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Design within Social Entrepreneurship: A Framework to reveal the use of Design in interdisciplinary spaces.

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Abstract: This paper aims to unveil some linkages between design and a social entrepreneurship process. To achieve this purpose, this analyses the key literature regarding social entrepreneurship and design. It introduces an abridged version of four case study resulting from a qualitative research conducted to a Chilean social business incubator and four social entrepreneurs. The cases serve as empirical evidence of the diverse and complex nature of social entrepreneurship. A data analysis introduces insights into how design is connected to the social entrepreneurship process. The insights presented are not determinative and show that design is used in response to the different challenges that social entrepreneurs encounter. These insights are used to create a framework that is to be employed as an analytical and reflective device to understand the social entrepreneurship process in practice and the different roles that design plays within it.

Keywords: Social Entrepreneurship, Design, Framework.

Introduction

This paper is part of an ongoing research project that seeks to understand how design management influences social entrepreneurship. The field of social entrepreneurship has gained the attention of academics and the general public because of their capacity to deal with social problems that neither governments nor private organisations are dealing with. The focus on social issues as a primary objective of those organisations also brings some challenges. In fact, in contrast to commercial businesses, social entrepreneurs use financial resources as a mean to create social impact instead to increase the revenues of the shareholders. Under this logic, social entrepreneurs have to obtain resources from different sources such as public grants, donations, philanthropic for instance (Austin, Stevenson, & Wei-Skillern, 2006). The lack of financial resources generates a series of challenges that social entrepreneurs encounter when starting their ventures.

Design has proved to be useful in matters regarding social issues. From the '70s design has been associated with the creation of goods for people's needs rather than wants (Papanek, 1971). Researchers have shown how designers contributes to social innovation through the deployment of design techniques, disciplines and ways of thinking (Brown & Wyatt, 2010; Manzini, 2015; Mulgan,

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2014). Nevertheless, little is known about how and when design impacts social entrepreneurship as a whole, not only creating impactful solutions to meet social needs but also supporting the activities that social entrepreneurs (frequently non-designers) conduct.

The field research was conducted with to four social entrepreneurship initiatives that were part of an incubation programme in Chile called OpenGate, supported by a public office (Corfo) and a social incubator (Socialab) located in Santiago, Chile.

To understand the social entrepreneurship phenomenon and the impact of design in this context the research has been conducted in a multidisciplinary team. The team is composed of researchers from management and design. The combination of disciplines allowed us to answer the research question from the intersection between design and social entrepreneurship. In this fashion, it is possible to bring to light the fundamental concepts of each of the areas to understand the phenomenon studied and draw observations that consider the implications between those areas. Therefore, the literature offers an analysis of social entrepreneurship and design and subsequently, the analysis of the data is taken considering the disciplines involved.

Thus, the paper starts with a review of social entrepreneurship and design to set the theoretical background of this research. Second, it introduces the methodology used to collect the data. Third, it provides an overview of the context and an abridged version of four case studies. Subsequently, it presents the data analysis with key insights. The last section introduces a framework for the analysis of design in social entrepreneurship and the conclusions of this paper.

Social Entrepreneurship

Social Entrepreneurship has been the subject of extensive research because it relates to initiatives that aim to deal with social challenges that neither private nor public organisations are dealing with (Austin et al., 2006). Thus the central criterion for social entrepreneurs, in contrast to commercial entrepreneurs, is the social impact that they generate through their initiatives rather than the commercial value or the wealth creation (Austin et al., 2006; Dees, 1998; Mair & Martí, 2006; Martin & Osberg, 2015; Renko, 2013; Zahra, Gedajlovic, Neubaum, & Shulman, 2009).

Despite of the differences between social and commercial entrepreneurship, there are fundamental similarities between the two. In a broad sense, social entrepreneurship involves the application practices of commercial entrepreneurship to the pursuit of a social mission (Kickul & Lyons, 2012). Thus, social entrepreneurship involves those activities and processes used to discover, define and exploit opportunities to increase social wealth by creating new organisations or managing existent ones in an innovative manner (Zahra, Rawhouser, Bhawe, Neubaum, & Hayton, 2008).

