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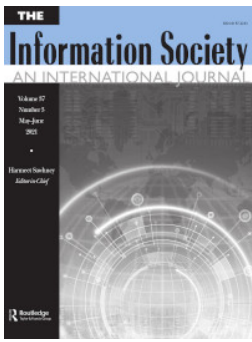
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Unpacking the multiple spaces of innovation hubs

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ABSTRACT

Innovation hubs, hailed as coworking spaces that support collaboration, innovation, and entrepreneurship, are rapidly diffusing across different regions of the world. In this study we examine two innovation hubs situated in starkly different locations: London and Lusaka. We examine them from a social production of space perspective to understand how, despite similar self-defined framing as hubs, they differently enact the day-to-day physical and social spaces. Our study shows the need to recognize “multiplicity of spaces” and a sensitivity to the politics of lived differences between the celebrated imaginary and the performed local practices of innovation hubs, as part of a global phenomenon.

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Introduction



The concept of coworking spaces and innovation hubs emerged in the Global North¹ in a context of an increasingly fluid knowledge economy, where flexibility, freelancing, precarity, mobility, self-enterprising are tied to “creativity” and “innovation” (Ivaldi, Pais, and Scaratti 2018; Parrino 2015; Spinuzzi 2012).² After the emergence of early coworking spaces in San Francisco Peninsula in mid-aughts (Gandini 2015), they have spread world over, with eOffice, a British company, alone listing over 7,000 coworking spaces “from Australia to Zambia.”³ In the case of the Global South, data from 2016 indicates that there are around 314 of such type of organizations on the African continent⁴, 565 in Asia⁵, and 722 in South America⁶.

Coworking spaces are intentionally designed to build communities – “bringing people with different backgrounds together and offering opportunities for exchange” (Jakonen et al. 2017, 236). They also offer space for independent workers, e.g., freelancers, who are in precarious conditions of flexible and casualized work, where they can find a group of likeminded people for support and social connection (Spinuzzi 2012), while keeping their autonomy and independence (Garrett, Spreitzer, and Bacevice 2017). By supporting collaborative practices, social relations, and temporary

partnerships, coworking spaces are expected to generate business opportunities (Merkel 2019; Spinuzzi 2012). To engender collaboration, community and co-creation, coworking organizations typically embrace openness, both architecturally and culturally.

Over time, in addition to a proliferation of coworking spaces, there has also been a diversifying in the forms they take, ranging from socially-oriented to more startup focused spaces. Our focus is on a type known as innovation hubs, which can be both socially oriented and startup focused. Afrilab and Briter Bridges (2019, 4) define innovation hubs as: “[...] a centre for learning, ideas, co-creation and community, that nurtures innovative ideas and market disruption, and supports creative ways of solving problems through offering on-the ground support across the entirety of the startup lifecycle.”

Innovation hubs tend to offer a variety of services that range from networking-oriented social events, pitch nights, and mentoring sessions to more traditional services like pre-incubation, incubation, and acceleration support (Jiménez and Zheng 2017; Tintiangko and Soriano 2020). They employ diverse income generation models, including public and private partnerships, consulting services, and skills development training (Schmitt and Muyoya 2020). They are also funded and promoted by international organizations and government bodies because of their

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potential to spawn successful ventures, contributing to job creation and economic development (Kelly and Firestone 2016).

At its heart, an innovation hub's core value is that it hosts a community of passionate and entrepreneurial people and encourages collaboration amongst them (Bachmann 2014; Gathege and Moraa 2013). Fundamentally, a "hub"⁷ is a built-up physical *space* that engenders innovations (GSMA. 2014; Littlewood and Kiyumbu 2018; Toivonen and Friederici 2015).

Given significant heterogeneity among hubs across the globe, little is known, especially in the Global South, about how the vast number of "hubs" actually operate on the ground, what organizing processes they have in place, and what daily activities are being carried out in them.

We present fieldwork-based case studies of innovation hubs located in two very different contexts: London and Lusaka.⁸ Both innovation hubs are self-defined as inherently collaborative spaces that host communities of like-minded people. However, as we will see, the values of community and collaboration are enacted very differently in the two hubs. In order to unpack hubs as enacted spaces from a relational perspective, we draw upon Lefebvre's (1991) notion of space as a perceived, conceived, and lived experience, as well as Massey's (1991, Massey, Quintas, and Wield 1992⁹, 1994, 2000, 2005) conceptualization of space as multiplicities. We study innovation hubs as organizational forms which embody contradictions and tensions as they are enacted and show the need for a more nuanced, contextualized, and localized understanding of hubs which are differently positioned in an uneven global landscape.

We structure this article as follows: after discussing Henri Lefebvre's conception of space from the perspective of sociology, we introduce Doreen Massey's perspective on space from human geography field. We next we describe our methodology and then present our case studies. Lastly, we end with your conclusions.

