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Inclusive innovation from the lenses of situated agency: insights from innovation hubs in the UK and Zambia

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ABSTRACT

Inclusive innovation has been criticized for not being theoretically strong and remaining as a 'catch-all-ideas' concept. In this paper, it is argued the concept has failed to take into account how structures of disadvantage may exclude individuals. This is addressed by introducing the concept of situated agency through the lenses of intersectionality to better understand the process of exclusion or inclusion experienced by people. The paper draws on empirical evidence from two innovation hubs in the UK and Zambia to see in what ways they represent inclusive spaces for women entrepreneurs. Interpretive research methods including semi-structured interviews and participant observation are used to understand how these women are evaluating their work and experience at the hub. Findings include that while female members of the hub attribute discrimination primarily to their gender, other intersecting identities are also determinates. As such, while some hubs can provide a more inclusive space, they can also reproduce and reinforce the gender inequalities present in the wider societal context. This has implications for inclusive innovation, that while temporarily tempering institutional and contextual constraints, what is required is a broader structural and contextual approach.

KEYWORDS

Inclusive innovation; development; situated agency; intersectionality

1. Introduction

Innovation, as a mechanism for development, has been framed and discussed in many ways (Jiménez and Zheng 2017a). Although the literature may present itself as a-political, these approaches usually hold underlying normative implications, of whose interests and knowledge count as being significant (Bryden et al. 2017).

In the past couple of decades, the recognition that previous top-down policy interventions on what development and innovation are, have failed to deliver the promises of economic development in universal terms. In fact, it has been recognized that the strong focus on innovation for economic growth has enhanced the already existing inequalities in the world (Chataway, Hanlin, and Kaplinsky 2014). Examples of this are in India where Science Technology and Innovation (STI) policies under globalization led to considerable

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growth and increased income, alongside income inequality among different sections of society (Joseph 2014).

In the search to counterbalance this, the concept of inclusive innovation has been developed to shift away from innovation approaches that do not consider the poor in both the process and the outcome of innovation, aspects that are part of what development entails (Bryden et al. 2017; Cozzens and Sutz 2014; Foster and Heeks 2013). Inclusive innovation has been defined in different ways, but usually includes looking at who benefits and who is involved in the innovation process and outcome (Chataway, Hanlin, and Kaplinsky 2014). It also presents a way of linking issues of sustainability – normally associated with environmental aspects – with the consideration of people and places that have often been neglected in mainstream innovation (Bryden et al. 2017).

In academic research, inclusive innovation has been applied to initiatives that include poor people in the development of a ‘participatory’ innovative agricultural project (Swaans et al. 2014); to develop grounded innovation platforms (GRIPs) (Refsgaard, Bryden, and Kvakkestad 2017), to explore institutional contexts and multiple spaces of exclusion in India’s plantation sector (Joseph 2014); and so on.

Despite efforts by scholars to develop the conceptual strength of inclusive innovation, some argue that it runs the risk of being theoretically weak and remaining as a ‘catch-all-ideas’ concept (Bryden et al. 2017). Chataway, Hanlin, and Kaplinsky (2014) for instance, review the concept and concludes that inclusive innovation is ‘[...] a weakly defined area of enquiry, with multiple roots and little synthetic analysis’ (39).

This paper argues that there are two main reasons that may explain the concept’s limitations. One is that the inclusion discourse, which claims to embrace a diverse approach, is articulated in terms of quotas (i.e. who is included and who is not) and not in terms of structural inequalities. As such, it functions to incorporate difference, rather than to redirect and reconfigure the ways power and material resources are unfairly distributed. This means that it focuses on the outcome rather than on the process of exclusion. As mentioned by scholars in science and medicine, the mere inclusion of those excluded in a field neither guarantees nor results in a progressive transformation of knowledge and practice (Clarke et al. 2003; Epstein 2007; Grzanka and Miles 2016; Poutanen and Kovalainen 2013).

Another reason is related to the subjects usually studied. Most studies on inclusive innovation focus on the poor and the disadvantaged in the Global South. Although there is a wide consensus on this, what it entails tends to differ between authors. Chataway, Hanlin, and Kaplinsky (2014) explain that inclusive innovation usually involves small-scale or collective producers. Bryden et al. (2017) suggest that it is ‘the most needy’ who should be the focus of inclusive innovation, leaving an open space for scholars to define who are the most needy in the context of a study. The poor are often the subjects of analysis in inclusive innovation studies. However, as Ustyuzhantseva (2017) states, other groups are also subjects of different types of exclusion. Women entrepreneurs and innovators, for instance, have often been neglected from mainstream innovation literature (Agnete Alsos, Ljunggren, and Hytti 2013; Blake and Hanson 2005).

In this paper, I focus on these two pitfalls and propose a way to go beyond them by adopting a framework that allows us to look at structures that prevent women from being included in innovation processes. Such structures exist both in the Global North and the Global South. As such, the social construction of gender will be sketched as it affects users of two innovation hubs in London and Lusaka. Situated agency, through

the lenses of intersectionality, will be the theoretical concept that will help us understand the gender construction of these spaces.

An innovation hub constitutes a space for people (mainly entrepreneurs) to connect, collaborate and be inspired in a conducive environment ‘where unlikely allies would meet by serendipity’ (Bachmann 2014, 23). Hubs have been described as spaces that attract diverse members with heterogeneous knowledge (Toivonen and Friederici 2015). Their flexible structure and collaborative ethos encompass different types of organizations, like labs, coworking spaces, incubators and accelerators (Sambuli and Whitt 2017). The notion behind this is that if a space gathers individuals with different types of knowledge, resources and networks, then there is more potential for collaboration.

Innovation hubs have been spreading widely throughout the world in the past ten years, both in the Global North and the Global South. This has occurred to a point where we can now count over a hundred hubs in Africa and around 200 in Southeast Asia (excluding India) (Du Boucher 2016). The discourse around innovation hubs is that they will drive economic development, especially in African countries (Kelly and Firestone 2016). There are high hopes invested in certain regions that envision technology, innovation and entrepreneurship as a way to leap towards this so-desired development (GIZ 2013). In this respect, its organizational structure inherently enables an inclusive approach, representing a phenomenon of inclusive innovation.