The process of social entrepreneurship (Guclu, Dees, & Anderson, 2002) involves multiple stages (Figure 1). Firstly, the entrepreneurs have to identify social needs and the social assets existing in the community. Second, considering the insights collected the entrepreneurs generate ideas of possible solutions that could make a positive social impact. To transform the ideas into opportunities, the entrepreneurs have to develop an operating environment which includes aspects related to resources and operational matters. The social impact proposed is tested, defined and refined to establish a convincing statement of how the project will produce the expected results. After completing these stages, the entrepreneurs will be able to pursue that opportunity and generate social impact.

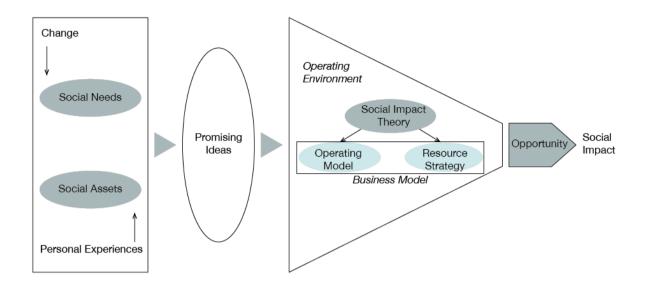


Figure 1: The Opportunity Creation Process (Guclu et. al, 2002)

Resource providers offer financial and human resources, access to their networks, knowledge, expertise and material resources, for instance (Bloom & Dees, 2008; Dees, 1998). To gain the interest of resource providers it is critical for social entrepreneurs to differentiate themselves and show their competitiveness to their potential supporters (Austin et al., 2006). Depending on the stage of the process in which the organisation is, they have to communicate their social mission and social impact produced. Due to the complexity of the different variables that intervene in a social context, measuring and, subsequently, communicating the social impact generated is complicated (Renko, 2013). Further, social entrepreneurs have to build their legitimacy, accessing funding and resources to sustain their organisations (Lumpkin, Moss, Gras, Kato, & Amezcua, 2013; Zahra et al., 2008). Thus, communicating their social mission to convince stakeholders is essential.

Austin et al. (2006) offer a framework that includes the key variables that affect social entrepreneurs. The model, based on Sahlman (1996) PCDO Framework (people, context, deals and opportunity), describes five variables that affect social entrepreneurs. The framework (Figure 2) put the social value proposition (SVP) as the intersection of opportunities, capital and people surrounded by the context in which the organisation operates. This approach shows the various components that participate in the concerns of social entrepreneurs to achieve the social value proposition they pursued. Indeed, social entrepreneurs require a balance of those elements to generate social impact through their organisations. In this way, the attention is not centred only on the final goal of social entrepreneurs but also in the establishment of relationships, the awareness of opportunities, the sources of capital available and the implication that contextual forces exert on the organisation.

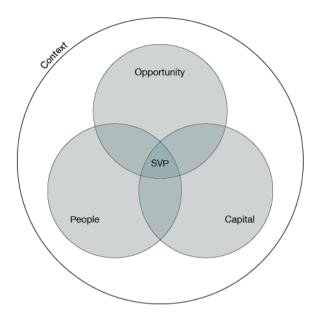


Figure 2: Social Entrepreneurship Framework (Austin et al., 2006)

The phenomenon of social entrepreneurship presents a high level of complexity due to the social nature of these organisations. Although the practices and methods are similar to commercial entrepreneurship, social entrepreneurs have to deal with multiple challenges that affect their organisations and the achievement of their social mission.

The next section introduces how design has been contributing to social initiatives to provide general concepts of design that enable the identification of potential connections between design and social entrepreneurship.

Design

From a different perspective, Design has also been considered relevant to address with social issues. In the early 1970's Victor Papanek, in his seminal book Design for the Real World (Papanek, 1971), introduces the notion of designing for the people's needs rather than their wants. From this statement, the role of design has shifted to a social responsibility where there is an inevitable link between society's design and social health (Withley, 1993).