Innovation, hubs, and coworking spaces literature

The literature mostly approaches coworking from an organizational and management perspective, emphasizing its business value (de Peuter, Cohen, and Saraco 2017). Studies focus on creating a sense of community to support knowledge sharing and promoting entrepreneurial opportunities (Botsman and Rogers 2010; Bouncken and Reuschl 2018; Capdevila 2015; Merkel 2019; Parrino 2015). In such a quest,

scholars underline the importance of facilitating social interactions among independent professionals (Gerdenitsch et al. 2016), fostering networking practices (Capdevila 2015), reducing professional isolation (Spinuzzi 2012), enhancing innovation (Schmidt and Brinks 2017), and promoting autonomy (Bouncken and Reuschl 2018). They note that coworking spaces provide a shared context for actors to reveal useful information and decrease uncertainty, thereby increasing trust and enabling collaboration (Jakonen et al. 2017; Waters-Lynch and Potts 2017). Coworking spaces are said to produce a form of accelerated serendipity that can be capitalized for successful collaborations (DeGuzman and Tang 2011; Jakonen et al. 2017).

In the global proliferation of coworking spaces, innovation hubs emerged in some African cities around 2010, mainly funded by the private sector and international organizations (Littlewood and Kiyumbu 2018; Toivonen and Friederici 2015). In Africa, hubs are expected to promote the digital and mobile boom, helping the continent to technologically leapfrog and accelerate its pace of development (GIZ. 2013). In this quest, innovation hubs in Africa seek to develop networks and join global alliances to build their ecosystems, and "adopt best practices" for managing hubs and providing services (Afrilab and Briter Bridges 2019) and in the process imitate their Global North counterparts (Avle, Lindtner, and Williams 2017).

Critical scholars challenge perspectives that portray coworking spaces as inherently benign organizations, situating them in the broader context of neoliberal capitalism and precarious work (Avdikos and Kalogeris 2017; de Peuter, Cohen, and Saraco 2017; Merkel 2019). They point out that coworking spaces seem to embody a contradiction of values, that is, the values of community and collaboration versus the individualistic pursuit of autonomy and flexibility and the reproduction of neoliberal entrepreneurial subjects (Gandini 2015; Merkel 2019; Vidaillet and Bousalham 2020).

Studies on the hubs in the Global South are limited. Tintiangko and Soriano (2020) study of coworking spaces in the Philippines shows how the coworking spaces in central Manila reproduce the above model from the Global North only to exclude local freelancers in favor of elite entrepreneurs and global diaspora.

Building on this stream of literature, we examine the hubs as spaces embodying and shaped by multiple logics and values, which interact and play out in the organization and the day-to-day enactment of spaces. We will now turn to the concepts of spatiality¹⁰ in the next section.

Conceptualizing space

Our analysis is inspired by Lefebvre's (1991) work on social production of space. In addition, we also draw on Massey's (1994) work on "global sense of place," as we compare hubs in two very different socio-economic contexts.

Lefebvre: Social production of space

Lefebvre (1991) conceives of space as situated, produced, and reproduced through social relations and everyday practices. He addresses power relations by differentiating explicitly the "conceived" space, seen as the product of planners, architects, and other technocratic agents; the "perceived" space, conceptualized as the ways in which space is produced and reproduced through our movements within it; and the "lived" space, referencing meanings we give to space and the ways in which we reorder it to reflect and reinforce those meanings (Watkins 2005). In this school of thought, space is seen not as a static entity but a socially constructed and fluid entity subject to change over time (Liu and Grey 2018), through organizational practices (Dale and Burrell 2008; de Vaujany and Vaast 2014) and the micro-spatial tactics of those inhabiting the space (Munro and Jordan 2013). Furthermore, national, regional, and cultural differences have an effect on the relationship between physical distance and interaction obligation (Fayard and Weeks 2007; Zhang and Spicer 2014).

Following Lefebvre, we examine the architectural arrangements and members' perceptions of and lived experiences in the two hubs, which display stark contrasts despite similar self-framing in organizational values and models. To account for the differences in the hubs from a global perspective, we turn to Massey (1991, 1994, 2005, 2007).

Massey: Global sense of place

Like Lefebvre, in Doreen Massey's conceptualization, *space is the product of interrelations*, and as such it does not exist before identities/entities; rather there is a "relational constructedness of things" (Massey 2005, 10). Massey argues that space is made at the intersection of economic, social, and material relations operating on a range of scales "from the immensity of the global to the intimately tiny" (2005, 9). Thus, exploring particular spaces means tracing "the coming together of the previously unrelated, a constellation of processes rather than a thing" (Massey 2005, 141). In this sense, the global is inherently interdependent, and

it is "as much locally produced as vice versa" (Massey 2007, 10).

Massey suggests that the interconnection of power and the globalization of space affects people and places differently (Bower 2017). The recognition of these patterns of unequal relationships is at the core of the argument that Massey makes through what she identifies as a "global sense of place" (Massey 1991). Space is a product of interrelations and coexistence; it is heterogeneous, as different social groups and individuals "are placed in very distinct ways in relation to these flows and interconnections" (Massey 1991, 25). This is what Massey refers to as the "power geometry" of the world – hegemonic narratives and economic forces that concentrate most of the power of what is understood to be good or desirable, creating dominant stories that establish norms. Spatial relations are thus "inevitably and everywhere imbued with power and meaning and symbolism" (Massey 1994, 3). Such spatial framings are inserted into our imaginations through repetition, until they become recognized as the "truth."

