Building Social Innovation Ecosystems: a capability approach

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Introduction

Social innovation has recently attracted the attention of policymakers in many countries. The establishment of the Office of Social Innovation and Civic Participation within the White House in 2009 and the development of the Social Innovation Initiative as part of the European Union's Horizon 2020 strategy demonstrate the increase in the concept's recognition as an effective way to find solutions to contemporary social challenges (Ayob, Teasdale, & Falgan, 2016; Howaldt, Kaletka, & Domanski, 2016). This increase has produced an extraordinary amount of academic research dedicated to understanding the process by which social innovation initiatives emerge, flourish and diffuse (see for example Mulgan, 2006; Jarvis & Marvel, 2013; Davies & Simon, 2013). This work is motivated by the will to contribute to the theoretical construction of a social innovation ecosystem that could serve as a reference and initial point to policy makers and scholars on the field. Its objective is to propose a framework that covers the complete process of social innovation and can apply to diverse contexts.

Social innovation has been a contested concept up until recently when some common ground on the elements that define it was found between scholars (Ayob et al., 2016). However, no common definition is generally accepted, which leads to policy-making works adopting a "working definition" (BEPA, 2011) or using the term in a strictly intuitive way, as in Mulgan et al. (2007), where social innovations are simply "new ideas that work". In this study, a definition that sees social innovation as driver for social change is adopted, which allows to take in consideration not only the actors involved in social innovation and their interactions, but also the institutions and the social context in which they co-evolve and lead to social change (Cajaiba-Santana, 2014).

In order to modelize a social innovation ecosystem, we depart from actual work on the subject. First, we conduct a systematic literature review of the academic articles published and a thorough study of policy reports and strategies for building social innovation ecosystems. In this study, work using various definitions and working definitions of social innovation as well as the various underlying perspectives were included. Then, we show how the social innovation ecosystems proposed thus far and their recommended policies, are based on the assumption of the existence of individual and collective capabilities to react to social problems. The term 'react' includes any action that involves getting informed and understanding a problem, conceptualizing and articulating a solution.

Proposed social innovation ecosystems build up on these assumed capabilities offering support in order for new ideas to develop and scale up in "bankable" initiatives.

Second, we use the capabilities approach and the 3C model for grassroots-led development proposed by Ibrahim (2017) as a base for the construction of the social innovation ecosystem in order to propose a shift to the ecosystem's center from the entrepreneur to the community and the citizen. This shift consists in understanding individual and collective capabilities not as assumptions, but as necessary preconditions for and results of social innovation. Finally, we provide a new scheme that intends to reflect this shift in perspective including the necessary actors and their relationships.

This work is motivated from the realization that social innovation has gained momentum due to the increasing pressure on social policy budgets. Furthermore, the development and the widespread use of digital tools, help integrate a user-centered approach in the designing of tailored-made public services that prove to be more cost-effective (OECD, 2010). On the other hand, authors call for a mere instrumentation of social innovation initiatives in an effort to combat social problems and justify further cuts in the public services' budgets (Grisolia & Ferragina, 2014) and offer neo-liberalism a more human face (Klein, Laville, & Moulaert, 2014). Critics have also drawn attention on the fact that existing policies tend to reproduce the dominant society structure, institutions and cognitive ends (Von Jacobi, Edmiston, & Ziegler, 2017). In other words, solutions are constructed using the same framework that structurally produces or does not provide adequate solutions to societal problems. Thus, an integrated framework is needed in order to offer a more radical approach to social innovation in the sense of its ability to act on the problems' roots and not only the symptoms.

Although policymakers have discovered and started using the term only recently, academic research has long explored social innovation, the underlying processes and its relation with social change (Ayob et al., 2016). Scholars have explored the notion of innovation as a novel product, service or process, or a disorganization of old practices to respond to new social needs (Harrisson & Vézina, 2006). As for the social aspect, academic work has identified it in the societal impact these new configurations have and in the active involvement of social groups in their production. Lately, most scholars agree the 'social' in the social innovation lays equally in the process and in the outcome (BEPA, 2014). Finally, some works propose understanding social innovation as a process of social change (Howaldt, Kopp, & Schwarz, 2015; Cajaiba-Santana, 2014). This approach

provides a useful definition to our level of analysis which regards processes and policies for social innovation at a micro and mesoscopic level.

There is also an extensive literature that explores innovation from a systems' approach. These academic works focus on product and technological innovations and have identified a close relation between the region and its innovation capacity (Klein et al., 2014). They recognize that enterprises do not innovate alone and the key importance of their relations with other actors and the knowledge spillovers that these relations generate. Lately, the ecosystems' approach is used as a useful framework for policy makers. It builds on management theories and Moore's work (1993) where a biological metaphor is used to understand the evolution of entrepreneurial systems.

In the policy arena, the European Commission has conducted a vast investigation in order to map social enterprises and their ecosystems in Europe. This research project was the initial part of further investigation and policy recommendations for the construction of a social innovation ecosystem in Europe (TEPSIE, 2014) that was used with some adaptations in many European and other countries' social innovations strategies (OECD, 2016; SiG, 2014; SIE, 2014; Building Change Trust, 2015; Björk et al., 2014). Although the ecosystem approach thought as a biological metaphor suggests an evolutionist and thus deterministic approach to social practices, it is adopted as a useful analytical framework because it gives a dynamic and long-lasting character to the actors and their relationships as well as their complementarity in the process of social innovation.

Some academic works have adopted human development approaches to understanding and supporting social innovation (Howaldt & Schwarz, 2017) and as a means for combating marginalization (Von Jacobi et al., 2017). Also, Ibrahim, in a recent work, develops a model that explains development through grassroots-led social innovation applying a capabilities approach. She stresses how conscientization, conciliation and collaboration are crucial for social innovation to happen, proposing thus a 3C model for social innovation (Ibrahim, 2017). The capability approach is an economic theory that provides an anthropocentric framework in understanding economic activity. It focuses in functioning capabilities, that is, to what extent people are able to use available resources and act on their freedom to engage in valuable activities. This approach offers in that way an understanding of collective action as a means for and as an end of social innovation and draws the attention on the freedom to react which is a precondition to the emergence of social innovation.

This work is presented in the following order: in the first chapter we provide an overview of the existing definitions and we adopt a definition focusing on the social innovation as a new combination of social practices that leads to social change. Then, we present the existent work on the process of social innovation that provides useful information on the various development stages of social innovation initiatives. In the third chapter, we present the evolution of the system's perspective in the understanding of innovation and the work associated with social innovation systems. We present examples of the social innovation ecosystems used in various policy-making documents and we argue that in these documents the social innovation's transformative capacity is ignored and that the recommended policies assume individual and collective capabilities. In chapter four we present the main concepts of the Capability Approach (CA) and we explain the useful insights that it can provide us in order to understand and support social innovation. We present the 3C model to understand grassroots-led social innovation and we map the CA against the structuration theory in order to conceptually link capabilities to to new combinations of social practices. We finally propose the actors of the social innovation ecosystem and their relations and we propose some orientations for public policies for social innovation. Conclusions of this study and subjects for further investigation are discussed in the last section.

Chapter 1 Social innovation: definition and life-cycle

In this chapter, we present and discuss some definitions and theoretical approaches to social innovation. We then explore the definition of social innovation as social practice and we adopt it as a useful framework in order, among others, to avoid structuralist or subjectivist simplistic conclusions. Finally, we describe the social innovation process constructing on existing work and adapting it to our view of social innovation as new combinations of social practice.

1.1 Some definitions of social innovation

In this section, we present some definitions of social innovation with their theoretical background and we provide with some critique on the methodological gaps of these approaches in the way they avoid some questions or do not answer them in an adequate manner. These definitions and the 'traps' they fall in are summarized in table 1.

Table 1: Summary of social innovation definitions

Definitions (where does the "social" lay?)	Actors (who and why?)	Traps
Solution that increases more the social value than the personal.	Social innovators as inspired individuals motivated by compassion and/or altruism	*"making more with less"* perspective focused on the outcome. Teleological: the same process leads necessarily to the same outcome
Solution to a social problem	Various actors in a co-creation mode: the State, firms, concerned users through digital tools	Equation of participation with democratization of public services. Tautological: every collaborative process leads to social innovation
Changes in the relations between various actors leading to social transformation	Organized social groups, associations or civil movements	Does not explain how these actors overcome institutional constraints

Source: author's elaboration

Social innovation has gained popularity lately in academic and policymaking circles as a provider of solutions in new or persistent social problems that neither the market nor the State resolve adequately. In this approach, social innovation initiatives are understood as a provider of efficient, effective, sustainable and more just solutions to social problems (Phills, Deiglemeier, & Miller, 2008). They are new products or services that provide with "good-enough solutions to inadequately addressed social problems" (Christensen, Baumann, Ruggles, & Sadtler, 2006, p. 3). This explains in part the increase in interest in fields where existing models fail or stagnate, in particular in areas where problems are intensifying or where possible solutions are not sufficiently exploited (Mulgan et al., 2007). This perspective focuses on the effect that social innovation initiatives have on societies in terms of social impact that is their capacity to benefit society as a whole (Ayob et al., 2016) through the reduction of social costs or the increase of social benefits, in other words, by creating social value (Phills, et al. 2008).

Since social value and social impact are difficult to measure, the qualification of social innovation in this approach is based on the intention of its promoters and recommendations for further research on social impact measurement are very frequent (Mulgan et al., 2007). Social innovators, as individuals or groups of individuals, are motivated by altruism or compassion for less privileged groups of our society (Harrisson, 2012a). The altruistic aspect expresses itself in the mission of these initiatives where common interest prevails over personal interest and social change is the primary objective (Christensen et al., 2006).

This perspective has its antecedents in Schumpeter's theory on the invention as a continuous necessity for better economic performance (Cajaiba-Santana, 2014). In

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Schumpeter's perspective, the protagonist of this kind of invention is the entrepreneur with her capacity to rearrange the available resources to give new products, production methods, markets, processes or ways to process materials or organizing methods (Hochgerner, 2011). 'Innovators' are at the core of social innovation; they are the motors and the holders of social innovation initiatives (Harrisson, 2012a). Social innovation is about the innovative capacity of the social entrepreneur who motivated by humanism proposes changes that produce social value (Richez-Battesti, Petrella, & Vallade, 2012).

This approach is frequently used among policymakers because it provides a straightforward analytical framework in order to develop policies to support initiatives that cover unmet needs. In particular, in public sector's traditional areas of intervention it represents the quest for the development of a new tool, a different way to define the eternal problem of "making more with less and do it better" (BEPA, 2014, p. 66).

The limits of this approach reside in centering the definition on the outcome, which can have a short-term effect avoiding to question and act upon the roots of social problems rather than on their symptoms (Bouchard, Evers, & Fraisse, 2015). Seing social innovation as an instrument leads also to teleological traps: because we see a particular outcome to a process, we conclude that the process itself always yields this result (Cajaiba-Santana, 2014). It also contains a normative aspect since the only way to exclude from the definition inventions that provide some social value, a relative function is necessary – inventions that are more profitable to individuals than to the society as a whole – (Phills et al., 2008). Sometimes a first-come first-served criterion is used as social innovation is defined as an invention addressed to market's segments which the market did not priorly detect as possibly profitable (Christensen et al., 2006), including products addressed to the "bottom of the pyramid" (Richez-Battesti et al., 2012).

Traditional management theories in an effort to distinguish between technological and social innovation bring up two arguments. The first one is the motivation criterion, technological being the profit-motivated innovation and the social, the "pure" innovation seeking for solutions to social problems (Pol & Ville, 2009). However, another important consideration is the one of the appropriation. Business and profit-motivated innovation is usually protected by intellectual property rights (Pol & Ville, 2009) whereas social innovation seeks to disseminate and propagate. In this sense, social innovation is detected in the intersection of the action area of various social actors: firms, the state and inspired individuals where place is given to the exchange of ideas and values, shifts of roles and perspectives and integration of philanthropic and profit oriented capital (Phills et al., 2008).

This idea brings in focus the involvement of concerned users in the co-creation of solutions which are seen automatically as more effective and as a guarantee for a fairer distribution of the created added value (Richez-Battesti et al., 2012). The premise is that people can be part of the solution by interpreting their own realities (Mulgan et al., 2007). Due to the expansion of the use of digital means, this approach falls in user-end strategy, that is, it confuses the increase in quality due to the possibility of an immediate feedback from users which enables tailored-made services or products with the democratization of the provision of public services (Klein et al., 2014). This approach suggests in a naive way that consultation results in the agreement of stakeholders ignoring the possibility that they might have contradictory interests (Klein et al., 2014). This approach falls in tautological tramps because it bypasses the question of whether every collaborative process leads to a social innovation by affirming that the process *per se* is a social innovation.

The traditional view on social innovation is centered on the transformative capacity of social innovation. This view draws the attention on social innovation as a process that emerges through collective action and focuses on the changes in the relations between different social actors (Ayob et al., 2016). In this stream of thought, the essence of the novelty of social innovation lies in "creating and disseminating new solutions that involve unprecedented associations between social actors" (Harrisson & Vézina, 2006, p. 2). In this process of creation, social groups relate to each other and as a result they create new knowledge through a mutual learning process and accumulate cognitive capital necessary to change (Klein et al., 2014). The need to cooperate in order to conciliate their contradictory interests in the quest for new solutions suggests the development of confidence relations and a redistribution of power. Change in social and power relations is seen as a precondition, but also as a result of social innovation (Ayob et al., 2016).

In this framework, non-profit organizations and associations as organized social movements find their position acting as principal motors of the transformation departing from the demands of the social groups they are representing. This part of the literature is concerned on the way social innovation initiatives challenge the established social order (Klein, Camus, Jetté, Champagne, & Roy, 2016). Many authors see this challenge as the reaction to the persistence and, in some cases, increase of social problems as income inequality, social exclusion and environmental degradation (Klein et al., 2016). The motivation of social agents emerges from the aspiration to propose a different, more inclusive development model. In the quest for this new model, not only more efficient solutions are necessary but also changes in the institutional frames (Klein et al., 2014).

These changes are seen as necessary because of the insufficiency of existing institutional structures to provide for adequate solutions to social problems (Harrisson & Vézina, 2006). Some scholars see expressions of this insufficiency in the 2008 financial crisis which extended in social and political aspects of western societies (Klein et al., 2014). In other words, there is an impossibility to generate legitimate solutions in an institutional environment that provides with insufficient resources to do so. This point of view sees institutions as a constraint to the innovative capacity of social actors (Klein et al., 2014). Institutionalization in this approach is denounced as the public authorities effort to alienate social movements' initiatives appropriating them in order to avoid revolt.

There is however another point of view that attributes to social innovators some power to provoke institutional change. This point of view argues that some social innovations emerge from a large consensus and generate an enduring engagement of their promoters. Institutionalization in this case is used to refer to the stabilization of the social innovation and the power to act that its promoters acquire through negotiation with public authorities (Bouchard et al., 2015).

This extended consensus gives the power of action that can affect the norms, the beliefs or the cognitive aspect of internal and external agents and that transgresses organizational frontiers to change institutional environments (Klein et al., 2014). Institutionalization is seen as the result of the diffusion and adoption of social innovation in a generalized manner and in different institutional contexts. As such, institutionalization is a prerequisite for a social invention to become innovation and social innovation is the process by which societies reconstruct themselves (Bouchard et al., 2015).