Using insights from two innovation hubs, it is proposed that to evaluate inclusive innovation as a mechanism for development, we need to look at a persons’ agency as situated in a specific context, with hegemonic narratives that shape their worlds. These are perceived and experienced differently depending on the individual’s intersectionality.

Furthermore, unless innovation hubs establish active programmes to address gender and other structural disadvantages in innovation, they will run the risk of leaving wider structural power relationships unchallenged and unchanged, thus reproducing existing patterns of inequality and disadvantage commonly found in larger society.

This paper contributes to the literature on inclusive innovation in two ways: firstly, following Bryden et al.’s (2017) paper, it continues to fill the gap of primary data that is needed for inclusive innovation, looking both at the Global North and Global South. Secondly, it contributes to the operationalization of inclusive innovation by adopting the concept of situated agency as an important component of the social inclusion process, and the role that intersectionality plays in that respect.

The paper is structured as follows: Section 2 will review the concept of inclusive innovation, followed by a discussion on its pitfalls. Subsequently, the concept of situated agency through the lens of intersectionality will be presented to address these issues. Section 4 presents the research methodology, followed by two case studies in Section 5. The paper finishes with a discussion, implications for innovation hubs and conclusions of this study.

2. Literature review

In more recent years there has been a clear recognition that the existing theories and approaches to innovation have been conceptualized in industrialized countries, and fitting them into other contexts can be challenging and misleading (George, McGahan, and Prabhu 2012). The notion that top-down policy interventions have failed to deliver the promises of economic development and in some cases have enhanced the already

existing inequalities has also been discussed (Chataway, Hanlin, and Kaplinsky 2014; Cozzens 2008).

In the search to ameliorate this, concepts around innovation and development started appearing, shifting away from approaches that did not consider the poor in both the process and the outcome of innovation, aspects that are part of what development entails (Bryden et al. 2017; Cozzens and Sutz 2014; Foster and Heeks 2013). This was also coupled with what is described by Pansera and Owen (2018) as the ‘cross-fertilisation’ of business and management discourse into the development sphere, whereby business and management scholars started treating development as an object of study (24).

Debates around this stemmed from the recognition that economic growth models had focused too much on increasing revenue without redistribution, thereby enhancing inequalities. The problem was identified as an issue of exclusion: innovations from scientific, technological sources were rarely focused on the needs of the poor (Kaplinsky 2010; Santiago 2014). Furthermore, people in lower socio-economic levels had not been considered relevant sources of innovation – as producers or consumers (Prahalad 2005).

2.1. Inclusive as a concept

Bryden et al. (2017) argue that when one examines the normative foundations of innovation, one quickly enters the political domain, and this consideration opens up questions about *who* innovation is for. The language of ‘inclusiveness’ has emerged as an approach concerned with the reduction of inequalities largely neglected by previous drives for development. Inclusive growth (George, McGahan, and Prabhu 2012); inclusive development (Gupta, Pouw, and Ros-Tonen 2015); and inclusive innovation (Altenburg 2009; Heeks, Foster, and Nugroho 2014) are some of the concepts that have been developing, framing research and political agendas.

In a similar line to Bryden et al. (2017), Papaioannou (2014) explains that what inclusive means varies depending on underlying political stances and societal arrangements (Levidow and Papaioannou 2017). On one side of the spectrum is what is termed as the ‘liberalist-individual camp’ which considers inclusive innovation in relation to the right of everyone being included in market processes and innovation outcomes. Contrarily, a ‘social-collectivist camp’ would conceive inclusive innovation regarding the equitable participation of everyone in innovation processes and outcomes without necessarily being based on the market.

Concepts evolving around the issue of inclusion could fit within any of these underlying normative stances. Inclusive growth, for instance, refers to ‘a desired outcome of innovative initiatives that target individuals in disenfranchised sectors of society as well as, at the same time, a characteristic of the processes by which such innovative initiatives occur’ (George, McGahan, and Prabhu 2012, 661). By focusing on growth, underlying this concept is a view that focuses on economic performance indicators. Growth from this perspective is based on exclusive and not structurally inclusive, principles and traits (Gupta, Pouw, and Ros-Tonen 2015; Narayan, Pritchett, and Kapoor 2009).

Similar concepts that focus on economic indicators are ‘pro-poor innovation’, ‘below-the-radar innovation’, and ‘BoP [base of the pyramid] innovation’ (Cozzens and Sutz 2014; Heeks et al. 2013; Ramani, SadreGhazi, and Duysters 2012). While these concepts differ in their approach, they frame the ‘excluded’ as poor and propose ways to include

them in the process, either as consumers or producers. Guth (2005) defines inclusive innovation as a mechanism to overcome the innovation gap and polarization that can be caused (in the form of job loss) due to innovation. It includes the concepts of learning, trust, social capital and social cohesion as factors that should be taken into account to undermine the negative impacts of innovation at the regional level. Inclusive innovation then constitutes a way to reduce inequalities (Bryden et al. 2017).

Other definitions present more nuanced characterizations. For George, McGahan, and Prabhu (2012), inclusive innovation refers to ‘the development and implementation of new ideas which aspire to create opportunities that enhance social and economic wellbeing for disenfranchised members of society’ (663). Foster and Heeks (2013) define inclusive innovation as ‘[...] the inclusion within some aspect of innovation of groups who are currently marginalized’ (335). These authors propose a multi-level approach by stating different aspects of inclusivity: intentions, consumption practices, impacts on the poor, participation in the process and structural characteristics of innovation context. A study of inclusive innovation, then, falls within some or all of these aspects.

For Cozzens and Sutz (2014, 12) ‘innovation needs to be “inclusive” in at least two ways: inclusive in terms of the process by which it is achieved and inclusive in terms of the problems and the solutions it is related to’. Bryden et al. (2017) present a more practical definition. For the authors, inclusive ‘innovation’ should include those new ways of doing things – including technologies, institutions, and other things – that may improve lives of the ‘most needy’. The most needy in this definition is left deliberately vague because who this represents is supposed to be answered on a study-by-study basis.

As mentioned previously, Papaioannou (2014) argues that there are two broad ways in which inclusion can be conceptualized: inclusion to market processes and inclusion for equity and participation. A revision of concepts and studies suggests that most definitions are located closer to the first group. The latter, however, gathers a smaller group of scholars challenging mainstream approaches and instead proposes a more political lens (Pansera and Owen 2018).