After more than 40 years of Papanek's work, design firms, public bodies and collaborative programs have shown a rising interest in Design for social innovation (Mulgan, 2014). In fact, researchers and practitioners have introduced a series of characteristics of Design that benefit social initiatives. For example, Brown and Wyatt (2010) also argue that Design Thinking, consisting of inspiration, ideation and implementation, is a deeply human process that promotes the creation of product and services that are human centred. Furthermore, there are specific disciplines that show great potential in social innovation projects such as Service Design (to develop solutions that consider the quality of the interactions involved) and Strategic Design (to promote and support the participation of different stakeholders) (Manzini, 2015).

Additionally, researchers have studied the impact of design from a designer's perspective. Mulgan (2014) argues that designers benefit social innovation initiatives by understanding user experiences, ideating, rapid prototyping, visualising and through their systemic approach. In the same way, TRANSITION conducted design-based experiments to analyse the 'Social Innovation Journey'

(Meroni, Fassi, & Simeone, 2013). Nevertheless, despite of the studies regarding how design contributes to social innovation, there is not much evidence about how design is used specifically in Social Entrepreneurship. Moreover, little is found considering a non-design perspective in which social entrepreneurs face not only the challenges of the creation of social impact but also the challenges regarding the management of the organisation.

To explore how design is deployed by social entrepreneurs we revisited the literature regarding the relationship between design and the creation of artefacts. Buchanan (2001) defined four orders of design in the twentieth century (Figure 3). The first and second order correspond to design as the creation of symbols and things. Those orders relate to the communication of information in words and images as well as tangible, physical artefacts. The third and fourth orders represent the turn to actions and environments. These orders situate design mediating interactions between humans and products as well as the creation of systems of things that originate experiences. The four orders offer a general perspective of how design is used in social entrepreneurship. For instance, the first order regarding the communicational efforts to divulge the social mission to the different stakeholders; the second order appears through the creation of products and services that meet a social need; the third order is used in the interactions with people to understand requirements and validate their ideas; the last order occurs in the articulation of systems that allow them to deliver a social value proposition.

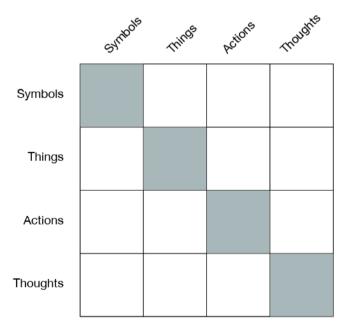


Figure 3:The Four Orders of Design (Buchanan, 2001)

The Danish Design Ladder also offers a similar analysis of the use of design in organisations. This model is also composed of four stages: (1) no-design (or design conducted by non-designers); (2) design as form-giving; (3) design as process; and (4) design as strategy (Danish National Agency for Enterprise and Housing, 2003). Despite of the similarity, the Buchanan's 'four orders of design' offer a precise way to analyse the type of design used, whereas the Danish Design Ladder is more appropriate for the analysis adoption of design within organisations.

Therefore, the contributions of designers for social innovation has been studied for decades, it is intended to unveil the utilisation of design by social entrepreneurs as an embodied practice conducted by social entrepreneurs. In this way, the research question is *how is design used throughout the social entrepreneurship process?*

The paper aims to show how design is used in practice not only for the creation of social value but for the multiple circumstances that social entrepreneurs encounter in their journeys. However, because of the complexity of the social entrepreneurship process, this paper will use as example short versions of the case studies highlighting the most critical issues that these entrepreneurs have encountered during the incubation programme. Due to the size of this paper, it is not intended to discuss in great detail every aspect of the process where design is involved, but in a revealing way based on the case studies.

