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Barriers to Social Innovation

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Content

1. Introduction

Many good ideas fail to get translated into social innovations. In some cases, this is because they are too expensive, or are not wanted, or simply because they are not good enough in comparison to existing alternatives. But many have raised concerns that there are more fundamental barriers in terms of taking ideas from inception to social impact. Some point to the fact that the impacts of social innovation are hard to measure, or difficult to quantify financially, and therefore unattractive or risky for funders to invest in. Others have argued that social innovations are inherently risky because their outcomes are uncertain and unpredictable, and it is therefore difficult to form coalitions of supporters around the social innovation. Others still point to organisational cultures which stifle creativity and risk taking and therefore limit the number and quality of social innovations which emerge. Others still point to the lack of adequate mechanisms to promote, adapt and grow social innovations. However, in order to support the spread of social innovation we need to better understand what the barriers are. In particular, we need to get beyond descriptions of barriers to a deeper analysis of the obstacles and challenges facing social innovators in developing and growing their solutions to social challenges.

The aim of this paper is to review the existing literature and develop a conceptual framework which will guide the rest of this work package on identifying and overcoming barriers to social innovation.

In the first half, we review the literature dealing specifically with the barriers to social innovation. The result is an inventory of the barriers that have been identified in this literature and some conclusions about what is lacking and areas for further work. One conclusion is that the analysis of these barriers has been mostly descriptive and driven by practical experience, without enough complementary conceptual work on the explanatory mechanisms of those barriers.

In the second half, we will propose some elements of a conceptual framework for analysing the barriers to social innovation. In order to do so, this paper will look at various theoretical perspectives to provide a more conceptual analysis of the barriers to social innovation. In particular, we will look at:

- The various 'traps' within social systems that prevent or impede change and innovation. In particular, we will look at resilience theory to explore the idea of 'poverty' and 'rigidity' traps and, psychology to explore the notion of 'social traps' and approaches for overcoming these.
- The economic theory on barriers to entry. Industrial organisation provides useful concepts about barriers to entry in markets which shed light on why it can be difficult to set up socially innovative activities.
- Insufficient growth mechanisms. Economies of scale, learning by doing and other growth mechanisms may be lacking or insufficient in social innovation process which might be another barrier preventing the growth and development of social innovations.
- Insufficient leveraging mechanisms. The leadership required to develop networks, partnerships and other mechanisms for leveraging social innovations from small scale projects to large scale programmes may also be missing. This can also be a barrier to social innovation.
- The collective nature of the goods and services delivered by social innovation. Social innovation often delivers collective goods and services (e.g. public goods) which raises specific challenges for social innovators such as the need to organise some form of collective action. Also, underfunding is a result of the impossibility of private appropriation of these kinds of outcomes of social innovation.

- Organisational failures: The collective nature of the goods and services delivered by social innovation also often implies that public organisations and social economy organisations play an important role in triggering, supporting and scaling up this kind of innovation, but these are organisations which may have failures in meeting their missions causing harm to the social innovation processes where they are a stakeholder;
- Agency failures: Social innovation is also about social innovators being capable of motivating others to participate in new ways to respond to social needs, but they may fail to do so because they may not have enough financial and other resources needed to accomplish their goals, they may not be capable of improving outcomes for their target populations, and/or they may not be able to prevent the process from being captured by opportunistic behaviours.

In brief, these are the main, but not all, themes covered in this paper.

2. Literature review

This literature review focuses on papers which explore the various barriers to social innovation. Some of these papers are devoted entirely to this subject, while others merely touch upon it. This review only covers those papers which have been published in English. After intensive searches on the Internet about this topic, it is fair to say that the majority of this literature is covered here. Many of the authors cited here repeat the same barriers, so there is some overlap in the types of barriers discussed in the literature.

As a subject area, this topic remains largely under-researched and there are numerous gaps. In particular, there is little conceptual work on the barriers to social innovation. Indeed, until now, no salient conceptual framework has emerged in this body of literature. Different authors and, even the same authors in different papers, deal with this topic in different ways, but without convergence towards a common conceptual framework.

2.1. A multilevel approach to the barriers to social innovation

One attempt to put some structure on the barriers to social innovation was undertaken by the Bureau of European Policy Advisors (BEPA) as part of their publication on social innovation in 2011. In it, Hubert et al.[1] proposed a classification of the barriers to social innovation, something that is unusual in this literature. They classify the barriers according to three types of approaches:

- The "social demand" approach
- The "societal challenges" approach
- The "systemic change" approach

According to the "social demand" approach "social innovations are innovations that respond to social demands that are traditionally not addressed by the market or existing institutions and are directed towards vulnerable groups in society."[2]

For the "societal challenges" approach, "social innovations are innovations that respond to those societal challenges in which the boundary between social and economic blurs, and are directed towards society as a whole."[3] So here, tackling social problems is part of economic development more broadly: "the social sector generates productivity and economic value for the whole society". As such, tackling social challenges is seen as an opportunity, rather than a constraint, to generating value.

According to the "systematic change" approach, "social innovations are innovations that contribute to the reform of society in the direction of a more participative arena where empowerment and learning are both sources and outcomes of well-being."[4] So, this is social innovation in its broadest meaning where the focus is on "changes in fundamental attitudes and values, strategies and policies, organisational structures and processes, delivery systems and services, methods and ways of working, responsibilities and tasks of institutions and linkages between them and different types

[1] A. Hubert (coord.), Empowering people, driving change, Social Innovation in the European Union, Bureau of European Policy Advisers - European Commission, Luxembourg, Publications Office of the European Union, 2011
[2] Ibid, p. 37
[3] Ibid, p. 37
[4] Ibid, p. 40

of actors."[5] In terms of this "systemic approach" Hubert et al.[6]identify two main barriers: a political culture consisting in a top-down approach to policy formulation and implementation; a general culture where the response to social problems is seen as something that has to be done by the public organisations. So, for these authors "policy education, experimentation and cultural change all become essential ways of overcoming these barriers."[7]

In terms of the "social demand" and "social challenges" approaches, Hubert *et al* identify the following types of barriers to social innovation:

- financing and scaling up
- governance and coordination
- legal and cultural recognition
- skills and training
- lack of data and measurement

These are the most common barriers cited in the literature. Other common barriers include risk and uncertainty, organisational cultures, norms and values, and the lack of social and organisational capital. Some authors refer to barriers at particular stages of the innovation life cycle and others look at barriers facing social innovations in specific sectors. As such, we have divided the following sections according to these various headings. In the last part of this chapter, we review the literature that tries to go deeper into some structural characteristics of the social innovation process as possible sources and explanations for barriers to this process. Some of these authors deal with the uncertainty and complexity of social systems, the traps that may hinder the progress of social innovation and the public goods nature of the outcomes of this process. We are particularly interested in these authors because they explore the barriers to social innovation from a theoretical perspective, providing some useful concepts for the development of social innovations and the barriers which may emerge during that process.

2.2. Financing and scaling up

Mulgan argues that social innovations face challenges in securing funding in comparison to technological innovations and innovations in business oriented to produce market goods and services. For Mulgan the potential supporters of social innovation such as foundations and public agencies are less likely to support social innovation because they lack the incentives to do so.

Hubert et al[8] provide the following reasons why funding social innovation is challenging:

- social innovation tends to be bottom-up;
- it is promoted by non-traditional business organisations;
- it is "problematic in the measurement of its impact";
- it "starts from a limited size";
- it is "not perceived as self-sustainable/replicable";

[5]A. Hubert (coord.), Empowering people, driving change, Social Innovation in the European Union, Bureau of European Policy Advisers - European Commission, Luxembourg, Publications Office of the European Union, 2011. p. 38
[6]Ibid
[7]Ibid p. 116
[8]Ibid pp. 103-104

- there is a “lack of recognition of the social dimension in innovation-related funding schemes and programmes”, social issues being seen “mainly as means rather than ends (i.e. contexts in which technological solutions could be validated), and users have been considered mainly as adopters rather than innovators (i.e. unable to define and shape the nature of a technology).”

2.2.1. Funding new ideas

Caulier-Grice et al[9], in a report for the Bureau of European Policy Advisors, take up the problem of underfunding of social innovation already stressed by Mulgan[10] and most of the others who write about barriers to social innovation. They refer the lack of funding for individuals, groups of citizens and coalitions of service providers and users to develop new ideas. At the sectoral level, they highlight the high dependence of third sector organisations on grants for developing social innovations, and to studies carried out in Australia, Canada, France and the UK which demonstrate the problems that this kind of funding can cause:

- a lack of stable and sustainable funds;
- a tendency for grants to be short term and directed away from operational costs; and
- high transaction costs in terms of the senior management energies devoted to secure these funds.

Recognising the importance of grants for the prototyping and start up phases of social innovation, these authors argue that grants are not adequate for the next phases which need growth and risk-taking capital. For Europe, at least, in spite of some developments that are underway, this kind of capital is lacking.

2.2.2. Funding growth and diffusion of innovation

The other barriers to social innovation treated in this report by Caulier-Grice et al. are the following:

- absence of scaling models;
- lack of a strong field of people with the skills in the many dimensions of innovation – from finance to development of projects and business models, to design and marketing; and
- the lack of networks and “innovation intermediaries”.

Given the important role of public funding in the initial phases of social innovation, Caulier-Grice et al. consider that the public sector can continue to play a positive role in the escalation phase through the mechanisms of procurement and commissioning, even though these mechanisms are also important in all the other phases of social innovation:

- in the initiation phase, public procurement can create a market for social innovation when this doesn’t exist and can overcome other market failures impeding this kind of innovation;
- in the escalation phase, public procurement, because of its scale, can help to demonstrate the value of social innovation to a wider market and provide revenues to the innovators to improve their products and services in order to become more competitive in the global marketplace;

[9] J. Caulier-Grice, L. Kahn, G. Mulgan, D. Vasconcelos, Study on Social Innovation, A paper prepared by the Social Innovation eXchange (SIX) and the Young Foundation for the Bureau of European Policy Advisors, 2010

[10] G. Mulgan, The Process of Social Innovation. Innovations: Technology, Governance, Globalization, 1, 2006, pp. 145-162

- in the consolidation phase, public procurement can reduce the risk, encourage investment and create critical mass for the acceptance of social innovation by using regulatory and other powers to set the new standards promoted by social innovation.

According to these authors public procurement is still far away from being able to play these roles in social innovation:

- It tends to favour larger and more established providers, instead of new and innovative ones;
- third sector providers are perceived as being more risky than usual business providers;
- transaction costs for bidding are higher for small and new organisations;
- contracts tend to be short term which is detrimental to third sector and social economy organisations which want to develop their staff and infrastructure and have access to growth capital;
- some contracts place too much risk on providers;
- too often the prices set for the contracts don't allow full cost recovery;
- in many cases there is an excessive burden in terms of resources that have to be devoted to monitoring and evaluation.

For disruptive social innovations these authors consider that public procurement should not be organised in the same way as for an established product or service. To reduce the risk involved in this kind of innovation and to reach the scale needed to solve the challenge at hand, these authors recommend a partnership approach and a stage gate model of funding. Public agencies and potential suppliers, namely small firms with disruptive innovation capacities, should work together from an early stage, with outcome-based specifications allowing suppliers to learn more about the problem the public procurement is addressing.

2.3. Governance and co-ordination

Other authors argue that without effective networks and intermediaries, it is very difficult to connect ideas, resources and people, which they argue is a pre-condition for the development and growth of social innovations. This role of networks and intermediaries is what Mulgan calls "Social Silicon Valleys"[11], that is, the clustering of organisations working across institutional barriers to generate and effectively implement new ideas to respond to social needs.

Most of the authors[12] who have written about the barriers to social innovation have emphasised the role of networks and collaboration in the generation and scaling up of social innovation. Caulier-Grice et al. mention a special kind of connection that is needed for scaling up social innovation: the connection between what they call the "bees", that is, "small organisations, individuals and groups who have new ideas, and are mobile, quick and able to cross pollinate"[13] and to find what they call the "trees", that is, "big organisations – such as governments, companies

[11] G. Mulgan, Social Silicon Valleys: A Manifesto for Social Innovation, London, Young Foundation, 2006

[12] M.-L. Moore, F. Westley, Surmountable Chasms: Networks and Social Innovation for Resilient Systems, Ecology and Society, 16(1): 5, 2011 and D. Chalmers, Why social innovators should embrace the "open" paradigm, Paper presented at the 3rd EMES International Research Conference on Social Enterprise Roskilde (Denmark) - July 4-7, 2011

[13] J. Caulier-Grice, L. Kahn, G. Mulgan, D. Vasconcelos, Study on Social Innovation, A paper prepared by the Social Innovation eXchange (SIX) and the Young Foundation for the Bureau of European Policy Advisors, 2010, p. 100

or non-governmental organisations, which are generally poor at creativity, but good at implementation and which have the resilience, roots and scale to make things happen."[14]

Concerning governance and coordination, Hubert et al. take up the same points made by other authors reviewed here about the need for "policy coordination" (cooperation in the policy domain) and "operational coordination" (networking between social innovators, financing institutions, incubators, etc.). In terms of policy coordination, these authors do not advocate the centralisation of the governance of social innovation into a single organisation, but the promotion of coordination among the regional, national and EU levels. In terms of operational coordination, Hubert et al. take up the metaphor of the "bees" and the "trees" proposed by Caulier-Grice et al[15]. In terms of the 'societal needs' approach, the lack of appropriate governance is a significant barrier. This is due to the fact that, at this broader scale, we need more than better coordination "among those public and private bodies concerned with pressing social demands".[16] What is required here is "a general and deeper rethinking of policy-making in general; namely, a view of policy-making as an intrinsically transversal activity in which decisions taken in a field deeply affect and constrain those taken in others".[17]

2.4. Legal and cultural recognition

By lack of legal recognition, Hubert et al. refer to the lack of a "common framework to define important sectors and players such as social entrepreneurs and enterprises, or third sector or non-profit sectors. Moreover, those concerned with addressing social demands are not necessarily innovators, while many business innovators do address social demands."[18] By lack of cultural recognition they refer to the prevailing idea "that innovation is confined to the business domain."[19] This lack of recognition impacts on many levels: lack of data to assess the size and impact of the social innovation sector, access to finance and lack of supply of appropriate education.

2.5. Lack of data and measurement

For the lack of data and measurement, Hubert et al.[20] provide the following explanations:

- lack of a clear definition of the concept of social innovation;
- boundaries and players of social innovation are not well defined, one instance of this problem being the fact that social enterprises are not necessarily social innovators even though they deliver social value and for profit business firms may be social innovators even though they are for profit;
- non-profit organisations are small and geographically dispersed;
- the impact of social innovation is hard to quantify;
- there is an insufficient culture and not enough tools for ex-post evaluation of projects related to social innovation.

[14] Ibid
[15] Ibid
[16] A. Hubert (coord.), Empowering people, driving change, Social Innovation in the European Union, Bureau of European Policy Advisers - European Commission, Luxembourg, Publications Office of the European Union, 2011. p. 114
[17] Ibid
[18] Ibid, p. 106
[19] Ibid, p. 106
[20] Ibid

2.6. Organisational cultures

There are also a range of barriers at the organisational level. In 2007, Mulgan et al published a paper on social innovation which identified a range of barriers at the organisational level.[21]The authors identified the following barriers:

- efficiency reasons
- peoples' interests
- peoples' minds
- personal relationships between movers and shakers

2.6.1. Efficiency reasons

Efficiency reasons refer to the fact that, in the short run, innovations may worsen performance in social systems because it disrupts the arrangements of "elements that have optimised around each other over time."[22] The authors give as examples of this kind of arrangements "the military bases in the old Soviet Union that propped up local economies, or the vast US prisons built in the 1980s and 1990s that did the same."[23]

2.6.2. People's interests

The second type of barrier to social innovation identified by Mulgan et al has to do with the fact that "in any successful social system many people will have high stakes in stability. The risks of change will appear great compared to the benefits of continuity."[24] And, especially in the public sector, "anyone who does promote innovations risks upsetting powerful vested interests."[25]

This type of barrier is related to what Acemoglu and Robinson[26] call the "political loser hypothesis": those who loose with innovation oppose change in order to protect their interests. For Acemoglu and Robinson this hypothesis is incomplete because it doesn't explain why the losers don't use their power to capture the gains of innovation for themselves. So, it is necessary to take into consideration the economic and political institutions and how they distribute power in the society in order to understand why some actors affected by innovation can or cannot successfully resist this kind if change.

In a book chapter on the barriers to innovation having in mind mostly technological innovation van der Geest and Heuts[27] provide a list of specific reasons why some actors may lose with innovation:

- there may be a loss of jobs;
- when new and more efficient methods replace old ones there is direct economic damage to the business using the old methods;

[21] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007
[22] Ibid, p. 18
[23] Ibid
[24] Ibid
[25] G. Mulgan, The Process of Social Innovation. Innovations: Technology, Governance, Globalization, 1, 2006, p. 156
[26] D. Acemoglu, J. Robinson, Political Losers as Barriers to Economic Development, The American Economic Review, Papers and Proceedings, 90 (2), 2000, pp. 126-30
[27] L. van der Geest, L. Heuts, Barriers to Innovation, in B. Nooteboom, E. Stam (eds.), Micro-foundations for Innovation Policy, Amsterdam, Amsterdam University Press, 2008, pp. 173-198

- there may also be indirect economic damage when there are negative externalities generated by the innovation, or, at least, fear that those kinds of externalities may happen (for example, fear with nuclear energy, genetically modified food, the bio-industry, prenatal screening and megastores);
- there may be insufficient information and uncertainty about the future impacts of innovation; and
- there may be distrust by the rest of society with respect to the innovators. (For this last point van der Geest and Heuts give as an example, the introduction of quinine in England that was eventually banned at the end of the 17th century because it hadbeen brought to Europe by the Jesuits.)