For example, in the context of innovation at the BoP, Arora and Romijn (2011) criticize the concept’s push to ‘cancel out politics’ in the process of enriching corporations while temporarily improving poor people’s income. The authors go even further to suggest that the BoP literature has proposed untested and false promises around the positive impact innovation can have because it has ignored ‘a whole history of political struggles that have marked many poor communities’ previous encounters with large corporations’ (482).

Grassroots innovation is also presented as an alternative to these market-based approaches (Pansera and Owen 2018). It is defined broadly as ‘bottom-up solutions for sustainable development; solutions that respond to the local situation and the interests and values of the communities involved’ (Seyfang and Smith 2007, 585). This concept holds value in being socially inclusive towards local communities (Smith, Fressoli, and Thomas 2014), and as such, it has been applied in contrast to mainstream management and business definitions. It has been used to describe new farming practices in India (Bhaduri and Kumar 2011), and a community of like-minded people called the Transition Towns movement in the UK (Seyfang and Haxeltine 2012).

An overview of grassroots innovation suggests that the concept prioritizes aspects like ‘empowerment and structural transformation’ (Fressoli et al. 2014, 288) rather than inclusion into the market as consumers or producers (Levidow and Papaioannou 2017).

However, as Pansera and Owen (2018) state, these framings also focus on inclusion of the *poor* (25) albeit overtly more politically.

How can inclusive innovation hold underlying values of participation and equity? The next section will explain two pitfalls that need to be addressed.

2.2. Pitfalls

2.2.1. The excluded as statistical outliers

The logic of inclusion presented in the literature is typically focused on opportunities for minorities to be incorporated into the dominant systems groups of interest and potential niche markets (Duggan 2003). In other words, inclusive innovation seems to be articulated in terms of quotas, and not regarding structural inequalities. It functions to incorporate difference, rather than to redirect and reconfigure the ways power and material resources are unfairly distributed (Grzanka and Miles 2016).

What seems to be missing is that processes of inclusion and exclusion significantly depend on how individuals understand themselves and others, and how ‘they come to act on those perceptions’ and ‘how their understandings and actions are shaped by social and historical forces’ (Cornell and Hartmann 2007, 13).

In this paper, I argue that inclusive innovation should go beyond values of incorporation, representation, and integration and include critical perspectives that involve looking at individuals and the structures that enable or constrain them. This implies not just adding people into the processes, but asking what structures exist that exclude a specific person with intersecting identities from innovation processes.

2.2.2. Women as subjects of study

Despite Bryden et al.’s (2017) proposition of an open and inductive approach to the concept, inclusive innovation and the concepts gathered within this umbrella term are often reserved solely for poor people in the Global South. But processes of exclusion are not only reserved for these actors. For instance, in a comparative study on inclusive innovation in India and Russia, Ustyuzhantseva (2017) found that although there is no absolute poverty in Russia (in comparison to India), the existence of uncertainty and instability for people living there was a major source of exclusion for those undertaking innovative activity. In this example, the excluded are people with a high level of education and professional skills but situated in a context where there is no conducive environment between society and the state, and where innovators lack financial support.

As such, while Bryden et al.’s (2017) definition of inclusive innovation focuses on the ‘most needy’, I argue that it should also focus on those marginalized from innovation narratives and discourses. Several scholars have demonstrated how, historically, innovation as a concept has been gendered in such a way that it has predominantly excluded female narratives and activities (Blake and Hanson 2005; Mirchandani 1999). Similarly, Cozzens and Sutz (2014) also suggest that studies around entrepreneurship and innovators may have been skewed towards the narratives of men rather than women.

This phenomenon, understood as the ‘stickiness’ between masculinity and innovation, and the difficulties in opening up processes and discourses to embrace broader understandings of innovation, can be seen as a result of the gender hierarchy which is embedded in many constructions of innovation (Agnete Alsos, Ljunggren, and Hytti 2013; Wikhamn

and Knights 2013). These issues speak to the complicated and sometimes uneasy ways in which women – individually and collectively – experience innovation processes. More broadly, they also relate to concepts underpinning the question of gender equality and women’s freedom.

Given this, there is a need to step away from examining inclusive innovation in countries of the Global South to understand how socio-economic, cultural and historical contexts can have an impact in whether an innovation process is excluding those marginalized in all societies (Ustyuzhantseva 2017). In this paper, I agree with scholars who argue that inclusive innovation should consider groups other than the poor in developing countries. But given the predominant male-centric character of innovation, I argue that women, both in the Global North and Global South, should be a central group of concern to any concept of inclusive innovation.

I propose a framework that combines the concept of situated agency through the lens of intersectionality to address these pitfalls and enrich the inclusive innovation literature.

3. Theoretical framework

3.1. *Situated agency*

Simone de Beauvoir was one of the first writers to discuss the idea of situated agency in relation to women. Beauvoir shared Jean-Paul de Sartre’s idea of existentialism, a philosophical approach that emphasizes individual existence, freedom and choice. Beauvoir believed the idea that no real essentialist structures existed of what life is and how to behave in the world.

And despite there being no fixed way in which woman should be, Beauvoir recognized that a woman’s freedom of choice presented a limited range of roles in ‘the closed chamber of history’s conspiracy against her’. A woman’s freedom was systematically constrained, unrecognized or denied and, as such, her difficulties were not due to personal limitations but were rather the product of a socially constructed reality (Grosholz 2004).

From this perspective, the parameters of our individual freedom and our collective freedom are not always in harmony. ‘Situated’ is based in Heidegger’s concept of ‘situation’, which implies that our choices are the basis of our freedom and the source of our limitations. In this respect, a situation in which we find ourselves includes our embodiment and the meanings given in our particular socio-historical location (Vera-Gray 2016, 3). Our situatedness has an impact on our choices and freedom (i.e. our existentialism).

Feminist scholars have adapted this idea to explain how human beings are always uniquely situated. As Vera-Gray (2016) mentions, the term ‘situated agency’ has been discussed in welfare economics and feminism (Peter 2003), and also by Herman (1991) in her discussion of Kantian ethics in the context of understanding how agency is the condition that makes autonomy possible. According to Herman, our agency is not free from our contingent ends, our culture, our history, or our actual (and possible) relations with others (Herman 1991, 795). Therefore, *situated* refers to the total context in which we give meaning to our lives.