1.2 Social innovation as social practice

Up until now, two major trends of understanding social innovation have been presented that represent the dichotomy between the agent and the structure perspective of understanding the world. The first understands social innovation as the result of individual strategic choice, and the second as a deterministic result of social structure (Cajaiba-Santana, 2014). An approach that avoids this dilemma is the one constructing on structuration theory advanced in recent work on social innovation (Cajaiba-Santana, 2014; Howaldt et al., 2015; Hochgerner, 2011). Structuration theory provides a "theoretical framework that highlights how social structures and social systems are iteratively and

reciprocally created by agents who are both constrained and empowered by institutions" (Cajaiba-Santana, 2014, p. 47).

In the light of the aforementioned methodological traps that the agent and the structure centered views can lead to, this can be an effective way to define social innovation since it can provide a "conceptual framework that enables us to understand how the path for social innovation is created and reproduced by action and institutions" (Cajaiba-Santana, 2014, p. 46). Giddens was the first to propose the concept of "duality of structure" to explain how "structure is both medium and outcome of reproduction of practices. Structure enters simultaneously into the constitution of the agent and social practices, and 'exists' in the generating moments of this constitution" (Giddens, 1979, p. 5). In this way, social practice becomes the central theoretical and analytical category of structuration theory.

Social 'practice' (Praktik) is a routinized type of behaviour which consists of several elements interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz, 2002, p. 249). Social practice can be understood as a multitude of interconnected social acts that form a pattern and as such, they cannot be analyzed as separate units. Thus the social world is composed of very specific, individual and interconnected practices: practices of cooking, consuming, organizing, of partnership, etc. (Howaldt, Butzin, Domanski, & Kaletka, 2014). The reproduction of social practices is what creates social order and systems of social classes, power, states and economies are constituted by repetitive performance of practices (Howaldt et al., 2014). In this way, "social systems are conceived as regulated models of social practices and relations between actors" (Cajaiba-Santana, 2014, p.47).

Being human is being an agent and agents are both enabled and constrained by structures. The constrain is understood as the way social practices are routinized in everyday life and carried by individual agents. However, the fact that routinized social practices get incorporated in the agent's memory traces, does not mean that they are not knowledgeable, in the sense that the agent knows that she performs a routine act and the reason for it. It is important here to say that Giddens makes a difference between practical and discursive consciousness, which means that what people understand is different from what they can tell you that they understand (Reckwitz, 2002). Though bounded by structures, agents have a practical consciousness of their actions that they cannot always explain, which depends on inherent capabilities. There are also many factors that influence

agents' knowledgeability and enable or constrain their actions, known as capability constrains. Thus, other more, others less, according to Giddens, all agents have a certain capacity of "reflexively monitoring their actions" (Reckwitz, 2002). They can reflect upon them and act according to their intentions. Agent are thus "knowledgeable, purposeful and reflexive" (Cajaiba-Santana, 2014, p. 47).

At the same time, agents carry and perform social practices that form part of different social systems. These social systems sometimes complement or contradict each other, which brings agents to reproduce or negate them. In front of this contradictions or opportunities, agents draw upon their practical consciousness in order to act. This explains their capacity to transform social practices by rearranging one or various of its elements when they become obsolete. The subject matter of social practice theory is precisely the recursive relations between social practices, incorporated and objective sociality. Social practices are formed, changed or replaced by new practices by making, sustaining, changing or breaking the link between their elements. Rearrangement of social practices may be transformed and ultimately institutionalized as regular social practice which results in social change (Howaldt et al., 2014).

Seen through these theoretical lenses, social innovation can be defined as "new combination or configuration of social practices in areas of social action, prompted by certain actors or constellations of actors with the ultimate goal of coping better with needs and problems than is possible by using existing practices" (Howaldt et al. 2010 as cited in Howaldt et al., 2015, p. 30). Since, as established previously, reconfiguration of social practices is at the core of social change, successfully implemented and socially accepted social innovations can be seen as drivers of social change. Next, we explore how social innovations happen and how they evolve before they become regular social practice.

1.3 The process of social innovation

Having established the advantages of using social practice theory to understand social innovation, the same approach is used to describe the life-cycle of a social innovation. It is worth noting that life-cycle approaches are neither frequent nor systematic in the study of social innovation and even less using a social practice approach (Howaldt et al., 2014). Since a social innovation as a driver of social change definition is adopted, (through diffusion and institutionalization) some insight on how this process comes about is necessary determining the specific contexts and actors implicated in it. We establish

how new practices emerge and how social movements detect conflicting social structures and articulate the inadequacy of existing social practices and the social economy entities act as a platform for application and experimentation on new practices. Finally, we describe how social innovations diffuse and become regular social practice through iterative processes of trial and error.

1.3.1 Emergence and experimentation

As we have seen, agents and social structures are co-evolving in a structuration process. Agents preserve or change social order and social structures by reproducing or transforming social practices. Change is part of the repetition, since a repeated social action never stays the same (Howaldt et al., 2014). Agents also participate in many overlapping and complementary social structures. Sometimes, these social structures enter in competition and confront each other. Actually the agent is the only cross-point of different social structures as the carrier of many body and mental routines (Reckwitz, 2002). In this context, agents are confronted with conflicting elements of social practices or loosened links between social practices' elements. These can be understood as conflicting physical behavior and mental activities or inadequacy of the way we understand them through the introduction of new artifacts. It is in this context that agents enter in the process of rearranging these elements as they reflexively evaluate existing practices.

"The 'breaking' and 'shifting' of structures must take place in everyday crises of routines, in constellations of interpretative interdeterminacy and of the inadequacy of knowledge with which the agent, carrying out a practice, is confronted in the face of a 'situation'" (Reckwitz, 2002, p. 255). It follows that we see social innovation frequently emerge as an effort to "react to the crisis and reconstruct destabilized or destructed links" (Klein et al., 2014) between different social structures. The contemporary context of social innovation can be thus the one of crisis in economic structure or practices of distribution, as is the transformation of capitalism, the changing role of the State and growing individualization of responsibility of "life cycles" (Harrisson, 2012b). These phenomena can be understood as destabilizing factors of social structures and the way people understand their relation with work, basic needs and political actions.

In this context, a connection with social movements as results of the shock between confronting social structures, be it economic, political or cultural (Howaldt et al., 2014) and the civil society at large is necessary. Social movements articulate the inadequacy of existing social practices (production, consumption) in responding to evolving mental

frames or relations between social agents (class or gender relations). They act on the mental spheres in order to increase agents' consciousness of this inadequacy and get involved in advocacy activities in order to act upon political structures.

Social economy, on the other hand, serves as the experimentation field where different organized groups in concert with social movements mobilize different practices and resources in order to respond to economic and social needs (Richez-Battesti et al., 2012). Community associations have been traditionally very active in the provision of social services and as a consequence, they are considered an important actor in the battle against poverty and social exclusion especially in the context of the crisis of the Welfare State. Social economy also mobilizes resources and various local social actors in an effort to provide solutions to urgent social problems (Harrisson & Vézina, 2006). These processes include contestation, conflict and sometimes social battles (Bouchard et al., 2015) as different social structures collide and confront each other in an effort to find common grounds to reconcile contradictory practices. As such, these are very fertile grounds for social innovation to happen.

These processes are developed as an integral part of the empowerment process of the affected part of the population. This concerns the process of raising the potential power of social groups that have become powerless due to social exclusion, long-term unemployment and inadequate provision of public goods (Howaldt et al., 2014). The reengagement of the vulnerable groups' point of view and contribution to the solution brings novel perspectives to the problem. As such, the vulnerable population is served and serves social innovation (Westley & Antadze, 2010). This process, for many organizations, is applied as a means for the realization of their mission, which is to seek for transversal and holistic solutions. It has also been the way by which social economy entities have been detecting and responding to emerging social demands (Bouchard et al., 2015).

Finally, social economy is the field of many organizational innovations, as members and militants of associations experiment on their organization's structure applying the principles and values of distribution of power as a proof of the concept for the wider society. On the other hand, many social economy initiatives emerge as forms of self employment reinventing the concept of division of labour, the organization of time in labour, and satisfaction in the work environment.

1.3.2 Diffusion

The processes that involve users or producers in the creation and production of new services and products suggest the implication of participants in social structures new to them. At the same time, through involvement of different social actors in common processes, social and relational capitals are produced between actors belonging to different social structures whereby they acquire new capacities and establish new reciprocity relations (Harrisson & Vézina, 2006). Through these experiences, agents engage in individual and collective learning that modify their mental frames. This is one of the possible ways of the diffusion of social innovations (Besançon, 2015).

The process of generating proposals and ideas, and prototyping and piloting can be highly iterative. That means that many ideas never make it off the ground (Howaldt et al., 2014). The ones that make it though, naturally enter in conflict with existing practices and social order. The success and the diffusion of social innovations happen through tensions, conflict and compromise (Klein at al., 2016). In this context the question arises of whether social innovations find a hostile environment in a liberal society where individual initiative is encouraged or in a society where the State intervenes to establish wealth distribution measures that guarantee certain minima (Harrisson, 2012b).

Another way of understanding diffusion is through growth or replication of the new practice through adaptation in different contexts (Besançon, 2015). This suggests an imitation process which implies the danger of oversimplification and standardization with the result of becoming commonplace or detracting form the initial idea (Bouchard et al., 2015). Because of this danger of social innovations travelling as 'best practices' and sometimes landing clumsily, replication does not always lead to institutional change.

1.3.3 Institutionalization or institutional change

However, under certain conditions, the process of adaptation and application of the new product, process or way of thinking in an extended part of society results in the institutionalization of the new social practice (Klein et al., 2014). The success and diffusion of social innovations and eventually their establishment as regular social practices are seen as highly dependent on the relations social actors have with the State (Klein et al., 2014). In some cases, after the first experimentation phase and with some satisfying results in hand, social actors seek support in order to replicate, disseminate and thus achieve a bigger social impact by scaling out the new approach (Westley & Antadze, 2010). The success depends on the pertinence of the new social practice proposed (Bouchard et al., 2015) or on the degree of the State's desire to play a more or less central

role (Harrisson & Vézina, 2006) in the regulation of the social problem in question. In this sense, public authorities, private and associative social actors enter in a cooperation-competition dynamic where new legitimized practices emerge to create consensus and form partnerships.

There is also another path, the negotiated institutionalization where social innovation gets diffused due to the effectiveness and its adequate representation of social needs (Bouchard et al., 2015). This kind of initiatives impose in a sense their practices not because but despite public authorities. Operating on the margin of illegality, in some cases for many years, based on activism and voluntary work, they mobilize resources in order to avoid obstacles and come up with a solution (in terms of new laws or norms) to the conflict that confronts them with their institutional environment (Klein et al., 2014). In order to understand this process sometimes theories of institutional entrepreneurship are used. It can be a useful framework to study the effort to 'scale out' social innovations motivated by the aspiration to change the broader social system by spreading across scales or across systems (Westley & Antadze, 2010).

Even though it represents a single system or organization chart, the adaptive cycle of social innovations advanced by Westley (2008) constructed on resilience systems is another proposed framework to understand social innovation life-cycle. This framework is adapted from Gunderson and Hollin's work on the complexity of economic, ecological and social systems.

Figure 1: Westley's adaptive cycle for social innovation
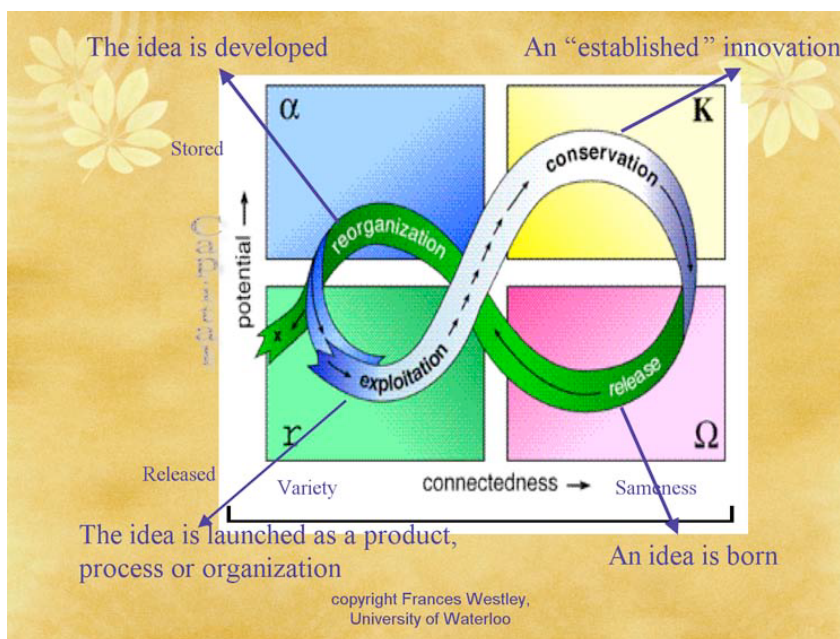
Source: Westley (2008, p. 3)

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One of the reasons for this adaptation is the fact that it brings in focus its nonlinear dynamics of continuity and change and that one of its important features is that it is based on the idea that a new social practice that becomes part of social structures passes first in a maturity stage (front loop) of exploitation and conservation. The accumulation of capital and the increased interconnectedness of its elements can make the system rigid, thus vulnerable to threats. Minor disturbance can then trigger the release of resources in the quest of new practices. This period of rapid reorganization inherently unpredictable and highly uncertain leads to innovation. This framework uses elements of the ecosystem approach, that is, understanding social innovation as a result of a local, ensemble performance of interconnected actors that we are going to explore in the following chapter.

Chapter 2 Innovation or Entrepreneurial Ecosystems?

Any effort to propose measures to foster social innovation suggests identifying the main actors, their relations and the causal relationships that permit new social practices to emerge and diffuse at the level of becoming regular practice. In this chapter, we explore the innovation and entrepreneurship theoretical fields as the main approaches used to understand innovation as a major factor for economic development. We also present some adaptations of the systemic approach of innovation to social innovation.

2.1 Innovation studies

Innovation studies have focused on technological and production processes' renewal in order to understand the emergence and the diffusion of innovations departing from the fact that innovation is a major growth factor of economies (Howaldt et al., 2014). The development of the research and development (R&D) departments as part of the companies' operations was an organizational breakthrough that changed the way innovation research was practised. As stated by Freeman in his historical perspective on national systems of innovation (1995), before and during the Second World War, innovation was a strictly linear issue of science and technology "push". Although academic research had shown that innovation success depended on other variables, such quality control, policy measures and OECD's science policy reviews were mostly focused on R&D investment and technical education. In this linear approach, the amount of investment naturally resulted in major innovation capacity. This approach was challenged during the '50s and the '60s, when the efficient diffusion and adaptation of imported technological

innovation and social innovation were seen as determinant for technical change and economic development.