2.6.3. People's minds

In their paper of 2007, Mulgan et al identified values and norms, or 'people's minds' as another barrier: "Any social system comes to be solidified within peoples' minds in the form of assumptions, values and norms. The more the system appears to work, giving people security and prosperity the more its norms will become entrenched as part of peoples' very sense of identity. Organisations then become locked into routines and habits that are as much psychological as practical, and which become embedded in organisational memories."[28]

This can be connected to what Seyfang and Smith[29] call a "socio-technical regime", that is, a "complex configuration of artefacts, institutions, and agents reproducing technological practices." These authors use this concept to refer to the reinforcing and "entrenched cognitive, social, economic, institutional and technological processes [that] lock us into trajectories and lock out sustainable alternatives."[30] For them this is the reason for the tendency of technological and social change to be incremental and path dependent. This is in line with the analysis developed by Nelson and Winter[31] about how firms resist change. Mulgan et al.[32] also acknowledge the influence of these authors.

Van der Geest and Heuts mention other barriers related to this resistance to change which go beyond specific individuals and groups. One is what has been called "path dependence" or "hysteresis". For some accidental reasons one innovation that is inferior to another in technological terms, or by some other criteria, may be retained and adopted by a large number of users. Once it is established at this large scale the costs of adopting a superior innovation may be very high. So the system gets locked in the inferior innovation. The classical example in this literature on path dependence is the adoption of the QWERTY keyboard, instead of the DVORAK keyboard which is technologically superior.[33] According to van deer Geest & Heuts[34] resistance to innovation is also stronger the greater the number of actors, activities and technologies that are negatively affected by the innovation and an innovation may be stopped if the stakeholders involved cannot agree on a common approach to the changes brought about by that innovation.

[28] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007, p. 18
[29] G. Seyfang, A. Smith, Grassroots innovations for sustainable development: Towards a new research and policy agenda, Environmental Politics, 16(4), 2007, p. 588
[30] Ibid
[31] R. R. Nelson, S. G. Winter, An Evolutionary Theory of Economic Change, Harvard University Press, 1982
[32] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007
[33] P. David, Clio and the Economics of QWERTY, The American Economic Review, Proceedings, 75, 1985, pp. 332-337
[34] L. van der Geest, L. Heuts, Barriers to Innovation, in B. Nooteboom, E. Stam (eds.), Micro-foundations for Innovation Policy, Amsterdam, Amsterdam University Press, 2008, pp. 173-198

Even though there are connections between social norms, peoples' values and "organisational memories" it is better to keep these three as different concepts. Considering the connection between peoples' values and social norms, one example from the empirical literature on social innovation is Maurice Lim's description of the challenges he faced in getting financial support for the project he founded, the Family Independence Initiative (FII).The aim of this initiative is to break the poverty cycle. Its implementation shows that it is effective in reaching this goal. The main reason for the resistance of public and private funders to support FII, in spite of its good results, is that it is hard for funders to change their minds and understand and accept the key innovation embodied in this initiative: instead of using the money to pay for more professional social service workers and more social equipment, FII gives the money directly to poor families, relying on their capacities and ability to respond to appropriate economic incentives.

In a paper written in 2010[35], Miller says that "In two recent conference presentations, after explaining that we sent checks to families I was asked, —How do you monitor how they spend the money you give them? I responded that the government does not monitor how middle- and upper-income families spend their tax refunds or other benefits. Why do we not trust low-income families in the way the rest of society is trusted?"[36] Negative stereotypes, in this case, about how low-income families behave, can be a major barrier to innovative and effective initiatives to help them break the poverty cycle.

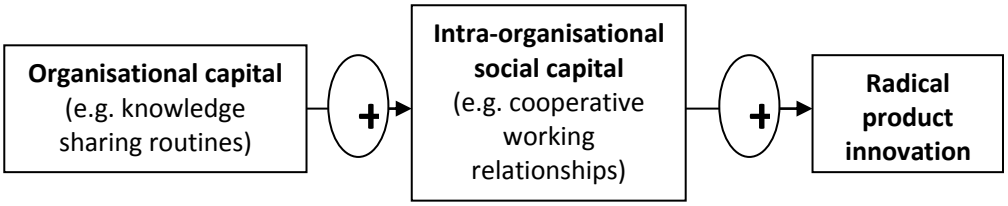
2.6.4. Social and organisational capital

The notion of 'organisational memories' elaborated in the 2007 paper by Mulgan et al is connected to the literature on organisational learning [37] and the concept of 'organisational capital' which is one of the components of the 'intellectual capital' of organisations, together with human capital (the knowledge embodied in the persons working in the organisation) and social capital (the social relationships among the persons working in the organisation and between the organisation and the external entities with which it interacts).[38]Youndt *et al*[39] define organisational capital as "institutionalized knowledge and codified experience stored in databases, routines, patents, manuals, structures, and the like (...) this is capital the organization actually owns". Mulgan et al refer to a negative effect organisational capital can have on social innovation. This has the nature of a feedback effect (or a trap) that tends to lock the organisation into some routines and habits: "Any social system comes to be solidified within peoples' minds in the form of assumptions, values and norms. The more the system appears to work, giving people security and prosperity the more its norms will become entrenched as part of peoples' very sense of identity."[40]

[35] M. L. Miller, Obstacles to Innovation: Experience of the Family Independence Initiative, Working Paper prepared for the Executive Session on Transforming Cities through Civil Entrepreneurship, Cambridge, MA, January 2010
[36]Ibid
[37] G. Huber, Organizational learning: The contributing processes and the literatures, Organization Science, 2(1), 1991, pp. 88-115 and J. P. Walsh, G. R. Ungson, Organizational memory, The Academic Management Review, 16(1), 1991, pp. 57-91
[38] L. Edvinsson, M. S. Malone, Intellectual capital: Realizing your company's true value by finding its hidden brainpower, New York, HarperBusiness, 1997; P. M. Wright, B. B. Dunford, S. A. Snell, Human Resources and the resource based view of the firm, Journal of Management, 27, 2001, p. 701-721 and; M. A. Youndt, M. Subramaniam, S. A. Snell, Intellectual Capital Profiles: An Examination of Investment and Returns, Journal of Management Studies, 41(2), 2004, pp. 335-361
[39] Ibid, p.338
[40] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007, p. 18

There is, however, some literature dealing with the relationships between organisational capital and the other components of intellectual capital (human and social capital) that give results in a different direction. It is true that it is a literature dealing with technological innovation, but, at least, it raises the question that the role of organisational capital with respect to social innovation may be a complex one. One of those studies was conducted by Carmona et al. using data for a set of 1,041 firms in Spain. They came to the following results: "First, there is a clear positive influence of social capital on product innovation, and, as expected, this relationship is stronger under radical innovations. It seems that the collaborative effort provided by social capital improves innovation performance, especially when people share complex and ambiguous information which is implicit in radical innovations. Second, organizational capital has a positive influence on social capital. (...) organizational capital creates a context that contributes to [the sharing of] knowledge and enhance[d] cooperation. (...)Third, it seems that organizational capital [does not have], per se, a direct influence on product innovation. This result does not reduce the importance of organizational capital for innovation; it just changes the nature of this influence. In this sense, organizational capital contributes to the improvement of innovation performance, though not directly, but through its positive effect on social capital."[41]

Figure 1 – The relationships between organisational capital, social capital and product innovation



Mulgan *et al.* also mention the role of social capital in social innovation, but they argue that there are situations where it can be negative: "The personal relationships between the movers and shakers in the system create an additional stabilising factor in the form of social capital and mutual commitment. Much of the business of government and the social sector rests on personal relationships that may count for more than formal organograms. These networks of favours and debts can be key for getting things to happen within a stable system, but they are likely to seriously impede any radical change."[42]

One way to understand why social capital can have different types of influence in social innovation is to appeal to Granovetter's[43] distinction between social capital with "weak ties" and "strong ties". This author and Burt[44] argued and provided empirical evidence showing that whether "weak ties" are favourable to innovation, it may not be the case with "strong ties". An example of recent empirical work in this direction is the project mentioned by Florida et al[45] which "looked at hundreds of metropolitan areas in the United States, comparing levels of social capital and levels of innovation (as measured by technological intensity and number of patents filed)."[46] The results

[41] A. Carmona-Lavado, G. Cuevas-Rodríguez, C. Cabello-Medina, Social and organizational capital: Building the context for innovation, Industrial Marketing Management, 39, 2010, pp. 687-688
[42] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007, p. 18
[43] M. S. Granovetter, The Strength of Weak Ties, The American Journal of Sociology, 78(6), 1973, pp. 1360-1380
[44] R. Burt, The Social Capital of Structural Holes, in M. F. Guillén, R. Collins, P. England, M. Meyer, The New Economic Sociology, New York, Russell Sage Foundation, 2002, p. 148-192 and R. Burt, Structural Holes and Good Ideas, The American Journal of Sociology, 110(2), 2004, pp. 349-399
[45] R. Florida, R. Cushing, G. Gates, When Social Capital Stifles Innovation, Harvard Business Review, May 2009, p. 20
[46] Ibid

show that areas with low levels of innovation tend to be those with high levels of strong social ties, and vice versa. The authors explain these results as follows: "Relationships can get so strong that the community becomes complacent and insulated from outside information and challenges. Strong ties can also promote the sort of conformity that undermines innovation. Weak ties, on the other hand, allow a basic level of information sharing and collaboration while permitting newcomers with different ideas to be accepted quickly into the social network."[47] This negative influence of strong social ties on innovation is what some authors in this literature call the "idea problem"[48].

This is not all about the connections between the two varieties of social capital and innovation. Besides the "idea problem" there is also an "action problem".[49] In dense social networks it is easier to mobilize people for action than in sparse networks.[50] So, in sparse networks, even though new ideas are easier to come up with, it might be more difficult to implement them. Obstfeld[51] identifies another element that he thinks is relevant for innovation, besides the density of relationships in a social network. It is what he calls the *"tertiusiungens"* ("the third who joins"). This refers to the people with a "strategic behavioural orientation toward connecting people in their social network by either introducing disconnected individuals or facilitating new coordination between connected individuals."[52]Obstfeld made the hypothesis and proved its empirical validity that people with this kind of behaviour are more involved in innovation processes than others, independently of the density of the social network.

2.7. Barriers to social innovation in the public sector

The treatment of barriers and enabling factors is very brief in the literature on social innovation. In particular, there is very little about how the barriers and enabling factors operate and manifest themselves within different sectors, and how they affect social economy organisations and for profit firms especially.

Mulgan[53] considers the different sectors where social innovations can emerge and identifies the following enabling background conditions:

- for social movements: basic legal protection and status and open media;
- in business: competition, open cultures, accessible capital not monopolized by urban elites and government;

[47] Ibid
[48] D. Obstfeld, Social Networks, the *Tertiuslungens* Orientation, and Involvement in Innovation, Administrative Science Quarterly, 50, 2005, pp. 100-130
[49]Ibid
[50] J. S. Coleman, Social Capital in the Creation of Human Capital, The American Journal of Sociology, Vol. 94, Supplement: Organizations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure, 1988, pp. S95-S120; R. Burt, Structural Holes and Good Ideas, The American Journal of Sociology, 110(2), 2004, pp. 349-399; M. S. Granovetter, The Impact of Social Structure on Economic Outcomes, Journal of Economic Perspectives, 19(1), 2005, pp. 33-50; D. Obstfeld, Social Networks, the *Tertiuslungens* Orientation, and Involvement in Innovation, Administrative Science Quarterly, 50, 2005, pp. 100-130
[51]D. Obstfeld, Social Networks, the *Tertiuslungens* Orientation, and Involvement in Innovation, Administrative Science Quarterly, 50, 2005, pp. 100-130
[52]Ibid, p. 100
[53] G. Mulgan, The Process of Social Innovation. Innovations: Technology, Governance, Globalization, 1, 2006, pp. 145-162

- in politics and government: competing parties, think tanks, innovation funds, contestable markets, plentiful pilots;
- in social organisations: practitioner networks, allies in politics, strong civic organisations (from trade unions to hospitals), support of progressive foundations and philanthropists;
- in all the fields above: global links making it easier to learn lessons and share ideas.

The sector for which this and other authors have devoted special attention in terms of the analysis of barriers to social innovation is the public sector. Many of the barriers to social innovation in this sector have already been mentioned above. Nevertheless, it is useful to repeat some of the main findings of this literature.

Chapman[54]identified a set of barriers to learning in the public sector which can be summarized as follows:

- an aversion to failure, exacerbated by the political process which uses failure to score points rather than learn lessons;
- the pressure of uniformity in public services;
- shared assumptions between civil servants and ministers that command and control is the correct way to exercise power;
- lack of evaluation of previous policies;
- lack of time to do anything other than cope with events;
- a tradition of secrecy used to stifle feedback and learning;
- the dominance of turf wars and negotiations between departments, effectively making end-user performance secondary to other considerations;
- the loss of professional integrity and autonomy under the knife of efficiency in policy making, and resistance and protection of vested interests by some professional and intermediary bodies.

Mulgan and Albury[55]identified the following barriers to social innovation in the public sector:

- delivery pressures and administrative burdens;
- short-term budgets and planning horizons;
- poor skills in active risk and change management;
- no incentives to innovate or adopt innovations;
- technologies available but constraining cultural or organisational arrangements;
- over reliance on high performers and sources of innovation;
- reluctance to close down failed programmes or organisations;
- a culture of risk aversion.

In a report published in 2007 Mulgan[56] considered the following “bad reasons to avoid good innovation” in the public sector:

- innovation is no-one’s job in the public administration;
- risk aversion;
- too many bureaucratic rules;

[54] J. Chapman, System Failure. Why governments must learn to think differently, London, DEMOS, 2002, p. 13
[55] G. Mulgan, D. Albury, Innovation in the Public Sector, Strategy Unit, Cabinet Office, 2003
[56] G. Mulgan, Ready or not? Taking innovation in the public sector seriously, NESTA Provocation 03, April 2007

- uncertain results of innovation;
- high walls dividing departments, agencies, and professions, or linked services;
- monopolistic structures in the public sector.

Summarising the results of the PUBLIN project on innovation in the public sector[57], Koch and Hauknes[58]mention the following barriers:

- size and complexity[59];
- heritage and legacy: entrenched practices and procedures and unwillingness to accept novel ideas from the outside;
- resistance to change by professional groupings;
- risk aversion;
- high public/political profile and high levels of accountability that have to be guaranteed;
- unclear outcomes of the innovation;
- pace and scale of change;
- absence of capacity for organisational learning at all levels;
- public (and end-user) resistance to change;
- absence of resources (funds, skills, supporting services);
- technical barriers.

Some of these barriers are identified in a report written by Clark et al in 2008.[60]The authors emphasised the following barriers:

- bureaucratic culture;
- risk aversion;
- heritage and legacy;
- pace and scale of change;
- absence of capacity for organisational learning at all levels.

Bureaucracies impose rules and uniformity, neither of which are favourable to innovation. Public administration management also rewards risk aversion or risk avoidance by civil servants which, again, does not favour innovation. There is often a conservative attitude of keeping the practices and procedures that have worked in the past and rejecting the novel ideas that come from the outside. If the changes to public administration demanded by the political powers are too radical and too many, the civil servants responsible for their implementation may become tired and resistant to further change. Finally, there are few opportunities for organisational learning, aggravated by the size and complexity of the public administration.

Some authors have argued that there are also “good” reasons for public agencies to be unresponsive to innovation, or for innovation, when it occurs in the public sector, to be incremental. For example, there are cases where services work well and efficiently and where peoples’ lives depend on the service in question. In these cases, radical innovation can have negative effects.

[57]Research project funded by the 5th Framework Programme of the EU
[58] P. Koch, J. Hauknes, On innovation in the public sector – today and beyond, Second revised edition, Publin Report No. D20, December 2005
[59] The authors are considering the specific case of the public health system for these and the other barriers.
[60] J. Clark, B. Good, P. Simmonds, Innovation in the Public and Third Sectors, NESTA Innovation Index Working Paper, September 2008

2.8. Risk and uncertainty[61]

Some of these organisational barriers are linked to the level of risk or uncertainty that is present during the social innovation process. The innovation process is not predictable, and will often involve failure. In some organisations, this risk of failure is too great to bear. Indeed, according to Mulgan, "Innovation must involve failure, and the appetite for failure is bound to be limited in very accountable organizations or where peoples' lives depend on reliability (for example, around traffic light systems, or delivery of welfare payments). In part for this reason, improved service delivery from public institutions and NGOs usually occurs via incremental improvements to existing models rather than via the invention of entirely new ones."[62]

Mulgan sums up this analysis of the factors of success and failure of social innovations as follows:

"Innovation is therefore easier where the risks are contained; where there is evident failure; where users have choice (so that they can choose a radically different model of school or doctor rather than having it forced on them); and where expectations are carefully managed. More generally, innovation is likely to be easier when contracts for services reward outcomes achieved rather than outputs or activities, or when there is some competition or contestability rather than monopoly provision by the state. How public sectors "dock" with the social or non-profit sector is also important, particularly given that public funding tends to overshadow other revenue sources for many innovations. Funding outcomes rather than activities helps; so too does funding directed to genuinely risk-taking ideas, experiments, and trials. Yet we are not aware of a single government that has developed a fully-fledged machinery for accelerating social innovation in a major sector."[63]

Here, Mulgan points out the important role the public sector can have in supporting social innovation against the problems due to risk and uncertainty: through public funding and public contracting, the public sector can limit those problems. However, to play this role well, public funding should not crowd out other types of funds. Also, public contracting should reward outcomes and should not limit end users choices.