This form of ambiguity, where our existence is influenced by the different facts of our embodiment (i.e. birthplace, body, etc.), and our freedom (i.e. the decisions that we call

ours, our values, etc.) is situated. Agency, as the ability to act in the world, is not only based on individual choice. This choice is dependent on a woman's motivations, values and constraints and mutually constitutive to the social norms in which she operates (Peter 2003). These ideas have been of particular significance in feminist studies because they help understand the diversity of women's experiences based on '[...] the significance of the contingencies of culture, time, mobility, and place' (Masika and Bailur 2015, 48).

From this perspective, inclusive innovation and the discourses around it can be understood as a socially constructed process, shaped by the people immersed in it, who are 'situated in a sometimes invisible or taken-for-granted network of ideology [...]' (Zheng and Stahl 2011, 75). It is these wider considerations that can determine whether their experiences are being included. This is relevant to our understanding of inclusive innovation, to see whether related interventions are significantly affecting individuals or not, and how these individuals navigate based on both their freedoms and constraints.

In this respect, situated agency presents us with a framework for analysing women's agency. More specifically, we can see how women involved in innovation processes are exercising their agency, and are at the same time constrained by wider societal barriers given their situatedness. This will be operationalized through the lens of intersectionality because women experience the world not only based on their gender, but also on their race, socio-economic class, amongst other dimensions (Crenshaw 1993).

Initially, intersectionality denotes the '[...] various ways in which race and gender interact to shape multiple dimensions of Black women's employment experiences' (Crenshaw 1989, 1993, 1241). The concept of intersectionality successfully articulated a frustration that many Black and working-class women had with a women's movement that seemed to be exclusively at the service of middle-class white women. The very foundation of the women's liberation movement that inspired many feminist scholars had failed to account for the complexity and diversity of female experiences (hooks 1984).

The concept has evolved throughout the years and it is now presented as 'the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not as unitary, mutually exclusive entities, but as reciprocally constructing phenomena that in turn shape complex social inequalities' (Collins 2015, 2). Intersectionality has been applied and interpreted widely and has traversed different disciplines, constantly changing and adapting.

In this respect, situated agency through the lenses of intersectionality implies recognizing that categories of social division have different meanings in different spaces, at different levels and at different points in time. It involves a recognition of geographical, social and temporal locations of a particular individual and their situatedness (Yuval-Davis 2015).

In theorizing the 'situatedness' of agency through the constitutive nature of gender, race, class, and other aspects that shape our world, we can look at how the inclusive innovation discourse has been gendered through everyday practices and how it is rooted in context-specific socio-political frames of reference. Moreover, we can understand the experiences of women involved in innovation processes and how their freedom to innovate can be enabled or constrained by specific intersections of advantage and disadvantage.

In order to evaluate whether, and how, an individual perceives their experiences in a hub, we need to look at their agency as situated in a specific context, with hegemonic narratives that shape their world. However, these are perceived and experienced differently

depending on the person's intersectionality. Situated agency through intersectionality lenses proves to be a flexible approach to understanding people's experiences based on locally constructed norms and definitions (Bastia 2014).

The next section presents an example of how this theoretical framework can help compensate for the aforementioned limitations of inclusive innovation as an analytical tool.

4. Methodology

The objective of this study is to provide a framework to analyze inclusive innovation from the lenses of situated agency and intersectionality. This is done by looking at innovation hubs, which are defined as networked-organizations that emphasize a set of practices to catalyze collaboration between a diverse set of members.

The study evaluates how innovation hubs can be inclusive or exclusive spaces for women and how their intersectionality impacts this. For this, the research questions are: 'Are hubs providing an inclusive space for women innovators?' and 'How are the intersection of different dimensions of advantage and disadvantage experienced by diverse women in innovation hubs?'

To do this, a case study approach was employed. Case studies are well suited to generating new and empirical insights in early stages of theory-building (Yin 1994). In this respect, a case study approach might not allow for statistical generalization, but by applying the transformation of empirical data to theory, it does provide a possibility for analytical generalization (Yin 1994).

Two case studies were selected as part of this study, located in two different contexts of the Global North and Global South. This was done in recognition that inclusive innovation is a concept that pertains not just the poor in the Global South, but any individuals who are excluded from innovation narratives and experiences. They may be embedded in contexts of strong economies and innovation, but simultaneously constrained through wider structures.

Even though this is not a comparative study, I sought to examine how socio-economic context shapes the experience of entrepreneurs and their practices in innovation hubs, which, on the surface, make similar claims about their role in promoting innovation. As such, the selection of these particular hubs is due to their similarities in relation to how they self-define and their objectives. Both hubs have 'collaboration' and 'community' as core values and claim to be collaborative and inclusive spaces.

The study started with an ethnographically informed approach by immersion in the research settings over a period of three months where I visited the hubs daily. In the London innovation hub, I became an evening host, where I was in charge of closing the space one evening of every week. In the Lusaka innovation hub, I attended only as a member. My identity as a researcher was transparent in both cases and consent for both interviews and sharing parts of the participant observation were sought appropriately. Through this approach, data were gathered around how people interacted in the space, how women worked and their experiences at the hub.

Semi-structured interviews and participant observation were implemented as part of the data gathering process (Atkinson and Hammersley 1994; Bryman 2004). Interviews with female members were conducted in situ and were used to understand women's experiences of their work to compliment participant observation. Following an

intersectional approach, questions were asked about their lives and careers, and why they decided to become a member of the hub. Instead of imposing categories of identity, I let them discuss their experiences and if they mentioned anything about their gender or race or class, which was followed up with further questions. For example, if they shared experiences of disadvantage based on their gender or other layers of intersectionality (e.g. age, ethnicity), then this would be explored further.

Participant observation was used to provide some triangulation, to understand the context and observe people's behaviour within the space. Special attention was placed on participants' perceptions or attitudes towards their own experiences in and outside the hub. A research diary was kept to clarify the topics and identify new ones. This tool allowed the researcher to see what people perceived and said about the hub and its impact, and also observe interactions and dynamics within the space that allowed a more complete analysis.

Interviews lasted 20–30 minutes, were transcribed verbatim and examined using qualitative data analysis methods (Miles and Huberman 1994). Transcripts were read several times and notes were taken on the main topics. Using intersectionality as a sensitizing device (Giddens 1987) the data were organized and coded in the qualitative data analysis software Nvivo, focusing on what the respondents perceived was their experience in relation to their gender and their work within the hub.

