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ORIGINAL ARTICLE

The 3 T's framework of social innovation labs

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ABSTRACT

Social innovation labs present an unorthodox and varied typology, but one common denominator among them is the goal to create complex inter-organizational collaborations in order to tackle complex problems. These labs are systemic, experimental and social in nature. They utilise methodologies already discussed in the collaboration theory literature, adapting them to the context of innovation. We argue that social innovation labs create safe spaces to innovate by using a framework composed of *time, techniques* and *tools*, which we refer to as the *three T's framework*. Constant development of the innovation process and respect for the time required in order to effect systemic change represent the major contributions that social innovation labs make towards addressing society's most intractable problems.

Keywords: Social innovation labs; system, experimental; social; techniques; tools; collaboration; framework.

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INTRODUCTION

Labs have existed in the academic and for-profit sectors since the 1800's. However, in the early 2000's innovation labs with human-centred design methodologies aimed at studying social impact started to appear in all sectors, including governments, universities and international organisations. These innovation Labs form a sector that is relatively small—approximately $150 million per year—and fragmented (Bliss and Sahni, 2014). The sector is growing quickly and about 70 % of the labs were founded in the last five years (Bliss and Sahni, 2014). Despite the boom, the sector is still new and the typology used to define innovation labs and their methodologies for innovation and collaboration, as a group, has "as yet no established orthodoxy" (Westley and Laban, 2014).

The field has only started attracting academic interest. There are very few published academic papers on the topic of social innovation labs, as demonstrated by searches on Google Scholar and iDiscover as of June 2019. Few peer-reviewed papers published in the last few years have aimed to provide a somewhat coherent typology and methodological framework for social innovation labs.

Labs can be referred to as social innovation labs, civic labs, system innovation labs, incubators, i-teams, hubs, and accelerators, among other terminologies. For the purpose of this study, we will consider that *social innovation lab* is "a semi-autonomous organisation that engages diverse participants - on a long-term basis - in open collaboration for the purpose of creating, elaborating, and prototyping radical solutions to open-ended systemic challenges" (Gryszkiewicz, Lykourentzou and Toivonen 2016, p.17). Living labs, innovation hubs, corporate R&D labs, communities of practice (CoP), innovation networks, innovation task forces and incubators shouldn't be considered innovation labs (Gryszkiewicz, Lykourentzou and Toivonen, 2016).

ESADE business school, in collaboration with Robert Bosch Stiftung foundation, published a review of the social innovation lab landscape, adding new members to the growing list as well as describing more than 80 different methodologies used by them (Papageorgiou, 2017). Roughly summarised, lab methodologies are based on ethnographic-inspired user research, creative ideation processes, and visualisation and modelling of service prototypes (Bason, 2013).

The most recent papers discuss the practices, outcomes and impact of specific labs with focus on the academic (Easterday, Gerber, and Rees Lewis, 2018; Pollock and Avi Brooks, 2019) and the public sector (McGann, Blomkamp, and Lewis, 2018; Timeus and Gascó, 2018.).

The literature seems to agree that the main characteristics of labs are: *systemic, experimental and social,* and that labs create inter-organizational collaboration to tackle society's *wicked* problems (Rittel and Webber, 1973), focusing their activities around themes such as food, water, poverty, and energy.

While there is a growing number of initiatives trying to address such problems, innovation labs propose a new framework to do so through inter-organisational collaborations, using innovative collaboration methodologies. Although extensive in body, the collaboration theory has not examined the emergent

field of social innovation labs. This omission represents an excellent opportunity to study the methodologies and structures used by these labs to innovate through collaboration.

Through the lens of collaboration theory, this study aims to answer the question: ***To what extent does the theoretical understanding of inter-organizational collaboration apply to innovation labs and what can we learn from it?***

THEORETICAL BACKGROUND

Collaboration can be defined at different levels, such as individual, group, organisation or society, and scales such as between groups, organisations, individuals and various combinations of these units (Bedwell and al., 2012). Collaboration has been observed and studied by many disciplines, such as biology and psychology, but it seems that its definition is still unclear. "Distilled to its essence, collaboration is an interaction that takes place between people, organisations, or both, in a wide range of settings" (Morris and Miller-Stevens, 2015, p. 7).

From the organisational collaboration point of view, as society's problems become harder to tackle by individual organisations, the need for diverse stakeholder collaboration becomes essential for survival (Morris and Miller-Stevens, 2015). Inter-organisational collaboration occurs when two or more organisations share information, resources, and expertise to achieve collective goals that only one organisation is unable to achieve (Bryson, Crosby and Stone, 2006).