In a paper presented in 2011[64], Chalmers acknowledges that "Very little research has been undertaken exploring the reasons for social innovation failure (a notable example being

[61] In this literature the term "risk" is often used to refer to the issues dealt with in this section, or is used interchangeably with the term "uncertainty". In the Economics literature, since the seminal book by Frank Knight (F. H. Knight, Risk, Uncertainty, and Profit, Boston, MA, Hart, Schaffner & Marx; Houghton Mifflin Company, 1921.), risk and uncertainty are related, but are not the same thing. There is risk when the following conditions are met: the decision maker has a precise idea about which alternative actions he can choose from; the consequences of his actions are influenced by a random state of nature; he has an objective of subjective probability distribution about that state of nature. This one possible case of uncertainty, but there are others. Another case is when the decision maker doesn't have a precise idea about the alternative actions he can choose from. In this situation it said that there is ambiguity. Another case is when the decision maker has no idea about the probability distribution of the states of nature. Here it is said that there is ignorance. Among other possible cases of uncertainty, we will mention just one more which is very important when social relationships are involved. It is the case of strategic uncertainty. In this type of uncertainty what influences the consequences of decision makers' actions is not a random "state of nature", but the actions chosen by other decision makers with whom he is interacting. One among other possible analytical approaches to this type of uncertainty is Game Theory. For the study of social innovation the main type of uncertainty that matters is this one because we are dealing here with social interactions.

[62] G. Mulgan, The Process of Social Innovation. Innovations: Technology, Governance, Globalization, 1, 2006, p. 156

[63] Ibid., pp. 156-157

[64] D. Chalmers, Why social innovators should embrace the "open" paradigm, Paper presented at the 3rd EMES International Research Conference on Social Enterprise Roskilde (Denmark) - July 4-7, 2011

McLoughlin and Preece's[65] study on the failure of rural "cyber" pubs in the UK)"[66]. He also says that because of definitional and conceptual issues, it is difficult to meaningfully interrogate existing datasets for new insight"[67]. This author doesn't provide a conceptual framework to fill in these gaps in the literature. Drawing from a few empirical studies on social innovation[68] and from some wider conceptual literature[69] in that paper and in another one published in 2012[70] he identifies three barriers to social innovation:

- protectionism and risk aversion
- problem complexity
- absence of networks and collaboration.

By "protectionism and risk aversion" he refers to the aversion to disruptive innovation by managers in public agencies and in non-profit organisations, as has already been mentioned by some authors reviewed here. He says that "rhetoric around social innovation perhaps naively assumes that all individuals and organizations share a common homogenous desire to develop the most effective solutions to societal problems; in reality, however, this may not always be the case."[71] He gives as an example the privatisation of social services in the United Kingdom where public managers and non-profits are kept in their "own domains and silos"[72] rather than being encouraged to develop radical innovations. He then relates this to a point we will take up in the next section about innovation in the public sector, more precisely, what he calls "a staunchly conservative culture within government and philanthropic circles".

The novelty of social innovation brings about consequences that social innovators and other relevant stakeholders in this process cannot predict. This is due to the fact that it is a process happening in a human society. Human societies are complex systems. For this reason, not only can no one predict when, where, how and by whom a social innovation process is going to get started, but also, when it starts no one can predict how it is going to evolve. Because of this characteristic, social innovators cannot fully control and assess the outcomes of the process and neither can those who could support them (e.g. possible funders). We are not saying here that this is a specific feature of social innovation. Because of the complexity of human societies, this is a feature common to all social processes, social innovation included. Since this also happens with social innovation and since this has relevant implications for how this process evolves, it should not be left out of this analysis.

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[65] I. McLoughlin, D. Preece, Last orders at the rural cyber pub: a failure of social learning, International Journal of Technology Management, 51, 2010, pp. 75-91

[66] D. Chalmers, Why social innovators should embrace the "open" paradigm, Paper presented at the 3rd EMES International Research Conference on Social Enterprise Roskilde (Denmark) - July 4-7, 2011, p. 5

[67] Ibid

[68] T. J. Hamalainen, R. Heiskala, Social innovations, institutional change, and economic performance: making sense of structural adjustment processes in industrial sectors, regions, and societies, Edward Elgar, 2007; S. Holmes, P. Smart, Exploring open innovation practice in firm-nonprofit engagements: a corporate social responsibility perspective. R&D Management, 39, 2009, pp. 394-409 and J.-L. Klein, D.-G. Tremblay, D. R. Russieres, Social economy-based local initiatives and social innovation: a Montreal case study. International Journal of Technology Management, 51, 2010, pp. 121-138

[69] N. Antadze, F. Westley, Funding Social Innovation: How Do We Know What to Grow? The Philanthropist, 23, 2010, pp. 343-356; P. Dawson, L. Daniel, Understanding social innovation: a provisional framework, International Journal of Technology Management, 51, 2010, pp. 9-21 and N. Jankel, Radical (re)invention, London, Wecreate, 2011

[70] D. Chalmers, Social innovation: An exploration of the barriers faced by innovating organizations in the social economy, Local Economy, 0(0), 2012, pp. 1-18 (published online on 13 November 2012)

[71] Ibid., p. 5

[72] Ibid., p. 5

In fact, this situation generates, at least, two types of barriers to social innovation. One is the resistance of potential beneficiaries from social innovation to support the process if they cannot perceive how they can benefit from this process. Another barrier is the difficulty for social innovators to get the support of funders and the supply of other resources (e. g. appropriate skills, data on the impacts of social innovation, etc.) needed for social innovation.

2.9. Complexity and resilience of social systems

Several authors link the unpredictability of the social innovation process with the complexity of the social challenges being addressed. Chalmers, mentioned above, for example, refers to "problem complexity" which refers to the "multifaceted nature of most social problems" and to the need for "cooperation across multi-stakeholder environments" to tackle those problems.[73]More than other social innovation authors, Frances Westley and her colleagues explore and analyse social innovation processes from the perspective of the 'complexity science paradigm'. In the book *Getting to Maybe,* Frances Westley and her co-authors argue in favour of this paradigm, reasoning that "Complexity science embraces life as it is: unpredictable, emergent, evolving and adaptable—not the least bit machine like. And though it implies that even though we can't control the world in the way we can control a machine, we are not powerless either. Using insights about how the world is changed, we can become active participants in shaping those changes."[74]

One of the ways these authors think the complexity paradigm can be useful in looking at social innovation, is to see social innovators not as people who start out with a grand strategy that they implement with certainty about the outcomes, but as people who are compelled by circumstances, and have the initiative to initiate and experiment new responses to social needs in relation with others who also want change. To be successful, they need to have the ability to act in a reflective way. . They call this skill "standing still" and consider that a key element of this skill is pattern recognition, which means being able to see emerging patterns, both in local environments and in broader systems.

Reflective skills are also important for social innovators in dealing with power dynamics in their society. The authors make the following recommendation: "be thoughtful and reflective about your place and role in the power dynamics that are part of your world. Become more skilful and sophisticated in assessing the role of power and connecting to those who have power. Understand that power is a two edged sword that can be used to both resist and foment change."[75]

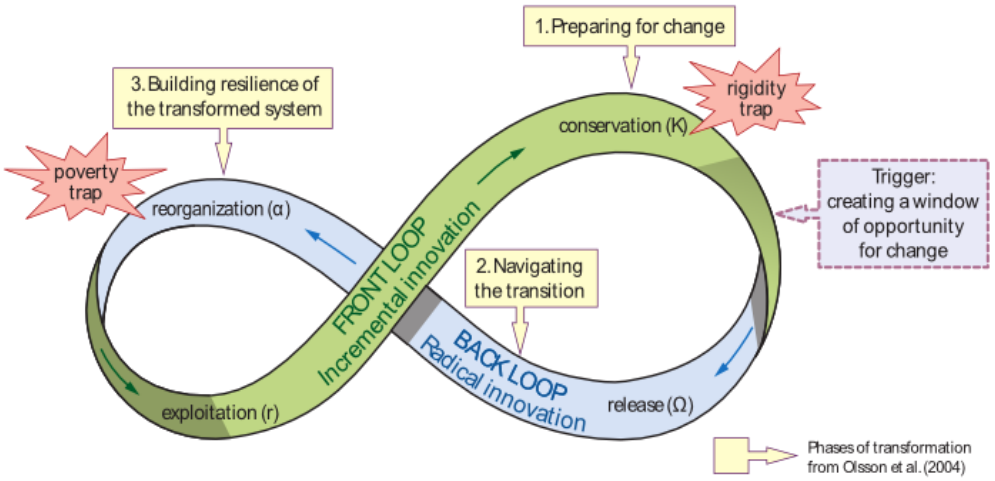
It is clear from these quotes that Frances Westley and her co-authors advocate an "agency based" approach to social innovation where the success or failure of this kind of process depends very much on the skills and strategies of social innovators to manage emergence of new responses to social needs in the context of complex social and ecological environments. She considers social innovation as "an initiative, product or process which profoundly changes the basic routines, resource and authority flows or beliefs of any social system in a direction of greater resilience. Successful social innovations have durability, impact and scale."[76]

[73] Ibid
[74] F. Westley, B. Zimmerman, M. Q. Patton, Getting to Maybe Canada, Random House, 2006, p.7
[75] Ibid, p. 125
[76] F. Westley, Getting to Maybe, Social innovation: an agency based approach to managing for resilience, viewed on 2 August 2012, http://www.sig.uwaterloo.ca/sites/default/files/documents/GettingtoMaybe-SocialInnovation_000.pdf

A resilient system has three characteristics: "the capacity of the system to experience a disturbance or change and still retain its basic function, structure, and identity; the ability to self-organize; and the ability to increase its capacity to learn and adapt."[77] Frances Westley and her co-authors look at resilience and social innovation by appealing to the concept of the "adaptive cycle" proposed by C. S. Holling[78]. This cycle graphically represented by an infinity loop (∞) encompasses four phases: "release, reorganization, exploitation, and conservation. The exploitation and conservation phases in the "front" loop represent periods of growth and resource accumulation, where change is routine and almost always adaptive, while the release and reorganization phases in the "back" loop can represent the introduction of novelty, either transformative (radical) or adaptive change, and renewal of the system."[79] Frances Westley applies this concept to the social innovation phases as follows[80]:

- release is when a new idea is born;
- reorganisation is when the new idea is developed;
- exploitation is when the idea is launched as a product, process or organisation;
- conservation is the phase of an "established" innovation.

Figure 2 – The adaptive cycle



Sources: R. Biggs, F. R. Westley, S. R. Carpenter, Navigating the back loop: fostering social innovation and transformation in ecosystem management. Ecology and Society 15(2): 9, 2010; P. Olsson, C. Folke, T. Hahn, Social–ecological transformation for ecosystem management: the development of adaptive co-management of a wetland landscape in southern Sweden. Ecology and Society 9(4): 2, 2004

The interest of this approach is not only for the concept of social innovation itself, but also for its implications in terms of the analysis of barriers to social innovation. In fact, for Frances Westley the

[77] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5
[78] C. S. Holling, Understanding the complexity of economic, ecological, and social systems, Ecosystems 4, 2001, pp. 390–405
[79] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5
[80] F. Westley, Getting to Maybe, Social innovation: an agency based approach to managing for resilience, viewed on 2 August 2012, http://www.sig.uwaterloo.ca/sites/default/files/documents/GettingtoMaybe-SocialInnovation_000.pdf

process of social innovation can get stuck at each stage of the loop and negative feedback mechanisms or 'traps' can prevent the process from moving from one stage to another. [81]

In the reorganisation phase, when a new idea is developed the process can be blocked by a "poverty trap" which Frances Westley defines as the difficulty to get sufficient resources for this development. Moore and Westley[82] give several examples of the types of resources that may be lacking when the process is stuck in a "poverty trap":

- financial capital;
- social capital;
- lack of new ideas or visions;
- insufficient efforts to build political will and public support;
- unsuccessful search for early adopters of the innovation;
- difficulty to create energy and momentum around the innovation.

During the reorganisation phase it is also possible to have some negative feedback mechanisms (vicious circles) which are barriers to the development of the process. This happens when multiple experiments have little effect in terms of measurable outcomes, possibly leading to increasing anxiety and frustration by those who, instead of taking this as a leaning by doing process, see this situation as a waste of time and lacking in direction.

If the process manages to overcome these poverty traps and vicious circles and moves to the exploitation phase, then the feedback mechanisms become positive:

- as the initiative takes form it attracts more and more supporters and resources;
- these developments also generate an increasing demand for organizing systems (communication, control, accounting), job definition and regulation.

This moves the process to the conservation stage. An "established" social innovation, however, cannot perform its innovative role forever. There will be a time when a new social innovation process should get started to respond to new shocks. However, it is possible that the system loses resilience if it gets trapped in this stage without being capable of generating new ideas and putting them to practice in an effective way. Frances Westley and other authors call this kind of situation a "rigidity trap". She appeals to Giddens'[83] concept of "structures" to identify the following possible sources for this kind of trap: "the structures of legitimation (rules), domination (resource and authority allocation), and signification (interpretation and meaning) become more homogeneous and more resistant to change."[84]

2.10. Skills and training and the agency approach to social innovation

We have seen in the previous section that the authors such as Frances Westley who adopt a complexity approach to social innovation emphasize the relevance of specific types of skills for a social innovator to be successful. We will come back to these authors, but first let us have a look at how others have dealt with this issue.

[81] In the rest of this section we will follow and adapt Frances Westley's presentation mentioned in the previous footnote.
[82] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5
[83] A. Giddens, A, Central problems in social theory, MacMillan Publishing, London, UK, 1979
[84] Ibid

The proceedings of an OECD workshop on social innovation[85] refer to the multidimensional and multi-stakeholder nature of social innovation as a barrier to this kind of innovation. Instead of considering underfunding as a barrier to social innovation at the same level as the others, in this report this underfunding is considered as a consequence of the deeper level barriers related to that multidimensional and multi-stakeholder nature. Because of this feature, social innovation is hindered by a lack of appropriate measurement tools (indicators of well-being), "traditional and well-established frontiers between disciplines, sectors, as well jurisdictional boundaries in government and administrations,"[86]the lack of "integration of competencies that are still to a large degree disconnected, especially technological and non-technological competencies, as well as the natural and social sciences,"[87] and insufficient "involvement of stakeholders who can introduce the necessary capabilities and interests in research and innovation to address social challenges"[88].In this workshop, Waasdorp and Ruiter[89], speaking about their experience in the Netherlands, refer to three barriers to social innovation already mentioned by other authors reviewed here:

- insufficient cooperation and networking between stakeholders;
- fragmented knowledge transfer policies;

Concerning the lack of skills, Caulier-Grice et al[90] say that even though there are many courses and programmes for social entrepreneurship, there are very few for social innovation. Also what does exist lacks "coherence, comprehensiveness, or a global outlook"[91]. These authors don't elaborate more on the kind of skills required for social innovation and on the kinds of training programmes needed to develop them. Other authors, such as Waasdorp and Ruiter[92] refer to insufficient expertise regarding support of social entrepreneurship.

In terms of skills and learning more broadly, Hubert et al[93] point to the need to improve the following in order to support social innovation:

- more inter-disciplinarity;
- stronger interplay between basic and applied research;
- greater accountability;
- deeper understanding of the social impacts of technological developments, both in terms of opportunities but also in terms of threats;
- more importance given to participatory and active learning approaches.

Now coming back to Frances Westley and her co-authors, they consider the role of skills in social innovation in connection to their emphasis on the role of agency in this process. The connection is simple: to speak about skills one has to speak about the actors having those skills. In the literature

[85] OECD, Fostering Innovation to Address Social Challenges, Workshop Proceedings, Paris, OECD, 2011
[86] Ibid, p. 9
[87] Ibid, pp. 9-10
[88] Ibid, p. 10
[89] P. Waasdorp, K. Ruiter, Countries Approaches & Innovation Policies to Address Social Challenges, in OECD, Fostering Innovation to Address Social Challenges, Workshop Proceedings, Paris, OECD, 2011, pp. 69-74
[90]J. Caulier-Grice, L. Kahn, G. Mulgan, D. Vasconcelos, Study on Social Innovation, A paper prepared by the Social Innovation eXchange (SIX) and the Young Foundation for the Bureau of European Policy Advisors, 2010, p. 27
[91]Ibid, p. 97
[92] P. Waasdorp, K. Ruiter, Countries Approaches & Innovation Policies to Address Social Challenges, in OECD, Fostering Innovation to Address Social Challenges, Workshop Proceedings, Paris, OECD, 2011, pp. 69-74
[93] A. Hubert (co-ord.), Empowering people, driving change, Social Innovation in the European Union, Bureau of European Policy Advisers - European Commission, Luxembourg, Publications Office of the European Union, 2011

on social innovation there is some analysis of the relative importance of actors in the process, but conducted in a "structural" way: the importance of an actor depends on the structure of the network he belongs to and on his position in that network. In an already quoted paper with Michele-Lee Moore, Frances Westley consider that this kind of analysis misses the point of understanding the "skill sets that a central actor needs in order to create so many ties and gain such influence, or of how the actor might maintain or leverage those ties as a capacity to achieve socially innovative goals in the present or the future."[94] These authors think that the concept of "institutional entrepreneurship" proposed by DiMaggio[95], Fligstein[96] and Dorado[97] "may add to the explanatory power of network theory for social innovations that aim to respond to complex problems and improve resilience by better illuminating the agency within networks."[98] They quote Maguire et al.to define an institutional entrepreneur as an actor or group of actors who seek to change "particular institutional arrangements and who leverage resources to create new institutions or transform existing ones."[99] An institution is understood here as "rules, norms and beliefs that describe reality for . . . [an] organization (group or individual), explaining what is and is not, what can be acted upon and what cannot".[100]

Moore and Westley say that there is only a small body of work identifying the skills needed for institutional entrepreneurship:

- cultural and cognitive skills such as framing and persuading[101];
- procedural and technical skills[102];
- political or interactional competence[103].