The coding process started first by following the theoretical perspectives of intersectionality and situated agency. Codes like 'inclusiveness' and 'gender' were created after applying these theoretical perspectives. After this, some initial labels were elaborated rather loosely, in some cases using participants' own terms. In time, more inductive codes started emerging from the data, like 'women in technology'; 'expectations of women at work'; 'structural disadvantages for women'; 'women's own negative perception'. These were further explored in the literature, thereby allowing an iterative process to deepen the analysis and generating further data insights.

This enabled the labels to develop into more analytical codes (Blumer 1954; Ritchie and Lewis 2003), which then resulted in themes. These themes have been labelled 'Limited exclusion' and 'Tension between freedom and constraint' and will be elaborated in Section 5.

4.1. Selection process

The data sample includes female entrepreneurs or freelancers¹ from two innovation hubs: London innovation hub (UK) and Lusaka innovation hub (Zambia). I pay attention to language and the discursive constructions of identities and experiences described by these members in both hubs. A total of 27 respondents were interviewed (15 from the UK hub and 12 from the Zambia hub). However, in this paper, I present four specific stories of women to help us go into detail. This follows previous studies on intersectionality that examine in-depth stories. The selection of the four stories is based on those who better represented the universe of women interviewed.

In the London innovation hub, 15 female members of the hub were interviewed: 10 were entrepreneurs, 4 were freelancers, and 1 was a member of the management team. This characterization is an overall reflection of the hub population. All of the women interviewed had university degrees and this is a very evident reflection of the community. The

majority of them were aged between 25 and 40. Nationalities vary, although the majority were white British.

In the Lusaka innovation hub, I conducted 12 semi-structured interviews with female members of the hub. They were all part of a support network for women who wanted to work in ICT. The majority of these members were introduced to the hub through this network, and some considered themselves members of the network rather than the hub. However, the innovation hub is the place where they went to work and where they regularly connected with their male counterparts. Some of these women were entrepreneurs and some were working on technology-related jobs. The majority of them were aged between 22 and 26 years old. All of the interviewees were of Zambian nationality, although some were raised in rural Zambia and others in the capital, Lusaka.

Pseudonyms are being used to keep anonymity in the study.

5. Case studies

5.1. London innovation hub

I introduce the stories of Diana (40), an IT specialist who has recently become a freelance consultant and uses the hub to work the design of an online magazine about dancing, which will showcase stories of dancers who would not fit ‘normal’ expectations of what a dancer looks like. Also Susan (25), an entrepreneur from Poland who runs her own business from the hub.

5.1.1. Limited inclusion

A good number of the respondents decided to change their jobs to become either entrepreneurs or freelancers. Reasons given are both structural and individual. Some female members feel they wanted the freedom to work without the inequalities they perceived in their former jobs.

For example, Diana explains the reason she decided to leave the IT sector after 15 years. McLaughlin (2008) has argued there is a main problem with how women are integrated into the IT sectors. The strong focus on providing jobs and reaching a target number is perceived as the solution to gender subordination. Diana confirms through her own experience:

They sometimes put a lot of work on getting women to the pipeline, at the entry level, there’s a lot of people doing that because they want to say ‘we can hire women’. So okay, they’re giving me a discount for being female, but what they’re not doing is taking into account the reality of my life or the possibility that, they’re all about long hours. And okay, that was particularly alright with me but when I was 20. (Diana, 40)

In this respect, we can see how a specific aspect of Diana’s situatedness both enables her to act at a particular moment in her life and, later on, constrains her from what she wants to achieve. Because she was a young woman, Diana was welcomed into the IT industry and given certain benefits/assistance. Later on in her life, she felt that same industry that was once so welcoming was now excluding her from progressing in her career. In this case, it is at the intersection between her gender and age that situated her in a particular circumstance, leading her to become a freelancer and join the hub. She reflects on a sector that once welcomed her and benefited her but then realizes that the industry is still

male-dominant and offers limited upward mobility for women. The IT sector failed to support her once the gender quotas were made. In this respect, the IT sector, by wanting to offer a more inclusive environment was, in fact, reinstating their power and dominance when they saw gender equality as merely an issue of ‘numbers’. This is one reason why inclusiveness needs to go beyond quotas and numbers by looking at a person’s situated agency.

McLaughlin (2008) argued that existing strategies to enhance gender equality in the IT sector often fail to confront any structural inequalities that position women ‘as the preferred labourers in the lowest ranks of occupations associated with new technologies’ (225). Diana explains that IT work was divided between support and development. The former is normally comprised of males and females, while the latter is quite male-gendered and male-dominated. From her experience working in support:

a lot of women find that they get sort of categorized in support when you could have been categorized either way with what you do. And you get underpaid, you get undervalued and I eventually figured out that I could do better elsewhere. And in fact now I’m using almost the same skills, certainly using what I learned but I’m getting much better paid for it now. (Diana, 40)

Diana’s decision to leave the IT sector speaks not only of how strongly male-driven the sector is, but it also reminds us of Thébaud’s (2015) argument that being an independent entrepreneur allows women to have more autonomy over their work, and the freedom to work without having to abide by an organization’s existing gender roles. Becoming an entrepreneur is presented as a solution for women since they will have the ability to ‘unleash’ their individual entrepreneurial energies. In fact, it can even be considered an advantage.

At the hub, Diana feels included and welcomed. She believes, for starters, that the number of men and women at the hub is balanced, and that the diversity of projects that people are working on enables a more inclusive environment. In a follow-up conversation with Diana, she confirms:

I’d reiterate that there appears to be a good balance of members, and a wide spread of businesses/projects underway (i.e. not just tech), and most people just come in and do their thing rather than imposing themselves on others. (Diana, 40)

Diana continues explaining:

The conversations that go on in my hearing are not ‘male-bonding’ sorts of conversations. Social conversations are generally mixed. Neither the conversations nor their subject matter seem noticeably gendered. There has been no difference between the men and the women in their level of apparent interest in me as a person and in what I’ve got to say. (Diana, 40)

Diana perceives that a diverse set of members enables for inclusive conversations. In her time at the hub she has not perceived that either the organization and the activities imparted by management nor the other members of the hub have a strong sense of male-dominance, and this is something that she values. The balanced number of men and women, combined with having women in the host team and management (four women out of seven management members) seems to project an environment for other women where gender is not an issue.