An early work by Barbara Gray, which is still very relevant to the literature body, proposes that inter-organizational collaborations can be classified into exploratory collaboration (scope the problem), advisory collaboration (identify solutions), confederative collaboration (define the implementation) and contractual collaboration (formalise action) (1989). However, beyond its goals, the field gives more attention to the inter-organization collaborative methodology.

This paper aims to summarize the discussion proposing that the characteristics that facilitate a successful inter-collaboration process are: (1) *Leadership based on consensus decision-making and inclusion led by a skilled convener,* (2) *Diverse stakeholders with social capital, shared resources and vision*, (3) *Communication that promotes trust and shared goals*. These processes are shown in Figure 1.

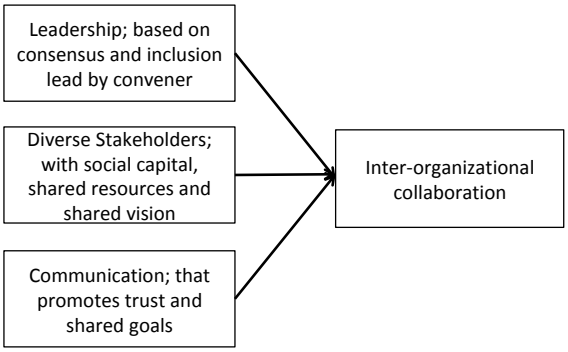

Fig. 1: Theoretical frameworks that facilitate collaboration

Leadership - Effective Leadership is perhaps one of the most important aspects of collaboration (Ansell and Gash, 2007). Leadership in an inter-organizational collaboration needs to rely less on hierarchical structure and more on consensus decision-making through shared power and the inclusion of stakeholders' opinions (O'Leary et al, 2012). Consensus decision-making efforts aim to dissipate authority and create a more equal and inclusive collaborative initiative (Innes and Booher, 1999). To achieve consensus decision-making, it is important that group ownership prevails over hierarchical structures, creating an environment where everyone feels their voices are heard (Innes and Booher, 1999). In fact, authors such as Ansell and Gash (2007) argue that the process of trying to achieve consensus decision-making is more important than actually achieving it. A group might not achieve 100% consensus, but a significant percentage is required (Leach, Pelkey and Sabatier, 2002). The main tasks of the leader, often referred to as the convener, are to define the agenda and goals, identify and attract stakeholders and promote an inclusive platform (Bryson, Crosby and Stone, 2006; Wood and Gray, 1991). Conveners are usually knowledgeable of the problem the collaboration is trying to address and 'possess legitimacy and high social capital' (Ansell and Gash, 2007, p. 550).

Diversity Stakeholders - Stakeholders in an inter-organizational collaboration can be defined as "all individuals, groups, or organizations that are directly influenced by actions others take to solve the problem" (Gray, 1989, p. 5). Diverse stakeholders also share resources such as technical expertise and know-how, as all stakeholders in an inter-organizational collaboration need to have legitimacy to sit at the table. "By combining the individual perspectives, resources, and skills of the partners, the group creates something new and valuable together—a whole that is greater than the sum of its individual parts" (Lasker, Weiss and Miller, 2001, p. 184). A high level of diversity in the stakeholder composition of collaboration adds resources and social capital to the collaborative effort (Majumdar, Moynihan and Pierce, 2009), which in turn contributes

to the development of a shared vision (Gray, 1989). Common interests and shared vision are often the first links that bring stakeholders together (Gajda and Koliba, 2007). The earlier a shared vision is created, the easier and more efficient the collaboration is (Bardach and Lesser, 1996).

Communication - Last but not least, frequent and open communication is another key aspect that facilitates collaboration and is especially important when diversity is high (Ferreya and Beard, 2007). Beyond sharing information, the communication strategy for collaboration should be based on true dialogue, helping to promote trust and achieve shared goals among members (McNamara, 2012; Ansell and Gash, 2007). Frequent communication is most important in the beginning of the initiative (Emerson, Nabatchi and Balogh, 2002), while over time, once trust has been developed, quality of communication becomes more important (Heikkila and Gerlak, 2014). On this note, it has been extensively argued that stakeholders need to trust that the other participants will bring in their share of resources and social capital towards making the common vision a reality (Gray, 1985; Huxham, 1996; Mattessich and Monsey, 1992; Morris et al., 2013; O'Leary and Vij, 2012; Thomson and Perry, 2006). One of the most efficient ways to achieve trust is by developing relationships through true dialogue (O'Leary and Vij, 2012). Developing and maintaining frequent and open communication channels is known to be a time-consuming and difficult task (Ansell and Gash, 2007; Bryson, Crosby and Stone, 2006; McNamara, 2012; Thomson, Perry and Miller, 2009). It is worth pursuing, however, since the lack of it can diminish the level of social capital stakeholders are able to bring into the collaborative effort (Lasker, Weiss and Miller, 2001).