Moore and Westley point out that this body of work does not deal with the relationships between the agency of institutional entrepreneurs and the social networks they are part of. The literatures that deal with this issue are the ones which appeal to the concepts of "distributed agency" or "actor net"[104], "collective institutionalized entrepreneurship"[105], or "collective action models".[106]

[94] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5
[95] P. DiMaggio, Interest and agency in institutional theory, in L. Zucker, editor, Institutional patterns and culture, Ballinger Publishing Company, Cambridge, Massachusetts, 1988, pp. 3-22
[96] N. Fligstein, Social skill and institutional theory. American Behavioral Scientist, 40(4), 1997, pp. 397–405
[97] S. Dorado, Institutional entrepreneurship, partaking, and convening. Organization Studies 26, (3), 2005, pp. 385–414
[98] Ibid
[99] S. Maguire, C. Hardy, T. Lawrence, Institutional entrepreneurship in emerging fields: HIV/AIDS treatment advocacy in Canada, Academy of Management Journal 47(5), 2004, p. 657
[100] A. J. Hoffman, Institutional evolution and change: environmentalism and the US chemical industry. Academy of Management Journal 42(4), 1999, p. 351
[101] H. Rao, Caveat emptor: the construction of non-profit consumer watchdog organizations, American Journal of Sociology 103, 1998, pp.912–961
[102] D. B. Strang, J. W. Meyer, Institutional conditions for diffusion, Theory and Society, 22(4), 1993, pp. 487–511
[103] P. DiMaggio, Interest and agency in institutional theory, in L. Zucker, editor, Institutional patterns and culture, Ballinger Publishing Company, Cambridge, Massachusetts, 1988, pp. 3-22 and R. A. Baron, G. D. Markman, Beyond social capital: the role of entrepreneurs' social competence in their financial success, Journal of Business Venturing 18, 2003, pp. 41–60
[104] R. Garud, P. Karnoe, Distributed agency and interactive emergence, in S. W. Floyd, J. Roos, F. Kellermanns, editors, Innovating strategy process, Blackwell Publishing, Oxford, UK, pp. 88-96
[105] G. Möllering, Collective institutional entrepreneurship? The recursive interplay of action, networks and institutions in market constitution, Paper presented at The Institutional Embeddedness of Markets Conference, February 1–3, 2007, Cologne, Germany and F. Wijen, S. Ansari, Overcoming inaction through collective institutional entrepreneurship: insights from regime theory, Organization Studies 28(7), 2007, pp. 1079–1100

By considering the role of institutional entrepreneurship in social networks to foster social innovation, Moore and Westley shed a new light on the relationships between social networks and social innovation. In particular, this can help to understand that the influence of strong bonds or weak ties of a social network on social innovation depends on what institutional entrepreneurs can make of them. Strong bonds can have a positive effect on social innovation if they are managed to build up high levels of trust, reducing uncertainty and reciprocity and promoting lots of exchange of information. The effect can be the opposite if strong bonds are managed to limit diversity and access to information.

Based on previous studies on social innovation Moore and Westley identify the following key skills for the institutional entrepreneurship needed to build social innovation:

- pattern recognition;
- relationship building and brokering;
- knowledge and resource brokering;
- network recharging.

Pattern recognition is the capacity to recognise the patterns causing a rigidity trap. Relationship building and brokering is the skill of institutional entrepreneurs capable of building networks and connecting different network scales not driven by self-interest, but to build trust and promote the exchange of information and make the changes valuable and attractive to those the social innovation process should involve. For the new or changed social networks to be effective in fostering social innovation there is a need for knowledge and other resources circulating in the network to be reframed across scales or from one type of actor to another in order to become more accessible and more engaging to a wider group of participants. Finally, network recharging is the kind of skill that some people, like visionary leaders, have to "give form and direction to the network and its mission" when the actors in the network are getting emotionally, mentally, and physically exhausted.[107]

2.11. Economic characteristics of the goods and services delivered by social innovation

In an OECD workshop on social innovation, two participants addressed the issue of underfunding. They mentioned one important economic characteristic of social innovation rarely stressed in the literature about this kind of innovation. It is the fact that "Social challenges have a public-good nature. Market processes and the "invisible hand" are, even more than in other innovation activities, inefficient to coordinate these activities that directly address social challenges. Prospects of large profits in the social area are limited, which hinders incentives to invest and commit resources to these activities."[108] So, in spite of the frequent reference to underfunding as a barrier to social innovation, it is difficult to find authors like these ones who make the connection of that barrier to this economic characteristic of the challenges social innovation is supposed to meet.

[106] T. J. Hargrave, A. H. Van de Ven, A collective model of institutional innovation, Academy of Management Review 31(4), 2006, pp. 864–888

[107] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5

[108] Y. Harayama, Y. Nitta, Introduction: Transforming Innovation to Address Social Challenges, in OECD, Fostering Innovation to Address Social Challenges, Workshop Proceedings, Paris, OECD, 2011, p. 15

Nicholls and Murdock also point to this issue of public goods provision and consumption when they analyse what the word "social" means in a social innovation process: "social innovation is defined here as varying levels of deliberative change that aim to address suboptimal issues in the production, availability, and consumption of public goods defined as that which is broadly of societal benefit within a particular normative and culturally contingent context."[109]

The economic nature of the goods and services delivered by social innovation is also one of the important factors contributing to what some authors reviewed before consider to be a barrier to social innovation, more precisely, the lack of data and the difficulties of measurement of the outcomes of social innovation.

2.12. A typology of the barriers to social innovation

Anticipating part of the conceptual framework that will be proposed in the next chapter, the barriers to social innovation identified by the authors covered in the literature review will be organised in two broad categories:

- Structural barriers;
- Agency barriers.

Structural barriers include those that are related to the complexity and uncertainty of social processes and its consequences, and to other characteristics of the context (social, political, economic, technologic, etc.) in which social innovators operate. Agency barriers include those that correspond to the characteristics and actions of individuals or organisations involved in social innovation processes and interactions among them.

The tables below present this organisation of the barriers to social innovation. Because of the existence of a specific literature on the barriers to social innovation in the public sector, we will put them in a separate table divided in those two categories.

Table 1 – Structural barriers to social innovation in all sectors

Barriers	Quoted references
Complexity and uncertainty of social processes and their consequences	
Problem complexity	Chalmers (2011, 2012)
Flawed by unforeseen side effects	Mulgan (2006)
Insufficient information and uncertainty about the future impacts of innovation	van der Geest &Heuts (2008)
Path dependence	Seyfang & Smith (2007)
...No independent source of money and insufficient Funding	Mulgan (2006); Caulier-Grice et al. (2010); Hubert et al. (2011)
Lack of data and measurement	Hubert et al. (2011)
...Poverty traps	Moore & Westley (2011)
...Rigidity traps	Moore & Westley (2011)
Political and public policy context	
Tight monopolization of power in the society	Mulgan (2006)
...Inhibition of free communication	Mulgan (2006)

[109] A. Nicholls, A. Murdock, The Nature of Social Innovation, in A. Nicholls, A. Murdock (eds) Social Innovation: Blurring Boundaries to Reconfigure Markets, Hampshire, Palgrave MacMillan, p. 8

Top down approach to policy formulation and Implementation	Hubert et al. (2011)
Lack of legal and cultural recognition	Hubert et al. (2011)
Inadequate public procurement and commissioning Mechanisms	Caulier-Grice et al. (2010)
Culture where the response to social problems is seen has something that has to be done by public organisations	Hubert et al. (2011)
Fragmented knowledge transfer policies	Waasdorp & Ruiter (2011)

Table 2 – Structural barriers to social innovation in all sectors (cont.)

Barriers	Quoted references
Social context	
Large number of actors, activities and technologies that will have a negative impact from the innovation	van der Geest & Heuts (2008)
Strong ties social capital	Mulgan et al. (2007); Granovetter (1973); Burt (2002, 2004); Florida et al. (2009)
Economic characteristics of social innovation	
Public goods nature of the outcomes of social Innovation	OECD (2011); Harayama & Nitta (2011)
Too expensive	Mulgan (2006)
Other structural barriers	
Lack of scaling mechanisms	Mulgan (2006); Caulier-Grice et al. (2010); Hubert et al. (2011)

Table 3 – Agency barriers to social innovation in all sectors

Barriers	Quoted references
Social innovation not wanted	Mulgan (2006)
Social innovation insufficiently useful	Mulgan (2006)
Social innovation not good enough relative to alternatives	Mulgan (2006)
Efficiency reasons	Mulgan et al (2007)
People's interests (direct and indirect economic damage)	Mulgan et al. (2007); van der Geest & Heuts (2008); Acemoglu & Anderson (2000)
People's minds	Mulgan et al. (2007); Miller (2010)
Personal relationships between movers and shakers	Mulgan et al. (2007)
Distrust by the rest of the society with respect to the innovators	van der Geest & Heuts (2008)
Stakeholders don't agree on a common approach to the changes brought about by the innovation	van der Geest & Heuts (2008)
Inexistence of "the third who joins" in social networks	Obstfeld (2005)
Lack of networks and network intermediaries	Mulgan et al. (2007); Caulier-Grice et al.(2010); Chalmers (2011, 2012); Moore & Westley (2011); Waasdorp & Ruiter (2011)

Lack of skills in the many dimensions of social Innovation, including skills for institutional entrepreneurship	Caulier-Grice et al. (2010); Hubert et al. (2011); Waasdorp & Ruiter (2011); Moore & Westley (2011)
Protectionism and risk aversion	Chalmers (2011, 2012)
Governance and coordination	Hubert et al. (2011)

Table 3 – Barriers to social innovation in the public sector

Barriers	Quoted references
Structural barriers	
Pressure of uniformity	Chapman (2002)
Too many bureaucratic rules	Mulgan (2007); Koch & Hauknes (2005); Clark et al. (2008)
Preference for command and control forms of power	Chapman (2002)
Lack of evaluation of previous policies	Chapman (2002)
Delivery pressures and administrative burdens	Chapman (2002); Mulgan & Albury (2003)
Tradition of secrecy	Chapman (2002)
End-user performance is secondary	Chapman (2002)
Loss of professional integrity and autonomy under the knife of efficiency in policy making	Chapman (2002)
Short term budgets and planning horizons	Mulgan & Albury (2003)
No incentives to innovate and adopt innovations	Mulgan & Albury (2003)
Technologies available but constraining cultural or organisational arrangements	Mulgan & Albury (2003)
Technical barriers	Koch & Hauknes (2005)
Over reliance on high performers and sources of innovation	Mulgan & Albury (2003)
Innovation is no-one job in the public administration	Mulgan (2007)
High walls dividing departments, agencies and professions or linked services	Mulgan (2007)
Monopolistic structures in the public administration	Mulgan (2007)
Size and complexity of the public sector	Koch & Hauknes (2005)
Heritage and legacy	Koch & Hauknes (2005); Clark et al. (2008)
High public/political profile and high levels of accountability that have to be guaranteed	Koch & Hauknes (2005)
Pace and scale of change	Koch & Hauknes (2005); Clark et al. (2008)
Poor skills in active risk and change management	Mulgan & Albury (2003)
Absence of resources (funds, skills, support services)	Koch & Hauknes (2005)
Absence of capacity for organisational learning at all levels	Koch & Hauknes (2005); Clark et al. (2008)
Agency barriers	
Aversion to risk and failure	Chapman (2002); Mulgan & Albury (2003); Mulgan (2007); Koch & Hauknes

	(2005); Clark et al. (2008)
Reluctance to close down failed programmes or projects	Mulgan & Albury (2003)
Resistance and protection of vested interests by some professional and intermediary bodies	Chapman (2002); Koch & Hauknes (2005)
Public (and end-user) resistance to change	Koch & Hauknes (2005)
Turf wars between departments	Chapman (2002)

2.13. Conclusions from the literature review

In the literature on the barriers to social innovation, the tendency is to draw lists of barriers in a descriptive way, without enough investment in elaborating testable hypotheses about the connections of those barriers with some economic and other characteristics of the social innovation process. This might include, for example, explaining the challenges of funding social innovations by pointing to the public-good nature of the social innovations being developed.[110]Another example would be to elaborate on the possible connections between some of the barriers to social innovation in the public sector with the fact that one fundamental characteristic of this sector in most places around the world is that the decisions about public revenues are disjoint from the decisions about the costs of delivery of specific public services[111]contrarily to what happens in market oriented organisations. This is one reason why this literature has not yet come up with a conceptual framework to explain the genesis and possible interactions among the different barriers to social innovation. Indeed, it remains mostly descriptive.

Even though social innovation is a dynamic process, and is often discussed in the context of trying to alleviate poverty and social exclusion, there is an important aspect of the dynamics of those challenges to which the literature on barriers to social innovation has not paid enough attention, with a very few exceptions such as the work of Frances Westley and her co-authors. This aspect has been the object of a large body of literature about so called "poverty" and "rigidity" traps"[112] in the literature on Development Economics. This is one example of a situation in which social systems are locked into the status quo by self-reinforcement mechanisms ("vicious circles") that are themselves barriers to change."[113] Social innovation, in these cases, involves breaking these vicious circles. Vicious cycles, which go in the opposite direction to social innovation processes, are themselves a barrier to social innovation.

In the next chapter we are going to deal with this idea of traps and other dynamic barriers to social innovation, and the issues raised for barriers to social innovation by the collective nature of goods and services delivered by social innovation.

[110] OECD, Fostering Innovation to Address Social Challenges, Workshop Proceedings, Paris, OECD, 2011
[111] C. Wolf Jr., Markets or Governments, Choosing between Imperfect Alternatives, 2.nd ed., Cambridge, MA, The MIT Press, 1993
[112] See for example, S. Bowles, S. N. Durlauf, K. Hoff (eds.), Poverty Traps, Princeton and Oxford, Princeton University Press, 2006; K. Basu, Analytical Development Economics, The Less Developed Economy Revisited, Cambridge, MA, The MIT Press, 1997; A. V. Banerjee, E. Duflo, Poor Economics, A Radical Rethinking of the Way to Fight Global Poverty, New York, Public Affairs, 2011 and J. D. Sachs, The End of Poverty, How We Can Make It Happen in Our Lifetime, London, Penguin Books, 2005
[113] S. Bowles, S. N. Durlauf, K. Hoff (eds.), Poverty Traps, Princeton and Oxford, Princeton University Press, 2006, p. 9

3. Barriers to social innovation

3.1. Conceptual framework

Having surveyed the literature on the barriers to social innovation it is clear that there are a number of critical gaps. In particular, there is very little theoretical or conceptual work on the barriers to social innovation. As such, the aim of this paper is to propose some elements of an explanatory framework of the barriers to social innovation. In particular, we will devote special attention to some themes connected to these barriers that have not been satisfactorily covered in the existing literature. We will then move towards a more theoretical approach to the barriers to social innovation, that is, an approach aiming to lead to hypotheses explaining where they come from and how they work, builds up on the following ideas:

- *Dynamics*: Like social innovation, barriers to social innovation are also processes, with the difference that they go in the opposite direction to social innovation processes;
- *Traps*: These kind of processes, especially relevant for the initiation stages of social innovation, are traps or vicious circles (e.g. poverty traps) in social systems causing harm and suffering to some groups or to the whole of society;
- *Barriers to entry*: social innovators may face barriers to entry in the new activities they want to set up;
- *Insufficiency of built in growth and leveraging mechanisms*: Another way of looking at barriers to social innovation in this dynamic manner, especially when we look at the scaling up stages of social innovation, is to consider as barriers to social innovation the lack or insufficiency of built in growth mechanisms (e.g. economies of scale) in the way social innovation is produced and the difficulty of this process to build up networking, partnership and other social connections capable of leveraging results from a small to a larger scale;
- *Collective nature of the goods and services*: The explanation and mechanisms of other barriers to social innovation (e.g. insufficient supply of funds and other resources) can be found by looking at the economic nature of relevant goods and services delivered by this process, namely the fact that, very often, they have a collective nature;
- *Collective action*: The collective nature of relevant goods and services delivered by many social innovations often requires the organisation of some form of collective action (collaborative work, co-production, co-operation and mutualism, creation of social economy organisations, social network building, partnerships, co-operation between private and public entities, social movements etc.) with the corresponding need to cope with cooperation and coordination problems to get this kind of action started and sustained;
- *Under resourcing*: The collective nature of those goods and services also implies that there are benefits from social innovation that cannot be privately appropriated which may make this kind of innovation less attractive than technological innovation for suppliers of funds or other resources seeking a private benefit;
- *Organisational failures*: The collective nature of the goods and services delivered by social innovation also often implies that public organisations and social economy organisations play an important role in triggering, supporting and scaling up this kind of innovation, but these are organisations which may have failures in meeting their missions causing harm to the social innovation processes where they are a stakeholder;
- *Agency failures*: Social innovation is also about social innovators being capable of motivating others to participate in new ways to respond to social needs, but they may fail to do so because they may not have enough financial and other resources needed to

accomplish their goals, they may not be able to make their target population better off, or they may not be able to prevent the process to be captured by opportunistic behaviours.

Taking up the typology proposed at the end of the previous chapter, the first five of these items refer to structural barriers to social innovation and the remaining ones to agency barriers. Structural factors influence agency, but agency by individuals and organisations can change those structural factors either by reinforcing their impeding role to social innovation or by overcoming this impeding role and developing social innovations.

3.2. Barriers related to traps in social systems

3.2.1. Why are traps in social systems an issue for social innovation?

The social needs addressed by social innovation processes often arise in situations where people are trapped in some kind of "vicious circle". The poverty traps studied in the development economics literature[114]are a major example of that, but there are others, like the depletion process of common-pool resources (or "Tragedy of the Commons") due to self-interested appropriation of these resources where each user continues to extract from the resource more beyond its regeneration capacity, even though this is damaging to society. The work of Frances Westley and her co-authors reviewed in the previous chapter also fits very well here.