Methodology

An ethnographic research was conducted to understand the phenomenon as it happens (Gray, 2014). Between June 2016 to January 2018, an ethnographic research was conducted to a Chilean social incubator business incubator called Socialab based in Santiago, Chile. This research involved of a series of interactions with members of the staff and social entrepreneurs of a Chilean business incubator with a focus on social enterprises. For this purpose, one of the researchers, who used to live in Chile, conducted the research 'in situ'. The reason was because the investigation considers both the journey as a topic but also as a tool of investigation (Wacquant, 2011). In this way the researcher could play the role of participant (insider) and observer (outsider).

The methods used included a presentation of one of the researchers in which some general concepts from Design theory and practice were introduced. This presentation allowed to set an initial language for the subsequent stages. Further, we conducted a series of semi-structured interviews (20) and informal conversations to understand the social entrepreneurship process used by the incubator and the different challenges that social entrepreneurs encountered. In doing so, it was possible to pay attention to how the issues of the investigation unfolded contextually and empirically (McKeever, Jack, & Anderson, 2015).

Later, the authors analysed the data to understand the use of design by social entrepreneurs following an interdisciplinary approach. The analysis considers the social entrepreneurship process as a specific indicator of the progression of the ventures, the different circumstances that affect the process and the use of design. For this purpose, a framework was developed to facilitate this analysis. Finally, there was a reflection upon the development and subsequent insights introduced in this paper.

Context

In this research, we analysed four Chilean social entrepreneurship that participated in an incubation programme during 2016-17. The project was supported by a Chilean public office (CORFO) and incubated by a business incubator (Socialab). The call was called Open Gate, which aimed to gather ideas on issues related to employment, incomes, environment, social capital, and human capital. The ideas selected received funding from CORFO, and mentoring and access to the services and facilities of Socialab. The organisations studied focused on two themes: education and environmental issues. These organisations were in early-stage social entrepreneurship or also called nascent entrepreneurs. As nascent entrepreneurs, they had to cope with the liabilities of newness, such as financial facilities, business reputation and social network (Politis, 2005).

The role of the business incubator consisted in the guidance of the entrepreneurs through a programme with a focus on the following areas: problem definition, prototyping, business model and communications. The programme consisted of multiples workshops in which internal or external specialists shared their experiences with the entrepreneurs. The incubator also assigned a mentor

who guided the entrepreneurs through their own projects. The combination of both, expertise and guidance, allowed entrepreneurs to define and conduct the necessary activities to start their organisations and achieve their social mission.

The following are abridged versions of the case studies which introduce primary issues faced by these social entrepreneurs during the incubation programme.

Case 1: Haedus – expanding the social impact through collaborations

Haedus aims to provide socio-emotional education to children from deprived communities. The socio-emotional education is vital for the development of children because it provides the mechanisms that determine life-satisfaction. They designed a service that seeks to reinforce these skills through learning programmes based on Neuroscience, pedagogy practices and Design Thinking. The objective of these approaches is to develop skills and competencies in children such as Collaboration, Creativity/Innovation, Critical Thinking, Problem Solving and Communication. The team is composed of a commercial engineer, a psychologist, an educator and a group of tutors that help to deliver the workshops.

The first learning programme developed had specific stages that involved diagnosis, review of the proposal with clients value proposition design and implementation, evaluation of the implementation, the involvement of the school community, and integration of the different people that had participated in the programme. The problem with this programme was its duration and cost. In fact, schools, as primary beneficiaries, could not afford the cost of the programme, or were not interested in investing a significant quantity of money in a relatively new, and potentially inexperienced, enterprise. Thus, during the incubation, the organisation reacted and developed shorter versions of the programmes to meet customers' requirements. To expand their social impact, they formed partnerships with other organisations. The partnerships offered new capacities to develop physical and digital products related to socio-emotional education. For instance, as a result of the partnerships, the organisation developed a physical toolkit that could be used by teachers in educational establishments. They also developed a mobile application with which they gained access to larger markets. Through the partnerships, the company expanded their social impact by offering a variety of products and services related to their social mission.