Although it might be clear what elements are important to the elaboration of an inter-organizational collaboration, the literature does not seem to acknowledge collaborations which were formed primarily with the goal to innovate the system, as it seems to be the case for social innovation labs. The question then is how their methodologies differ from those already explored through the theory.

Considering this theoretical background, this study first analyses deductively the similarities and differences between the theoretical framework (leadership, stakeholders and communication) and those of social innovation labs. Secondly, the study analyses inductively whether new elements emerge from their practices, not yet discussed in the theory.

METHOD AND DATA

Mapping the field of social innovation labs can present many complications. Firstly, it is an emergent field with very little published academic material. Those involved in running the labs themselves have published most of the material on the topic, sharing their models and practices through books, booklets and reports, but there is little academic material about them. Secondly, it has an unorthodox typology with new labs and new methodologies constantly appearing (Westley and Laban, 2014). In addition, it presents a relatively high fluctuation, as some of the original labs are dying quickly.

The author used the reference "social innovation labs", "innovation labs" and "social labs" categorizing the development of papers in the field since 2009 until the present date through Google search, Google Scholar, iDiscover and EBSCO and from references within reports. The author discarded all materials referring to living labs, innovation hubs, corporate R&D labs, innovation networks, innovation task forces and incubators, considering that those would fall outside the definition used in this work. In total 5 books, 27 reports, 10 articles, and 7 academic papers were reviewed.

In order to define the case studies, the author collected the names of labs mentioned at least twice in the literature review, categorizing them according to (1) longevity, (2) thematic diversity and (3) geographical distribution. After careful analysis, the author selected one of the oldest networks of labs active in the field that has engaged in a diverse range of themes, and which maintains offices around the world.

In order to increase validity (Maxwell 1996), the research used within-case design (Guba and Lincoln, 1982) exploring three different labs within the network, collecting data from members with different roles within each of the labs' projects, such as conveners, facilitators and participants. Aiming to increase *external generalizability* (Maxwell 1996), the author chose labs distributed in different parts of the world. The project study were: a Sustainable Fashion Lab in Brazil (which seeks to work towards a more fair and sustainable fashion industry in Brazil), a Food Lab in South Africa (that works towards create examples of sustainable food supply chains in South Africa) and an Oceans Lab Central American and Africa (aiming to create a global platform to preserve the ocean ecosystems by bringing together African biologists, European oil industry executives, Mexican fishermen, and traditional leaders from small island states).

In order to increase *validity and rigour* and due to the fact that social innovation labs represent an emergent research field (Edmondson and McManus, 2007), the author used data triangulation (Denzin, 1988) between interviews and documents; as well as audit trail (Miles et al., 2014, pp. 317-21) and peer debriefing support (Robson and McCartan, 2016). Data collection was done through semi-structured interviews (Galletta, 2013) and through content analyses of documents (Neuendorf, 2016) provided by interviewees, such as reports of findings of each of the labs and other publications such as presentations and blogs. In total, 10

interviews were conducted. Due to the distance between the author's location and the interviewees, most of the interviews were conducted via the videoconference software Skype, while 2 were conducted in person.

Due to the lack of academic research on innovation labs, it was decided that an exploratory study (Stebbins, 2001) with a flexible (or qualitative) design methodology was the most suitable choice for the initial investigation (Miles and Huberman, 1994). This study uses *a mix of deductive and inductive approaches* (Fereday, and Muir-Cochrane, 2006). It starts with a deductive analysis exploring the extent to which the themes, identified as the theoretical body of collaboration theory, apply to the context of social innovation labs. In the second part of the analysis, the study inductively addresses new themes, previously not found in the literature, that have emerged from the data.

RESULTS

Through *deductive analyses*, data suggest that social innovation labs are aware of the key principles that facilitate collaboration (leadership, diverse stakeholder and communication) discussed in the literature review. However, the data also suggest that labs modify these principles with the goal to innovate. Figure 2 compares the theoretical context with observations from the data analysis.