These and other kinds of traps are a type of barrier to social innovation. Social innovation often attempts to break these kinds of traps or vicious cycles. However, these traps or vicious cycles are also a dynamic process and travel in the opposite direction to social innovation processes.

Since we have already reviewed the main ideas of the body of work by Frances Westley and her co-authors in the previous chapter, we will not repeat them here. In the next section we will present another approach to traps in the social systems coming from authors who were not dealing explicitly with social innovation.

3.2.2. Social traps

The language of 'traps' is used within psychology to explore and explain some of the barriers to social change. One of the seminal papers on this subject was written by Platt[115]who described various "social traps". These are situations "where men or organizations or whole societies get themselves started in some direction or some set of relationships that later prove to be unpleasant or lethal and that they see no easy way to back out of or to avoid."[116]

Social traps can exist all along the social innovation process, from the initiation stages, to the scaling and later stages. This being said, they tend to be of more relevance as barriers to social

[114] S. Bowles, S. N. Durlauf, K. Hoff (eds.), Poverty Traps, Princeton and Oxford, Princeton University Press, 2006; K. Basu, Analytical Development Economics, The Less Developed Economy Revisited, Cambridge, MA, The MIT Press, 1997; A. V. Banerjee, E. Duflo, Poor Economics, A Radical Rethinking of the Way to Fight Global Poverty, New York, Public Affairs, 2011 and J. D. Sachs, The End of Poverty, How We Can Make It Happen in Our Lifetime, London, Penguin Books, 2005

[115] J. Platt, Social Traps, American Psychologist, August 1973, pp. 641-651.

[116] Ibid.

innovation in the initiation and scaling stages. Once a social innovation process has managed to get through these stages, this means that it has been successful in breaking this kind of trap.

In this 1973 paper Platt starts with the example of the "tragedy of commons".[117]Where common land has open access (i.e. anyone can graze their cattle freely), every owner driven by his self-interest increases the number of cattle that he grazes. As everyone does this, the common land is destroyed. In this case, each individual "continues to do something for his individual advantage that collectively is damaging to the group as a whole".[118] Platt calls this kind of situation a "social trap".

He called a "social fence", or a "counter-trap" the converse situation: "The consideration of individual advantage prevents us from doing something that might nevertheless be of great benefit to the group as a whole."[119]

As a follower of the influential psychologist B.F. Skinner, Platt notes that in this kind of situation there is a feedback or self-reinforcement mechanism:

- the environment where the individual operates creates a stimulus (S);
- the individual responds to this stimulus with some kind of behaviour (B);
- this behaviour has some result (R) in that environment;
- if the result is positive for the individual, this contributes to making his initial behaviour more probable; and
- if it is negative, the opposite tends to happen to his behaviour.

According to Platt, when there is a social trap, or a social fence the following happens:

- there is a difference between the short-run and the long-run consequences for the individual of his behaviour;
- the short-run consequences are positive for the individual and the long run are negative and;
- the short-run consequences have more influence on the individual's behaviour than the long-run consequences.

Platt identified three types of traps:

- one-person traps or self-traps;
- "missing-hero" traps where the person (the "hero") who is needed to get the group to act in a co-operative way is missing;
- collective traps like the "tragedy of the commons".

One type of one-person trap identified by Platt is related to time delay. Consequences of individual behaviour are rewarding for the person in the short run, but this effect is reversed in the long run. Platt gives as examples smoking, and saving too little money.

There is another type of situation studied in the literature about organisational capacity building called a "capability trap".[120] Organisations may prefer to adopt procedures, technologies and other

[117] G. Hardin, The Tragedy of the Commons, 162, 1968, pp. 1242-1248.
[118] J. Platt, Social Traps, American Psychologist, August 1973, p. 641.
[119] Ibid.
[120] See N. P. Repening, J. D. Sterman, Nobody Ever Gets Credit for Fixing Problems that Never Happened, Creating and Sustaining Process Improvement, California Management Review, Vol. 43, No. 4, 2001, pp. 64-88 and N. P.

things that give them positive results in the short run, crowding out proactive work on more fundamental changes which could give them superior results in the long run.

Another type of one-person trap is when the individual doesn't have enough or enough good quality information about the consequences of his/her behaviour. In their study of poverty, Banerjee and Duflo argue that a lack of information can play a major role in poor decision making amongst disadvantaged groups. They note that simply supplying information (which is credible and delivered as part of a well thought out communication campaign) can make a major difference to some of the social challenges related to poverty.[121]

The third type of one person trap identified by Platt is related to what he calls "sliding reinforcers". This is the situation where the consequences reinforcing some kind of behaviour become less and less rewarding as this behaviour is repeated, but where the individual keeps doing the same thing in the hope that the consequences will be as rewarding as they once were. An example given by Platt is drug addiction.

To illustrate the "missing hero" trap Platt takes the example given by Schelling[122]of a "summer Sunday evening when thousands of cars are coming back from a Cape Cod weekend on a two-lane road and a mattress falls unnoticed from the top of a station wagon and lies in the northbound lane."[123] In this case, if no one stops and moves the mattress, the drivers will be caught in a traffic jam: the cars in the northbound lane behind the mattress will wait until those in the southbound lane go by; the drivers close to the mattress will only think about how to get around it quickly; those far away don't know what is going on; those who have already gone by the mattress have no incentive to come back and move the mattress away. For Platt more or ethical training can help to get out of this kind of trap, but this depends on the level of personal difficulty or danger a person can face if he plays the role of "hero".

The collective traps are those where the existence of a single "hero" or even a small group of "heroes" is not effective in getting the majority of the group to change behaviour. It is also the case where it does not matter if there is an individual or a small group that is behaving against the collective interest of the members. In this kind of situation everyone would be better off if everyone cooperates, but if people don't trust that almost everyone else will cooperate, it is pointless to cooperate. This is what has been called in Game Theory, a "prisoner's dilemma".

This kind of trap can be a barrier to the development of a social innovation, and can prevent a social invention from becoming a social innovation in the following way:

- people who can benefit from a social invention don't have enough information to perceive this benefit compared to the status quo, or the innovation may have effects they perceive as unpredictable and they are averse to that, as was seen in the previous section;
- it might be too dangerous (for example due to risk of political persecution, or social out-casting) for the social innovator to push his innovation forward enough to induce a large number of followers;

Repening, J. D. Sterman, Capability Traps and Self-Confirming Attribution Errors in the Dynamic Process of Improvement, Administrative Science Quarterly, 47, 2002, pp. 265-295.

[121] A. V. Banerjee, E. Duflo, Poor Economics, A Radical Rethinking of the Way to Fight Global Poverty, New York, Public Affairs, 2011.

[122] T. Schelling, The ecology of micromotives, Public Interest, 25, 1971, pp. 61-98

[123] J. Platt, Social Traps, American Psychologist, August 1973, p. 644

- the efforts of one or a small number of social innovators is not enough to get widespread acceptance of their innovation as long as each individual in their population doesn't believe that the majority of the others will accept that innovation.

Representing barriers to social innovation in this way has several advantages:

- like social innovation itself, these barriers also have a dynamic nature;
- they are not difficulties that can be overcome by simply supplying missing resources (money or others) to the social system; and
- if they work through some kind of self-reinforcement mechanism, the way out might be to reverse this kind of mechanism and; reversing these reinforcement mechanisms could enable the growth and development of social innovations, or could themselves be examples of social innovations.

Platt identified six ways to reverse reinforcement mechanisms; or put another way, six ways of overcoming social traps. One is to "change the delay to convert long-range consequences into more immediate ones."[124]Platt gives two examples of reversing reinforcement mechanisms:

- put warning labels on cigarette packages; and
- the work of "social entrepreneurs" who persuaded the legislatures in Indiana and Ohio to set up toll road corporations in order to build new highways to replace the busy and old ones (drivers got an immediate benefit for themselves from the new highways and society as a whole benefited from better transportation).

Another way of reversing reinforcement mechanisms is to "add counterreinforcers, such as social incentives or punishments, to encourage or discourage behaviours by their immediate" positive or negative results.[125] Examples are punitive laws, administrative laws, contract laws, taxes or public incentives. Through these kinds of mechanisms, individuals' behaviour can be modified in the short term to better reflect the longer term consequences of those behaviours.

The third approach to overcoming social traps by reversing reinforcement mechanisms is to "*change the long run consequence*" of behaviours.[126] For Platt, one way to do this is by new inventions. He argues that birth-control methods, urban planning, social security and banking reforms (to prevent excessive risk taking which, as we have seen, can have devastating effects on society more broadly) are examples reversing reinforcement mechanisms.

The fourth way of reversing reinforcement mechanisms proposed by Platt is to add positive consequences to "competing behaviour".[127]For example, he suggests drinking "a diet cola with saccharine instead of fattening sugar; smoke a pipe instead of a cigarette."[128] Some of these methods are described in the study by Tharp and Wetzel[129]on improving school performance and family relationships of vulnerable and socially excluded children and revitalizing an ailing auto assembly plant by participatory management methods.[130]

[124] J. Platt, Social Traps, American Psychologist, August 1973, p. 648
[125] Ibid, p. 649
[126] Ibid
[127] Ibid
[128] Ibid
[129] R. Tharp, R. Wetzel, Behavior modification in the natural environment, New York, Academic Press, 1969
[130] R. H. Guest, Organizational change: The effect of successful leadership, Homewood, Ill., Irwin, 1962

The fifth approach to reversing reinforcement mechanisms proposed by Platt is to "get outside help in changing the reinforcement patterns of locked-in loops."[131] As an example of this kind of reversal, Platt quotes again the work of Tharp and Wetzel.[132]It could be argued that socially excluded children have an incentive to behave badly because they are 'rewarded' with attention when they are scolded, chased by the police, or admired by their friends when this happens. Tharp and Wetzel got around this kind of situation by getting the help of outside "mediators" (a teacher, a friend) who could follow the children on a daily basis and provide them with appropriate incentives for good behaviour (e.g. marks for increased attention and reading). Because of the work of these "mediators" children's behaviour gradually started to change. Also the kind of incentives the other teachers and friends provided to the children started to align with the approach taken by the mediators, reinforcing the effects of mediators' incentives.

The sixth mechanism identified by Platt is to "set up a superordinate authority".[133] What he means by this is to appeal to national and international public authorities "to correct social traps leading to collective bads."[134] The Kyoto protocol and other international agreements for the protection of resources are an example this kind of mechanism.

Platt's paper ends with a reference to what he calls "nested traps". These are situations where numerous traps occur simultaneously. Platt gives the example of "the locked-in violence of United States communications media, books and drama; delinquent gang behaviour; and drug and alcohol addiction."[135] He argues that media compete for higher audiences by giving attention to violent events, instead of good things that are happening in society. This news influences the behaviour of children and other people who end up thinking that the violence is the only kind of important news, or is just another TV show.

When there is a situation of nested traps, the way out is much more difficult than when there is only one single kind of trap. It is worth quoting what Platt has written to wrap up his paper:

"Whatever solutions may eventually be found in these more complex nested cases, it is clear that the approach by analysis of reinforcements and reinforcement loops offers important new clarifying explanations and new tools for any amelioration that may be possible. Social traps are not the only kind of social problems, of course. [...] But the social traps represent all of our most intractable and large-scale urban, national, and international problems today. And it seems possible that the study of social traps from this reinforcement point of view may be opening the door on a whole new discipline that could do more than almost any other academic study to illuminate and solve these locked-in collective problems."[136]

3.2.3. Path dependence and competency traps

Social systems are not locked into social traps, which cause harm or suffering, forever. In the previous section we have seen several ways of overcoming or escaping social traps. However, one related aspect, which is not covered in Platt's paper, is the issue of 'path dependence'. Broadly, this means that history and context matter; where we can go next depends on the steps we have taken to get here. Importantly, some path dependence theorists argue that past decisions can lock-in

[131] J. Platt, Social Traps, American Psychologist, August 1973, p. 650
[132] R. Tharp, R. Wetzel, Behavior modification in the natural environment, New York, Academic Press, 1969
[133] J. Platt, Social Traps, American Psychologist, August 1973, p. 650
[134] Ibid
[135] Ibid
[136] Ibid, p. 651

inferior outcomes or technologies. This is therefore relevant to our present inquiry: when there is a successful way of overcoming or escaping a social trap, the trajectory followed afterwards will not be independent from the previous history of that social system.

There is an abundant theoretical and empirical literature from the fields of economic history and technological innovation about this topic which draw heavily on the works of W. Brian Arthur[137] and the seminal paper by Paul David[138] on why the inferior typewriter keyboard QWERTY was adopted instead of the Dvorak keyboard. Two of the authors who have been publishing more intensively on the theory and empirical basis of path dependence in the history of political and other broad institutions are Daron Acemoglu and James A. Robinson.[139]

The basic argument goes as follows:

- by some random combination of circumstances a new idea, product, technology and/or mode of organisation etc., get adopted by an initial group of users when possibly there are superior ideas, products, technologies or modes of organisation (on efficiency grounds or by other criteria),which could have been adopted;
- if there are increasing returns in the use or production of the adopted solution, the fact that it is the one that is in place gives an advantage to expand its adoption beyond the initial group of adopters; and
- through this kind of process the solution that was initially adopted is the one that will stay, even though others were available and potentially better than the one that was ultimately selected.

Increasing returns are one kind of self-reinforcement mechanism: the more that is produced, the lower the average cost will be and therefore, there is an incentive to produce even more. We will come back to the role of increasing returns and other kinds of self-reinforcement mechanisms later in the paper when we look at growing social innovations. In this section, we look at one of the ways in which path dependence can be a barrier to social innovation.

A social system may be caught in some course of action to deal with social needs that is influenced by its past history, when innovative and better solutions are available to meet those same needs. It is a barrier to the diffusion and widespread adoption of these innovative solutions if their "novelty" is exaggerated at the point of ignoring crucial features of the history of the social system they intend to change. History always matters. Social inventions may not turn into social innovations when this is ignored. Social inventions need to be appropriately embedded in the history of the social system to become social innovations. In other words, social innovations are path dependent. So, one kind of path dependence which is a barrier to social innovation at the organisational level is what has been called a "competency trap". One organisation may keep using the same procedures because they proved to be good in the past, even though better ones have since become available.[140]

[137] W. Brian Arthur, Increasing Returns and Path Dependence in the Economy, Ann Arbor, The University of Michigan Press, 1994

[138] P. David, Clio and the Economics of QWERTY, The American Economic Review, Papers and Proceedings, 75, 1985, pp. 332-337

[139] D. Acemoglu, J. A. Robinson, De Facto Political Power and Institutions Persistence, The American Economic Review, Papers and Proceedings, 2006, pp. 325-330 and D. Acemoglu, J. A. Robinson, Why Nations Fail, The Origins of Power, Prosperity and Poverty, New York, Crown Business, 2012

[140] D. A. Levinthal, J. G. March, 1993. The myopia of learning, Strategic Management Journal, 14, 1993, pp. 95–112 and W. Liu, Knowledge Exploitation, Knowledge Exploration, and Competency Trap, Knowledge and Process Management, 13(3), 2006, pp. 144-161

3.3. Barriers to entry

The inspiration for this section comes from the large body of literature in industrial organisation or industrial economics, on the barriers to market entry.[141] Without being exhaustive, here is a list of economic factors which may prevent a social innovator from entering new activities, new markets, or new populations of users:

- Economies of scale in the technologies needed by the social innovator requiring him/her to make large investments in case they want to go into business;
- Public policies impeding the social innovation;
- The target population of the social innovation is loyal to those who are currently serving them;
- Incumbents benefit from cost advantages independent of scale in the access to knowledge, capital, and other inputs;
- Incumbents benefit from network externalities (the larger the number of customers, the higher the value of the goods and services for the customers);
- Switching costs for the target population of the social innovation to move from the status quo to the innovative situation;
- Sunk costs, that is, fixed costs which cannot be recovered in case the entrepreneur goes out of business (e.g. time spent in preparing a business start-up; cost of the government licences needed to run a business which cannot be sold later on, etc.).

The following are a series of barriers to entry that social innovators might face in the context of public policy. Social innovators may require:

- Political champions in favour of social innovation;
- Political exhortation and mobilisation in favour of social innovation;
- Publicity and greater awareness of the benefits of social innovation;
- Policy pronouncements in favour of social innovation;
- Reorientation of public bureaucracies to the service of social innovation;
- Effective mechanisms for resolving disputes between social innovators and some interests affected by social innovation; Creation and regulation by public policies of markets for new products delivered by social innovation;
- New public procurement and commissioning structures;
- New or revised legislation, decrees, regulations favouring social innovation;
- Financial incentives to social innovation (taxes, subsidies, public funding).

These can be barriers to the development of new social innovations and to the growth and development of social innovations, especially when the social innovator expands to new activities, markets or populations of users.

3.4. Lacking or insufficient built in growth mechanisms

The technological and other characteristics of what the social innovator is doing may have a weak built in growth potential. This means that the social innovation is missing economic properties like the following:

- Economies of scale (when they exist, the more is produced, the cheaper it costs on average);

[141] J. Tirole, The Theory of Industrial Organization, Cambridge, MA, The MIT Press, 1988

- Economies of scope (when they exist, the greater the variety of what is produced, the cheaper it costs on average);
- Learning by doing (the more the activity is performed the higher is the productivity of those who perform it);
- Learning by using (the more the goods and services delivered by social innovation are used, the better their users know how to benefit from them);
- Learning by interacting (the more the social innovator interacts with other stakeholders, more productive these interactions can be);
- Network externalities (the greater the number of users of the products delivered by the social innovation, the higher the value of those products for the users);
- Economies of agglomeration (the greater the density of economic activities and people in the area where the social innovation is taking place, the better are the synergies of the social innovator with other economic agents in the same area);
- Economies of sharing (possibilities for sharing slack capacity of productive resources with other economic agents);
- Economies of peer-to-peer collaboration ('peering'[142] is a new form of production, which when combined with information openness is more suitable for creating information-based products and services and some physical things than hierarchies).
- Economies of flow (eliminating waste along the production chain or user journey to focus on value demand (what people want and need) rather than failure demand which is 'demand caused by the failure to do something right for the customer')).[143]

The lack or insufficiency of these kinds of mechanisms is a barrier to social innovation which has more relevance in the scaling up stages of the process.