5.1.2. *Tension between freedom and constraint*

Susan is a Polish entrepreneur who has her own web-design company based at the hub. She talks about her business with great pride and says that her gender is an advantage rather than a constraint:

I actually think it's an advantage because a lot of little business owners who approach me are also guys and I think they feel that they can open up a bit more because with a guy they feel like it's another business person and it's very competitive, whereas with a girl, they feel less threatened by me in a way. They don't feel they need to impress me so much, and they don't feel like embellishing where the business is going. With a guy I think they're trying to prove that they're doing so well. (Susan, 25)

While this lack of threat from 'another business person' is perceived as an immediate advantage for her, this view reinforces an image of women unable to compete and so remaining at the service of men. Susan also recognizes that there is a tension between the work that she is doing and society's perception of women at work. Even though she owns her own company, she still has to navigate between her own pre-conceptions of women at work. These pre-conceptions are a result of society's expectation of women:

If I picture a manager I would probably think it's a man, except if you had a lot of women as managers. If I tell you the CEO of the company, you'll picture a man, never a woman. And every strong position high in the hierarchy you would visualize a man. So as a woman you first have to go against this vision and picture yourself as it being possible. (Susan 25)

This tension also manifests itself in her personal choices. Susan mentions that her partner was also an entrepreneur, with his own company. When discussing her personal life and work, she talks about how having a family would mean sacrificing her career but not her partner's. She explains that, if she became a mother, she would probably have to temporarily finish her company to take care of her children, whereas her partner would probably continue with his own company:

It would be nicer to know that he's going to be there for me changing the nappies and stuff but he's the type of person that says 'I'm going to make the money and pay for someone to do it for me'. I don't really feel that is the answer because it's about spending time with your family. But you can't have an entrepreneurial boyfriend who's also a family man, but you can have an entrepreneurial woman who's a mother. (Susan, 25)

This reflects existing constraints that their male counterparts do not have to face. By saying that 'you can't have an entrepreneurial boyfriend who's also a family man but you can have an entrepreneurial woman who's a mother' is to accept and reproduce essentialist constructions of both masculinity and femininity. This claim suggests that entrepreneurship in itself does not cause greater equality. Socially constructed gender roles are determinate and in some cases men can benefit at the direct expense of women's choice to look after the children. At the end of a working day a female entrepreneur must carry out a second shift of domestic work in childcare, cooking and cleaning for the husband whereas at the end of a working day a male entrepreneur is free.

Furthermore, Susan is a 'host' member, a service offered by the hub for people who would like to save money on membership. Member hosts look after the space 4–5 hours a week and are in charge of serving teas and coffees, cleaning, answering phone calls and receiving guests. The offer to become a member host is available to anyone

and it does not require a lot of experience. In exchange for becoming a member host, they receive 100 hours a month free, as well as access to the network and all the hub services. This position has been running for the past 2.5 years and so far there have been five female member hosts and only one male. I ask Susan why she thinks that it was mostly women who applied for these positions:

I think that is interesting too because women can see the great value it brings them in terms of having free membership and so on but the guys think 'I'm just going to work harder and pay for it' and still have some money left over. (Susan, 25)

This issue speaks of gender roles in the workplace. Her explanation speaks of the wider structural conditions and her perceived differences between men and women at work. It also speaks of her situated agency, which is the basis of her freedom as well as the starting point of her choices and, source of her limitations (Vera-Gray 2016). She has the freedom to be an entrepreneur, and in some cases, her gender benefits her when dealing with male clients. She is, however, constrained given society's expectations of women. This constraint has been internalized and is constitutive of her agency (Poveda and Roberts 2017).

For these women, the gender construction at this hub is much more inclusive than their previous jobs, despite their gender, race, nationality. The literature in innovation has been largely developed as predominantly reinforcing masculinity as the norm; and because of this, there are problematic implications in its application. In this particular case, a perception of gender inequality does exist. The respondents do recognize other places and fields are discriminatory of their gender, but the hub does not represent a space where that happens. If anything, it represents a space where their gender or their nationality does not affect their work as it did in other more conventional settings. In this respect, there is enough reason to consider that this hub has managed to provide a space where its female members do not perceive a sense of discrimination, despite the overall institutional constraints facing women in the social context.

Susan also believes that members of the hub are forward thinkers and people who are able to really make a difference:

I think the people who are in the hub are a lot more adult and a lot more forward-looking. They're not so backwards thinking, I think it's a bit old-fashioned to think that girls cannot do as good as boys. (Susan, 25)

However, not every hub enables an inclusive environment for women as this particular hub. Our second case presents a very different situation for its female members.

5.2. Lusaka innovation hub

This hub was founded in 2011 by four middle-class urban men with a university degree. It is the only innovation hub in the country. The same year the hub was founded, three female members raised their concerns about the lack of women working on technology and decided to form a network of women in ICT, to both empower and encourage more women to work in technology (Roberts 2016). Cindy, one of the co-founders, asserted that the need to have more women in technology was related to wider societal imbalances:

[...] because our culture teaches women to be quiet and be passive and not to be rowdy. If you talk too much then you're perceived to be proud. So I would say, I'm speaking mostly in the workplace, but then in general, our culture is very oppressive of women. (Cindy, 27)

This women's network is going against these parameters and trying to empower women and educate them so they can make their own career choices. They organize workshops, training and events for women in technology, as well as women interested in technology. As a result of this, participants learn digital skills, develop mobile applications for women's rights, make training videos to discuss women's issues and organize workshops before bigger mixed-gender events to target women specifically.

The stories presented here are from two female members of the network: Vicky (25), a technology expert who has lived in Lusaka her whole life and is involved in various projects at the hub; and Gemma (23), a nurse student, born and raised in rural Zambia who attends special all-female events at the hub.

5.2.1. Tension between freedom and constraint

Vicky comes from a middle-class family and was raised in urban Zambia. She is a computer scientist by training that joined the hub to learn about programming. During her time at the hub, she has been involved in a game-app-developers group and a group of robotic enthusiasts. She is the only female involved in these groups, with the exception of another computer scientist who is part of the game app developers group, but is completing her studies in South Africa. So Vicky is the only female that attends all events and is actively involved in both groups. Being the only woman involved in these groups was also a reflection of the overall gender construction at the hub. At the time of the research, the ratio of men-to-women attending the hub daily is approximately 10:3.