Freeman (1995) identifies various issues that came into surface during the '70s and the '80s regarding the understanding of innovation that attracted the attention of policy makers and academics. These were based on empirical evidence from the comparison between the innovative capacity of emerging economies like the one of Japan and Korea and the one of long-established centralized states like the Soviet Union. First, incremental innovations were found to happen in other spaces than labs, from engineers and technicians that were part of different organizational levels. Also, improvements in products and services could result from interactions with the market and other related firms and radical innovations were dependent on the external linkages in the narrower professional science-technology network. Finally, the success of any technical improvement depended on other related changes in the systems of production. In this way, the focus of innovation studies was transferred to the systemic aspects of innovation.

2.1.1 The systems of innovation approach

When the disappearance of national borders and the appearance of an inter-liked economy in the beginning of the '90 became obvious, the systems of innovation approach (SIA) emerged as an alternative to the neoclassical explanation of growth (Watkins, Papaioannou, Mugwagwa, & Kale, 2015). Lundvall in his work on national innovation systems (1992) advanced that if uncertainty, bounded rationality and localized learning were to be assumed, as more reasonable than hyperrationality and symmetry of information (Edquist, 2005), then variations in local and national circumstances could lead to different paths of development. As a result, and in light of the research evidence of the past decade, he placed interactive learning in the centre of the system of innovation. He argued that geographical and cultural proximity, formal or informal user-producer and inter-firm relations and local supply of technical skills were producing diversity and competitive advantage (Freeman, 1995).

In other words, it was clear by then that "firms do not innovate alone" but in relation with other organizations and that they were "limited and enabled by institutions" (Edquist, 2005, p. 2). This approach recognized that firms were embedded in a socioeconomic context with specific boundaries, thus providing a systemic approach to innovation. A general definition of innovation systems, as opposed to their national version, comprised "all important economic, social, political, organizations, institutional and other that influence
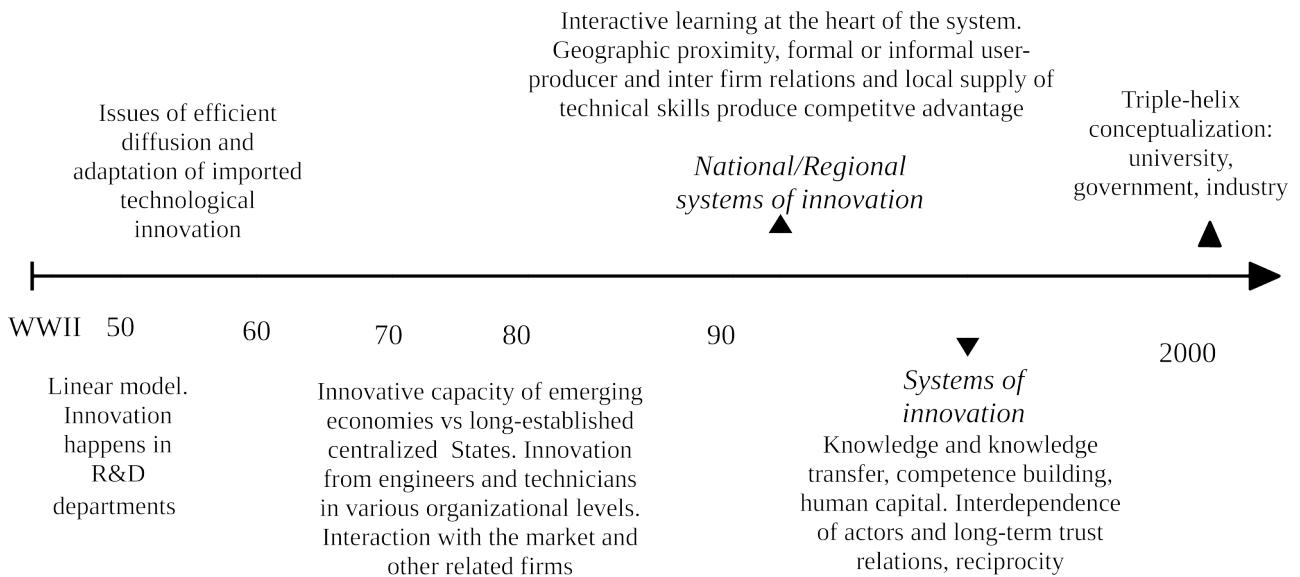
the development, diffusion and use of innovation" (Edquist, 1997 as cited in Edquist 2005, p.3). The "triple helix" conceptualization proposed by Etzkowitz and Leydesdorff in 2000 underlined the importance of the collaboration between university, industry and government agents as well as the tri-lateral hybrid organizations formed at the intersection of the helices for knowledge production (Carayannis & Campbell, 2012). Institutions, in the sense of 'the rules of the game', also play a crucial role in this conceptual framework as they are considered to be the ones to shape and frame behaviour in a systemic context. Institutions matter because they can create and support a system where collective knowledge and resources combine to enable innovation capabilities (Watkins et al., 2015).

In this sense geographical properties of national and regional systems become relevant, since they provide the boundaries in which the institutional 'set up' is common (Edquist, 2005). Also, contrary to the increasing expansion of multinational firms and global markets, the competitive advantage was identified in "highly localized processes" (Porter, 1990 as cited in Freeman, 1995). One aspect of these processes is localized learning that includes not easily codifiable, tacit, knowledge.

Another aspect is the development of human and relational capital defined as the "presence of synergy and cooperation among local actors and within the local labour market, which lead to knowledge exchange" (Capello, 2001, p. 3). In this literature, emphasis is given to the sociocultural coherence due to spatial proximity that enables the establishment of trust relations between organizations (Edquist, 2005). Through long-term formal and informal interactions networks of heterogeneous actors who provide complementary competences and resources in order to contribute to the system of innovation are formed. The main points of the evolution of the systems of innovation approach from World War II to the year 2000 is presented in figure 2.

The network approach in understanding innovation in terms of the variety of actors involved drew attention on the management of their relations. Institutions were seen as the mostly adequate to assume the role of enabling and regulating these exchanges. Since this task concerned various social areas of action, inter-ministerial organs and innovation councils were constituted and strategies for making industrial and other innovation policies more coherent were established. This process implied a certain complexity since the establishment of common visions and objectives between till then separate institutions became necessary. Finally evaluation mechanisms and follow-up of the policies' results became part of the governance discourse that included all of these elements for an effective implementation of a national innovation system (Remoe, 2008).

Figure 2: Evolution of the systems of innovation approach from WWII to 2000

Interactive learning at the heart of the system. Geographic proximity, formal or informal user-producer and inter firm relations and local supply of technical skills produce competitve advantage

Issues of efficient diffusion and adaptation of imported technological innovation

National/Regional systems of innovation
▲

Triple-helix conceptualization: university, government, industry
▲

WWII 50   60   70   80   90   ▼   2000

Linear model. Innovation happens in R&D departments

Innovative capacity of emerging economies vs long-established centralized States. Innovation from engineers and technicians in various organizational levels. Interaction with the market and other related firms

Systems of innovation
Knowledge and knowledge transfer, competence building, human capital. Interdependence of actors and long-term trust relations, reciprocity

source: author's elaboration

The SIA has many interesting features as presented by Edquist (2005). First, it places learning processes at the centre of innovation, defining it as new knowledge or reconfiguration of existing knowledge, understanding technological innovation as a product exogenous to the innovation system. This aspect links learning processes and knowledge production with processes of individual competence building and enhancement of human capital. The firms and the spaces for inter-firm interactions are identified as spaces where these learning processes take place through experimentation and tacit knowledge transfer. This perspective underlines the interdependence of actors for the transfer of knowledge and their dependence on the establishment of long-term trust relations, thus considering not only vertical and horizontal relations but non-market relations as well.

These relations are considered to have some degree of complexity since they are characterized by reciprocity and feedback mechanisms in several loops - "recursively informing stages of invention, research and development, and commercialization" (Watkins et al., 2015). This permits to understand institutions as also embedded in systems. In other words, organizations and the relations between them also influence institutions, both related in a mutual embeddedness relation. Finally, the systemic approach gives an evolutionary perspective, making the notion of optimality of a system irrelevant. In SIA, systems change through time, influenced by various actors that are both influenced by the systems in a co-evolution process. However, the systemic understanding of innovation does not mean that the system can be easily reproduced, on the contrary it evolves with time in a largely unplanned manner (Edquist, 2005).

The diffusion of the SIA suggested bringing into focus the links between the R&D agents like universities and public research institutes and the firms. Attention was also drawn upon the 'third task' of the universities, the one that is related to their interaction with society in diffusing and applying knowledge. Policy was thus directed in removing barriers to cooperation between various organizations and the construction of collaborative centres and programs in order to maximize learning spill-overs. Also, policies were designed to encourage mobility of skilled workers and human capital enhancement (Edquist, 2005). These policies targeted the elements that policies could act upon thus representing innovation systems as "static structures regulated by government bodies with successful performance depending on critical mass of involved actors and intentional infrastructure" (Smorodinskaya, Russell, Katukov, & Still 2017, p. 5245).

2.1.2 The innovation ecosystem approach

The emergence of the knowledge-based economy and the development of digital tools make some argue for a change in the innovation paradigm. Howaldt et al. (2016) argue that evidence of this change can be found in the way some aspects are treated in the related literature. These are: the non-linear trajectories of innovation; the high degree of context and interaction contingency; the implication of a big variety of heterogeneous actors in innovation production; and the fact that innovation cannot be reduced in its technological products and aspects of risk, complexity and reflexion. At the same time, the policies that resulted from the SIA were judged inadequate to provide with useful solutions to the unequal rate of economic growth between different regions.

It is in this context that the innovation ecosystems approach (IEA) emerges to reflect the dynamic and agile collaborative structures of individuals and organizations that enjoy self-governance and have a shared vision of desired transformations (Smorodinskaya et al., 2017).

An innovation ecosystem is defined as a "network of interdependent organizations, organized around a focal firm or a platform and incorporating both production and use side participants and focusing on the development of new value through innovation" (Autio & Thomas, 2014). This approach emphasizes the blurring between the roles and definitions of social agents into economies represented by new compound words such as 'prosumer' for the mixing of consumer and producer roles (Smorodinskaya et al., 2017), 'co-opetion' for the simultaneous competition and cooperation between firms (Autio & Thomas, 2014)

and 'gloCal' for the mixing of local and global perspectives of creation of social value (Carayannis & Campbell, 2012).

The concept of 'prosumer' underlines the various possibilities of co-creation of value by the integration of the value-in-use in order to create customized products. The 'co-opetition' concept, sometimes refers to the business strategy developed by certain companies that consists in nurturing innovation culture in their providers' organization (Gobble, 2014). In some other contexts, it is used to represent the complex mix between cooperation within networks and between various networks and competition between various networks in the production of knowledge (Carayannis & Campbell, 2012, p. 41). The 'gloCal' concept refers to the multi-level simultaneous process of knowledge and information as well as to "stocks and flows of knowledge with local meaning and global reach" (Carayannis & Campbell, 2012, p. 48).

All of these concepts involve the idea of the permeable boundaries represented by the 'open innovation' concept as innovation is directly linked to the flow of knowledge from internal as well as external sources (Gobble, 2014). Knowledge is a central element of the innovation ecosystem, some going as far a defining an innovation ecosystem as "two separate, weakly coupled economies: the knowledge and the commercial economy" (Gobble, 2014). This brings some to talk about creativity instead of innovation and argue that "an advanced knowledge economy is a knowledge economy, innovation economy, and a creativity economy at the same time" (Carayannis & Campell, 2012, p. 15). This 'creativity turn' underlines the fact that new ideas and critical and creative thinking can result from non-R&D activities and their implementation can be non-commercial.

Innovation is considered to happen through confrontation of different angles and perspectives, pointing out the connectivity of different actors (Smorodinskaya et al., 2017). The power of the collaborative aspect of networks as systems of production and transfer of knowledge, as well as the variety of the actors involved is underlined. In table 2, the key concepts of the Innovation Ecosystem Approach are summarized in terms of the main actors involved, the way the innovation process comes about and the organization schemes developed around the actors and innovation process.

However, in contrast with the SIA, the IEA as a metaphor inspired from natural systems, emphasizes the complex dynamics of these systems and underlines self-governance, self-organizing and adaptation to a non-linear environment as their constituent elements (Smorodinskaya et al., 2017). This approach suggests that institutions are part of the ecosystem in the same way as firms, educational institutions

and consumers. This aspect was conceptualized in Carayannis and Campbell's work (2012) by adding in Etzkowitz and Leydesdorff's "triple-helix" innovation system one more helix to represent "public" sector defined as "media-based and culture-based public and civil society" (Carayannis & Campbell, 2012, p. 13). The Mode 3 innovation ecosystem was thus defined as a "model of an interactive coupling of nonlinear innovation modes", these modes being defined as innovation trajectories carried by different institutional couplings (Carayannis & Campbell, 2012, p.24).

Table 2: Key words and concepts for the IEA

Who (main actors)	How	Organization
Production & use-side participation; 'prosumer'	Confrontation of different angles & perspectives; mixing of local and global perspectives; 'gloCal'	Network as a system of production & transfer of knowledge
Variety of actors organized around a local firm or platform		Complex dynamics & agile collaborative structures; 'co-opetition'
Institutions part of the ensemble just as firms, educational institutes and consumers; 'quadruple helix' for multilevel innovation systems	New ideas, critical and creative thinking can result from non R&D activities	Self-governance, self-organization & adaptation to a non-linear environment

Source: authors's elaboration

The IEA represents the transition to a type of market whose micro and macro elements are connected through network linkages enabled by digital platforms as well as a digital shift in social interactions. The resulting policies are extremely challenging since they suggest a revolution in public organization to more horizontal and interactive structures as well as the establishment of more inclusive institutional frames that allow and enable collective decision-making.

2.2 Entrepreneurship Studies

Entrepreneurship is another approach to understanding economic development and industrial renewal. The field is constructed on Schumpeter's theory of economic growth and although it shares this theoretical basis with innovation studies, these two have taken very different turns (Landström, Åström, & Harirchi, 2015). Entrepreneurship is closely related with the idea of "creative destruction" as a mechanism through which temporal and spatial inefficiencies in an economy are discovered and mitigated (Shane & Venkataram, 2000). The entrepreneur in Schumpeter's vision consists of the person that combines

knowledge in order to introduce new ways of doing things. The process of "creative destruction" is based on the hypothesis that large, established companies generally demonstrate organizational inertia and resistance to change. That is the reason why entrepreneurs are forced to create new ventures in order to apply new arrangements. If this succeeds, thus providing the new venture with a competitive advantage, incumbent companies are forced either to follow the trend or exit the market.

The idea of the entrepreneur as change agent displacing established companies by her adventurous innovative capacity was reexamined by Schumpeter due to the increasing systematic development of new processes inside the big companies. The predominance of big enterprises, the link between performance and economies of scale somewhat forced him to recognize that innovation and knowledge appropriation would become a big enterprise affair (Audretsch & Thurik, 2001). These aspects of the managed economy persisted from the post-war era throughout the cold war. Additionally, during the late '80s and the early '90s, as knowledge started to be considered as a crucial determinant of competitive advantage and better suited to explain long-term growth, the importance of established companies with large R&D departments in the innovation production was reinforced. Furthermore, globalization and the development of transnational corporations made small size seem an enormous disadvantage in terms of facing fixed costs of learning about foreign environments, negotiating with national governments and communicating at long distance (Thurik, 2008). Big companies and governmental research institutions were perceived as the main drivers of innovation and public policies were addressed to them.