3.5. Lacking or insufficient leveraging mechanisms

These "built-in growth mechanisms" can contribute to the growth and development of social innovations, and play a key role in the scaling up stages of the social innovation process.

Another group of factors which are critical to the successful growth and development of social innovations are what is called here leveraging mechanisms. In this case we are referring to the combination of the resources the social innovators have already managed to mobilize with other resources that can amplify the outcomes of the social innovation process. This matching of resources doesn't happen spontaneously. It has to be constructed. In this process can be crucial what Zolli and Healy[144] call "translational leaders", that is, people who "play a critical role, frequently behind the scenes, connecting constituencies, and weaving various networks, perspective, knowledge systems, and agendas into a coherent whole".[145] Networks that may already exist can also be useful for this purpose, but they are insufficient without the agency of

[142] D. Tapscott, A. D. Williams, Wikinomics, How Mass Collaboration Changes Everything, Expanded edition, London, Atlantic Books, 2008. The authors define peering as "egalitarianism among participants in the production process is the general rule, even though in most peer networks "some people have more authority and influence than others"; participants "have many different motivations for jumping in, from fun and altruism to achieving something that is of direct value to them"; peering "leverages self-organization – a style of production that works more effectively than hierarchical management for certain tasks.

[143] See for example John Seddon, Freedom from Command and Control: a better way to make the work work, Buckingham, Vanguard Education Ltd, 2003

[144] A. Zolli, A. M. Healy, Resilience, Why Things Bounce Back, New York, Free Press, 2012

[145] Ibid, p. 15

"translational leaders". We can recall here the analysis of "institutional entrepreneurship" developed by Moore and Westley[146] and reviewed in the previous chapter.

In a context where there is a short supply of this kind of leadership and these kinds of networks, or where this kind of behaviour is sanctioned, or under-developed, it is more difficult for social innovation to happen. These leaders have to be competent in building networks and promoting cooperation and coordination, but in relation to social innovation they also have to be sufficiently motivated by civic values. If, along the way, most of what they do is to find ways to capture the results of the process for their own benefit, this is detrimental to social innovation.

The role that translational leadership plays in the design, development and growth of social innovation depends on the nature of the problem that has to be solved:

- when there is a cooperation problem the major role for translational leadership is to make the parties involved aware that there are mutual advantages in cooperation that will be lost if they behave in a self-interested way;
- when there is a coordination problem the major role for translational leadership is to find a focal point to get the parties involved to adopt the same pattern of behaviour, in a co-ordinated way;
- when there is a distributional problem with a potential for conflict the major role for translational leadership is to look for possible ways to transform the pattern of strategic interactions among the parties involved into one where there may be some potential mutual advantages; and/or
- when there are poor interpersonal relationships the major role for translational leadership is to come up with ways to improve those relationships.

So, without adequate supply of this kind of leadership and without translational leaders that are capable of analysing correctly the strategic nature of the social situation they are facing in order to design an effective path for their action, social innovation is hard to get started and reach a critical mass. So, effective translational leaders should not only be responsive to their social context (be sensitive, be well aware of the situations and issues they face and be capable of identifying areas where social innovation is most meaningful), but also have the skills and the knowledge to analyse this context correctly and define and implement an effective action plan.

The need to be responsive to the social context gives a specificity to this kind of leadership. Another kind of specificity is related to the topic of the next section. Social innovation processes often require the organisation of some form of collective action. Translational leaders may play an important role in getting these organisations started by helping to mitigate or overcome cooperation and coordination problems that can often make the early stages of the social innovation process difficult.

Translational leaders can be very useful leveraging agents, but they are not the leveraging mechanisms. These mechanisms are the outcome of their action when it is successful, or they may already exist and the social innovators just have to take advantage of that. Examples of different forms of leveraging mechanism are:

- networks;
- partnerships;

[146] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5

- public procurement and commissioning; and
- legislation or other kinds of regulations adopting and spreading to a large scale the results of pilot social innovation processes.

3.6. Barriers related to the collective nature of goods and services delivered by social innovation

3.6.1. Why is the collective nature of goods and services delivered by social innovation processes relevant to a discussion on the barriers to social innovation?

Murray et al.[147] consider that one of the distinctive features of social innovation is the key role played by coalitions and networks in the success of this kind of process: "Whereas in business the firm is the key agent of innovation, in the social field the drive is more likely to come from a wider network, perhaps linking some commissioners in the public sector, providers in social enterprises, advocates in social movements, and entrepreneurs in business."[148]In an International Roundtable on Social Innovation organised in 2010 by two Canadian institutions, the Policy Research Initiative and the Public Policy Forum, the first two key messages gleaned from the discussions are the following:

- "Social Innovation Responds to Challenges that cannot be met through Private Actions Alone: According to the participants, a primary objective of social innovation is to respond to societal challenges that are not being addressed through conventional approaches – whether through the market sector, interventions within families, or individuals' actions. (It was recognized that social innovations often build on and interact with the actions of all of these.)"[149];
- "Social Innovation is a Process of "Co-creation" and "Co-production" among Citizens and Institutional Actors: Participants agreed that social innovation is a process of "co-creating" and "co-producing" solutions to address basic individual and societal needs – in which individuals, families, and community organizations (along with for-profit businesses and governments, in many cases) were all seen as potential catalysts of innovation."[150]

The analysis of the role of "institutional entrepreneurship" in social innovation developed by Moore and Westley[151] and reviewed in the previous chapter goes in a similar direction as the authors quoted above.

One idea that is going to be developed in this section is that a driver of this need for coalitions, networks and other forms of collective action may be the economic nature of the goods and services delivered by social innovation processes. To be more precise, we will look at situations where the goods and services developed by social innovators have a collective nature. By collective nature we mean here the following situations:

[147] R. Murray, J. Caulier-Grice, G. Mulgan, The Open Book of Social Innovation, London, The Young Foundation & NESTA,2010
[148] Ibid, p. 7
[149] Government of Canada - Policy Research Initiative, Talking about social innovation, Summary of International Roundtable on Social Innovation (March 18, 2010), Workshop Report, September 2010, p.3
[150] Ibid, p. 4
[151] M. Moore, M., F. Westley, Surmountable chasms: networks and social innovation for resilient systems, Ecology and Society, 16(1): 5

- Provision of public goods and the free riding problem: where there is no exclusion in the access to the use of the good and no rivalry in its use (e. g. an information campaign about how to prevent a specific disease to a ill-informed population);
- Provision or allocation of common-pool resources and the "tragedy of the commons": where there is a group of potential users of a good that share a joint non-exclusive entitlement prior to using it, that is, they have ex ante claims on any particular unit of the good, but there is rivalry in the use of the good (e. g. common property goods, like the facilities of a social welfare organisation which are for use by a community of poor people where everybody in this community has the right to be helped by that organisation, but there is rivalry in the use of its facilities);
- Allocation of shareable goods: where there is exclusion and rivalry in the use of a good, that is, it is a private good, but since its owner doesn't use it to its full capacity, he decides to share the slack capacity with other people (e. g. cars in a car pooling scheme, or books that are lent by their owners to be read by other people);
- Production and consumption of relational goods, that is, the "goods" that are produced and consumed in the "encounters" of human beings in their interpersonal relationships. Increasingly, this is an area for socially innovative projects aiming to address issues such as loneliness of elderly people, or of other people living alone;
- Provision and allocation of merit goods to the poor and capital goods to small producers: merit goods (e.g. food, housing, education, health, etc.) which people on low incomes do not have access to require support to gain this access; similarly, small producers who do not have access to financial capital or other productive resources require support to be able to access these kinds of resources.

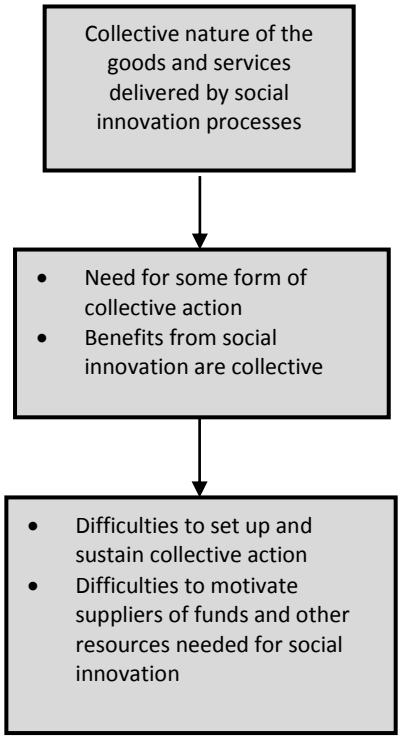
The situations described above are often typical of many social innovations or of the challenges that social innovations are seeking to address. For example, micro-finance seeks to provide capital resources to small producers. Organisations such as The Southwark Circle in the UK or PLAN and Roots of Empathy, seek to improve the interpersonal relationships or relational goods of vulnerable groups (PLAN works with people with disabilities and Roots of Empathy works with disadvantaged young people with social and emotional needs). In each of these cases, there is a collective nature in some of the goods and services that are delivered by the social innovation processes. The reason why this connects with the issue of barriers to social innovation is because that collective nature requires some form of collective action, since individual behaviours by those involved in these situations cannot solve the provision and allocation problems at stake. Also the benefits of solving these problems are not all privately appropriated by those who invested resources in organising that provision and allocation. So, for social innovation processes to be successful in these kinds of situations, they have to solve the following problems:

- Some form of collective action is needed which may be difficult to get started and to be sustained;
- Because of the collective nature of the goods and services involved, the outcomes of social innovation cannot be privately appropriated which is a barrier to funders and other resource providers whose main motivation is private benefit. As such, the market alone cannot solve these problems and therefore some non-market, collective action is required.

This collective action can be some form of social economy organisation, a common-pool resource management mechanism, a social network, a citizens' participatory mechanism in public policy formulation and implementation and others. Since the specific nature of the collective action

problems are different for each of the five types of situations mentioned above, there will be a specific analysis for each of them in the next sections.

Figure 3 – From structure to agency: the collective nature of the goods and services delivered by social innovation and the issues of collective action and under resourcing of social innovation



3.6.2. Provision of public goods and the free riding and efficacy problems

Characteristics of public goods

Public goods are goods or services that have two main characteristics. First, they are non-excludable, namely that once they are produced by someone, anybody can consume them unconditionally, including here no obligation to contribute to the costs of producing those goods and services. Second, they are non-rivalrous. This means that once they are consumed by someone this does not reduce the quality or quantity of the goods which are then available for others to consume. Because of these characteristics the provision of a public good may be inefficient, that is, it may be below the welfare maximising level of the group of its producers and consumers, because of two kinds of problems:

- The free riding problem;
- The efficacy problems

The free-riding problem

Because they are non-excludable and non-rivalrous, public goods are prone to what is called the "free-riding" problem: not all those who benefit from the consumption of these goods and services

voluntarily contribute to the costs of their production. This happens when people behave in a self-interested way. Therefore, resources collected from the consumers of these goods and services on a voluntary basis are insufficient to sustain their production at a level compatible with the benefits for all of them. So, they will be undersupplied if we rely only on voluntary contributions from the consumers.

So, when the social challenge addressed by a social innovation has this public goods nature there is, from the very beginning of the process, a problem of underfunding and a lack of other kinds of contributions to get the provision of the public good started, scaled up and sustained.

Possible ways to cope with this problem are the following:

- educational projects and other ways of raising awareness among potential consumers of the public goods for their duty to voluntarily contribute to its production;
- establishing some kind of exclusion mechanism (if it is technically and economically feasible and socially acceptable) transforming the public good into a club good, that is, a good with exclusion in access and no rivalry in use;
- organising forms of joint supply of the public good with private goods or services which can be sold, generating income to pay for the production costs; and/or
- using coercive ways of collecting funds to pay for the production of the public good, namely taxes and other sources of public funding.

In all these cases there tends to be some form of collective action:

- educational campaigns are not private training services supplied for commercial purposes, but campaigns directed to the collective of the potential consumers of the public good;
- turning a public good into a club good involves the creation of an organisation for the consumption of a good restricted to a specific collective of people; and
- public funding requires the involvement and engagement of the State.

Examples of the joint supply of public and private goods and services are the following:

- the creation of social enterprises which produce marketable goods and services, but, at the same time, deliver a public good corresponding to the mitigation, or resolution of a social problem; or
- a non-profit organisation (for example, an environmental organisation) whose main output is a public good (for example, environmental protection), that starts a new economic activity (for example, a camping site) producing goods or services for sale which help to sustain the production of that public good.

This second case includes what Olson calls “selective incentives”[152]. These are private goods or services that an organisation whose main mission is to provide public goods delivers to those who become members of the organisation and contribute to its activities.

None of the four types of possible ways to cope with the free-riding problem mentioned above is appropriate or feasible (technically, economically or socially) in all kinds of situations where there is an under supply of a public good due to free-riding problems. So one difficulty, or barrier to

[152] M. Olson, The Logic of Collective Action. Public Goods and the Theory of Groups, Cambridge, MA, Harvard University Press, 1965

innovation, is the difficulty to identify which solution is appropriate and feasible. For example, if a non-profit organisation whose main output is the provision of a public good tries to get funds for this by starting to sell goods and services in another area (for example, selling consultancy services to large corporations), in some social contexts and depending on how this is done, it is possible that the local community and potential donors may stop the monetary and non-monetary support to this organisation if they perceive this as a deviation of that organisation's mission and main objective.

The efficacy problem

It is true that it is difficult to get all the consumers of a public good to contribute voluntarily to its provision according to the benefits they receive, it is also true that it is possible to have a group of consumers willing to be the first movers in delivering those contributions because their benefits from doing so may be relatively high and/or they expect that others will follow. What is called the "efficacy problem" is the fact that those first movers may not necessarily be effective in driving other consumers of the public good to contribute voluntarily to its provision. Olson[153], Hardin[154], Oliver, Marwell and Teixeira[155]and Marwell, Oliver and Prahl[156] examined the role of group heterogeneity in getting the provision of a public good started by those first movers and growing this to a tipping point of critical mass where more and more additional consumers of the public good voluntarily contribute to the provision of the good. Homogeneity refers here to the variation in interest in the public good and in resources to contribute to the public good. Collective action is easier to get started if there are some people with enough resources and enough interest to initiate this kind of action, even if there is nobody else with them at the beginning.

For Oliver et al.[157]the role that the homogeneity of the group plays in making the "efficacy problem" more or less difficult to solve depends on the technology of producing the public good:

- if this technology has increasing marginal returns, the heterogeneity of resource distribution facilitates collective action: each additional contribution to collective action produces a larger amount of public good;
- if marginal returns are decreasing, the heterogeneity in resource distribution cannot play this kind of role.

So, briefly, heterogeneity of interests facilitates collective action, whereas heterogeneity in resources has a null or positive effect.

Heckathorn[158], inspired by the work of Durkheim[159] on social solidarity criticised the literature focused on the positive role of group homogeneity in the provision of public goods. For Heckathorn the heterogeneity of interests and costs of contributing to the public good may be an impeding

[153] M. Olson, The Logic of Collective Action, Public Goods and the Theory of Groups, Cambridge, MA, The University of Harvard Press, 1965
[154] G. Hardin, Rational Choice, Baltimore, The John Hopkins University Press, 1982
[155] P. Oliver, G. Marwell, R. Teixeira, A Theory of the Critical Mass I. Interdependence, Group Heterogeneity, and the Production of Collective Action. American Journal of Sociology, 91, 1985, pp. 522-556
[156] G. Marwell, P. Oliver, R. Prahl, Social Networks and Collective Action: A Theory of Critical Mass III. American Journal of Sociology, 94, 1988, pp. 502-534
[157] P. Oliver, G. Marwell, R. Teixeira, A Theory of the Critical Mass I. Interdependence, Group Heterogeneity, and the Production of Collective Action. American Journal of Sociology, 91, 1985, pp. 522-556
[158] D. Heckathorn, Collective Action and Group Heterogeneity: Voluntary Provision Versus Selective Incentives, American Sociological Review, Vol. 58, Issue 3, 1993, pp. 329-350
[159] E. Durkheim, Division of Labor, New York, Free Press, [1893] 1947

factor to collective action by dividing the group into opposing camps. Connecting this with our working definition of social innovation, we pointed out that social innovations involve situations where the kind of problems at stake in terms of social relationships can be to promote cooperation, coordination, peaceful resolution of conflicts or positive interpersonal relationships. This requires promoting some form of homogeneity of interests and the willingness of the parties involved to interact on an even basis.

3.6.3. Appropriation and provision of Common-Pool Resources and the "Tragedy of the Commons"

Resources used in an open access regime are those meeting the following two characteristics: they are non-excludable and rivalrous. In this case, behaviour by consumers of the good may lead to overuse and exhaustion:

- self-interested consumers look only at the private benefits and private costs (benefits and costs for themselves) of their consumption;
- they don't take into account the fact that, because there is rivalry in consumption, if they use the resource beyond its natural regeneration capacity, the good will be of a lower quantity and/or quality for consumption by others; and/or
- if many consumers behave in this way the management of the open access resource will not be sustainable and will experience both quantitative and qualitative depletion.