To counteract the hegemonic conception of space, Massey introduces the notion of *positive multiplicity* – space is the sphere of the possibility of the existence of multiplicity, characterized by "liveliness, the complexity and openness of the configurational itself" (2005, 13). In effect, this understanding of space implies the recognition of the existence of "the other" and hence has political implications: space exists in contemporaneous plurality, where many narratives and discourses are recognized and where heterogeneity coexists (Massey 2005).

Both Lefebvre and Massey provide a critical interrogation of simplistic notions of space, with Massey also re-interpreting it for a contemporary, globalized world (Bower 2017). Furthermore, Massey expands the implications of space as a social process to questions of regional inequality and uneven development.

Inspired by Massey, we seek to move beyond singular narratives to look at innovation hubs as situated in different geographies of uneven distribution and power, and social, cultural, historical trajectories. By bringing together Lefebvre's conceptualization of space with Massey's propositions, this article unpacks innovation hubs both as enacted, lived, and complex organizational spaces and as points of global intersection of power relations.

In the next section we describe our methodology.

Methodology

In this study we adopt an interpretivist case study approach (Walsham 1993) to research two innovation

Table 1. Lusaka hub interviews.

Interviewees	Gender	Age
Silvana	Female	23
Luke	Male	32
Joseph	Male	28
Kevin	Male	26
Patricia	Female	21
Ronda	Female	26
Seth	Male	31
Charlie	Male	27
Zion	Male	23
Catherine	Female	30
AJ	Male	18
Nicolas	Male	24
Mariani	Female	24
Timothy	Male	28
Darius	Male	26
Jack	Male	23
Chimoi	Male	30
Kite	Male	35
Mich	Male	29

hubs located in the two very different contexts: London (UK) in the Global North and Lusaka (Zambia) in the Global South.

Both hubs were similar in how they defined themselves and their objectives. Firstly, both focused on innovations that addressed societal challenges. Secondly, both saw “collaboration” and “community” as their core values. As such, we wanted to see how these practices looked *in situ* in two very different contexts.

Our starting point was to examine the hubs as organizations with certain explicit or implicit ethos, rules, and organized activities. We then looked at members’ day-to-day interactions and practices and how they enact the physical and social spaces of the hub, e.g., whether members worked together on projects or bounced ideas around. We recognized the limitations and advantages of the hubs being situated in a time-place boundary, sensitive to how contextual factors influenced members’ practices. In other words, we consciously counteracted received ideas about prescriptive ways in which hubs should act, we focused on the activities on the ground and the context within which they occurred.

The fieldwork was conducted as part of the first author’s doctoral dissertation completed in 2017. It entailed participant observations and semi-structured interviews – a total of 30 interviews, 19 in Lusaka (Table 1) and 11 in London (Table 2). In both contexts the first author had previous contact with participants.

The first author conducted the fieldwork in Lusaka between mid-January 2015 and April 2015. She had, since 2012, a connection with the innovation hub in Lusaka. While the hub increased its membership and

Table 2. London hub interviews.

Interviewees	Gender	Age
Rochdale	Male	31
Mark	Male	28
Adrian	Male	30
Melanie	Female	29
Diana	Female	40
Faucett	Female	36
Sofia	Female	38
Ann Marie	Female	28
Charlize	Female	30
Abbie	Female	28
Gaby	Female	37
Mariani	Female	27

moved to a bigger location in early January 2015, its managers and members remained the same. In the UK hub, the first author conducted fieldwork between August 2014 and November 2014. She became an evening host for these four months, since the hub offered basic membership in exchange for hosting one evening a week. On these evenings, the first author had to attend to clerical duties, cleaning tasks, and arranging space for events.

On the average interviews lasted between 30 and 45 minutes, with the first author making extensive notes. Also, during visits to the hubs, the first author wrote detailed descriptions of each respondents use of the space and forms of interaction.

In the first phase the first author used participant observation to cross-reference, triangulate, and understand the spatial context of people’s behavior in the hubs. She kept a diary to record participant observations, as well as note thoughts that were appearing in relation to the findings and potential ways to interpret them. This allowed us to see what people perceived and said about the space and its impact, and also to observe interactions and dynamics within it, allowing for the construction of a more complete analysis. Our goal was to describe what happened inside a hub on a daily basis, what were the common dynamics and practices observed, and how these compared with participant responses during the interviews. So, for example, if we saw members working together on specific projects, the first author would make it a point to see how frequently this occurred, between whom, and for what purposes.

In the second phase the first author conducted semi-structured interviews with hub members and managers, who were selected through purposive sampling, seeking the widest possible spectrum of views possible in our study. First, members were categorized based on the level of attendance at the hub. For this, participant observation was crucial. We then used demographic criteria – gender and age. We sought to have an equal number of males and females, as well

as people from different age groups. To achieve this, we used snow-ball sampling approach, where interviewees were invited to suggest others based on the demographic criteria.

We started our interviews with more general questions about the participant's background and interests. From these, we followed with questions about their experience in the hub and their perception of it. The conversations then progressed to questions more related to their work and the impact they were trying to have. Questions also evolved around the day-to-day practices around the hub and whether there were any differences with previous work experiences.