The publication of David Birch's *The Job Generation Process* in 1979 that showed that the majority of new jobs in the US was created by new, small firms drew attention to and resulted in an increased number of works exploring the link of economic development to entrepreneurship. Furthermore, during the '90s as big companies entered in a crisis which resulted in multiple phases of restructuring and downsizing due to the entrance of 'low-cost labour' regions in the global competition, new and small firms grew their share of job creation and GDP creation (Audretsch & Thurik, 2001). Further academic research suggested that in an economy where knowledge became a central factor of competitive advantage, entrepreneurial activity was a straightforward way by which knowledge and R&D spilled over and leaded to the introduction of newness in the market (Thurik, 2008). This shift from the managed to the entrepreneurial economy, became more obvious as the rate at which big companies were replaced by small, highly innovative new ventures grew.

During the first years of this shift from managed to entrepreneurial economy, scholars treated a large variety of subjects and drew form a vast literature of economic theory, sociology and psychology in order to understand entrepreneurship. The common feature of this literature is that the focal point is the entrepreneur. Management issues of small and medium companies, the factors that influence new ventures' creation, their success or failure, as well as the psychological traits of the entrepreneurs seen as the particularly talented people able to raise capital and support around a new venture dominated the related literature for a long time.

In their influential article published in 2000, Shane and Venkataraman argued that entrepreneurial studies up until then focused largely on issues of strategic management and performance of small and new firms ignoring issues exclusively relevant to entrepreneurial activity itself. Constructing on the definition of entrepreneurship as the mechanism by which society converts technical information into products and services, they define entrepreneurship studies as the scholarly examination of how, by whom and with what effects opportunities for such conversions are discovered, evaluated and exploited. This definition has two major axes: the existence of lucrative opportunities and enterprising individuals, thus suggesting two major considerations. First, that opportunities are not equally distributed across the population and that there is no equilibrium state where opportunities exist or not, thus the dependence of the existence of such opportunities on contextual factors. Second, that since we can understand entrepreneurship as a transition state and since it involves many and diverse individuals, it cannot be solely analyzed through personal attributes independently of the situation.

In parallel with the work of Shane and Venkataraman, Verheul et al. worked on and proposed an integrating framework for understanding entrepreneurship drawing on various theoretical basis. This exercise resulted in a two-fold understanding of the existence of an entrepreneur at the macro-level, a demand and a supply perspective (Verheul et al., 2002). This framework proposed a way to understand the existence of the need for innovative products, sources of supply and processes and of enterprising agents that combine knowledge, discover or create this opportunity and take the decision to risk to implement it.

The work identified push and pull factors for entrepreneurship determined by technological development, globalization, economic development and the industrial structure on the demand side and on population growth, density and urbanization rate, age structure of the population, immigration rate, women's participation on the job market, income levels, unemployment and income disparity on the supply side (Verheul et al.

2002). At the micro-level, it was assumed that other factors affect the decision making of whether the individual will act upon the available entrepreneurial opportunities. As stated by the authors "resources, ability, personality characteristics and preferences are the main inputs for assessing and weighing the risks and rewards of entrepreneurial opportunities versus those of alternative occupational opportunities" (Verheul et al., 2002, p. 19).

2.2.1 Entrepreneurship ecosystem approach

As economic studies consistently linked entrepreneurship with rapid job creation and GDP growth and the protagonism of regions with high business turbulence related to high-technology innovation was increasing, academics became interested in the local specificities of these regions. The work of Saxenian on Silicon Valley and the development of the study of clusters, industrial systems, learning regions as economies geographically specified contributed to the shift to a system-based approach to entrepreneurship (Mason & Brown, 2014). Furthermore, it was understood that not every small start up but firms with a high growth potential had a significant economic impact. A systemic approach was considered to give a better insight on how to foster high growth firms through a more holistic and dynamic way of understanding how these firms are created and developed. As Stam notes (2015), the entrepreneurship ecosystem approach (EEA) has emerged as an answer to the insufficiency of the system of innovation approach. He argues that although it considers the involvement of a variety of actors and the non-market relations between them, it is insufficient because the entrepreneur in it remains a "black box".

The ecosystem metaphor, was firstly used in Moore's work on business ecosystems, a conceptual framework that emerged at the beginning of the '90s, in parallel with the systems of innovation approach. Moore, inspired from the realization that innovative businesses cannot evolve in a vacuum, advances that business need to mobilize many resources from their surroundings in order to succeed in out-innovating their competitors (Moore, 1993). In his work, Moore with some input from natural systems where interdependent species co-evolve in an endless reciprocal cycle, identifies various phases of emergence, consolidation and challenging of business ecosystems and provides managers with advice regarding ecosystem's management. This approach sees the ecosystem as a result of big companies strategy to promote innovation in their providers' network. It is considered as a strategy that builds cooperative business communities that develop complementary capabilities in order to serve customers' needs and compete with other business ecosystems of the same sector.

Recently a strategy of entrepreneurship ecosystems for economic development has been developed by Isenberg. For him, the "entrepreneurship ecosystem consists of a set of individual elements such as leadership, culture, capital markets and open-minded customers that combine in complex ways" (Isenberg, 2010, p. 3). In his work, Isenberg stresses the fact that each ecosystem is constructed on unique local conditions. This is a common feature in many works on entrepreneurship ecosystems considered to be created on place-specific assets (Mason & Brown, 2014). Also, at their heart typically exists one or several large established businesses which act as talent magnets and as providers of continuous training to their employees. It is also considered that the most effective businesses to foster entrepreneurial ecosystems are the ones which are locally headquarted (Mason & Brown, 2014). Another important element of these ecosystems is the recycling factor, that means the existence of serial entrepreneurs and business angels, people that have succeeded and continue to enterprise or help others to do the same by mentoring and lobbying. In this sense, media are crucial in changing attitudes through positive image construction and in celebrating entrepreneurial successes (Isenberg, 2010).

There are also organizations that act as incubators, that is rapidly growing firms operating on the cutting edge of new technology that generate too many commercial opportunities to take advantage of. In these organizations future entrepreneurs acquire technical and management skills, market and product knowledge through which they can develop strategies to exploit of these opportunities. However, spin-off companies are common in the emergent phases of industry when there is not yet a dominant product design (Mason & Brown, 2014). Incubators are important because spin-off companies contribute in diffusing important knowledge and skills through the mobility of highly qualified people and because spin-offs create the critical mass to create and reinforce a support network for entrepreneurship (Mason & Brown, 2014).

In these ecosystems we find also bridging assets, that is people who act as connectors and deal makers just because they have that type of leadership profile and because the ecosystem's culture permits it. Culture is considered a very important item since it promotes a 'give before you take' attitude and does not stigmatize failure. In fact, there is a high experimentation philosophy which applauds fast failure and seeks to draw valuable information from failed enterprises (Mason & Brown, 2014). The key elements of the entrepreneurship ecosystem approach are summarized in table 3.

Finally there is access to capital markets. In order to foster entrepreneurship, changes in legal and regulatory frameworks are considered necessary in order to facilitate

access to capital. However, flooding every high-potential entrepreneur with easy money might be counter-productive, Isenberg argues, as this can impede the development of resourcefulness which is a basic characteristic of entrepreneurship (Isenberg, 2010).

Table 3: Entrepreneurship ecosystem key concepts

Key elements	Description
Place-specific assets	Unique previous local conditions, such as a previous industry
Large established businesses	Talent-magnets & continuous training providers to their personnel; Great leadership of those that are locally head-quartered
Recycling factor	Serial entrepreneurs and business angels. People that have succeeded and help others to imitate them; media's central role in positive image construction celebrating local entrepreneurial successes.
Bridging assets	People that act as connectors & deal makers because of a 'give-before-you-take' culture & encouraging learning from failure culture.
Incubators	High growth firms at the cutting edge of new technology that cannot exploit all of the commercial opportunities that present to them leading to spin-offs that help create the critical mass for the creation of an entrepreneurial system.
Access to capitals	Legal & institutional rules that permit access to financing.

Source: author's elaboration

The EEA has received some interesting critiques. Stam (2015) points out that works adopting this approach only provide with a large list of involved actors without a clear definition of the optimal interaction between them. He argues also that the definition of a successful entrepreneurship ecosystem has limited utility since it is based in tautological premises, in other words it ignores the "chicken and egg" question (Mason & Brown, 2014). Another issue is that whereas there is an evolutionary logic implicit to the ecosystem formation which should implicate time in the analysis, in general these ecosystems are considered as completely formed and static. There is very little understanding on how these ecosystems come to be and evolve (Mason & Brown, 2014). Also, the assumed dynamic nature of these ecosystems limits the value of identifying generic features altogether.

A big difference in policy orientation compared with the SIA is that the government is not considered to be a good leader in fostering entrepreneurship. "It is difficult to point to an entrepreneurial ecosystem that has arisen through direct government intervention" (Mason & Brown, 2014, p. 19). The government is restricted in the role of facilitator, identifying potentially entrepreneurial capabilities of the specific localities, since it is also admitted that "you cannot create something from nothing" (Mason & Brown, 2014, p. 19). A blend of "bottom-up" and "top-down" policies is then recommended in order to receive

active input from the (potential) entrepreneurial community. These policies are supposed to adopt a holistic approach facilitating solutions promoted organically through collective action of the entrepreneurial actors on aspects relative to entrepreneurs themselves, resource providers and connectors within the ecosystems (Mason & Brown, 2014).

2.3 Models for social innovation

Scholars and policy analysts have used the innovation and entrepreneurship system approaches to understand social innovation and its processes. In the following section, we analyze some of these works categorized according to their main inspiration, even though the distinction is made in a vague way. We also discuss relative models used in policy-making documents and their implication on the policy recommendations. The works discussed in the next sections are summarized in table 4.

Table 4: Analyzed innovation/entrepreneurship and ecosystem-inspired models for social innovation

Systems of Innovation & Regional Innovation systems approach	Ecosystems
(Gallego-Bono & Chaves-Avila) Cooperative innovation systems	(Bloom & Dees) Ecosystem for social entrepreneurship
(Moulaert & Nussbaumer) Social Region	(Lévesque) Entrepreneurial ecosystems for social and solidary economy
(Klein et al.) Qc model for social innovation based on consultation	(policy-report) TEPSIE'S demand and supply ecosystem

Source: author's elaboration

2.3.1 Innovation/entrepreneurship-inspired approaches to social innovation

In a recent work that draws upon the SIA, Gallego-Bono and Chaves-Avila (2016) advance that one of the ways to transform cluster to innovation systems is through cooperation. More specifically, they argue that cooperatives in innovative systems are able to stimulate innovation and develop abstract rules to overcome the inevitable imbalances that arise from the 'destructive creation' process. The authors adopt an evolutionary perspective advancing that an innovation consists of the generation, adoption and retention of an innovation by an entire business population, defining in this way a meso-trajectory that depends basically on the business owners' and entrepreneurs' creativity. This trajectory is the main driver of the configuration of new meso-rules, that can be

understood as new cognitive, behavioral, technological and organizational practices. In this process, meta-institutions (0th order institutions, 1st order being the institutions that regulate the relations between the individuals, their organizations and the production and consumption processes), as the set of very stable rules and beliefs play a key role in coordinating the disorder provoked (Gallego-Bono & Chaves-Avila, 2016).

The authors argue that cooperatives are good at creating meso-rules because they share common values and routines, they can bring together heterogeneous population members thus facilitating internal dissemination due also to their strong territorial ties. Cooperatives can be "spaces for the *organic* and *spontaneous* generation of 0th order institutions" (Gallego-Bono & Chaves-Avila, 2016, p. 4908). Finally, due to the mutual duty between cooperatives and their regroupments, they tend to engage in advocacy activities in order to complete their mission. The population heterogeneity requires the second-tier organization to act as an intermediary between them and the communities of practice and epistemic communities (CP/EPs) that produce new knowledge. The articulation of this meso-economic level is a way to coordinate the different actors, and CP/EPs play a crucial role in this process as their network has a coordinating effect. Finally, the strategic position of 'cooperative Schumpeterian entrepreneurs' in the network contributes to the creation and the dissemination of the new meso-rule as well as in the "creation of new CP/ECs and [as] an essential vehicle for public policies on technology and innovation" (Gallego-Bono & Chaves-Avila, 2016, p. 4908).

This work contributes in articulating the role that second order cooperatives and cooperative groups play in generating and disseminating new combination of rules that coordinate the innovation process. In this way, they form and integrate the new meso-rule from the CP/ECs to the highly heterogeneous cooperatives that compose the business population. This work is addressing the dissemination and coordination issue of the introduction of a new technology in a specific industry. It could be a very useful theoretical framework in order to make an analogy with new meso-rules that go beyond industry-specific practices to address day-to-day practices.

Based on the regional innovation system approach, the work coordinated by Franck Moulaert through various research programs explores the relation between spatial distribution, socioeconomic organization, governance and development. Moulaert and Nussbaumer proposed the social region (presented in its actualized version in Moulaert & Nussbaumer, 2014) as a community approach to territorial development. This approach is an alternative to the individualist approach, defining the community as the space where

people interact and enact their sociality. It also integrates various aspects of development arguing that economic improvements such as economic growth does not necessarily lead to prosperity and thus do not capture the development status of a region in its globality.

In this context, indicators of general well-being rather than strictly those that measure economic performance are taken into account. In consequence, social innovation is about satisfaction of basic needs not only in terms of availability of monetary resources, but also of cultural, artistic and political private and collective needs as well as sustainable use of natural resources. Community development thus connects the two main characteristics of social innovation: the answer to unmet basic social needs and the new relations between the community's actors. The way by which social innovation happens is a bottom-up process deeply socially and politically entrenched. Institutional innovation is thus necessary in order to create and support local institutions and establish a fruitful connection with central government. These institutions' role is to identify and foster local competencies, characteristic of the region's socioeconomic and political history. Since community development depends on "bottom up" initiatives, capacities such as collective decision-making, deliberation and consensus building are indispensable. In this order of ideas, the term collective capital is used to express any association of public or private capital, created based on principles of reciprocity and solidarity and used to cover a private or public need or to control or reorientate the market's resource allocation functions.

This approach contributed in integrating the social innovation with the community development literature emphasizing the self-governing and self-organizing aspect of regional development. However, the social region falls in what we identified earlier as the collective trap. Anything done in a collective way has a positive connotation excluding *de facto* the possibility that the community does not adopt a sustainable, long-term informed strategy. This framework served as an inspiration to the ecosystem approach positioning social innovation as the process by which "citizens are proactively taking charge of their future" (Sgaragli, 2014, p. 9). Community development is the predecessor of what is understood as "a paradigm shift where grass-root, bottom-up, spontaneous movements and communities of change are shaping new ecosystems" (Sgaragli, 2014, p. 9).