Natural resources when there is no exclusion in access to their use are one of the major examples of this kind of resource. When there is no exclusion in access there is a risk of quantitative or qualitative depletion of this kind of resource. To cope with this kind of risk some rules have to be imposed in the use of the resource. If the resource continues to be accessible to multiple users, under those rules, it moves from a situation of open access to a situation of common property defined as follows:[160]

- the resource has boundaries which are well defined by physical, biological and social parameters;
- the resource has multiple users;
- the users share a joint non-exclusive entitlement to the resource prior to extraction, that is, they have ex ante claims on any particular unit of the resource;
- there is rivalry in resource extraction by the users;
- there is a delimitation of the population of users;
- there are explicit or implicit rules known by the users about their rights and duties to one another regarding resource extraction;
- those rules can consist in one or several cases:
    - limits to the amount of goods or services produced by the resource that each user can extract;
    - limits to the amount of inputs each user can use to extract goods or services from the resource;
    - mandatory requirements to be met by the technology used to extract goods or services from the resource.

[160] G. G. Stevenson, Common Property Economics, A General Theory and Land Use Applications, Cambridge, Cambridge University Press, 1991

Ostrom *et al*[161]use the term "common-pool resource" to cover these types of cases. Common-pool resources are those for which there is rivalry and difficulties in excluding multiple users. Using the terms proposed by Ostrom *et al*[162], setting limits to the amount of resource extracted or on the amount of input used for the extraction corresponds to solving what these authors call an "appropriation problem". In this kind of problem the relationship between yield from the resource and the level of inputs required to produce that yield is given.

If replacing open access by a sustainable use of the resource involves setting rules about the technology of resource extraction we are dealing with what Ostrom *et al*[163] call a "provision problem". For these authors, these situations are problematic, or are what they call a "Common-Pool Resource dilemma" when the following happens simultaneously:

- the strategies of the appropriators of the resource driven by their individual rationality lead to outcomes that are not rational from the perspective of the group;
- "given existing institutional arrangements, there exists at least one set of coordinated strategies that are more efficient than current decisions and are institutionally feasible."[164]

So, in this case, some form of collective action, or coordinated set of strategies by the people involved is needed. These are strategies "regarding (a) how much, when and with what technology to withdraw resource units and/or (b) how much and/or when to invest in supply or maintenance input to the Common-Pool Resource facility or stock."[165]Coming up with these kinds of strategies can be considered as social innovation processes. Still according to the work of Ostrom *et al.*, two types of coordinated strategies occur in field settings:

- One "is the result of learning and evolutionary processes by which appropriators eventually reach and maintain a set of individual strategies that increase joint (and individual) payoffs relative to [the outcomes where they behave in a individualistic way, for example, by communicating] (...) with one another and agree that each will follow a particular strategy so long as others also follow that strategy".[166]
- Another type of coordinated strategy is when there are changes in the rules of appropriating the resource, for example, when the appropriators "not only agree on the particular actions they will adopt if others adopt them but also agree upon rules for monitoring and sanctioning one another."[167]

As the history of human societies shows, it is not an easy task to come up with this kind of strategy. Sometimes, human beings can do it and the result is a sustainable management of the resources at stake. In other cases, they can't and the resources are depleted.

[161] E. Ostrom, R. Gardner, J. Walker, Rules, Games, and Common-Pool Resources, Ann Arbor, The University of Michigan Press, 1994
[162] Ibid
[163] Ibid
[164] Ibid, p. 16
[165] Ibid, p. 16
[166] Ibid, pp. 16-17
[167] Ibid, p. 17

3.6.4. Allocation of the slack capacity of shareable goods

Setting up mechanisms for allocating shareable goods is a fast growing area for social innovation with examples of projects such as "carpooling.com" (http://www.carpooling.com/), Ouishare (http://www.ouishare.net/) and others.

A seminal contribution for the theory of the shareable goods is a paper by Benkler published in 2004.[168] This author defines shareable goods as the ones having the following characteristics:

- they are private in the sense of having total exclusion and total rivalry;
- they are lumpy (namely that "they provision functionality in discrete packages rather than in a smooth flow"[169]);
- and have mid grained granularity (that is, there is "relatively widespread private ownership of these goods and… these privately owned goods will systematically exhibit slack capacity relative to the demand of their owners."[170]

Cars, personal computers and books are good examples of this kind of situation. Benkler explains why in cases such as carpooling, the owners of these kinds of resources prefer a non-market mechanism (or "social" mechanism to use Benkler's words) to allocate the slack capacity, instead of a market mechanism or instead of keeping the shareable good only for themselves.

Both market and "social" mechanisms to allocate the slack capacity are exclusion mechanisms which are "partial" (other people besides the owner are allowed to use the good) and "selective" (the owner can choose who uses the shareable good). Perfect exclusion is the case where the owner keeps the good only for himself. Partial and selective exclusion (market or social) have higher transaction costs than perfect exclusion because the cost of exclusion is similar in both cases, but in the case of selective or partial exclusion, the owner has the additional cost of selecting other users for his shareable good. If the owner does that it is because he has a benefit which is higher than that cost.

In the case of a market mechanism to allocate the slack capacity, the benefit comes in through the price paid to the owner of the good. One problem with this mechanism is that, to work well, it requires what Benkler calls "crispness" of what is in the transaction, that is, a precise definition of the contents of the transaction (price, quantities to be exchanged, qualities of the goods and services to be exchanged, etc.).In cases such as carpooling crispness is problematic. It is not easy to specify in a precise way all that is in the social exchange among the people involved. So it is not easy to establish a market transaction in this situation. To specify in a precise way all that is in this social exchange would take time and it would not be easy to negotiate the terms of a market transaction. So it is too costly to go through this kind of negotiation when the amount of slack capacity available for use is relatively small.

In the case of a "social mechanism", crispness is not necessary. It is true that there is no monetary reward, but this may not be relevant for the owner if what he is looking for is the social and psychological rewards corresponding to the interpersonal relationships that he can establish with those with whom he shares his/her good. So in the sharing economy building community through interpersonal relationships may be a relevant motivation. This might supersede market

[168] Y. Benkler, Sharing Nicely: On shareable goods and the emergence of sharing as a modality of economic production, The Yale Law Journal, Vol. 114, 2004, pp. 273-358
[169] Ibid pp. 276-277
[170] I bid, p. 277

transactions which are poorer in terms of the social and psychological rewards involved in those interpersonal relationships.

As was said before, setting up this kind of sharing allocation mechanism has higher transaction costs, compared to perfect exclusion, namely situations where the owner keeps the shareable good only for himself. Also, as was said before, in cases such as carpooling, the alternative of setting up a market mechanism for allocating the slack capacity of these goods requires a degree of "crispness" that is lacking. So, these are barriers that may lead to a non-use of the slack capacity of these kinds of resources.

3.6.5. Co-production and co-consumption of relational goods, the "paradox of happiness" and the fragility of the Good

The growing literature on the economics of happiness[171] has been driven by the "Paradox of Happiness" or Easterlin Paradox", so called after the influential paper on the relationship between GDP trends and people's happiness by Easterlin.[172]He showed that for a given country people with higher incomes are more likely to report being happy. However, in international comparisons, the average reported level of happiness does not vary much with national income per person, once the basic needs of the population are met. For the United States, between 1946 and 1970, average reported happiness showed no long-term trend and declined between 1960 and 1970. What these and other similar results show is that once the basic needs are met income ceases to contribute positively to happiness, or at least is less important than other factors such as the quality of interpersonal relationships.

Because the quality of these relationships is threatened in modern societies with many people living alone or affected by interpersonal conflicts in their family or professional lives, this is a growing area for social innovation, for example, with projects aiming to help people to overcome their loneliness, especially the elderly.

In the previous section we have talked about the role interpersonal relationships can have in the mobilisation of the slack capacity of shareable goods. Luigino Bruni[173] and Benedetto Gui[174]are the authors who have gone furthest in the economic analysis of these kinds of relations. According to Bruni and Gui, interpersonal relationships (or "encounters") are the place where a special kind of economic good is produced and consumed. They call these "relational goods". They are defined as follows:[175]

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[171] B. S. Frey, A. Stutzer, Happiness and Economics, How the Economy and Institutions Affect Well-Being, Princeton and Oxford, Princeton University Press, 2001 and B. M. S. Van Praag, A. Ferrer-i-Carbonel, Happiness Quantified, A Satisfaction Calculus Approach, Oxford, Oxford University Press, 2004

[172] R. A. Easterlin, Does Economic Growth Improve the Human Lot? Some Empirical Evidence, in P. A. David, M. W. Reder (eds.), Nations and Households in Economic Growth: Essays in Honor of Moses Abramowitz, New York, Academic Press, 1974, pp. 89-125;and R. A. Easterlin, Will Raising the Incomes of All Increase the Happiness of All?, Journal of Economic Behavior and Organization, 27/1, 1995, pp. 35-47; R. A. Easterlin, Income and Happiness: Towards a Unified Theory, Economic Journal, 111, 2001, pp. 465-484 and; R. A. Easterlin, The Worldwide Standard of Living since 1800, Journal of Economic Perspectives, 14 (1), 2000, pp. 7-26

[173] L. Bruni, Reciprocity, Altruism and the Civil Society, In praise of heterogeneity, New York, Routledge, 2008 and L. Bruni, The Wound and the Blessing, Economics, Relationships, and Happiness. New York, New City Press, 2012

[174] B. Gui, On relational goods: strategic implications of investment in relationships, International Journal of Social Economics, 23 (10/11), 1996, pp. 260-278 and B. Gui, Benedetto, R. Sugden, Economics and Social Interaction, Accounting for Interpersonal Relations, Cambridge, Cambridge University Press, 2005.

[175] The quotes are from pages 132 and 133 of the following book chapter: L. Bruni, Back to Aristotle? Happiness, Eudaimonia, and Relational Goods, In L. Bruni, F. Comim, M. Pugno, Capabilities and Happiness, Oxford, Oxford University Press, 2008, pp. 114-139

- "*Identity*: the identity of the persons involved is a fundamental ingredient";
- "*Reciprocity*: because they are *made* of relations, these goods can only be enjoyed within reciprocity";
- "*Simultaneity*: (...) [they] are co-produced and co-consumed at the same time by the subjects involved";
- "*Motivations*: (...) the "encounter" itself – a dinner, for example – can generate relational goods or only "standard" goods depending on the motivation that inspires the subjects. If the relationship is not conceived as an end in itself but only as [a] means to something else (e.g. negotiating business deals), then there is no relational good";
- "*Emerging fact*: relational goods "emerge" within a relationship (...) beyond the contributions made by the agents, and in many cases even beyond their original intentions";
- "*Gratuitousness*: (...) a relational good is such only as long as the relationship is not "used" for other purposes, that is, as long as the relationship is enjoyed as a *good in itself* and it arises from *intrinsic motivations*";
- "*Good*: (...) relational goods (...) are *goods* but not commodities (in Marx's sense), that is to say, they have a value (because they respond to a need) but not a market price (because of gratuitousness)."

Taking the analysis developed by Bruni in one of his more recent books,[176] human beings cannot survive without engaging in interpersonal relationships. So, the "blessing" in these relationships is that they provide essential support to human lives. The problem ("the wound") is that there is a risk that the relationship may be or become a hardship for the persons involved. Because of this risk that interpersonal relationships may become negative, human beings often find ways to escape that risk by appealing to different sorts of mediations: e.g. writing a message, or making a call instead of meeting someone face to face; using money and a market transaction instead of using another type of transaction involving a closer personal relationship with the other party.

If this process of substitution of interpersonal relationships by various forms of mediation goes too far, society will be at risk because its members will not be happy and completely fulfilled as human beings. A large arena for social innovation nowadays is to support networks for people who are suffering because of insufficient positive interpersonal relations (for example, lonely people), or because of interpersonal relations with a bad quality (for example, support to victims of domestic violence, training for management of interpersonal conflicts in the organisations).

Because relational goods have so much to do with the identities of the parties and they require intrinsic motivations and, to use Bruni's terms, it is not easy to find the people with the necessary human qualities and skills to be the appropriate agents of projects delivering these kinds of goods. Even when these persons are available, interpersonal relationships are fragile. As was said before, they may become negative. Also, the borderline between voluntarism and non-voluntarism may easily be crossed. These are sufficient reasons to expect that it is not easy to set up and develop projects which are continuously successful in delivering positive relational goods.

3.6.6. Providing access to merit goods to those on low incomes and capital goods to small producers

[176] L. Bruni, The Wound and the Blessing, Economics, Relationships, and Happiness. New York, New City Press, 2012

The modes of inclusion and exclusion characteristic of the market mechanism
On the demand side, markets include buyers who have enough resources to pay for what they want to get from the sellers, but exclude those who don't have enough income or other resources to pay for what they need. On the supply side, markets include producers who are capable of supplying goods and services with characteristics and prices for which there are potential buyers, but exclude producers who cannot do this. If left on their own, markets don't provide access to goods and services to all consumers and they cannot accommodate all potential producers. Whether this is problematic and represents a social need depends on the goods and services at stake and on the characteristics of those who have no market access to those goods and services.

Before we proceed, it should be clarified that modes of inclusion and exclusion don't exist only in the case of the market mechanism. Other forms of organising economic activity also include and exclude. The reference to the market mechanism here is simply because this is the dominant form of organising economic activity in today's world.

Providing access to merit goods to those on low income
Let's take first the case of merit goods and services, that is, the goods and services that a given society considers that everybody should be able to consume regardless of the ability to pay for them. Examples are food, decent housing, schooling, and health services. Since these goods and services are private (total exclusion in the access to consumption and total rivalry in consumption) they can be delivered through market transactions. As we said before, the problem is that markets alone don't provide universal access to these goods and services. So, to provide access to these goods and services by people on low incomes, the market mechanism has to be combined with other economic mechanisms. Examples of these kinds of mechanisms are the following:

- Income redistribution based on state intervention and/or private philanthropy enabling people on low incomes to have the income needed to pay for those merit goods and services;
- Provision of the merit goods and services directly by the state, or indirectly by financing private organisations to deliver them at affordable prices, or free of charge to people on low income;
- Provision of the merit goods and services by social economy organisations, including social enterprises, funded by donations, or social investors;
- Provision of the merit goods and services by for-profit corporations through corporate social responsibility projects, usually in partnership with social economy organisations.

We can see that, even though we are dealing here with goods and services that meet the characteristics for being allocated through market mechanisms (they are private), market mechanisms may lead to situations of social need which these mechanisms alone can't solve. To respond to these social needs it is necessary to appeal to state intervention, social economy organisations, partnerships involving social economy organisations and for-profit corporations or to other forms of collective action.

Finding new ways to provide access to merit goods and services is a large arena for social innovation across all types of organisations: public entities, social economy organisations and for-profit firms. Here getting the necessary funding, in a sustainable basis, is a problem like in all kinds of social innovation, but here it is more problematic that in other cases. The reason is that what is produced is delivered to people who cannot afford to pay the full cost of production.

Another type of barrier to social innovation here is to design and deliver goods and services that do not really make the beneficiaries better off. If social innovators don't have the skills and resources to understand the characteristics and behaviours of those they want to help, they will fail in meeting the real needs of these people. Using a terminology from economics, these failures will happen if social innovators cannot solve adverse selection (they don't understand the characteristics of their target population) and moral hazard problems (they don't understand how their target population behaves).

Still another barrier to social innovation here follows from what was said about the need for organising forms of collective action. What was said about the free riding and efficacy problems typical of public goods can be applied here. The public good at stake here is the reduction in the number of people on low incomes excluded from access to merit goods and services.

Providing access to input and output markets to small producers
Small producers often struggle to access input and output markets. For the input markets a case that has been and continues to be an important field for social innovation is the financial market. Those on low incomes are repeatedly excluded from the commercial banking system due to asymmetric information problems:

- Adverse selection: since these are not the usual costumers of the commercial banks, the banks don't understand the characteristics of those on low incomes and don't invest in getting information about them;
- Moral hazard: even if commercial banks do give credit to people on low incomes, they are often not prepared to monitor the use of that credit.

For those on low incomes, these asymmetric information problems are combined with another major barrier: to cope with the risk of default banks usually ask customers for some collateral which those on low incomes cannot provide.

This leads to a market failure because experience shows that if those on low incomes do get credit to start a small business they are usually better at paying back loans than other customers. Microcredit is a social innovation that emerged to cope with this market failure by dropping out the requirement of providing a real asset as collateral and setting up forms of coping with the asymmetric information problems (e.g. giving credit to people organised in groups where each member monitors the others, or setting up a service of "microcredit agents" who do the follow up of the beneficiary from the preparation of the loan application to the full utilisation of the loan).

Moving to the output markets, small producers' cooperatives are an example of improving their market access in this field.

In these and other cases, even though we are dealing with goods and services that are marketable, again we may have situations where market mechanisms and individual action need to be combined with some form of collective action to respond to the social need of including those that the market left alone would exclude. Small producers' cooperatives are one case. In the example of microfinance, coping with the asymmetric information problems is done in some places by appealing to group mechanisms. In societies where this is not feasible, like Portugal for example, one way to solve this problem is through a partnership between the banks providing the microcredit and a non-profit organisation which takes care of the follow up of the beneficiaries.

When social innovation is the small producers getting together in cooperatives or other forms of collective action to improve access to input or output markets one major type of barrier is related to the free rider and efficacy problems we mentioned about public goods.

When the social innovation is to set up some form of coalition, network, partnership or new organisation to support small producers to improve their access to input or output markets, cooperation problems typical of public goods (free riding and efficacy problems) may also make this process difficult to get started and sustained.