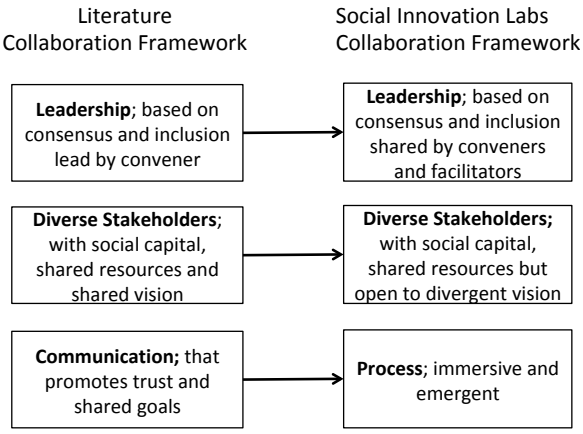

Fig. 2: Comparison of collaboration framework from literature with that of social innovation labs

In the literature review of collaboration, the convener(s) is (are) framed as the leader (Ansell and Gash, 2007) of the collaboration and the one responsible for creating a platform for consensus decision-making and inclusion (Bryson, Crosby and Stone, 2006; Wood and Gray, 1991; O'Leary et al, 2012). However, in social innovation labs, conveners and facilitators share the tasks of leadership. As opposed to conveners, facilitators are not members of the system, and don't have expertise with the problem; they bring neutrality to the discussions, which is also an important aspect when trying to diverge before innovating (Bason, 2013). On the other hand, facilitators are knowledgeable and skilful at the facilitation process.

Following similar principles already discussed in collaboration theory, social innovation labs also pursue high levels of diversity among stakeholders (Majumdar, Moynihan and Pierce, 2009). However, contrary to the theoretical context (Gajda and Koliba, 2007; Bardach and Lesser, 1996), in social labs, a shared vision is not a prerequisite for participation. Innovation labs welcome diverse points of view and believe that participants don't need to agree in order to collaborate.

The literature also discusses the importance of a frequent and open channel of communication that promotes trust and helps achieve shared goals among stakeholders (Ferreya and Beard, 2007; McNamara, 2012; Ansell and Gash, 2007). However, from the data, one can conclude that beyond communication, social innovation labs utilise an immersive and emergent process that seeks novel ideas. Each meeting lasts 2 or 3 days and it's repeated every few months, and in some cases for years. Although there is a clear plan for the process, the topics are not set but emerge from the participants.

Beyond the contextual framework, *inductive analyses* revealed how labs create a process that harvests the individual's expertise and experience of being part of the system it aims to innovate. First, in order for this process to take place, the paper argues that it is important to build a safe space for collaborating. Beyond the physical connotation, by space we mean "the opportunity to assert or experience one's identity or needs freely" (Merriam-Webster Dictionary, no date). That said, a lab does not require a specifically designed space to exist, but the space in which it is set up needs to give the sense that it is not business-as-usual. It should be a space that invites learning and experimentation. The space is created by using the 3T's framework, composed of *time, techniques* to listen and learn and *tools* to generate and test ideas as shown in Figure 3.

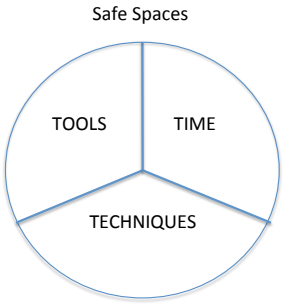

Fig. 3: Social Labs 3T's framework

Time - Data suggest that, in social innovation labs, complex social issues need more time to be solved. The theory discusses the time needed for participants to gain trust. However, the first theme that emerged through inductive analysis was the importance of giving participants enough time to widen their understanding of the system and the problem. Time is necessary due to the diversity of stakeholders, the way they experience the problem at hand and, above all, the "wicked" nature of the problems themselves. Additionally, the process itself needs several interactions to allow perception and change to sink in within each participant.

Techniques - In order to understand their problems, social innovation labs offer a diverse set of techniques to build the individual's capacity to listen and learn from others and take full advantage of the stakeholders' diversity. The process starts with facilitators approaching participants before they are even part of the lab to listen to the potential stakeholders' point of view of the system and the problem, which they call *dialogue interviews*. Once at the lab, participants have a chance to listen and learn from each other. For example, through the technique *democracy of time*, each participant is given the same amount of time to express themselves in front of the group, independently of their position within the system. In *learning journeys*, stakeholders visit parts of the supply chain that decision makers are usually removed from. During these journeys, the small farmer, fisherman and seamstress are the hosts and experts.

Tools - Only after personal connections are made and in depth discussions of the problem have taken place, do social innovation labs focus on the tools to *generate* and *test* ideas. An example of a tool used to generate new ideas is called *transformative scenarios* which consists of imagining the possible scenarios for that system in the future, from the continuum of extreme negative to extreme positive and what needs to happen for each one of these scenarios to take place. In order to test ideas, labs use a set of tools based on human-centred design techniques such as *rapid prototyping*. The data also address the fact that the kind of prototypes social innovations labs aim to create are quite different from those used for products. After all, the end goal is to use design methodologies for systemic impact and not to create one more object and that sensitivity needs to be well established through the process.