We reviewed and digitally transcribed the two research diaries. We also transcribed the interviews verbatim, and read the transcripts several times, making notes as we developed new insights.

Our data analysis followed 3 stages:

Given the amount of data, transcripts from interviews, as well as the research diaries – total of 150 pages written on Microsoft Word files, we uploaded them into NVivo to facilitate coding (Bazeley and Jackson 2013). We started by focusing on members' perceptions of their work and values, with two key initial codes labeled "collaboration" and "community." We elaborated some sub-nodes rather loosely, in some cases using the participant's own terms. When participants mentioned something around community and collaboration, the first author asked for examples and then cross-referenced them with participant observation notes. For instance, if members mentioned that for them one of the markers of lack of collaboration was people wearing headphones, the researcher cross-referenced participant observation to see whether this happened and how often, if it happened.

Our second step was to generate more codes from the data that fell outside the initial categories. For example, we generated more codes for participants' perception of the hubs, and gender differences in lived experience of the hub. Finally, space emerged as the overarching theme that brought together most of the codes generated in the first two stages. We followed an iterative process to organize the codes guided by Lefebvre's and Doreen Massey's theoretical approaches, making connections between the physical space, the hub's own conception of the space, and participants' perceptions and lived experiences using the hub. This led to the findings content that we detail below. In the following case analysis, we have changed names to pseudonyms to protect participants' identities.

Unpacking the spaces of innovation hubs

In this section we present the findings of the two case studies. We structure the discussion along four different dimensions for our analytical purposes. We first present the two hubs as spaces situated in a global context, informed by Massey's work. We follow this with a presentation of each hub along three aspects inspired by Lefebvre's socio-spatial theory: as an organizational space with organizational rules, cultures and identities; as a physical/material space with values inscribed into the design of the space; and finally, as lived experience of the participants. Of course, all these spaces reproduce and feed into each other.

Innovation hub in London

The hub as positioned in the global economy

The UK among the top countries in the world in terms of economy¹¹, human capital¹², innovation capacity (Dutta, Lanvin, and Wunsch-Vincent 2020), and business friendliness (World Bank 2017). In effect, the London hub is embedded in one of the world's economic hotspots.

The hub as an organizational space

The London hub, a product of the anti-globalization movement at the turn of the millennium, was founded in 2005 to bring together Londoners who wanted to tackle pressing problems. Its two founders were looking for a space in which people with different backgrounds and skills could work. In a profile written about one of the co-founders, he shared that the hub was initially created for people who were dedicating their lives to finding new ways of confronting the world's issues from their bedrooms. Now, the London hub is one of the largest hub organizations in the world, with more than 80 hubs and over 13,000 members worldwide. At the time of the research, the hub had four different locations in different areas of London. Both participant observation and the interviews took place in one of the hubs in central London.

On one of its notice boards there is a poster of a male figure spelling out "the perfect member" – passionate, checks in and out (pointing to the watch), active in the community, communicates, forward thinker, and fills out the global survey.

The hub provides a space for people, mostly entrepreneurs and freelancers, who want to work on specific projects or create startups, normally with a social component. At a very basic level, the hub offers a number of services (coworking, incubation, scaling,

ect.) and provides a set of resources (WiFi, tea, and coffee). On a more complex level, the hub seeks to maintain an international network of people and contacts, encouraging a global community of innovators around the world.

Furthermore, the hub also seeks to provide space for a community of people who could feel a sense of belonging and shared goals. One of the defining threads that runs through the history of the hub is the collaborative nature of the organization. In short, the main objective of the hub is to create local, collaborative communities that are bringing about social change.

The hub as a material space and lived experience

The workspace used to be an old warehouse and contains open areas, with round-shaped tables, high ceilings, glass doors, relaxed social areas, an open kitchen, and designated meeting rooms for hire. At the time of the fieldwork, the workspace had three different levels of the: first level with open workspace and no assigned seating, second level with meeting rooms, and third level with tables for dedicated teams.

The meeting rooms were equipped with big screens and other digital facilities, with glass doors that give them an open and transparent feel. However, these rooms were not accessible unless booked with a fee on top of the membership. The third level had seating spaces ranging from private seats, quiet areas, to open tables and a library. Some tables were designated only for startups and teams, again bookable with a special fee. Some spaces could be booked to hold internet meetings for up to two hours.

In short, the physical design of the workspace was very open and multifunctional with almost no physical boundaries, which at first glance, appears to be aligned with the values of collaboration and community as espoused by the organization's aims. New members were given a mandatory tour of the space when they joined. At this point, they are told which areas are free for them to enter, depending on which type of membership they have, as well as the areas that they need to book or pay for in advance.

During our participant observation we noticed that hub members behaved according to the indications they were given by management. More often than not, members obeyed the rules and acted in ways that created no conflict in the space. In that sense, the workspace had very defined areas and roles for each area. All members knew what each area was there for and how to use it, and it was very unlikely that people would use it any differently.