Case 2: MIAUM – a platform as a driver for growth

MIAUM focusses on the development of mobile games to reinforce Math and Language subjects according to the Chilean Ministry of Education programme. The benefit of the games is that the children can revisit the topics seen in classes playfully and attractively.

The primary challenge of the entrepreneur is the time spent on the development of the game in different mobile operative systems (IOS and Android). This problem also requires an effective way to manage their operations and team. The team composed of programmers, educators and a designer struggled in communicating with each other in the same language. For this reason, the CEO, who was one of the developers, created a platform that allowed them to work more efficiently.

The platform permits members of the team to upload content and images and automatically develops a mobile app for a determined platform. By doing this, the programmers could release the pressure of translating content and images into code and deliver apps in less time. Moreover, this new platform also showed the potential to be commercialised as a parallel product of the organisation. The target group for this product will be organisations without software creation capacities such as design or marketing agencies, that require the development of mobile

applications. This opportunity would generate new sources of income for the organisation, thereby reducing the dependency on external funding.

Case 3: La Polla Energetica – redirecting the organisation through community involvement.

La Polla Energetica aims to help people to reduce the cost of energy by the installation of solar thermal collectors (STC). The challenge is how to make the STC affordable to low-income neighbourhoods. Their idea is to use these collectors as a "clean" alternative to conventional sources of energy but also making hot sanitary water accessible to everybody. They recognised the positive turnover of the STC, however, the costs of installation could be amortised in between 4 to 6 years, and the lifespan of the system is 20 years. Therefore, they proposed a traditional Latin-American payment system called polla, which is similar to a crowdfunding system

They contacted multiples communities and delivered co-creation workshops to test their idea. The workshops were designed by the entrepreneurs with the support of a community leader who introduced the communities. In these sessions, the entrepreneurs explained the benefits of the technology and the financial system proposed. The locals appreciated the benefits of the STC but rejected the payment system introduced. The reason was that it would cause internal conflicts if community members do not pay the quota, affecting relationships within the community. Nevertheless, locals showed interest in learning how to build the artefacts also making available their capacities to build hand-made versions of the STC. Thus, locals would acquire not only the knowledge related to the construction of the collectors but even understanding the technology behind to maintain them during their use.

The social venture redefined their business idea, departing from the installation of the solar thermal collectors to a training for the construction of them. The redefinition enabled the entrepreneurs to acquire new knowledge and redefine their social value proposition. This new business included the development of training material, technical specifications and instructions on how to build and maintain the STC.

Case 4: Municipio Verde – unintended consequences of underestimating the value of design

Municipio Verde seeks to engage citizens in topics related to environmental policies in municipalities. The organisation offers a platform on which people can check and evaluate the initiatives and strategies that municipalities are conducting. In this way, citizens can also compare different cities and participate collectively in the measurements taken.

The team composed of two lawyers, a journalist and a sociologist who contacted a well-known organisation that have developed multiples platforms regarding citizen participation. However, this was the first time that the developers to offered their services to an external organisation. The task consisted in the development of the platform including its "graphics". The lack of knowledge from both parties caused critical problems. In fact, , the developers understood by "graphics", all the images related to the front end design of the platform, whereas for the social entrepreneurs the "graphics" included infographics, illustrations, banners and promotional materials. The lack of an appropriate design brief created unexpected delays in launching the platform because the entrepreneurs had to hire a designer to do the visual communications for the platform and the communications of the project.

Data Analysis

The financial support and mentorship offered by CORFO and Socialab helped them to set the goals during the process to achieve their social mission. To create social value the entrepreneurs have to react to different challenges by making appropriate use of the scarce resource and people available. These reactions affected their decision-making process, requiring them to navigate through decisions that impacted, for instance, relationships with a service provider, the redefinition of the organisation's strategy, engagement with communities, the identification of new opportunities and the creation of new products or services. In each of those moments when the entrepreneurs were orchestrating their organisations design played different roles. Some of the roles identified are described as follows.