On the other side of the Atlantic ocean an amount of academic work produced in the Research Centre on Social Innovations (CRISES) in Quebec has been exploring the dynamics of social innovations since the '80s along three axes: production, life conditions and services to collectivities and local development and its governance. This work has resulted in the conceptualization of a Quebec model for social innovation based on

consultation[1]. This model (Klein, Fontan, Harrisson, & Lévesque, 2014) is based on governance, the coconstruction and the coproduction schemes and the existence of a plural economy.

In CRISES' work, social innovation is studied as change that results in social transformation through new institutional arrangements. Governance refers to the processes of consultation and negotiation in the quest for a common ground resulting in partnerships between various actors that have traditionally conflicting interests. The co-construction and co-production of public policies refers to the active participation of organized civil society movements in their elaboration at the institutional level and the production of the social services at the organizational level. Finally, plural economy refers to the cohabitation of various forms of economic propriety, of various resources and logics for their use.

The Quebec model for social innovation contributes in underlining the importance of co-construction and co-production. It escapes from the instrumentalisation of the participation to the services' efficiency putting the emphasis on the autonomy of the organized social groups in the design and the implementation of the solution. Financing of these services follows the same logic, creating and supporting the autonomous community sector through direct funding of its general social mission.

However, the model fails to provide an answer to the 'chicken and egg' question in the causal relation between social movements self-organizing to provide sustainable solutions because of government support or the existence of a critical mass of organized social movements resulting in government support. Also the "cultural specificity" that brings leaders from all social sectors to work together for Quebec's development is an insufficient explanation of how this happens because there is no region in the world that lacks cultural specificity. The concept of economic nationalism explains more of this unusual coalition (Malo, 1999) but it is necessary to explore what is exactly its role in this coalition's formation and evolution.

2.3.2 Ecosystem-inspired approaches to social innovation

The increasing popularity of the concepts of social entrepreneurship and entrepreneurship ecosystem made these theories more familiar and interesting to scholars and policy makers. Bloom and Dees (2008) used an ecosystem approach to elaborate a

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1   In french the word "concertation" can be translated as the process of consulting the concerning parties before taking a decision. "Se concerter" as a reflexive verb can be translated as consulting each other in order to reconcile existing visions in view of a joint project.

strategy for social change through social entrepreneurship. Social change would come about through systemic change that "requires both a shift in environmental conditions and the introduction and establishment of innovative practices" (Bloom & Dees, 2008, p 52). Thus, social entrepreneurs should make coalitions with other relevant organizations, communicate adequately the intended change in order to create support, establish the credibility of the new idea through small scale experimentation and, anticipate contingencies in order to elaborate alternative ways to achieve their goals.

Lévesque's work on the entrepreneurial ecosystems for social entrepreneurship (2016) is an adaptation of the EEA approach to the social and solidary economy. Lévesque departs from the fact that, historically, the social economy was constructed upon affinity systems in terms of values, rules and practices because it is based on an aspiration for a better world making diffusion and change of scale an obvious objective. Also, due to the fact that it functions in a hostile environment, partnership is a survival issue. Finally, the need of support from civil society made obvious the construction of a governance system more or less autonomous from the government bringing together all relevant stakeholders.

Lévesque uses the Quebec model to illustrate a regional perspective on social and solidary ecosystems. According to the author, the Quebec ecosystem that took its form as a result of the 1996 summit on work and the economy is supported by four main pilars: financing, support services to the enterprises, research and knowledge transfer and education and training. In each of these domains many social and solidary economy initiatives were working long before the 1996 summit, but this permitted the recognition of their work by the government and other social actors and the establishment of a new group of all emerging actors of social economy, the *Chantier de l'économie sociale*. This group along with the intersectoral union of cooperatives and mutuals were the platforms of networking and representation where in co-construction schemes, transversal public policies were negociated. Lévesque underlines also the fact that the financial network, the services for the support to the entities as well as the research and training programs were promoted and supported by the government.

Lévesque's work links the formation of cooperative groups to the capacity of the cooperative movement to reposition itself and elaborate development tools, partly through institutional change, during the '90s decade of economic crisis. These groups' mission, he argues, went beyond the narrow sectorial vision – the response to their members' needs – elaborating a strategy to combat economic determinism in collaboration with other organized groups such as community organizations, worker's unions and women's groups.

Although the two works presented above give valuable insight on the requirements for the formation of a support system for social entrepreneurship and entities of social and solidary economy as in the Quebec example, they fail to explain how this links to social change. Bloom and Dees provide a definition of systemic change, but they do not explain how it happens. In this sense, they both explain little of the capacity for social innovation of these ecosystems.

2.3.3 Policy-motivated system approaches to social and policy implications

As we have established in the introduction of this document, social innovation has recently attracted the attention of policy-makers, which combined with the increase in popularity of the ecosystem metaphor, has led to the publication of policy reports proposing ecosystems' approach to social innovation. European Commission's BEPA's report "Social Innovation: a decade of changes" (2014) intends to analyze the way social problems are approached aiming at providing with sustainable and radical solutions applying a system-based approach. Ecosystems are understood as a useful framework because they provide with an understanding of a long-lasting support system and a representation of the various stages of the process. Special attention is thus given to "supportive governance" that enables mobilisation of collective energy by "identifying obstacles and creating spaces of collaboration and thinking out of the box" (BEPA, 2014, p. 21). According to the authors, the government should play an important role in fostering a trust and learning culture, digital means can revolutionize self-organizing strategies and open governance and innovative funding tools are a major factor throughout the different stages of social innovation. Finally, competence building and recognition tools are presented as important catalysers in these collective endeavours.

In TEPSIE's publication "Building the Social Innovation Ecosystem in Europe" (2014), methods to "support socially innovative organisations that emerge from civil society and the third sector, including social enterprises, co-operatives and mutuals" (TEPSIE, 2014, p. 5) are presented. The authors identify demand and supply side parameters as well as intermediaries that together form the support ecosystem. In the supply side we find financial tools and non-financial services such as mentoring and coaching, incubators for turning an idea to a business plan and accelerators for scaling a successful business.

Some elements regarding the skills required for social innovation are also presented. A remarkable example is *Kaospilots,* a hybrid business and design in Denmark that cultivates a set of capacities that constitute 4th sector leadership (not purely private,

public nor third sector) necessary to create socially innovative initiatives. In the demand side, we find civil organizations advocating for sustainable solutions to societal problems and representation organs of the social enterprise sector itself. We also find policies, such as personalized budgets, which aim at implicating users in the social services' delivery increasing their independence and finally commissioning and public procurement.

TEPSIE's publication contributes in noting a conceptual confusing between the incubation process, incubators and accelerators that may mean from co-working spaces to service providers for social enterprises but, mostly, avoids the first stage of social innovation, that is, the coming-up with the new idea. These reports contribute in enumerating a number of tools for financing and other business related services, but fail to identify those directly related to social innovation. In most of the analysis, social innovation is implicitly considered as equivalent to social economy or social entrepreneurship.

In this sense, the proposed measures fit in the categorization made in Chaves' (2013) analysis of public policies addressed to social economy that define three main categories, institutional, cognitive and financial measures. The institutional measures address the legal norms and administrative procedures necessary for the formation of social economy entities and the cognitive, the understanding and the promotion of the inherent values of social economy. Finally, the financial measures put forward tools that promote either the demand or the supply side, such as direct financing or social clauses in public procurement. An issue that is however specific to social innovation policies is the focus on the innovative character of the instruments that are used without an explicit explanation of how this enhance social innovation. For instance, the way digital media have changed people's communicating practices is now a generally accepted fact, so their use in any kind of support scheme for social and solidary enterprises does not add anything to their innovative capacity.

The work in the OECD's "Social Innovation Policy Framework for Croatia" (2016) defines social innovation as a provider of "impactful new solutions to meet societal needs, resulting in new social relationships (including beneficiaries) achieved through new products, processes and models" (OECD, 2016, p. 13). Furthermore, interconnected social innovations happening in parallel lead to systemic social innovation answering to societal challenges, thus imposing a system-based approach. Although the proposed ecosystem contains few new items compared with the systems presented above, it takes into account a social innovation system typology that links a country's social system with the type of social economy entities that flourish in it. It thus provides with an insight on the first stage

of social innovation, that is the way people perceive social challenges and the role that each social actor should play in their resolution.

Finally, in the article on tackling marginalization through social innovation, Von Jacobi et al. (2017) after a thorough study of European policies for social innovation, suggest that the EU's definition recognizes the capacity of social innovation to transform the socio-structural dynamics that give rise to social exclusion, However, the policies as operationalized in the European Social Funds and the EU program for employment and social innovation, focus on equipping citizens with the resources they need for the labour market, rather than supporting initiatives that aim at transforming the labour market in a 'sustainable' or 'inclusive' manner. Thus these policies direct the majority of the resources towards "innovations that proffer individual solutions, or mere strategies and tools" (Von Jacobi et al., 2017, p. 13) leading to activities that often fall short of allowing social innovation processes to be genuinely transformative.

Through these examples, we can see that the proposed social innovation systems are inspired from the entreprneurship ecosystems and focus on the suppport system of the emerging initiatives. They thus leave outside of the analysis the initial phase of social innovation, the one that challenges existing configurations and rearranges existing elements to invent new frameworks. They also promote a more straightforward instrumental use of social innovation, ignoring its transformative potential.

Chapter 3 Social innovation ecosystems and Capability Approach

In this work we defined social innovation as new combinations of social practices that drive to social change. In this chapter we explain how social practices can be linked to human capabilities in a way to understand social innovation as a new combination of capabilities. Then, using the 3C model, we explain the relation between individual and collective capabilities and social innovation. Finally, we give some general directions on how social innovation ecosystems might work and how they could be supported.

3.1 Human development approach to social innovation as driver of social change

One of the main characteristics of social innovation in this work is that it drives social change making new social practices regular. Development theories have studied this issue from a normative perspective, that is "how desirable change in society is best

achieved" (Howaldt et al., 2014, p. 34) but there are many other reasons why development theory provides us with useful insight in understanding social change through new social practices. Development theories based on the neoclassical model were mostly focused on what were called developing countries and were based on a sequential view of development. The ecologist's movement questioned the sustainability of this model urging for ways to develop economic growth models that could meet citizens' needs without compromising the ability of future generations to do the same. At the same time, the questioning of the neoclassical definition of development as being socially constructed and dominated by western ethnocentricity gave place to a post-development approach. This approach incorporates 'bottom-up' methods for a locally-embedded development based on traditional knowledge, local competencies and principles of reciprocity and solidarity (Howaldt et al., 2014).

Meanwhile, the recent "economic and financial crisis has re-opened a serious north-south and east-west split between European countries" (Howaldt et al., 2014, p. 41) and the emergence of phenomena such as urban poverty and social exclusion bring in european actuality problems that were considered to belong to the past. The expanded use of digital platforms seems to enable new forms of economy, such as the shared economy that moves away from the primacy of ownership. Frugal innovation permits the apparition of 'good-enough (and certainly better in social terms) with less' solutions vs 'doing more with more' models (Howaldt et al., 2014, p. 44). 3D printing has permitted also a wave of mass customization and the expansion of the 'makers' movement' that creates tailor-made products reducing waste. These developments shift the development theories to a more 'shared value' and people-centered model.

As Rifkin notes (2014), the emerging new ways of economy are also important because a large number of people in western societies "not only share but are also empowered on a large scale for the first time since the modern economy formes to opt-out of passively purchasing goods and services" (as cited in Howaldt et al., 2014, p. 40). Amartya Sen has contributed with a people-centered theoretical framework in the understanding of human development, the Capability Approach (CA).

3.2 The capability approach and the structuration theory

In the first part of this chapter, we explained why development theories are relevant to the understanding of social innovation as driver of social change and why people-

centered approaches are useful perspectives in the context of modern societies. In what follows, we first present the conceptual building blocks of the Capability Approach (CA). We then map the central concepts of the CA against the ones of structuration theory in order to express social innovation as a new combination of social practices. This exercise permits us also to systematically show how human development theory and social innovation complement each other and through structuration theory.

3.2.1 Central elements of the capability approach

The CA is a framework that intends to evaluate well-being avoiding the utilitarian indicators of pleasure and desire-fulfillment and the commodity fetishism (Sen, 1990). Utilitarian indicators are judged inadequate to differentiate between real deprivation and the ability of people to adapt their desires in their situation of scarcity they might live in and between moral social imperatives and people giving up on claiming them as it is mostly the case with equal wadge for women. On the other hand, it is now accepted that income and wealth do not necessarily lead to quality of life, which makes commodity indicators inadequate to accurately assessing well-being (Sen, 1990).

Sen's work departs from the necessity to understand people as ends and not as means of progress. As he states "human beings are the agents, the beneficiaries and adjudicates of progress" (Sen, 1990, p. 41). In this sense, he defines well-being as the capability of a person to lead the life she values. Sen introduced this framework in the beginning of '80s and his work was further developed by the philosopher Martha Nussbaum, Ingrid Robeyns and other scholars. In Sen's framework, the CA is about people's "effective opportunities to undertake the actions and activities that they want to engage in and be whom they want to be" (Robeyns, 2005, p. 41). Sen defines human life as a combination of various different ways to be and to do, that is *'doings and beings'* called *'functionings'*. Many features of a human being could be described as a being or as a doing. Thus, the quality of human life, that is well-being, can be understood in terms of valued activities and the capability to achieve these activities. With the term 'capabilities' Sen defines a person's real freedoms or opportunities to achieve functionings.

The rejection of the commodities approach results also from the realization that people do not convert commodities to functionings at the same rate. In other words, the availability and ultimately the ownership of a good or a service is only part of what a person will use to achieve a functioning. A very commonly used example of this is the bicycle. Having a bicycle does not lead automatically to mobility, instead it does so through

the ability to cycle (Robeyns, 2005). The rate at which a person can turn commodities to functionings is called a '*conversion rate*' and can be influenced by personal, social and environmental factors. The personal conversion factors refer to personal characteristics such as physical condition, sex and metabolism. As for social factors, these concern social norms, discriminating practices, gender roles, power relations, etc. The environmental factors include geographical location and climate. In figure 3, the conversion equation is presented graphically, as in Robeyns' "The Capability Approach: a theoretical survey".