The hub's intention behind clearly demarcating functional zones was to preempt potential conflicts and foster a collaborative community. This is not to say that the hub was a confined, claustrophobic, and heavily "controlled" workspace. In many respects, the hub was a flexible, open workspace, and it did engender an abundance of interactions. At the same time, in contrast to a truly open space, the hub was enacted as a heavily compartmentalized space, with divisions carefully observed through rules and norms.

The managers attempted to cultivate a community of innovators and entrepreneurs that went beyond the regular users by using mailing lists and holding engagement events on the hub's premises. Some of these were hosted by the hub's managers, while some were hosted by other organizations at the venue.

However, despite the open space and all these initiatives, our findings were mixed. Most importantly, the hub members valued the space and hub for reasons other than collaboration and community. In fact, the majority (8 out of 11) of our respondents valued the hub for reasons such as suitability of space for their businesses, the location, and the esthetics. For example, with regards to aspects of "community" and "collaboration", a member commented:

For shared workspace I think it's a great place. Apart from the intention of trying to get people to collaborate which I don't think it happens that much. It is still a great place to work. (Harvey 31)

When we cross-referenced with our participant observations, we had found very little sense of collaboration during our fieldwork – we did not see members frequently interacting or collaborating on projects together. What we had found most noticeable during our participant observations was members working on their laptops with their headphones on. While they socialized at various social events hosted at the hub, we saw little evidence of collaborations stemming from interactions at these events. An observation the first author made in the research diary whilst at the hub says:

[...] most people sitting and looking at their laptops screens and typing away, most of them wearing headphones. 4 months since the observation started, there had been no observation of people sitting together on a table discussing things, looking at screens together. (Research diary).

Moreover, in the research diary, the first author also describes an uncomfortable feeling of sitting in the middle of the open space, as if she was being observed.

Thus, the enactment of the hub did not often accord with the values of collaboration and community the hub proclaimed. Most of our research population did not seriously engage with the community. Many of them made use of the space on a daily basis, some had been members for a significant period of time (e.g., two years), yet they did not feel they were part of a community, nor had they ever collaborated with anyone from the hub.

Some members valued the hub for the esthetics of the place and its location. They liked bringing clients who were often impressed by the design of the hub. This could be considered a symbolic value of the space, which allowed members to present an image or narrative for their projects or business, as a way to frame the identities of the social entrepreneurs as well as the hub's (Clegg, Rhodes, and Kornberger 2007). In this case, the design of the space was relevant for members for other reasons. For instance, members often considered the hub as a place that gave them conveniences for their work:

For us it was more practical, it was more about us being a small business and not wanting to hire a full office. It provides a solution in a really convenient part of London. We pay them an amount each month they provide facilities, post office, toilet, kitchen, photocopier, scanner... you know all that stuff. As well as being a great space to bring people to meet and that sort of stuff, is really convenient. But we haven't really become part of the network. (Andrew 29)

Innovation hub in Lusaka

The hub as positioned in the global economy

Once a British colony, Zambia (Republic of Zambia) became an independent state in 1964. Moving from a post-independence stagnation period with the collapse of copper prices (Zambia's main export) and a period of structural adjustments implemented/imposed by international financial institutions in the 1980s, Zambia undertook an ambitious macroeconomic and market liberalization programme in the 1990s with strong privatization measures. These liberal policies, however, did not result in much investment or income per capita. Instead, Zambia's economy is characterized by a strong dependency on natural resources, with a substantial international debt as an effect of structural adjustments and programmes proposed by the International Monetary Fund (Simutanyi 1996). Zambia also has high levels of aid and development interventions, encouraged and promoted by the West, which continues to exert imperialistic power (Moyo

2009). These broader, macroeconomic factors present a distinct context for innovation.

Zambia is a lower-middle-income country, with a GDP of US\$26.933 billion in 2018 and a 3.70 % GDP growth rate, ranking 105 position in the world. In 2019 Zambia was ranked 124 out of 129 countries in the Global Innovation Index (Dutta, Lanvin, and Wunsch-Vincent 2020), and 116 out of 137 countries for Global Entrepreneurship Index (Ács et al. 2019). Zambia is considered a difficult environment in which to start a business (World Bank 2017) with low levels of foreign investment due an uncertain policy environment (Bigsten and Kayizzi-Mugerwa 2000; ITC (International Trade Center) 2020). Correspondingly, Zambia has low level of high-growth potential entrepreneurial venture but one of the highest self-employment rates, due to the lack of the human capital and infrastructure (Mwaanga and Chewe 2016). Taken together, these measures suggest that Zambia's socio-economic context is not conducive to market-based innovation.

The hub as an organizational space

The Lusaka innovation hub was founded in 2011 and is the only hub of its kind in the country. It was started by two employees of a Belgium development cooperation agency who were implementing an initiative that fixed old computers and delivered them to colleges in Lusaka. For this, they recruited young technologists to work as interns, focusing on putting together hardware for an electronic library that would support teachers and students. In the course of this project, it became evident to all involved that there was a community of people interested in getting together and learning more about technology to complement what interns had learned in colleges or universities.