- Design supports enabling communications between the entrepreneurs and people.
 This allows entrepreneurs to express their social mission effectively which is vital to building their legitimacy among stakeholders.
- Design facilitates the interactions between people, products or services and their
 organisations. The interactive aspect of design allows social entrepreneurs to engage
 with multiple stakeholders. The stakeholders include beneficiaries, clients, funders,
 supporters (for instance the social incubator), citizens, partner organisations and
 service providers. The interactions allow entrepreneurs to leverage capital, resources,
 capacities, information and knowledge necessary for the accomplishment of their
 strategic goals while also leading to the development of new opportunities.
- Design facilitates the operations of organisations. Appropriate utilisation of design reduces the development times and costs, resources that are limited in social entrepreneurship. The entrepreneurs found useful design useful as a process, because it helped them to structure their way of working but allowing the exploration of ideas and the implementation of them.

Despite of these benefits, the adoption of design principles and practices is not a priority for social entrepreneurs. Although the entrepreneurs recognised the value of design for their ventures they also admitted that implementing a designerly approach requires the acquisition of design as new knowledge. Adopting that new knowledge is not a priority compared to the responsibilities that they face within the organisation and with their stakeholders. Further, they argue that there was a need to work with an in-house designer to adopt design adequately.

On the other hand, entrepreneurs made use of different disciplines to discover and take advantage of the opportunities, but also to overcome the challenges that they encounter when creating a new social organisation. Nevertheless, it was identified that the social entrepreneur is who performs those different disciplines (i.e. a developer, a marketer, a designer, an educator). Thus, the entrepreneurs are responsible for deciding which practices, among the whole spectrum of disciplines related to their ventures, are the most appropriate to be used in particular circumstances.

Regarding design, this issue brings to the light the level of awareness or unawareness of how design is being used. We argue that design is used explicitly and also silently (Gorb & Dumas, 1987) by the entrepreneurs. Here we present a framework, developed to position design within the social entrepreneurship process which provides an interdisciplinary perspective. This framework was intended as an analytical device but also as a reflective tool as that aims to trace the utilisations of design and the reasons for it beyond the social entrepreneurship process.

Framework

A critical framework to analyse the data is introduced due to the multiple variables and the non-linear process of the case studies (Figure 4). The data was analysed considering three main dimensions. (1) The social entrepreneurship process, (2) the key moments and the variables that affect the decisions taken by the entrepreneurs, and (3) the way that design was throughout the process. The analysis allows the understanding of how social entrepreneurs operate in practice, the type of considerations and insights that social entrepreneurs encounter and the decision-making process they employ.

The first dimension is about the social entrepreneurship process. The process is described by a triangulation of the definitions found in the literature and the empirical process used by the incubator, in which the research was conducted. This divides the social entrepreneurship process in to three stages: **Opportunity creation**, which goes from the research to the definition of the social problem; **Prototyping**, that involves from the development to the test of prototypes; and **Social Impact**, in which the organisation moves to a level of establishment in which has to guarantee the economic sustainability for the subsequent growth.

The second dimension, represented by the dots in the Figure 4, shows specific moments throughout the social entrepreneurship process. Those moments include instances, events, thoughts, status,

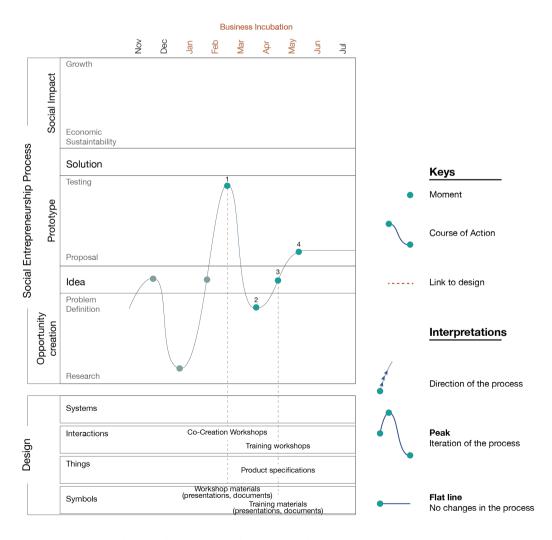


Figure 4: Design within Social Entrepreneurship Framework

projects or situations found in the language of each social entrepreneurs. The moments were identified regarding the focus of the conversation during the interviews. For instance, a moment can be a crucial meeting in which the entrepreneur received critical advice that changed their course of action of what they were doing. The moments are analysed by the different variables suggested by Austin et al. (2006) in their Social Entrepreneurship Framework (Figure 2)