Figure 3: Robeyn's stylized non-dynamic representation of a person's capability set and her social and personal context.
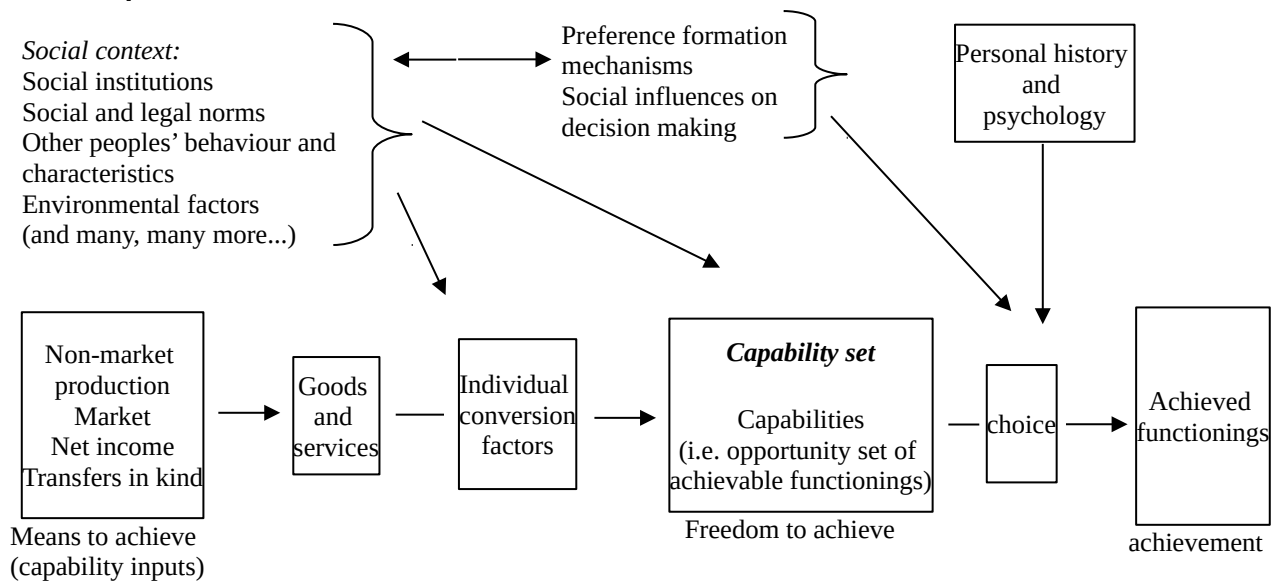
Source: Robeyns (2005, p. 98)

In this sense, goods and services account as inputs in the same way social and institutional context, social norms and tradition do in the equation that converts commodities into functionings. These elements influence the individual's conversion factors - for instance, following the bicycle example, the role that being a young woman could play in riding a bicycle in some social contexts - and the capability set as such, putting some functionings in the sphere of the socially possible or not impossible. Finally, the social and institutional context influences the personal preferences and the process by which the person chooses to actually pursue a functioning or not. In this sense there is a conceptual difference between capabilities as the set of possible functionings or the set of opportunities and actually achieved functionings.

3.2.2 Mapping the Capability Approach against structuration theory

A mapping exercise consists of establishing analogies between two sets of elements. The starting point consists of establishing equivalences between definitions of their basic elements and then between their properties and the relations between the sets' elements. Finally, we extrapolate properties of the whole set to the other and vice versa. In table 5, we summarize the results of this mapping exercise of the capabilities approach to the structuration theory in terms of corresponding definitions, properties and relations between the various elements that leads us to the final proposition of understanding social innovation as new combinations of social practices.

Table 5: Mapping of the CA to the structuration theory for social innovation (SI)

Capabilities approach	Structuration theory
doings and beings (functionings)	social practices as everyday acts
the set of all functionings is human life	social practices and their enactment make social systems that exhibit structural properties
evaluating well-being means evaluating functionings and the capabilities to achieve them	evaluating well-being means evaluating how people live their everyday life and their ability to influence it
Capability reflects a person's freedom to **choose** between available ways of living	Ability to choose between various ways of living one's life: cooking, consuming, partnership, etc.
Conversion factors as the rate at which a person can convert commodities to functionings	Knowledgeability as a process of reflection and monitoring through which people produce and reproduce social practices.
New combinations of capabilities is SI	New combinations of social practices is SI
social change means actually achieved functionings through new combined capabilities	social change means introducing a change in social practices that subsequently become regular practice

Source: author's elaboration

We start the mapping exercice of the CA to the structuration theory by establishing that social practices can be seen as functionings.

Definition: Social practices are equivalent to functionings

We have already seen that social practices are defined in structuration theory as routinized types of behaviour which consist of several interconnected elements: bodily activities, forms of mental activities and background knowledge in the form of understanding. According to the structuration theory, the reproduction of social practices creates social life which suggests the analogy with the definition of human life as a combination of functionings, since we intutitively can see life being lived in the various way we are and we do things everyday. This leads us to the first proposition of this mapping, that is when we talk about evaluating well-being as evaluating valued functionings and the

capability to achieve them, we refer to evaluating ways of living one's life and the ability to influence them.

> Proposition: Evaluating well-being is evaluating the set of achievable functionigns, thus evaluating quality of life is evaluating the way we live our lives and the ability to influence it

Furthermore, as Robeyns states, the main inputs for achieving functionings can be mainly financial but it can also be "political practices and institutions, such as the effective guaranteeing and protection of freedom of thought, political participation, social or cultural practices, social structures, social institutions, public goods, social norms, traditions and habits" (Robeyns, 2005, p. 96). We can thus see social practices as catalysts or inhibitors of the conversion equation as. In the beginning, it might seem ambiguous that we define social practices both as functionings and parameters of the equation that converts commodities to functionings. This can be explained by differenciating between routinized social practices and social practices that exhibit structural properties.

According to Giddens, social systems can be understood as reproduced social practices that exhibit structural properties that allow "the 'binding' of time and space in a social system, the properties which make it possible for discernibly similar social practices to exist across varying spans of time and space and which lend them systemic form" (Giddens, 1986, p. 17). The social practices with the most deeply embedded structural properties implicated in the reproduction of societal totalities, the ones with the greatest time-space extension within these totalities can be refered to as institutions. This differenciation leads us to a second definition, that is social conversion factors are ways of being and doing with great time-space extension that have a systemic form.

> Definition: Social conversion factors are functionings (beings and doings) that are enacted in great time-space extension and take a systemic form

Giddens also argues that structure implies a "virtual order of 'modes of structuring' recursively implicated in the reproduction of situated practices" (Giddens, 1986, p.17) and regulated by certain rules of transformation. Rules can be understood as habits, routines or constitutive or regulative elements of certain practices. He defines resources as the modes whereby transformative relations are actually incorporated into the production and reproduction of social practices. The routinized aspect of social practices suggests an analogy with everyday doings and beings. This analogy confirms also the "sense of trust and ontological security that is sustained through the routinization of the daily activities of social life" (Giddens, 1979).

Structuration theory also considers the enabling and constraining role of structure in the agent's social life. The enabling part is the capabilities expansion, the way Sen defines human development. As we established previously, the structural properties of social practices imply a set of rules governing the matrix of admissible transformations of social systems. These rules can be understood as the generalizable procedures applied in the enactment/reproduction of social practices. Awareness of such rules, expressed in practical consciousness is the very core of knowledgeability which characterizes human agents. Knowledgeability is the capacity of a human agent to reflect and monitor one's enactment of social practices. This knowledge provides for the generalized capacity to respond to and influence a range of social circumstances. We thus arrive to our second proposition: what Giddens calls the agent's knowledgeability is equivalent to the conversion factors, that is the individual's ability to convert comodities to functionings.

Proposition: Knowledgeability is equivalent to the conversion factors

Finally, through knowldedgeability individuals not only reproduce but also transform or replace inadequate social practices in the same way conversion factors can lead to the expansion of capabilities. We can thus arrive to our final definition:

Definition: new combinations of social practices can be seen as new combinations of capabilities

This exercise would be complete if a straightforward analogy between the structural properties of reproduced social practices, which in structuration theory are understood as the sets of transformation relations, organized as properties of social systems and the organized properties of the functionings could be possible. In the CA it is often underlined how social structures influence the capabilities set or an individual's conversion factors and there is mention of the complementarity and mutual strengthening of various capabilites (Sen, 1999 as cited in Ziegler, 2010). However, there is no explicit explanation of how these doings and beings form social systems, how some functionings are incompatible with others or in what way some doings and beings connect to each other to form social practices of specific groups of people or entire social totalities.

This could restrict the way this mapping could be used as a comprehensive scheme for social innovation because the CA emphasizes the access to the opportunities to achieve functionings that are part of the sphere of the socially possible or the not impossible. However, it does not provide with a way to understand how conversion factors

change to produce new possible functionings. This limit is connected to the first since if there is no explicit relation between functionings, we cannot really see how some functionings are possible and some others are not.

This obstacle is overcome by Ziegler (2010) who in his article makes an effort to define the 'social' in contrast with innovation in the economic context which, from the Schumpeterian point of view, is seen as combination of new ways to produce, to supply, to organize or to market. He thus defines social innovation as the "carrying out of new combinations of capabilities" (Ziegler, 2010, p. 14) based on Sen's concept of development and social change as capability expansion.

Through our mapping we can see the Grameen bank is a social innovation because it conceived and introduced two functionings that were previously seen as incompatible 'being poor' and 'being reliable to reimburse a loan', thus leading to microfinance. This mapping leads us to consider that when we are seeking to influence conversion factors, we are talking about the capacity of a person to reflect and monitor its own enactment of social acts. It is also important to underline the influence of the social and institutional context in reflecting and monitoring one's everyday social acts, reminding us of the fact that inherent factors that affect the conversion factors can affect one's knowledgeability resulting in what we can call a marginalization process.

As Robeyns notes, Sen has recognized that the CA "can only account for the opportunity aspect of freedom and justice and not for the procedural aspect" (Robeyns, 2005, p. 110). By procedural aspect, Sen refers to normative imperatives of non-discrimination or non-exploitation that should (or not) be adopted by institution. Since these phenomena persist in our societies, social exclusion understood through the CA theoretical lenses could be seen not only as a symptom of low human development but also as a major barrier to the capabilities expansion, since it affects the individuals' conversion factors, the capability set and the process of choice making. We could thus see persistent inequalities as persistently low rates of achieved functionings for social groups with certain ascribed characteristics not subject to change, such as gender or ethnicity.

In the context of the social challenges that our world is facing, it is important to consider such social phenomena and how they can influence human capabilities' expansion and how social innovation can contribute in tackling these problems. In what follows we explore how individual and collective capabilities connect to provide with an answer to the marginalization processes.

3.3 The 3C model for social innovation

In the first part of this section, we establish the relevance of the study of the collective capabilities to social innovation as a driver for social change. We present Jacobi's 3C model for social innovation that makes the link between individual and collective capabilities as well as community capabilities.

3.3.1 Collective capabilities for social change

In their article connecting Sen's theory with social innovation and the marginalized, Chiappero-Martineti and Von Jacobi define marginalization as the "*social process* through which *personal traits* are transformed into *potential factors of disadvantage*" (Chiappero-Martinetti & Von Jacobi, 2015, p. 2). The expression of this disadvantage can be detectable in the form of inequalities. Kabeer draws the attention to four types of inequalities – cultural, spatial, economic and political – and argues that it is "the mutual — and intersecting— nature of these inequalities that reinforces the persistence of social exclusion over time" (Kabeer, 2010, p. 7). It is important, thus, to focus on the fact that all people pertain to various social groups and have various social identities and the event of intersectionality, that is pertaining to a "group at the junction of two or more identity categories such as gender or ethnicity" (Chiappero-Martinetti & Von Jacobi, 2015, p. 2) can be an important determinant of the conversion equation.

According to Chiappero-Martineti and Von Jacobi, an important feature of marginalisation is that not all members of a given group are automatically marginalized. If compensatory individual action is successful, the disadvantage that individuals could suffer because of an ascribed characteristic could not be empirically confirmed. In their further analysis, they adopt an institutional point of view to discuss how networks, institutions and cognitive frames act as contextual conversions factors that could be at play at the same time. Through the CA perspective, they can be seen both as means to achieve functionings and as conversion factors. They thus argue that personal traits can put different individuals in different distances from the functionings they have reasons to value and that social structures act as negative conversion factors to their achievement, making marginalization a "self-feeding (resilient) phenomenon". This relation is presented graphically in figure 4.

The y axis represents the starting points on which individuals are placed due to their ascribed characteristics. At the parallel vertical line the functionings they could achieve

through a compensatory effort after a certain time t are placed in an ascending order, from less to more valued. The slide of the lines represent the personal conversion rate combined with contextual circumstances.

Figure 4: Graphic representation of the relation between starting points, conversion factors and individual achievements

Starting points

Indivual achievements

A_{22}

A_1

A_{21}

$S_{21} = S_{22}$

S_1

time
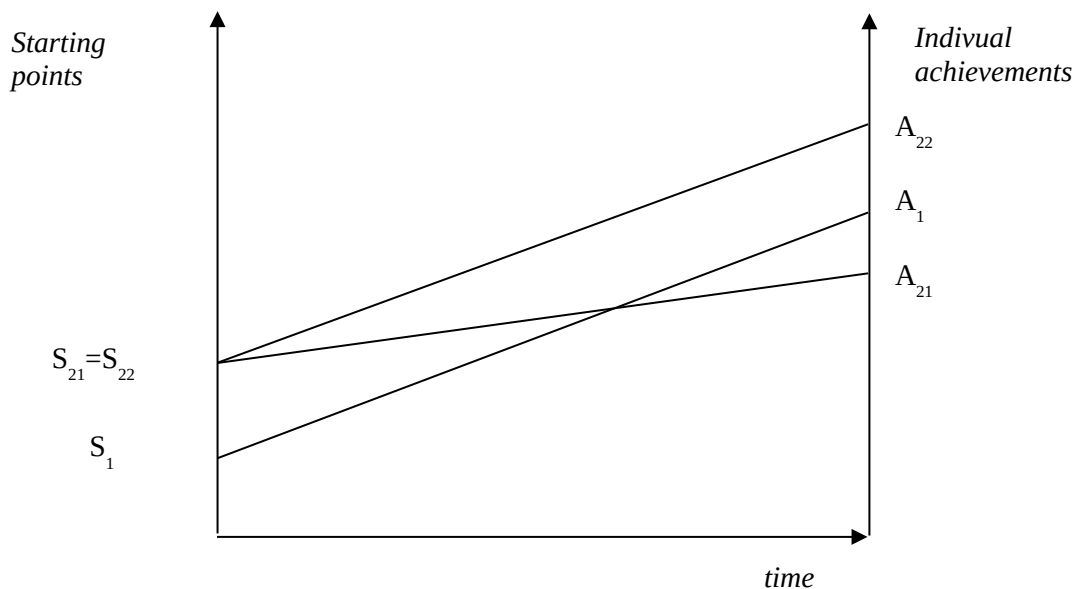
Source: author's adaptation from Chiappero-Martinetti & Von Jacobi (2014)

In this figure, three distinct cases are represented. Since her combined conversion factor is greater, the individual starting from the less privileged position S_1 outruns the individual that started off from S_2 and achieved the A_{21} functioning. At the same time, even if they have the same conversion rates, the individual starting off from S_{21} achieves the more valued functioning A_{22} compared with the one starting off from S_1, that is A_1 due to her better starting point S_2.

Chiappero-Martinetti and Von Jacobi argue that it is difficult that a single individual through her agency might be able to change any social structure, thus leading to the conclusion that only collective action by groups of people with a common goal can exert pressure for social change. This work leads us to see pertaining to a certain social group both as an inhibitor, in terms of the inputs of the conversion equation and as a catalyst, in terms of the collective conversion rate.

It is no coincidence that this discourse overlaps with the empowerment discourse. What in Chiappero-Martinetti and von Jacobi's article is seen as 'compensatory individual action', in Rowlands' work is expressed as the power to undo negative social constructions

(1997). Giddens defines agency as the "capability of the individual to 'make a difference' to a pre-existing state of affairs or course of events" (Giddens, 1986, p. 14). As we have established previously, all human beings are knowledgeable agents that monitor continuously the flow of their activities. But they also expect others to do the same for their own activities and do so for the social and physical contexts in which they move. That means that all people "maintain a theoretical understanding of the grounds of their activity" (Giddens, 1986, p. 5) and their surrounding activity. On the other hand, motives' explanation is different from routine rationalization, because motives tend to directly influence action only in relatively unusual circumstances, which in some way break with the routine. In this sense, "much of our day-to-day action is not motivated" (Giddens, 1986, p. 6).