As the community grew, it moved from a small room to a bigger space, and further evolved to include entrepreneurs. The hub became a space where innovators and entrepreneurs could connect, collaborate, and work on their projects and turn them into viable businesses. By 2015 the hub presented itself as an organization that fosters a "community" and holds values of "collaboration", with a vision to nurture an entrepreneurial community (Research diary)

The hub managers' "experiment-trial" strategy allows them to re-assess their plans and change if needed. We asked a member of the management team why he decided to join the hub, and he said:

Think of the minimum viable product, that's what [the hub] is. It is good that it is so unstructured. It is

good because if you have rigid structures, then you need to follow the structure in order to change. The great thing about [the hub] when I first came here and even now is that if you want to try something you just do it. And if that doesn't work ... well it didn't work, what do we learn from that? (Mich 30)

Without a clear organizational structure, the hub adopted a flexible approach and experimented with different services depending on what members brought into the hub. For instance, they hosted events of the technology industry, policy makers, and even the fashion industry. This was possible due to the hub's open-ended philosophy: experimenting with different issues and not rejecting proposals made by members.

At the time of the fieldwork, the London hub was looking to expand its franchise to Africa, wherein African hubs would adopt its name, logo, and organizational structure and become part of its global network. In exchange, the franchisee had to pay a commission from its annual revenue. Regarding this, managers in the Lusaka hub had meetings, conducted market research, and explored potential partnerships. They traveled to take part in workshops provided by the London hub to assess the viability of their application to become a franchisee. On conducting this exploratory research, hub managers realized that commission was too high to make financial sense for the Lusaka hub, subsequently they dropped the idea. On another occasion, the hub tried to apply for funding from an international organization and were asked to state how many startups would be incubated within the hub in one year: selecting from 50-100, 100-150, or 150-200 startups. One of the hub managers said with frustration that “[w]e would be lucky if we manage to scale up two start-ups in one year” (Research diary).

In a similar vein, we noted differences in expectations with regard to the use of the Business Model Canvas¹³, a tool developed in Europe for designing business models. On the one hand, hub members showed little enthusiasm for it. On the other hand, the mentor showed frustration of what he perceived as the lack of basic literacy skills and motivation from the members, with little reflection on whether the tool was suitable within the context and for the hub members' purposes.

These examples reveal the tension between adopting strategies for innovation developed and designed in Western contexts and the hub's own practices and interests. Yet, the Lusaka hub comes under pressure to follow the Western models of business startup and innovation.

The hub as a material space and lived experience

The workspace had clear physical boundaries and did not present an open coworking space like the London Hub. It was set in what used to be a family house, and no physical change was subsequently made. As such, it had all the usual elements found in a house: a kitchen, a living room, bedrooms, bathrooms with showers, etc. What used to be the living room became the main room for big workshops and events. The former bedrooms were used for meetings and more workspace. The kitchen remained the same and was used only to make drinks and light snacks. The house was compartmentalized with thick walls.

Most of the rooms contained individual plastic tables and chairs. The main room was used for trainings and events with a big wall serving as a projector screen. The internet connection was often very weak and tended to break down when too many people were using it, in bad weather, and during power cuts. No specific functions were allocated for the rooms, except that events were usually held in the living room. There was no signage for any of the rooms.

Despite the compartmentalization of the physical space, the enactment of the space proved to be fluid and improvised. Even though the space had clear physical boundaries, they were not barriers. The “hybrid format” of the hub as an organization allowed members to visit the space in the way they wanted. Usually, members visited the space on a daily basis, although others would attend every fortnight. It was common to see members working in groups, networking with others, and in some cases playing video games. Members used any room, and the way they used it varied significantly. The plastic tables and chairs were easily moved, and members changed their location often. In other words, despite the rigidity and constraint of the physical space, there was a sense of “making” the space by the participants, rather than a strictly imposed, structural used of the space.

Such a relaxed and fluid enactment of space supports a strong atmosphere of community and collaboration. Beyond the aspiration of building successful startups or generating revenue, members were focused on learning and working together to solve problems within their communities. When members got stuck trying to fix bugs or improve their innovations, they looked at online forums and communities and shared the learning with others. This form of collaboration was very common within the hub, creating opportunities for members to meet different kinds of people with a driven mind-set.

A member reflecting on the success of the hub said:

If success was measured by the initial reason it started and it was created, which is developing the community, yes 100%. It was about building a community and developing people's technical capacity. Literally there was nothing before these guys got here and they've done a very good job at that. (Mich, 29)

The uniqueness of the hub encouraged people to feel comfortable when opening up and sharing their ideas and projects. The freedom to experiment and share their ideas was substantially important for the creative process that members were immersing themselves in. A hub member who had visited coworking spaces in other countries said:

These guys started it because they wanted a community. They didn't start it because they thought it was a good sell model that would make lots of money. They never thought about money. They just thought about supporting the community, that was it. And so, if people are just getting in with their headphones and not talking to anybody, they fail. (Vincent, 32)

However, difficulty in securing funding as well as the discourses around innovation started affecting the activities within the hub. There was a push by the funders to focus more on startup development. By 2018, the hub was more strongly focused on developing startups and empowering local businesses. In contrast to hub's 2015 self-definition, which spoke of fostering a community of entrepreneurs that addressed social challenges in effective and sustainable ways, the hub's website now talks of scaling startups, accelerating growth, and reducing barriers to entrepreneurship