DISCUSSION AND CONCLUSIONS

This paper argues that Social Innovation labs utilise methodologies already discussed in the collaboration theory literature, adapting them to the context of innovation. The systemic, social and experimental nature of labs (Zaid Hassan, 2014) requires the members of an innovative collaboration to fully immerse themselves in the collaborative process. This effort requires time to understand the problem at hand, techniques that allow the participants to drop their organizational voices and to learn one from another, and tools for the experimentation of new ideas.

Additionally, "the right timing for action" is also an important external element that will affect the framework; the more the problem or challenge is pressing the more the stakeholders will grant motivation to the initiative. For example, in the sustainable fashion lab, it was a change in legislation addressing irregular working conditions that motivated a very diverse group of stakeholders, representing all layers of the system, to work together. They met a few times per year and each meeting took place in a neutral space, lasting three days at a time. Time was required to build trust among the participants and deepen their understanding of the problem and challenge to be tackled. Techniques to help the participants of the group to learn from one another such as *democracy of time* and *learning journeys* were also employed. Finally, the group was able to generate and test ideas using the *transformative scenarios*. At the conclusion of this research, the group, which had been working for more than one year together, continued to meet and discuss new ideas.

Interestingly, the concept of granting adequate time to develop an innovative collaboration seems to conflict with the project-management mind-set of fixed timelines and clear outcomes. The for-profit sector usually engages initiatives with a predetermined set of goals and a defined timeline, while the governmental sector has to work within mandates (Bryson, 1988). Additionally, much has been written in management theory (focusing on the for-profit sector) about time being a competitive advantage. "Innovation means change and change is measured by innovation per unit of time" (Stalk and Hout, 1990, p.19).

Despite the pressure to produce fast outcomes, this study highlights the importance to avoid rushing the innovation process in order to obtain concrete and tangible results for systemic innovation. Geoff Mulgan, from NESTA, states that "simple solutionism (rapid prototyping, quick and dirty approaches) takes hold, while complex system dynamics can be underestimated – this can hurt [social] innovation where in most cases long-term engagement is important to have a real impact" (as quoted in Tõnurist, Kattel and Lember, 2017). It is important to respect the systemic nature of the labs and draft realistic expectations of what deliverables they can produce within a given timeframe. Furthermore, the creation of a space that allows a group of people representing a system to extend the understanding of the problem and of the system itself should be considered as an important part of the outcome.

The main limitation of the present research lies in the fact that the data was gathered from within-case

study of the same network. The framework might not necessarily be applied in the same proportions by all social labs. Through analyses of the literature review, it is possible to speculate that the 3T's framework applies differently throughout a continuum of innovation labs. At one extreme are those labs whose strength lies in the techniques to listen and learn from members of the system, as is the case of the labs analysed in this study, and at the other extreme are those labs whose strengths are found in the tools that generate and test ideas. Furthermore, not all labs, or projects within labs, might be granted the ideal time and funding to work on the problems at hand. It is clear that the extremes would benefit from one another. The first could make their processes more tangible by *generating and testing* more ideas through slow prototyping. The later, that addresses the more experimental aspect of labs, could benefit from a more careful mapping and employment of *techniques to listen and learn* towards its stakeholders.

This consideration provides a clear opportunity for further studies. A space like Idea Square, part of the Design Factory Global Network, that usually works with students and give emphasis to the *tools to generate and test ideas* could run an experiment to test the potential of dedicating more time in the innovation process to the *techniques to listen and learn* mentioned in this study. For example, different groups of students could be given the same societal challenge and same time frame, however, half of the groups could dedicate 2/3 of their time on *the techniques to listen and learn* and the other half of the groups could dedicate 2/3 of their time to *generating and testing ideas*. A panel of experts on the problem could then judge the ideas generated and see if they could identify which proposals would have a more realistic impact in the real world and the framework's influence on them.

It is important to note that this paper does not propose that the 3T's framework is exclusive to social innovation labs. Instead, it aims to highlight that social innovation labs do a good job of creating a mind-set and a safe space to innovate by applying these elements together. A comparison between this framework and those applied by other organizations dealing with innovation might also present a research opportunity.

One thing is certain: complex problems, such as climate change, are on the rise, and these problems cannot be solved by one entity alone. Experimental methodologies that teach individuals to listen and learn from one another and imagine potential new solutions for complex problems certainly deserve our attention. The remaining question is, how much time will we, as a society, dedicate to them?

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