Here we are interested in this kind of motivated agency that leads to achieved functionings and not to mere reproduction of doings and beings. We thus follow Giddens who states that action logically involves power in the sense of transformative capacity and argues that there exist two faces of power: the capability of actors to enact decisions they favour and the 'mobilization of bias' that is built into institutions. According to him, social systems with continuity over time and space presume "regularized relations of autonomy and dependence between actors or collectivities in contexts of social interaction" (Giddens, 1986, p. 16). He finally argues that all forms of dependence offer some resources whereby those who are subordinate can influence the activities of their superiors.

Rowlands talks about three kinds of power that help distinguish between individual, relational and collective power. Personal empowerment, as what we can express as '*power within*' refers to the developing of a sense of self and individual confidence and capacity of undoing the effects of internalised oppression. As for empowerment within close relationships, this refers to the ability to negociate and influence the nature of the relationship and the decisions made within it. It about a generative or productive '*power with'* that creates new possibilities and actions and finally, collective empowerment, that is the '*power to*' is about the ability to work together to achieve a more extensive impact than the one that each could have had alone (Rowlands, 1997).

In his article on collective capabilities, Evans (2002) asserts that individual capabilities depend on collective capabilities in the sense that in reality, everyone's ability to choose the life one has reasons to value often depends greatly on the possibility of acting together with others who have reason to value similar things. What results is that the issue of agency as the actual capability of choosing itself maybe in essence a

collective rather than an individual capability. This work confirms Robeyn's categorization of the CA as a methodologically but not ontologically individualistic theoretical framework (Robeyns, 2005). Evans furthermore extends the argument to argue that especially for less privileged people attaining development as freedom requires collective action.

3.3.2 The 3C processes for building collective capabilities

In her article on building collective capabilities for grassroots-led development, Ibrahim (2017) departs from the same argument in order to establish the relation between individual and new combinations of collective capabilities.

She uses Rowlands' three levels of power in order to analyze how context matters for collectivities at the quest of successful, sustainable and scalable and solutions (2017). She proposes a model that describes three processes needed for the generation of new individual and collective capabilities, thus a model for social innovation. Each of these processes explain how each level of power is enabled. Individual empowerment happens through a **C**onscientization process, the collective through **C**onciliation, and the community empowerment through **C**ollaboration, thus the 3C model for social innovation which is graphically represented in figure 5.

The conscientization process acts at the individual level, addressing cognitive frames. It encourages citizens to think critically about their realities and enable the capability to perceive and aspire for a better life as well as the willingness and the capability to decide on a plan of action to bring about this aspired change. In this way, it helps induce positive behavioural change enabling self-confidence and the *power within* people to be their own transformation agents. It is about the belief people have in their own abilities to change their lives and the lives of their communities. This process enables also their capability to establish relations with other agents with similar valued functionings.

It is important to note that, as it is the case for the majority of capabilities, apart form its instrumental value in promoting freedoms of other kind, the "opportunity to join peers in collective action is valuable because of its 'intrinsic importance'" (Evans, 2002) because of its central role to the development of people's identities and values, what in structuration theory we called the enactment of people's sociality. However, the passage from individual to collective agency is not easy. It requires various individual and collective capabilities that are enabled, according to Ibrahim, through the conciliation process which can be resumed in the process of creating a common vision of the means to guide the acts of collective agency (Ibrahim 2017, p. 5).

The process involves activities of conciliation of individual with collective interests and guide the *power* to achieve functionings *with* each other. Ibrahim describes this process as the creation of a communal vision through consensus-building. It is important here to note that the essence of consensus is the taking into account of the multiplicity of communal needs through deliberation in community meetings and groups discussion. We can see here how individual capabilities, such as the capability of expressing one's opinion in public, are necessary conditions for this process to happen successfully. In the opposite situation, community decisions not only will be less effective but they can even perpetuate poverty traps and existing structural inequalities. The collective capabilities are more than the sum of the individual capabilities because they imply a different conversion rate, a collective one, that is not the average of the personal conversion rates of the group and certainly more than their sum.

Figure 5: Ibrahim's 3C model for grassroot-led social innovation
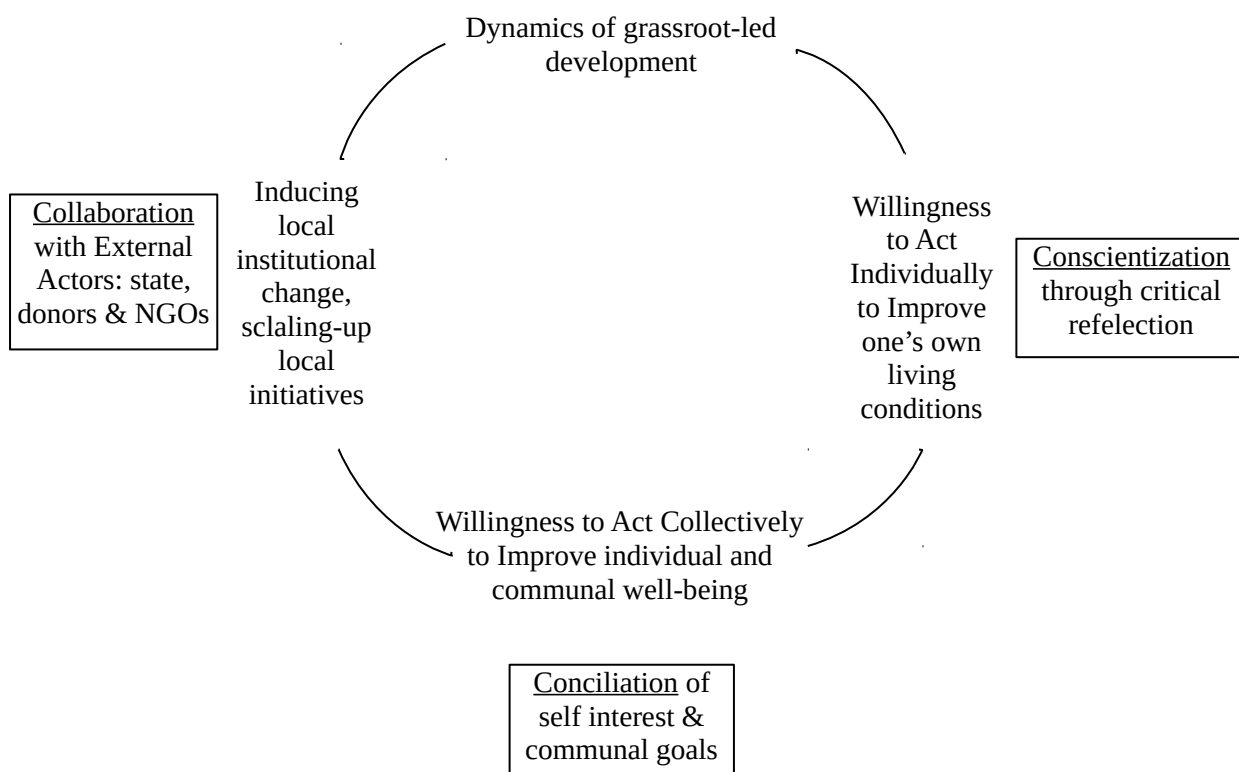
Source: Ibrahim, 2017

Finally, the last process is about the power to promote local institutional reforms through collaboration with other social actors. Collaboration between these actors is seen as crucial for challenging the existing unequal power relations among and between these partners and increase the bargaining power of local communities compared with other

actors. This process is crucial, according to her, especially regarding the relationship with the State in the effort to sustain social innovations and integrate them within local and national development policies.

This model fills in the gap of the first stage of social innovation as we have detected it previously because it provides with a dynamic picture of these three processes and their interlinkages leading to new combinations of capabilities. With its circular causal form, it also reflects the way we have defined capabilities as means and ends for widening individual freedoms and collective capabilities, thus human development. This model is a way to avoid falling into the collective trap and the sanctification of the 'community' as it makes the link between the indivual and the collective capabilities. It also provides with a useful framework in order to define necessary conditions for people to get involved into processes of social innovation in order to avoid exclusion of the most vulnerable from these processes.

In what follows we position this model in relation with our understanding of the social innovation ecosystem. This will provide us with an understanding of the functioning of the process of social innovation as new combinations of social practices who lead to social change. We identify factors that enable or constrain this process, as well as measures to foment or to annihilate the corresponding effects.

3.4 Social innovation ecosystems

In this section, we propose a definition for the social innovation ecosystem in relation with the 3C model for social innovation, Robeyn's conversion equation and the social innovation process as viewed through the structuration theoretical lenses. We then discuss some main orientations for policy as they result from considering the capability approach to social innovation.

3.4.1 Constituent elements and basic properties

We start by establishing that a useful way to understand a social innovation ecosystem is by defining its constituents parts as individuals with a certain level of capabilities and their personal conversion factors, the social groups in which they pertain, the goods and services at which they have access to and the social and contextual factors that act in a positive or negative manner towards the achievement of valued functionings.

Next, we establish the system's basic properties through what we have already established regarding the social innovation process

Social innovation as new combination of social practices happens when different social structures enter in conflict, when their elements get disorganized, when the connections between them get loosened or when they become inadequate means of understanding social life. This process can be triggered by the introduction of new artifacts, such as new technology, or by demographic or environmental phenomena. We argue that these phenomena provoke the loosening or the break of the connections between the various elements in Robeyns' conversion equation and in that way they do not permit the passage from one step to the other. In other words, what provokes disturbances to the system is the loose connection between goods and services and the way these get converted to functionings.

These disturbances can result in phenomena that people characterize as social challenges. As such, they challenge our understanding of social life and they have repercussions on people's everyday social practices. In front of these phenomena, new social practices are necessary in order to reestablish a certain way of doing things that permits the smooth conversion of commodities to capabilities. In this sense, if everything stays in place, the system will die. It is as if the system forces itself in an exploration of its space of possibilities in a 'far from equilibrium' state.

However, Robeyns' conversion equation is not a dynamic representation and we can easily understand that fixing a variable in order to analyze the behavior of the other elements of the system is very difficult. There is thus high interconnection and interdependence of the elements that constitute the ecosystem. This property can be illustrated by the fact that the individual's conversion factors depend on the social and contextual conversion factors, but her own social practices and their day-to-day enactment is what forms structured social life. We have also seen that the way social practice can be understood as a multitude of interconnected social acts that form a pattern and as such, they cannot be analyzed as separate units. Social life is thus an emergent event, in the sense that the study of its dissociated parts does not explain how it functions, in the same way a neuron does not have enough information for the formation of consciousness.

Finally, Ibrahim's 3C model permits us to establish a circular causal relation between the various elements of the conversion equation. It also permits us to establish the relevance of the collective capabilities as a necessary tool for the reestablishment of the loose or the broken connections. This element underlines the co-evolution of the

various constituent elements, in the sense that change in the individual's capabilities results in change in the collective capabilities of the social group in which she pertains and eventually to system change. However what is mostly interesting in this process is that this does not happen in a uniform way. Small changes can lead to big overall impact or the contrary, that in certain circumstances, the ecosystem shows great stability even if big changes in its elements are occurring.

To resume, these properties of the social innovation ecosystem, that is the interdependence and connectedness of its elements, the co-evolution, the emergent order and the sensitivity on initial conditions are not just fancy words to disguise business as usual. They push us to the conclusion that public policies cannot be understood, imagined or designed in a linear input-output way anymore. In general terms, public policies for social innovation maybe more useful embracing the unpredictable character of the emerging order of social innovation. Public policies should be designed to play a detecting and facilitating role. That being said, we do not suggest that public administration should play a lesser role, just a very different one.

If we examine the way individual capabilities connect and foster collective and community capabilities through the 3C model, we can find a whole range of actions and approaches that can be adopted in order to foster new combinations of these capabilities in every level. In what follows, we examine how this could be realized in the individual and the collective level as well as in the relation that could be fostered between various social actors.

3.4.2 The role of the individual

According to the structuration theory, the individual is the only crossroad of the various social structures as she enacts social practices belonging to different social structures. According to Giddens, what constitutes the 'systemness' of a social system is the reproduction of social practices in co-presence and through face-to-face interaction. We can understand "'integration' as the reciprocity of practices between actors and collectivities" (Giddens, 1986, p. 28). Each person is positioned in a 'multiple way' within social relations conferred by specific social identities and also in different 'locales' understood as settings of interaction. According to the author, the position of actors in different sectors or regions of more encompassing social systems affects the impact of even their habitual conduct upon the integration of societal totalities.

It is thus logical that our departing point is the individual's conversion factors and the individual capabilities. What Giddens' understanding of the participation of an individual in various social structures is, in our ecosystem reflects the various ways individuals are and do things that reproduce or transform various social systems. In this sense, the intersection of different social structures can be understood as 'transformation points'. That leads us to conclude that individuals present in various levels of intersectionality can be valuable assets in the quest of new combination of capabilities. They can bring together various ways of beings and doings with ensembles of functionings that do not pertain in the same social structure.

This point is also argued in Moore & Westley's study of networks for social innovation from an ecological perspective (2011). The authors argue that as any form of social order matures, the structures of legitimation, domination and signification become more homogeneous and more resistant to change leading systems to a 'rigidity trap'. They also argue that "heterogeneous conditions are created when different forms of knowledge and capabilities intersect" (Moore & Westley, 2011, p. 4).

However, as we have seen, individuals due to their ascribed characteristics are placed in a more or less distanced position from the functionings they have reason to value. Furthermore, individuals that are present in intersection points are frequently placed in a less privileged position compared to the rest. In addition, every individual has her own personal conversion rate, that is, the rythm at which one can turn commodities to achieved functionings. Negative social conversion factors make the distance from the starting point to the valued functioning even bigger. A process to combat this powerlessness is conscientization that enables the individual's knowledgeability, that is, her capacity to reflect and monitor her actions as well as the practices enacted in her surroundings.

A major barrier to this process, as defined by Ibrahim, is that the capacity to aspire to better life conditions for valued functionings is influenced from the individual's tendency to adapt her aspirations to the 'scarcity reality' she confronts everyday. It is thus no surprise that social innovation initiatives are frequently promoted by the individuals that apparently need it the less. This can be explained by the fact that these individuals have a necessary level of individual capability to aspire and to plan their actions to achieve valued functionings. Ibrahim also adds that this adaptation of preferences can also "create a 'false consciousness' that encourages individuals to accept different forms of inequalities" (Ibrahim, 2017). In this sense there should be of no surprise to anyone that women and immigrants participate less in programs and funds to socially innovative projects.

As a conclusion, the central elements in the discussion about policies that foster social innovation should englobe the issue of the necessary conditions in terms of minima of capabilities that offer people a real opportunity to participate in the reflexive activity and the monitoring of social practices. For instance, entrepreneurship funds or cooperative initiatives addressed to people living in a situation of long-term deprivation of capabilities might be an inadequate measure.