Corresponding to changes in the mission statement, day-to-day practices changed, resulting in new work arrangements. For instance, in 2015, the members were allowed to access the coworking space and use WiFi for free. Consequently, profile of members was diverse, some were young people wanting to improve their digital skills; others had specific projects they wanted to scale up; and others simply wanted a space to hang out with like-minded people. By 2020, in a follow-up conversation with one of the co-founders, we learned that access to the coworking space now entails a fee, and the hub is now program-focused, where members receive training and support based on the stage their business is in. Now, the membership has narrowed to those seeking to develop startups and interested in participating in tech communities.

Discussion

Massey's spatial perspective recognizes "the existence in the lived world of a simultaneous multiplicity of spaces: cross-cutting, intersecting, aligning with one another, or existing in relations of paradox or antagonism" (Bondi 2005, 3). The notion of multiplicity rejects an *a priori* assignment of statuses and authorities, as well as a privileging of certain stories over others, instead understands that conceptual framings of spaces are embedded in social and political structures (Lagendijk et al. 2011). Such structures are then perpetuated and become institutionalized through policymaking, media, academic publications, and more (Rodgers 2004).

By unpacking hubs as global, organizational, material, and lived spaces, in this article we argue for a more open and nuanced view of innovation hubs that registers their heterogeneity. We shed light on how innovation hubs, in practice, perform, differently in different contexts. We go beyond merely capturing the characteristics of a place or space (Gill and Larson 2014), since perceptions and experiences of space can vary radically through cultures and history (Thrift 2008). We brought together global narratives of innovation with local sense-making to understand how they interact to shape the hubs. By looking at the embeddedness of a hub within its social and contemporary environments and the impact they have on the daily relational practices with the space, we unpack the contradictions, incongruences and nuances in the formation and enactment of spaces.

In effect, hubs are symbolic spaces of innovation, packaged with assumptions and narratives of community and collaboration, yet performed differently with heterogeneous material, organizational and lived experiences enacted by local participants of the hub. It is not a story of one space imitating another, but one of "contemporaneous plurality" where heterogeneity coexists (Massey 2005).

Hubs as multiplicity of spaces

While the literature on space often emphasizes how material design of space shapes users' behavior and patterns of interaction (Argyris and Schön 1996; Fayard and Weeks 2007; Peters 1992), what we observe is an incongruence in the material design and spatial practices of participants, which highlight the significance of social, cultural, institutional processes that influence the relationship between actors and spaces.

In both hubs, spatial practices were contradictory to the material design but aligned with local values and culture, economic and educational resources, and shaped by implicit and explicit organizational rules, or the absence of them. For example, even though the Lusaka hub was located in a material space that was compartmentalized with clear physical boundaries (doors, thick walls, no open space), the relaxed atmosphere and informal rules encouraged members to creatively reconfigure the space as open and fluid, and use it as an innovation hub that fulfill their needs. Participants were found to shape their own work environment, exercising agency to learn and explore through trial and error, knowledge sharing and collaboration, activities that give rise to creativity and innovation (Zheng, Venters, and Cornford 2011). Members' ability to re-imagine and re-produce the space as an open coworking space speaks not only to how they were able to overcome the static parameters of the physical space (Kornberger and Clegg 2004), but also to how they were open to multiple interpretations and dynamic simultaneity (Massey 1994). In contrast, the London hub was designed with an abundance of open spaces, transparent doors, and creativity-conducive esthetics, yet we found little evidence of collaboration and community building. In practice the workspace was enacted in a way that prioritized rules, routines and behavioral norms with little evidence of bricolage and serendipity. Instead, the hub was mostly valued for its functional value of hot-desking and symbolic value of esthetics, rather than the interactions among participants.

By unveiling the disjuncture between physical design and organizational practices in both hubs, our finding goes against the grain of the literature, which predominantly emphasizes the mutual shaping of space and social practices (Kornberger and Clegg 2004; Markus and Cameron 2002). Different from research on the manipulation of space to achieve certain values (Dale and Burrell 2008), our case studies highlight the importance the culture, norms, and explicit and tacit rules in mediating the constitutive relationship between the social and the material, as well as the heterogeneous possibilities that could arise from the "throwtogetherness" of spaces (Massey 2005).

A global sense of place

Hubs are not just physical spaces and instantiations of an organizational form, but also nodes in global networks. Despite the rapid expansion of innovation hubs and coworking spaces in various regions of the

world, especially Africa and Southeast Asia, most existing research focuses on the Global North, and little is known about the local practices of hubs in the Global South. Beyond quantitative mapping, there is little research examining hubs as entities situated in the uneven global landscape of power, discourse, and resource distribution. In our study, we also examine how hubs are constituted in the interaction of local practices and global order of power and neoliberal discourses. Our study highlights the importance of recognizing the global sphere in the production of space (Massey 1994), and extends existing literature of temporal-spatial relations within organizations to global spatiotemporal dynamics beyond organizations.