3.6.7. Summary

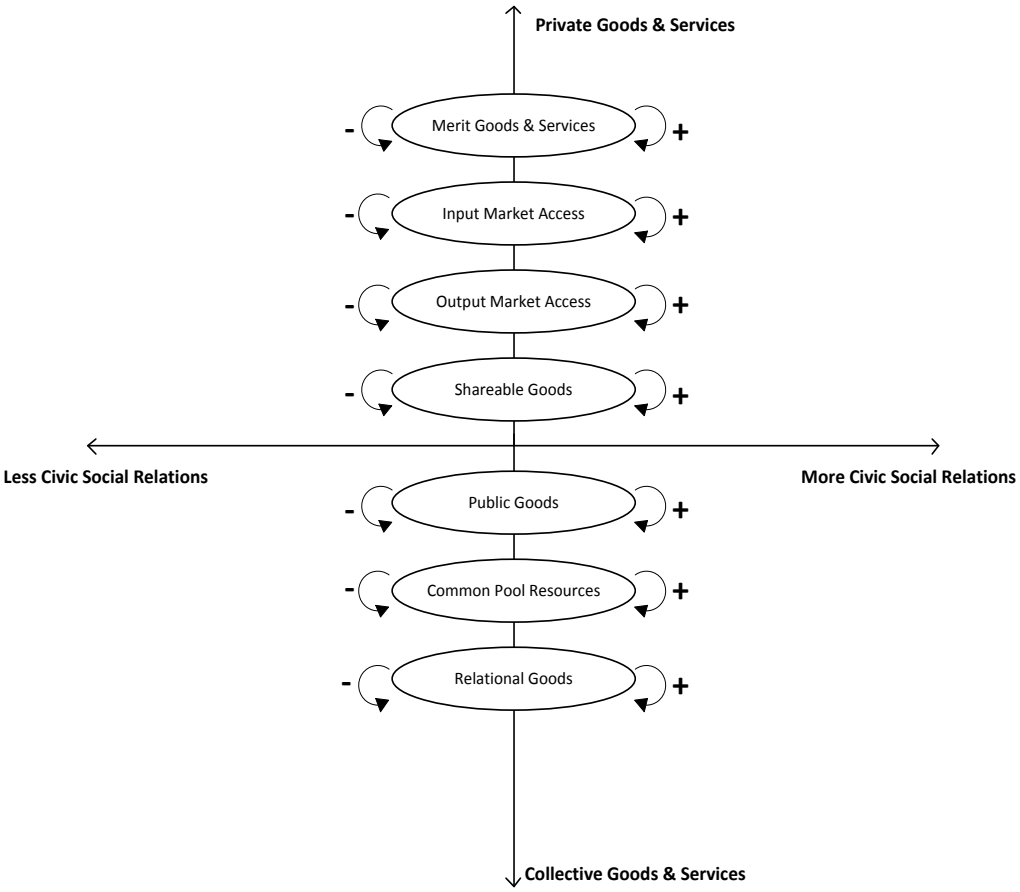
As a summary of what has been said up to now in this chapter, we can say that contributing to the difficulties of starting up, sustaining and scaling social innovation there are four types of factors:

- The target situations of social innovation may have a social dynamic characterised by the existence of "vicious circles", or "traps" (e.g. poverty traps) which are hard to break;
- Social innovators may face barriers to entry in the new activities they want to set up;
- Once they manage to get started, social innovation processes may have a hard time to be scaled up if they lack or they don't have enough built in growth mechanisms (e.g. economies of scale);
- Scaling up may also be difficult because social innovators have a hard time to find in their environment leveraging mechanisms through which their operations can be combined with other stakeholders' operations to achieve scale;
- Social innovation processes may deliver goods or services which have a collective nature requiring some form of collective action with the corresponding cooperation problems to get started and sustained and generating collective benefits which may not be attractive to private funders and suppliers of other resources needed for social innovation.

If it is not possible to overcome these kinds of barriers, society remains trapped in a situation where socially innovative goods and services are not delivered. In the following graph this is represented by the arrows on the left with the negative signs.

If it is possible to overcome these kinds of barriers it means that it is possible to make progress in terms of improving cooperation, coordination, peaceful resolution of conflicts and interpersonal relationships and do this through social innovation processes that can be scaled up. In this graph this is represented by a move from left to right, that is, from what we call "less civic" to "more civic" social relations and by the arrows with a positive sign.

Figure 4 – The collective nature of the goods and services delivered by social innovation, its changes in social relations and the feedback mechanisms hindering or enhancing this process



3.7. Barriers related the agency failures

3.7.1. Agency relationships in social innovation processes

All along a social innovation process the social innovators have to motivate others to come along. If they are not effective in doing so, the process will stagnate and will die. Principal-agent theory[177] can be a useful analytical framework to represent the relationships between the social innovators ("the principals") and those they have to motivate to engage in the process ("the agents"). This framework is very useful for organising the kinds of reasons why these relationships may, or may not be effective in meeting the objectives defined by the social innovators.[178] According to this kind of framework, there are three possible types of reasons for failing to meet these objectives:

- Not enough resources (financial capital, human capital, intra-organisational and inter-organisational social capital, organisational capital, adequate legislation or other kinds of regulations) at the reach of the principal and the agents in order for the agents to meet the targets set to them by the social innovator;
- Individual or group rationality constraints: even if there are enough resources available, implementation failures may happen if the agents are not made better off by working with the principal;
- Incentive compatibility constraints: even if there are enough resources available and the agents are better off with what the principal provides to them, there might be implementation failures if they use this in a way that is not compatible with the objectives set by the principal.

3.7.2. Resource constraints: underfunding and other forms of under resourcing of social innovation

The unpredictability of social innovation processes and the collective nature of goods and services delivered by social innovation processes make this kind of innovation unattractive to potential suppliers of funds and other resources needed for social innovation.

This is why, to get started, social innovation may need protected "niches" and "eco-systems" where experimentation can take place without the threat of being censured in the case of failure, and where social innovation can attract public funds or social investment funds not looking for an immediate and private profit. In these niches, social innovation can also be nurtured by other resources such as appropriate skills, favourable legislation, private and public organisations, and a local culture supportive of this kind of innovation. Therefore, a lack of these kinds of "niches" and "eco-systems" is a barrier to the initiation stages of social innovation.

For the kind of resources needed in the next stages of the social innovation process we refer to the previous section on the scaling mechanisms.

[177] I. Macho-Stadler, D. Pérez-Castrillo, An Introduction to the Economics of Information, Incentives and Contracts, Oxford, Oxford University Press, 1997 and B. Salanié, The Economics of Contracts, A Primer, Cambridge, MA, The MIT Press, 1997

[178] A. Mendes, Implementation analysis of forest programmes: Some theoretical notes and an example, Forest Policy and Economics, 8, 2006, pp. 512-528

3.7.3. Individual and group rationality constraints

Even if social innovators have at their disposal all the resources they need to get started and to develop their operations, the social innovation may fail, or may be contained to a relatively small number of targeted entities if it is not capable of improving outcomes for this target population and other relevant stakeholders. So, for a social innovation to be successful it has to meet this constraint of improving outcomes for the individuals and groups of target populations, as well as other relevant stakeholders they need to bring into this process.

In the literature review we found several authors who identified barriers that are of this nature:

- Social innovation is insufficiently useful[179];
- Social innovation not good enough relative to alternatives[180];
- Efficiency reasons[181];
- People's interests[182];
- Insufficient information and uncertainty about the future impacts of innovation[183];
- Large number of actors, activities, and technologies that will have a negative impact innovation[184];
- Risk aversion.

To avoid these kinds of barriers social innovators have to do their best to understand the characteristics and behaviours of their target populations and other relevant stakeholders. That is why participation of all these stakeholders is important in co-designing the process together with the social innovators. Barriers to this kind of participation are barriers to a successful social innovation process which may appear in some of the forms of the list above.

3.7.4. Incentive compatibility constraints

Even if social innovators have at their disposal all the resources they need to get started and to develop their operations, and even if they manage to improve outcomes for their target populations and other relevant stakeholders, the social innovation process may fail if it captured by interests which deviates the process from the satisfaction of the social needs it was intended to meet.

These deviations can occur when social innovators lose sight of their initial mission. They may be due to opportunistic behaviours by individuals or groups in the target population, or by other stakeholders involved in the process who take advantage of the process to meet self-interested objectives and have no interest in meeting the social needs that the social innovation process was intended to meet.

These opportunistic behaviours may happen for reasons due to asymmetries of information:

- Adverse selection: social innovators may not understand the characteristics of their target populations and other relevant stakeholders involved in the process;

[179] G. Mulgan, The Process of Social Innovation. Innovations: Technology, Governance, Globalization, 1, 2006.
[180] Ibid
[181] G. Mulgan, S. Tucker, A. Rushanara, B. Sanders, What it is, Why it matters, How it can be accelerated, Oxford, Oxford Said Business School, 2007
[182] Ibid
[183] L. van der Geest, L. Heuts, Barriers to Innovation, in B. Nooteboom, E. Stam (eds.), Micro-foundations for Innovation Policy, Amsterdam, Amsterdam University Press, 2008, pp. 173-198
[184] Ibid

- Moral hazard: social innovators may not be capable of monitoring what their target populations or other relevant stakeholders are doing.

Like in the case of rationality constraints, participation of all relevant stakeholders may be a mechanism to prevent, or fix this kind of problems because with participation each party can monitor what the other is doing. . So, a lack of this kind of participation and monitoring are a barrier to social innovation.

3.8. Barriers related to the characteristics of specific organisations

Social innovation processes involve organisations in the public sector, the social economy, the for-profit sector and households. Each of these types of organisation has specific characteristics which may be the source of barriers to social innovation. As we have seen in the literature review, some attention has been devoted to the barriers to social innovation in the public sector, but not so much in the other sectors.

In this section we will add to what is in the literature review about the barriers to social innovation in the public sector, in terms of characteristics of this sector that may be the source of that kind of barriers.

Because of the role played in social innovation processes by goods and services with a collective nature which may lead to the creation or intervention of social economy organisations, we will add a section about the specific characteristics of this kind if organisation and their connections with barriers to social innovation.

3.8.1. Public organisations

In the literature review we have a section on the barriers to social innovation in the public sector. So we are not going to repeat the barriers that have already been discussed here. Instead, we are going to refer to some of the characteristics of public sector organisations which may be the source of processes going against the direction of social innovation processes. These characteristics have been treated in the literature on public economics and were well summarised in a book by Charles Wolf, Jr. as follows[185]:

- the disjunction between costs and revenues which may lead to redundant and rising costs: since the revenues that sustain public sector activities "are unrelated to the costs of producing it, more resources may be used than necessary to produce a given output"[186];
- internalities, that is, the internal standards to guide, regulate and evaluate public agencies' performances which may be poorly connected to the needs of the "consumers" of their services when these "consumers" don't have effective possibilities to participate in the design of those services and have an influence on how they are provided;
- derived externalities: since public sector intervention "tends to operate through large organisations using blunt instruments (...) [its] consequences are both far-reaching and difficult to forecast"[187], so that unanticipated side effects may happen which are not necessarily all good for society;

[185] C. Wolf Jr., Markets or Governments, Choosing between Imperfect Alternatives, 2.nd ed., Cambridge, MA, The MIT Press, 1993
[186] Ibid, p. 65
[187] Ibid, p. 83

- distributional inequity: “public policy measures (...) place authority in the hands of some to be exercised over others (...) The power may be exercised with scruple, compassion, and competence, although it also may not be.”[188]

3.8.2. Social economy organisations

A concept of social economy organisations
Social economy organisations are defined here as follows[189]:

- they are organisations, that is, collectives of human beings regulated by (formal and/or informal) norms about membership, internal structure, governance and interactions with the rest of society;
- they are private, that is, initiated by civil society and not governed by the public administration;
- they are self-governing, that is, capable of deciding about their own activities;
- they are voluntary, that is, membership is non-compulsory and they are open to voluntary participation;
- their main mission is to promote more civic social relationships;
- by doing so, the overall result of their activity is the provision of public goods (poverty reduction, environmental protection, cultural heritage conservation, reduction in regional disparities, production of open access data, etc.)[190];
- in the assets they use to produce the goods and services they provide often there is some form of common property resources (for example, facilities and other assets owned by the organisation).

This last characteristic is obviously met by associations, cooperatives, mutuals and foundations. However, it is more of a problem for profit and market oriented organisations, which also have a role to play in social innovation. In these kinds of organisations the capital of the enterprise is private and is not common property. This is true if we take a narrow and inappropriate view of social innovation and of what is meant by a social economy organisation. When profit making and market oriented organisations engage in a social innovation process they cannot do it alone if this process is really socially innovative. They need to create or connect to other stakeholders (either formally or informally).By doing so they are contributing to the creation of formal or informal social economy organisations and to the generation of forms of common property.

The vulnerabilities of social economy organisations

Because of their characteristics, social economy organisations have two major kinds of vulnerabilities:

- economic sustainability problems; and
- governance problems.

[188] Ibid
[189] A. Mendes, O perímetro da economia social, Report prepared for CASES – Cooperativa António Sérgio para a Economia Social, 2010 and A. Mendes, Organizações de economia social, O que as distingue e como podem ser sustentáveis, Presentation made at “Colóquio Economia Social e Solidária. Gestão, Parcerias e Desenvolvimento”, Lisbon, Universidade Lusófona, 2011 (to be published in the conference proceedings).
[190] We are referring here to the overall result of the activity of these organisations when they fulfil their mission, not to the specific goods and services they deliver to the people they serve, or to the markets where they may operate.

The causes of the economic sustainability problems are the following:

- the economic nature of the goods and services they provide;
- the economic characteristics of the technology used to produce those goods and services;
- asymmetric information problems related to the mode of governance of these organisations.

Since often the major output of social economy organisations is the provision of a public good, or the supply of goods and services to users who cannot afford to pay their full cost, they tend to operate with deficit if they rely only on what they can receive from the users of their production.

Turning now to the type of technology used in many social economy organisations, human resources tend to be the major input used in the production of the goods and services delivered by these organisations. For the part of these human resources that is paid, the "Baumol disease" tends to happen: their productivity cannot rise at the same rate as in the rest of the economy, but their wages cannot diverge too much from the other wages. So, the consequence of this is an increase in the relative costs of the goods and services provided by these organisations.

Concerning the governance problems, they have to do with the possibility of the existence of asymmetric information problems in four domains:

- in the relationships between the board of directors and those who have elected or nominated their members;
- in the relationships between the governing bodies of the organisations and its workers;
- in the relationships between the donors who voluntarily provide monetary or other kinds of support to the organisation and the organisation;
- in the relationships between the organisation and the people the organisation aims to help.

In all these relationships there tends to be one party better informed than the other about the characteristics of the other party (adverse selection), or about what the other party does (moral hazard):

- in the relationship between the board of directors and those who have elected or nominated them the directors are better informed about their characteristics and about what they do in the management of the organisation;
- in the relationship between the governing bodies of the organisation and its workers, the workers are better informed about their own characteristics and about how they work for the organisation than the directors;
- in the relationship between the donors and the organisation, the organisation knows better its own characteristics and what is done with the donations than the donors;
- in the relationship between the organisation and the people supported by its work, the people know their own characteristics and what they do with the resources provided by the organisation better than the organisation.

The existence of these informational asymmetries makes room for the possibility of opportunistic behaviours by the better informed parties. These kinds of behaviours are detrimental to the economic sustainability and overall sustainability of the organisation. So if social organisations play a critical role in a social innovation process, when they fail because of these vulnerabilities this is a barrier to the advancement of the process.

4. Conclusions

In this paper we propose a conceptual framework organising the barriers to social innovation in two categories:

- Structural barriers
- Agency barriers

In the first category we include the barriers that have to do with the context in which social innovators operate and which influence their behaviours. The barriers we considered here are the following:

- *Traps*: These kind of processes, especially relevant for the initiation stages of social innovation, are traps or vicious circles (e.g. poverty traps) in social systems causing harm and suffering to some groups or to the whole of society;
- *Barriers to entry*: social innovators may face barriers to entry in the new activities they want to set up;
- *Insufficiency of built in growth and leveraging mechanisms*: Another way of looking at barriers to social innovation in this dynamic manner, especially when we look at the scaling up stages of social innovation, is to consider as barriers to social innovation the lack or insufficiency of built in growth mechanisms (e.g. economies of scale) in the way social innovation is produced and the difficulty of this process to build up networking, partnership and other social connections capable of leveraging results from a small to a larger scale;
- *Collective nature of the goods and services*: The explanation and mechanisms of other barriers to social innovation (e.g. insufficient supply of funds and other resources) can be found by looking at the economic nature of the goods and services delivered by this process, namely the fact that, very often they have a collective nature.

From our review of the literature, it is clear that few of these barriers have been adequately covered. This is why we have devoted so much attention to these barriers in this paper. In some cases, we have proposed or suggested extensions to what has already been written about these barriers.

In the second category barriers (agency) we include those that have to do with characteristics of the social innovation actors and of their actions. The barriers we considered here are the following:

- *Collective action*: The collective nature of relevant goods and services delivered by social innovation[191]requires the organisation of some form of collective action (collaborative work, co-production, co-operation and mutualism, creation of social economy organisations, social network building, partnerships, co-operation between private and public entities, social movements etc.) with the corresponding need to cope with cooperation and coordination problems to get this kind of action started and sustained;
- *Under resourcing*: The collective nature of those goods and services also implies that there are benefits from social innovation that cannot be privately appropriated which may make this kind of innovation less attractive than technological innovation for suppliers of funds or other resources seeking a private benefit;

[191] We don't mean here that social innovation delivers only collective goods and services.

- *Organisational failures*: The collective nature of the goods and services delivered by social innovation also often implies that public organisations and social economy organisations play an important role in triggering, supporting and scaling up this kind of innovation, but these are organisations which may have failures in meeting their missions causing harm to the social innovation processes where they are a stakeholder;
- *Agency failures*: Social innovation is also about social innovators being capable of motivating others to participate in new ways to respond to social needs, but they may fail to do so because they may not have enough financial and other resources needed to accomplish their goals, they may not be able to make their target population better off, or they may not be able to prevent the process to be captured by opportunistic behaviours.

In each social setting the contents, combination and interaction of these factors takes a specific form. The structural factors influence the agency factors, and the agency of individual and collective social innovators can change the structural factors. Looking at the feedback mechanisms relating the two types of factors is a very important step for understanding how barriers to social innovation work, or can be removed.