Vicky has learned different computer program languages and explains that the hub is a very good place to attend if one has an interest in IT. Such opportunities do not exist in the wider industry given the lack of positions available to young people working in IT in Zambia. During her time at the hub, she has been involved in a number of projects and is working to develop mobile applications related to agriculture and shopping. She is, overall, one of the very few women who attends the hub on a daily basis.

I ask her why the hub does not have that many women members. She explains:

[...] so girls in Zambia they just don't... they are not interested in that sort of thing. They think [programming] video games are just for guys – that's how they look at it. (Vicky, 25)

When I ask her what it was about her experience that differed from other girls she says:

I think is mostly my upbringing. I have three brothers and no sisters. I grew up with guys around me so I did what they did, they did something, I did it too. (Vicky, 25)

This coincides with Poveda and Roberts (2017) when they explained that women's internalization that men are better at computing than them was a result of their socialization and the pervasiveness of such social constructions. Vicky first says that women in Zambia think working in technology is a male-related activity. Then she explains that this does not apply to her because she grew up with boys and as such, she learned to adopt male-related activities. Despite her actions challenging the existing perception of women in technology, she is still operating within the similar mindset. Here we see the

tension between her freedom and constraint, and it speaks of her situated agency as one that values the great opportunities her upbringing around men gave her.

This perception is also in direct relation to Vicky's view of women in Zambia. She sees great opportunities for women in Zambia. She considers that Zambian women have the freedom to do whatever they want, and failing to do so is a matter of individual choice. She considers that women could be more proactive in their own freedom but in most cases choose not to:

I think that women/girls have something to bring to the table. I don't know if they are afraid or just not interested. So I don't know. I guess it's just an issue we have to deal with. (Vicky, 25)

And so, the reason why there are not that many women attending the hub, or women in technology is due to individual reasons and not due to structural constraints. For Vicky, the hub is an inclusive space that welcomes women who want to work in technology. She uses an example of a two-day workshop that was organized for women with the objective to encourage them to take part in a later unisex global innovation event running a few days later. The preparatory workshop gathered around 15 women; however, this translated into only 2 attending the main global event. This was a free event and open to all, and there had been an explicit push to get more women involved. But women preferred to attend the event targeting women-only and miss the event free to all. A possible reason for this may come from the next story.

5.2.2. Limited inclusion

Gemma comes from a working-class family and was raised in rural Zambia. She moved to Lusaka to live with her sister. Gemma is working to become a nurse and during her free time teaches younger women about technology as part of the women's network located at the hub. She does not attend the hub on a daily basis and only attends events held for the women's network.

For Gemma, women in Zambia are at a disadvantage compared to men. She considers this to do with society at large and women's self-perception:

A lot of times, as women, we level ourselves. When we see a man doing something big we think no, I don't manage that. I don't have that strength of doing it. And would give up. Us women we have low self-esteem. We lower ourselves very much. (Gemma, 23)

Gemma's perception of what it is to be a woman in Zambia is intimately related to her origins. As mentioned previously, Gemma was brought up in rural Zambia, in the northern part, where they mainly speak Bemba. When asked about women's situation in her country:

So in cities women know their rights, women are supposed to go to school and work and all that. But in villages you'll find that a woman is not allowed to go to school, a woman is just allowed to be at home. (Gemma, 23)

Gemma is looking to become a nurse, because that is what all the women in her family have done. Her sister is a nurse and her mother was a mid-wife. This coincides with findings from Roberts's (2016) study where Zambian women working in technology are encouraged to become nurses or teachers.

The situation of women working on technology in Zambia is very uneven for Gemma. When asked about why there were not many women in IT she replied:

The men think that women cannot do what they can do [...] say they want to fix computers, they'll just employ a man. (Gemma, 23)

This situation of imbalance and bias towards men seems to have transcended the hub space. Gemma perceives the hub as a male-dominated space, where women are not welcomed. She thinks that the hub is 'mainly concerned with men'. And she explains:

The first time I went to (Innovation hub's name), the only people I was seeing were men, there were no women. It's like a separate thing. When we went there they said (the men) 'ah your room is that side (pointing at the kitchen)'. I was like, why can't we be together? That's why I didn't like it. (Gemma, 23)

These findings coincide with Henry's (2014) article in reference to female hackers, and why some refrained from attending hackerspaces. She argued 'It's because men act like the space is theirs. Women face harassment ranging from assault to much milder, but more constant, come-ons and innuendos. Our geek cred is constantly challenged or belittled (...)'.²

The different opinions that Vicky and Gemma have regarding Zambian women in society are in relation to their class and upbringing. Both Gemma and Vicky are members of the network, yet Vicky attends the hub on a daily basis whereas Gemma only goes when there are events related to women in technology. Vicky went to a private school and is pursuing a career in technology which is not the typical gendered career a women would pursue (Roberts 2016). Contrarily, Gemma went to public school in the village and intends to study nursing, which is a very traditional career for Zambian women. For Vicky, the hub represents a space where she goes to work; and for Gemma, the hub is a place she goes in her free time to help other women. Vicky is an entrepreneur; whereas Gemma is a freelance technologist.

The primary distinction between Gemma and Vicky is socio-economic class. Acknowledging that the notion of social class is hugely contested and criticized; the focus on this paper is on the ways in which class and its intersections are narrated and experienced by our respondents. In this case, they identify themselves as either middle-class or working class. Gemma does not explicitly mention 'class', but she refers to coming from the 'village' and not having enough money to study, whereas Vicky shares how she grew up in the city and her parents are paying for her university degree. These categories have existed in the wider Zambian society since its independence (Scarritt 1983).

Overall, the gender construction of this hub reveals mixed findings. For middle-class women, the hub is an inclusive space where they can be part of different groups, attend on a day-to-day basis and learn from others, both male and female. For working-class women, the hub is perceived as an exclusive space where they are not welcomed. In this respect, an analysis of the gender dimension would suggest this hub is a place where inclusion and exclusion are more nuanced, and women's agency is situated at the intersection of gender, age, class and other facets of their identities.