This "global sense of place" underlines how spaces are interconnected and reproduced as power relations are materialized (Massey 1991). As Massey puts it, "[m]ost places are complex combinations – on the receiving end of some wider forces, seat of the production of others – and in consequence in each case the political potential will be different" (2007, 21). Our study examines two hubs: one in a city that is one of the world's top economic centers; the other in a city in a formerly colonized country, gaining independence 55 years ago, where the economic activity is mainly focused on mining and agriculture. In other words, the former is a central node in the established international network, and directly linked into that system of resources and norms, while the latter is peripheral in every sense. As Massey (2004) notes, the interconnection of power and the globalization of space affects people and places differently. What happens in London often shapes and informs the production of other spaces, whereas Lusaka is under pressure to follow London's lead and not in a position to propose alternative narratives.

In this article we adopt a critical perspective to the universalization of hubs and highlight the importance of recognizing the heterogeneity and politics of spatial practices papered over under the dominance of globalized symbols and discourses (Massey 1994, 2005). We found conflicting global and local logics in play at both hubs, albeit in different ways. In London, we found absence of community and collaboration in contrast to its claims and esthetics. The London case shows that coworking spaces in the Global North advocate communitarian values while reproducing a self-entrepreneurial ethos and the logic of the market (Gandini 2016; Spinuzzi et al. 2019). In Lusaka, community and collaboration exist in spite of spatial constraints, yet tensions arose when the hub was expected to adopt Western innovation tools (Business Model

Canvas), when seeking to join Western-led networks and when applying for Western funding, showing the effects of hegemonic narratives in local settings. These arose from the conflict between what they value – collaboration, identity, processes of learning and innovation, and community-oriented inventions – and the external market-based criteria. In sum, the dominant neoliberal model and the economic yardstick for assessing innovation hubs are inherently contradictory to the values of collaboration and community.

Our study provides an interesting reference point to Tintiangko and Soriano (2020) study on coworking spaces in the Philippines, which share the design of the London hub, yet are more often occupied by elite knowledge workers such as freelance lawyers, consultants, and visiting members of Filipino foreign diaspora. Hubs in the Global South may aspire to a positive vision of space that seeks to enact the global imaginary, creating various repercussions for local practitioners. Lusaka hub's later transition from a socially-oriented to a business-focused model shows the pressure on peripheral hubs to follow the trajectory of Global North hubs.

Therefore, understanding the global phenomenon of innovation hubs as a type of coworking spaces requires a more critical narrative that rejects universality and neutrality of space (van Marrewijk and Yanow 2010) and the “blind celebratory framework” (Gandini 2015, 203). Our study shows that the established narrative often disguises reproduction of existing inequalities, on the one hand, and further forces homogenizing particular spaces with all their diversity.

Studies that look at how organizational forms are translated from different contexts have typically focused on the translation and legitimization of their business model, seeking to provide recommendations for companies looking to expand regionally or globally (Tracey, Dalpiaz, and Phillips 2018). Our study takes a critical view and suggests that such transfers are not neutral – the diffusion of a one-size-fits-all model for innovation hubs represents a global hegemony of place and space. We thus argue for the recognition of the global positioning of spaces and the power geometry that exist in the diffusion of innovations (Rogers 1962). A recognition of positive multiplicity serves to decenter the totalizing effect that the existing Western model of organizations have in the production of knowledge and progress (Chang 2013; Massey 2005).

Conclusion

In this article we presented a hub in London and another one in Lusaka, and evaluated them on their

own terms, as spaces for community, collaboration, and social interaction, and saw how these values play out in their contexts. We analyzed them as multiple spatialities at the intersections of the global, the organizational, the material, and the lived experiences of participants.

Our findings show divergences in how hubs self-define and what actually happens on the ground. Moreover, we also show how the hubs, despite the shared aspiration of communitarian values, are in fact subjected to the neoliberal logic. In this way, we provide a critical perspective on the universalization of spaces in accordance with the neoliberal logic and highlight the importance of recognizing the multiplicity of narratives, as well as the contemporaneous plurality of spaces situated in the “power geometry” of the world (Massey 1994, 2005).

We argue that hubs should be studied as positioned in their local context. Hubs are, in practice, relational spaces, performed amid interactions between global power structures, regional settings, local cultural contexts, daily lived experience of communities and individuals, among other things. At stake then is the politics of recognition – legitimacy and value of the so-called “innovation hubs” in Southern contexts. We echo scholars who raise concerns about the tendency of importing concepts and constructs often developed in the North to be implemented in the South (Alcadipani et al. 2012) and of falling on essentialist notions that represent the Global South as backward (Jackson 2012).

While we contrast a hub in the Global North with one in the Global South, we would be remiss if we do not point out that they should not be seen as homogenous geographical regions. In other words, two hubs we present in this article are not representatives of innovation hubs in their regions. Our endeavor is to reveal that diverse possibilities exist as to what form a hub can take. More longitudinal studies, which allow for the observation of the evolution of hubs within their spatial contexts, are needed to develop nuanced understanding of hubs *in situ* as enacted in the day-to-day practice of local users, and their interaction with global discourses and socio-economic development.

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