Furthermore, this analysis brings the attention to the necessity to give value to diversity as a catalyst for social innovation. The confrontation of the different social structures in which people interact leads to new combinations of social practices. Consequently, diversity should be valued in tho ways. First, individual intersectionality should be seen as a precious resource as people that combine in their knowledgeability social practices from various backgrounds are less likely to fall into rigidity traps. Second, the co-presence of people coming from different backgrounds in the processes of understanding, articulating and coming up with beings and doings that respond to the inadequacy of existing social practices enhances the formulation of new capabilities. Diversity and inclusion should stop being considered as claims for a more fair distribution of resources, but as an asset for societies. Diversity is an enriching factor for societies in transformation in all its expressions, that is cutural, physical, of age, gender, etc.

Finally, policies should be orientated in addressing the issue of difference being an obstacle for the conversion of commodities to capabilities. The CA for social innovation urges for the individualisation of social services, that is an increase in the adaptation of public policies to specific individuals or social groups. However, this perspective could be useful if adopted in other expressions of social life. Difference is seen as an obstacle to optimal performance making 'life difficult' to all individuals that are ethnically, sexually, physically or mentally different. Homogenization is a factor that leads directly to the 'rigidity trap' that makes the ecosystem vulnerable.

3.4.3 Social movements and social economy

The social movements play a crucial role in articulating the inadequacy of existing social practices. They are thus valuable sources of information in the sense that they can detect loose connections in the conversion equation that otherwise stay invisible from the rest of social actors. According to Ibrahim, social movements play a crucial role in the conciliation process as their spaces provide with a fertile soil for discussion, debate and construction of a communal vision. The various collective management configurations,

such as representation or self-management assure the voluntary, inclusive and transparent decision-making processes that according to her can lead to a kind of 'social agreement' to cooperate and thus to new spaces for capability creation (Ibrahim, 2017).

Finally, Ibrahim underlines that another crucial factor for the conciliation process is the wider concept of voluntarism and communal responsibility. Part of this communal responsibility is the general acceptance from the participants that the level of participation in a common project is not always directly proportional to the personal benefit obtained. She argues that solving existing communal conflicts and enhancing individuals' sense of belonging to their community can help them overcome the various constraints in enabling the *power* to achieve *with* others. We argue argue here that confrontation of various points of view about what the 'common good' means for a social group can be the process through which new combinations of capabilities emerge, in particular as solutions to the conflicting points of view. So, conflict is not necessarily a problem to solve *a priori* but a fertile soil for social innovation. The aversion to conflict is another expression of the homogenization urge, seen as an obstacle to smooth and highly performing functioning.

Furthermore, as we have seen, another crucial function assured by the social economy entities is the one of experimentation, that is, organize and realize a new way to provide services or produce. What we argue here is that this function depends initially on the capabilities set pertaining to the collective action. As presented in OECD's "Policy Framework for social innovation for Croatia" (2016), individuals have a different understanding and as a consequence attitude towards the distribution of tasks that assure the society's functioning. This can lead in different configurations of ecosystems for social innovation as presented in the table 6.

Table 6: OECD's comparison of social innovation (SI) systems

Type of SI system / Aspect of SI system	Anglo-saxon	Continental	East European
Structure	Liberal market	Top-down	Grassroots
Social Innovation efforts	Focus on societal impact through income generation	Focus on societal impact	Focus on societal impact. Advocacy actions
Institutions (Leading actors)	Social enterprises	Governmental institutions	Non for profit organizations, associations
Financing conditions	Private (foundations, impact investment)	Government EU-funds mainly (ESF/ERDF)	Government EU funds/Donor support
Scaling promotion	Promotion by government to scale	No focus on scaling	No focus on scaling
Openness for collaboration	Open for collaboration	Individualistic approach	Individualistic approach

Source: redrawn from OECD (2016, p. 28)

We argue here that this understanding affects the set of a country's collective capabilities, that is, the possible or not impossible things groups of people may be able to achieve. In most western European countries, the predominance of keyniasm, the Welfare State and the strong syndicates gave an advantage to this type of organized action over the community action as understood in North American countries. On the other hand, the strongly centralized socialist State and its strategy of collectivization of answers to social needs gave rise to a profound distrust towards government action and an aversion to collective action in Eastern European ex-members of the Eastern block.

Klein et al. (2014) discuss this distinction as it is expressed in the meaning of the word 'community' in North American and European contexts. They argue than in the former, the 'community' refers to the territorial belonging from which dominated groups get support in order to defend their civic rights. It is an expression vector and a link that facilitates the exercise of a positive freedom from its self-management capacity. In the European perspective however, the 'community' action is from the beginning rejected as perpetuating 'community' links understood as traditional and hierarchical society links. This debate apart from revealing the historical and political background that affects our ecosystems functioning hides as stated in Klein et al. (2014) on one hand a 'community sanctification' implicit in many North American works and on the other hand the democratic deficit of the 'Welfare State'.

We argue here that public policies should address the issue of collective action independently of the form of its expression. Apart from the fact that various expressions co-existe in different formats in various social contexts making it difficult to exclude a specific form of collective action from a region or a country, public policies directed in a type of collective action that in general is not part of the collective capabilities set can be badly allocated resources. And that is because this kind of understanding belongs to the institutional contexts that persist in time and take a lot to change. In this context, it is an effort to 'make something from nothing'.

3.4.4 Connection between social actors

The final level of our analysis of the social innovation ecosystem is what in Ibrahim's 3C model is the level that can be enabled through collaboration and it concerns the capacity of the ecosystem to provoke local institutional reforms, what we can understand as new social practices becoming regular commonplace practice. According to Ibrahim, through collaboration with various social actors, community initiatives can be scaled

through an increase in the bargaining power of the 'community'. This bargaining power can be affected by the role organized social movements play in the group's claims, the way the State's agents are positioned towards community-based initiatives and the openness of a community to other communities' experiences and information.

We discussed the challenges of this process in our discussion on the various institutionalization processes. The difficulties of this process can result in what Ibrahim calls 'capture' and it refers to the appropriation of the local initiatives form by the public administration, its instrumentation and alienation from the initial goal (Ibrahim, 2017). This is related to the power relations among affected social groups, the social movements around them and the State. Another barrier to this process is also what Ibrahim calls 'cooptation' and it is the pure instrumentation of local actors from the public administration in order for them to provide with low-cost social services. In this latter phenomenon, the State sometimes acts in a 'divide and conquer' strategy, forcing different organizations to compete for public resources at the expense most of the time of their stuff mostly motivated by ideology.

We argue here that a useful way to visualize the formation of the social innovation ecosystem from the public administration's perspective in a way to avoid these phenomena is through vertical or horizontal integration (SiG, 2014). Social groups, organizations, providers and beneficiaries sometimes organize themselves around a solution, a social practice that was once a social innovation. This includes social actors providing the same service, sharing their issues and lobbying to answer to the sector's problems. However what is sometimes neglected is a more vertical integration between actors that work their way throughout all the different stages of this innovation. Public policies should be interested in this vertical integration around a social innovation independently of its stage because it contains precious information on the various stages of a social innovation, that is, how it was born and the logic or ideology behind it, its evolution, etc.

At the same time, horizontal integration of all relevant actors to a social problem is also a fertile soil for social innovation. It reinforces our point on the negotiation process being facilitated by conflicting perspectives and overlapping social structures.

These two integration schemes can be detected in various forms in systemic approaches to social problems or innovative solutions to social problems. Designing public policies as if there is a desert around these problems is an indirect way to claim power over these initiatives in a way a corporation appropriates an innovation. More collaborative

strategies can only be fruitful if they are based in a new mindset regarding public policy that is able to share the power of decision-making and strategy designing.

Conclusion

This work is motivated by the need for policies aimed to support social innovation throughout the various stages of its development. The study of the existing academic approaches to social innovation and the policy-motivated reports reveals that sometimes social innovation is approached as a 'low-cost' provider of social services or it is associated to the resolution of a complexe social problem through user-end participation with the use of digital tools. These approaches fall in tautological and teleological methodological traps, providing an inadequate framework for the conceptualization of social innovation. There is thus a need for a definition for social innovation that goes beyond personal motivations of 'social innovators', beyond profit imperatives of entrepreneurship or collective panaceas.

The existing approaches in fact reflect the dilemma between agent and structure in the way we understand how social phenomena work. Constructing on previous work (Cajaiba-Santana, 2014; Howaldt et al., 2014), we adopt the definition of social innovation as new social practices. This allows to see how social structures are both enabling and constraining social agents that reproduce and transform iteratively social practices and social systems using their 'knowledgeability', that is their capacity to reflect and monitor their actions and their surroundings'.

This definition allows also to consider personal and collective actions and routinized everyday practices that individuals do not really reflect upon and others that are the result of motivation. Finally, it permits to understand how in 'going on' with their lives, individuals reproduce social practices that endure in time and space forming social institutions. According to structuration theory, built on these basic elements, social practices consist of routinized interconnected social elements and a background knowledge in a way of understanding. When the connections between these elements become loose or when they do not provide with an adequate understanding of social life, social actors are prompted to transform or to replace the existing social practices with new ones or with new combinations of existing ones.

We can then see how different social structures collide as individuals enact social practices pertaining in various social structures, sometimes conflicting or incompatible. We

can explain how social innovation seems to happen in times of crisis and how social movements act as means for the detection of the loose connections and the articulation of the inadequacy of existing social practices. We can also see how new combinations of social practices are put in practice experimentally in the social economy arena and how the successful ones disseminate and diffuse only when they make sense in other social systems, making pure replication an inadequate diffusion strategy. Structuration theory gives us a framework to understand the social innovation process. We need however also to know how social innovation comes about as new combination of social practices.

The concept of social innovation has been approached through traditional theories of innovation and entrepreneurship strongly influenced by Schumpeter's economic theory. We studied these approaches in order to evaluate in what way they could inform our understanding of social innovation. Innovation studies evolved from a linear model of innovation that could be resumed in R&D departments of big companies, government financed research institutes and patents to a more dynamic framework that considers institutions, networks of smaller firms and knowledge flows. Recently, a new innovation paradigm is emerging that includes non-technological aspects of innovation carried by different institutional couplings in various non-linear innovation trajectories.

The system-based innovation approach adapted in regional schemes has been used in order to understand social innovation. Our analysis of these works revealed that they either need further elaboration in order to make the link between industrial and social innovation clearer or they need to depart from different assumptions than the naive one that wants all collective processes to lead to socially innovative products. Furthermore, they need to come up with a credible explanation of how social actors with conflicting interests come to work together to co-construct and co-produce socially innovative strategies for economic development and solutions to social problems.

Meanwhile, globalization, the shift from managed to entrepreneurial economy and the technological advances gave place to a more dynamic way of understanding the interactions between various actors involved in the development of an industry, leading to the ecosystem approach. This approach receives an increased attention due to the high technology advances with big commercial value making it possible for high growth SMEs to form rapidly and organize in clusters of technologically innovative industries. Since entrepreneurship is considered a key factor for economic development through the process of 'creative destruction', the available financial tools for start-ups and consulting

services, the spin-off possibilities and the factors that actually influence individuals' choice to become an entrepreneur or not are considered part of the entrepreneurial ecosystem.

This framework is very useful for policy-making since it provides with a straight-forward answer to long-term unemployment. However, despite the valuable contribution of the works using this framework to specify what forms a support system for social entrepreneurship and social and solidary entites, we cannot ignore that they mostly neglect differenciating between social entrepreneurship and social innovation.

In light of this information, we explored other approaches to social innovation and conclude that human development theories can provide with a useful insight in the analysis of the processes that lead to social change. The Capability Approach is a very useful framework to address the real opportunity of people to participate in the formation and transformation of their lives. It is about the opportunity that people really have to do the things they want to do and be who they want to be. Sen's understanding of development as human capabilities expansion suggest a useful framework for social innovation as driver for social change.

The work of Ziegler (2010) and Von Jacobi et al. (2017) provide with a view of social innovation in relation with human capabilities. In particular, they call for an understanding of social innovation as new combinations of capabilities. Our contribution to the development of this line of thought is a systematic mapping of the capability approach against structuration theory. This mapping allows for a more complete understanding of capabilities as social practices with different time and space extension. It offers a conceptual differenciation between the routinized type of capabilities, that is the way people are and do things every day and the doings and beings that require a conversion process to lead to achieved functionings. Also, it allows for the consideration of incompatible capabilities in certain social systems, making new combinations exceptional or rare, thus leading to social innovation that drives social change. Further exploration of this mapping should extend in the issues of agency and choice as well as the preference formation processes.

Furthermore, Chiappero-Martinetti & Von Jacobi (2015) contribute further in the understanding of the conversion factors, that is the factors that affect the way people are able to use available resources and their personal characteristics in order to achieve valuable functionings. They draw also the attention on the necessity of the use of collective capabilities in order to achieve some functionings. Ibrahim's 3C model (2017) contributes in making the link between the individual, the collective and the community capabilities and

identifying the processes of conscientization, conciliation and collaboration that enable the expansion of the corresponding capability set.

Our contribution in this effort is first to visualize an ecosystem consisting of the individuals with a certain level of capabilities and their personal conversion factors, the social groups in which they pertain, the goods and services at which they have access to and the social and contextual factors that act in a positive or negative manner towards the achievement of valued functionings. Our further contribution is the establishment of some properties of this ecosystem by constructing on our definition of new combinations of capabilities as new social practices. We were able to conclude that the ecosystem exhibits properties such as interdependence, connectedness and co-evolution of its elements, emergent order, 'far form equilibrium' functioning and sensitivity on initial conditions.

Also, in the policy arena, this conceptualization suggest that public policies for social innovation should adopt a role of detecting the initiatives that emerge and facilitating their development. Based on this understanding of the social innovation ecosystem, a whole range of actions and approaches can be adopted in order to foster new combinations of capabilities in every level. In the individual level, public policies should address the issue of how diversity acts as an inhibitor in existing conversion equations leading to exclusion and homogeneization which in turn leads to rigidity traps. Public policies should place diversity as a priority goal in order to enable its properties of catalyst of the conversion equation that leads to new combination of capabilities.

Furthermore, public policies should be adapted to the set of capabilities that belong to the possible in a country's imaginary. Modifying what citizens understand as their role in the solution of a social problem is a long procedure that depends on the country's historical and political background. Public policies should avoid sanctification of the community action or the promotion of a democratically deficitary 'Welfare State'. Public policies should foster collective action independently of the way it is expressed publicly.

Finally, in terms of organization, social movements and social economy are generally organized horizontally or vertically around social problems or solutions. These entities can be a precious source of information regarding the various stages of development of socially innovative solutions to specific social problems. Public policies designed to act as if they were applied in a vacuum, as if seeking for an innovative solution to a social problem for the first time are trying to 'create something from nothing' and are probably doomed to fail. This is probably the biggest chellenge in the design and

application of the public policies to support social innovation: the required change in the mind-set that will permit public administration to share the power of decision-making and strategy designing with social economy entities, to recognize their expertise and dedicate resources to social experimentation guaranteeing the practicioners' autonomy and the social movements' independence.

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