6. Discussion

This study has analyzed the concept of inclusive innovation through situated agency and intersectionality to see how women immersed in innovation processes have both freedom

and constraints, and how they navigate between these spaces. Through this analytical process, inclusive innovation goes beyond looking at quotas to focusing on the underlying process of exclusion that people may face.

This has been done by looking at the case study of two innovation hubs, located both in the UK and Zambia respectively. More specifically, it focused on the in-depth experiences of four women. Cases like Diana in the UK hub demonstrate that mechanisms for inclusion can only succeed if it is left at initial stages of reaching a numerical target. The inclusive approach initially benefitted her but then she found the same structures of disadvantage that prevent women from progressing in their careers.

Susan's experience shows that even when women are free to join innovation and entrepreneurship, structural constraints inhibit their freedom to work. In this case, society's expectation that women should care for children supersedes their entrepreneurialism, while their partner's is not questioned. Even though Susan joined an inclusive, welcoming environment, she is constrained by wider structures.

In a different context, Vicky believes the reason why there are no more women in the Lusaka hub is because they believe it is a male activity. Instead, she speaks about the hub as an inclusive space where she has benefitted significantly. Her perspective speaks about the internalization of gender divisions of labour. By believing that growing up with three brothers was significant in choosing a career in IT, she is saying that it was because of being exposed to men that she has a facility to work in technology. Inclusive initiatives that accommodate these uncritical views reduce the lack of women's participation to an individualistic dimension, failing to comprehend that it is a structural issue of women being historically unrecognized and limited that has contributed to the status quo. This is more visible in cases like Gemma's, who's experience at the hub are shaped by the intersection between her gender and class.

Findings also include that the innovation hub in the UK is more successful at providing an inclusive environment for women. Overall, the conducive environment that respondents perceive of the hub can be explained because the structure of the hub is not the same as of a firm or company – it is relatively flat, less hierarchical and more people buy into the shared values. It is a platform for members or small teams to work *from*, but not necessarily *with* one another. By being a platform rather than actively working with members, the hub is almost pre-empting any kind of competition or conflict.

The Zambia hub does pursue an inclusive approach to women, but fails to recognize the intersections between gender and class that are critical in determining why some women feel excluded. This presents an example of how some strategies that aim to break down gender inequalities can inadvertently recreate other asymmetries if it does not consider other dimensions. Although it does represent an inclusive space in respect to wider societal expectations, it only does so to consider privileged women.

These experiences demonstrate how focusing on a person as a situated agent can shift the conversation towards a more complex process of inclusion. The wider structural dimensions affect their experiences overall, but it can also be the difference between who finds it easier to innovate, and who does not.

7. Implication and concluding remarks

Inclusive innovation has been defined and applied to understand how innovation goes from measuring impact in the economy to looking at the impact on people (Pansera

and Owen 2018). Despite efforts to develop a strong concept, it has been acknowledged that it lacks theoretical strength (Bryden et al. 2017). One reason is that, with a few exceptions, the concept has become exclusively related to the poor in the Global South. This view continues to hold a perspective of individuals based on their economic capacity and not their ability to pursue their own choices. It also continues to reinforce the power geometries of the developing/developed dichotomy so mainstream in our understanding of innovation (Jiménez and Zheng 2017b).

Furthermore, despite some exceptions, inclusive innovation remains a discourse that incorporates people in the process but does not take into account how structures of disadvantage exist that excluded those individuals in the first place. Such structures exist and are interrelated, which is why people experience the world from intersectional dimensions rather than unified, single categories (Collins 2015).

Inclusive innovation, merely as the process of incorporating people in innovation processes, could miss situations where merely accommodating those usually excluded is not enough for sustaining change. Without further consideration of wider structures of disadvantage, and without recognizing that women navigate ‘between their capacity for freedom and the alienating processes of socialization’ (Vera-Gray 2016, 5), there is a risk that inclusive innovation will lose its relevance in its impact on development. It would suggest an inclusion inherently exclusive (Merino 2015) that would fail to account for the ‘distinctive theoretical issues involved in women innovating [...]’ (Cozzens and Sutz 2014, 24).

As such, it is proposed that the conversation around inclusive innovation shifts from merely accommodating people in highly unequal systems to discussing how certain systems are creating those boundaries between people. This requires that we look at the process of exclusion and the economic, political systems which create such inequalities, because these may be translated into innovation processes. In sum, this implies looking at the conditions under which certain consequences appear.

In this respect, a concept of inclusive innovation that seeks to go beyond its shortcomings would benefit from understanding the situatedness of a person, rather than just prescribing mechanisms to insert into innovation processes. By limiting an intervention to including someone, an individual will still have to deal with a process of exclusion and wider structures of disadvantage, even after being included in the process. These structures of disadvantage are interrelated and co-constituting.

Following Papaioannou’s (2014) discussion that inclusion should refer to political principles of equity and participation, this paper goes further to argue that definitions of inclusive innovation that focus mainly in who is included and who is not (the marginalized, the most needy, the disfranchized) would strengthen if they focused on how people experience processes of exclusion and how to effectively seek change.

This paper has presented a contribution to the literature on inclusive innovation by filling the gap of empirical data on inclusive innovation (Pansera and Owen 2018). It has done so by expanding what is understood as the ‘excluded’, by looking at the Global North and Global South as spaces of study. Furthermore, this paper has provided a framework to look at the process of inclusion that goes beyond including people in the market, but for principles of equity and participation (Papaioannou 2014).

These findings reveal that innovation hubs can be inclusive spaces for women in some cases, as their situated intersectionality demonstrates. Not in all cases will this be the result

and, as such, recognizing that people live diverse, multifaceted lives and that intersections of disadvantage can affect them should be recognized from the outset.

This provides lessons for innovation hubs: although they can be more inclusive by setting up a horizontal environment, they require a wider understanding of structures of advantage and disadvantage to see whether all members can feel part of the network. This has implications on who is a member and whether opportunities to work and innovate are available to them.

Notes

1. In this study I followed Baines and Robson's (2001) definition and distinguish entrepreneurs from freelancers. The former are women that either have their own businesses and hire other people or present an interest to do so; and the latter are women that are self-employed but do not hire other people and do not show an interest to do so.
2. 'The Rise of Feminist Hackerspaces and How to Make Your Own' (2014). <https://modelviewculture.com/pieces/the-rise-of-feminist-hackerspaces-and-how-to-make-your-own> (accessed 1 June 2017).

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