be about working "alone together" or "alongside each other" in a flexible and affordable office space (Merkel, 2015).

Is it, therefore, possible to build coworking from the bottom-up? According to what we have said, yes, it is possible.

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3.3 How?

Through co-creative and participatory design approaches, designers from the global headquarters or from one of the local design centres would work directly with people in their own communities to build a shared understanding of their needs and context of living, creating locally relevant products and services (Meroni, Sangiorgi, 2011). As we already said, coworkers shape the spaces, the services and the scale of coworking spaces.

For what we know, there haven't been any example of coworking spaces built entirely with a bottom-up approach, so far. Despite this, we can mention some initiatives: some coworking spaces offer free spots to refugees, allowing accelerator programs to enter the local economy. Others offer initiatives and training programs for unemployed people. At a time where most jobs come from one's network, it would also make sense from a job centre's perspective to partner with coworking spaces. Some coworking spaces are very active in the territory, claiming the historical identity of often neglected neighbourhoods.

In the city of Milan, we can mention Piano C, a coworking space which focuses on mothers (without limiting the access to other people), offering baby-sitting services, but also training programs for starting new businesses or returning back to work after a hiatus. Even if this space wasn't built with a bottom-up approach, the values of the organizational team meet the needs of a broader community. Another example in Milan is Mare Culturale Urbano ("Urban Cultural Sea"), which coordinates temporary artistic residences that interact with social innovation, in order to generate contents that have a strong impact on the territories for which they were designed. Italian and international experts are invited to take care of the artistic production.

Outside of the coworking realm, living labs could be an interesting innovative environment to take as a best practice: they "are situated in real-world environments, are user-driven, and collaborate with research organizations, companies, and public and civic sectors with the aim to collaboratively develop new services and products. Living labs emerged as a response to innovation environments that were too closed, which often resulted in failure to innovate, partly because of limited and late interaction with potential markets (Stålbröst 2008)" (Björgvinsson, Ehn, Hillgren, 2010).

In general, we suggest that, in order to build coworking spaces with a bottom-up perspective, coworking hosts should:
- understand the identity of the neighbourhood they're interested in for the establishment of their space;
- involve the neighbourhood's stakeholders;
- have the support of a designer, facilitating multidisciplinary design processes, triggering a dialogue among people and organisations, envisioning and defining new, more community-oriented, platforms and tools needed to enable and encourage participation (Cottam, Leadbeater, 2004).

We also propose the adoption of participatory design tools, not using its traditional approach, but rather employing what Cottam and Leadbeater call the "co-creation" model (2004), where users are seen as the biggest resources of the system. This model uses distributed resources (know-how, tools and expertise) and collaborative modes of delivery, and implies the participation of users in 'the design and delivery of services, working with professionals and front-line staff to devise effective solutions' (Cottam, Leadbeater, 2004).

3.4 Benefits

What would be the benefits of a bottom-up-designed coworking space?
This approach could benefit coworking spaces and the community for these reasons:
- participation can reduce the risk of failure (and, so, costs);
- participation can build ownership of the outcome;
- it focuses on a community's strengths rather than its weaknesses, so it helps to build more confident and resilient communities;
- resistance to change is lowered;

- participation can forge stronger bonds and trust, thus, greater community involvement.

The potential of service design is to facilitate the direct involvement of stakeholders in the design of spaces, and this can contribute to strengthening long-term relationships between people and places. Hence, communities within and around coworking spaces would be much more cohesive and extensive. Such places could also play a part in making local neighbourhoods more inclusive. This would ensure greater social mix and diversity within coworking communities.

4. Conclusions

Coworking spaces are emerging as a bottom-up phenomenon and this nature, over time, has gone missing, to give space to businesses that are struggling to be inclusive. A bottom-up design of coworking spaces is possible and would create great social value in the areas where they would be established. Just as in the model of the Smart City, all stakeholders would have a word, people could create a coworking system that can welcome everyone's voices and needs. Making coworking space's services accessible to a broader and more diverse public would lead to better quality of life for the whole community.

In the future, coworking is likely to be another area of the business where centralized planning will yield to decentralized and localized activities, and so coworking will not be designed top-down, but grown, bottom-up, toward more sustainable patterns by the decisions of hundreds or thousands or individual workers (Boyd, 2014), in which designers' capability to work within this dynamic framework is strategic and necessary (Meroni, Sangiorgi, 2011).

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