The third dimension aims to understand how design had been deployed by the social entrepreneurs. In this respect, it follows Buchanan's four orders of design (Figure 3): design used to create symbols, things, interactions and systems. This approach was considered appropriate for defining the design implications throughout the social entrepreneurship process because it offers a simple but wide range of possibilities to describe how design is utilised.

Figure 4, shows how the three dimensions graphically represent the journey of the social entrepreneurs and their interaction with design. This example graphically represents the case study introduced previously of La Polla Energetica. The framework illustrates the moment when the entrepreneurs running the workshops with the community receive their insights and iterate their business strategy. Thus, the structure allows the researcher to visually identify, for instance:

- The moments when decisions were taken by the entrepreneurs and their consequences. In this case, dot 1 shows when the entrepreneurs introduced and tested their business idea to the community. Dot 2, is when the entrepreneurs reflect on their problem definition to redefine their concept (dot 3) and generate a new business proposal (dot 4)
- The courses of actions between those moments. The courses of actions are the trajectories taken by the entrepreneurs through the social entrepreneurship process to achieve their social mission. The function of the courses of action is to visually identify the behaviour of the entrepreneurs concerning the decision making process.
- The iterations in the process. Based on the aforementioned courses of actions it is possible to distinguish when the entrepreneurs iterate their business ideas. In fact, sections of courses of actions that show multiple peaks are clear examples of the iterative nature of the social entrepreneurship process. For instance, the course of action between the dots 2 and 4 illustrates an iteration of a business idea.
- The use of design during the social entrepreneurship process. Last, but not least, the
 bottom section of the framework acts as a lens through which design is analysed.
 Detailing the social entrepreneurship process by moments and courses of actions
 allows identifying clearly the specific use of design during the entrepreneurial journey.
 In this way, the use of design can be studied in detail rather than from a more general
 perspective. In the case used as an example, it is possible to distinguish the use of
 design to create symbols, things and interactions required by the entrepreneurs in the
 specific moments identified.

The framework does not intend to demonstrate a replicable model of the use of design by any type of social entrepreneurship. The framework was designed as a reflective and analytical tool that allows navigating the social entrepreneurship process from the specific to the general in a visual manner. The framework provides means to identify how design is being deployed by an organisation, its effects on the process, the reaction upon the diverse circumstances that arise, for instance.

Conclusions

The paper described how nascent social entrepreneurs perform their work and how design is used in their process. The main finding is that as social entrepreneurship is a complex endeavour, the use of design cannot be predicted in detail. The use of design is attributable mainly to the different circumstances that social entrepreneurs encounter, rather than the opportunities design knowledge and tools offer.

Through the analysis of the four case studies introduced, it is possible to see how their journeys differ to each other although they were participating in the same incubation programme. Conversely, the utilisation of design also differs between these organisations. The framework introduced allows analysis not only to consider the social entrepreneurship process as a sum of stages but also takes in to account iterative processes. Once the actual journey of an the entrepreneur is settled, the framework allows the understanding of how design was used by them.

The difference of this approach with the current literature is it positions design not as a set of benefits or suggestions for social innovation initiatives, but instead as a practice that is used reactively by nascent social entrepreneurs according the challenges and opportunities that they encounter. The framework can be used as an analytical instrument that shows the utilisation of design according to the specific moments that entrepreneurs face during their journey.

Further research will include the analysis of the implications of design during the courses of actions taken by social entrepreneurs. For instance, considering how design affects the effectuality or causality of the decisions taken by entrepreneurs.

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