



An evolutionary view on social innovation and the process of economic change

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An evolutionary view on social innovation and the process of economic change

Andreas Reinstaller (WIFO)

Contribution to the Project

Social innovation and social entrepreneurship are concepts that are widely used in the policy discourse. Despite this they are analytically not well defined and very diffuse, as is often the case in nascent fields of research and policy design. This report contributes to the project as a whole by clarifying these concepts and to work out how social innovation is likely to contribute to social and economic progress in general, and to industrial change more specifically.

An evolutionary view on social innovation and the process of economic change

Andreas Reinstaller

October 22, 2013

Abstract

The concepts social innovation and social entrepreneurship have gained considerable attention both in different fields of academic research and in the context of the development of economic and social policies. However, despite its wide-spread use there does not exist a unique or at least widely accepted agreement among scholars on its relevance and meaning. The principal aim of this paper is to work out a general framework for the analysis of social innovations borrowing key concepts from institutional economics, evolutionary (game) theory and the capabilities approach to welfare economics. Using these approaches we specify the elements that are core for the analysis of social innovation as well as secondary elements that are in the context of this concept and specific to particular manifestations of the phenomenon. While this attempt to clarify the concept of social innovation it is necessarily incomplete, we consider it to be a first necessary step to make them more operational for empirical research in social sciences but also for the design, implementation and assessment of policies to support social innovation. The final part of the paper discusses then how social innovation contributes to social and economic progress in general, and its potential contribution to industrial change more specifically.

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1 Introduction

Across the globe social innovation, social entrepreneurship or social enterprise have turned into mainstream concepts in politics that comprehend a heterogeneous set of policies and measures to support the provision of public goods or more generally strengthen the innovative capabilities of countries by other means than the public sector.

For example, for the European Union social innovation is a key part of its new strategy for smart, sustainable and inclusive growth in Europe by 2020 (European Commission, 2010a) where “social issues are being brought to the fore” (BEPA, 2011, p.7). Hence, for the European Commission social innovation conceived of as “the design and implementation of creative ways of meeting social needs” seems to be an important means to implement key aspects of its medium term growth strategy. The hopes are that “at a time of major budgetary constraints, social innovation is an effective way of responding to social challenges, by mobilising people’s creativity to develop solutions and make better use of scarce resources. Social innovation can also promote an innovative and learning society. It is a starting point for creating the social dynamics behind technological innovations.” In other words, the European Commission considers social innovation to potentially increase the efficiency of social spending of its member states as well as to promote social processes that may induce or support technological innovation.

In its Flagship Initiative Innovation Union (European Commission, 2010b) that outlines the measures to be taken to implement the Europe 2020 Strategy in the area of science, innovation and technology policy, the European Commission then even announces that it will promote social innovation through the European Social Fund (ESF) and that it should become a “mainstream focus in the next generation of European Social Fund programmes”. Similarly, in the United States, under the Obama administration the White House has set up the Office of Social Innovation and Civic Participation whose aim is to promote the development of communities and has set up innovation funds to promote initiatives to achieve “transformative change – as opposed to marginal or incremental progress – on [...] social problems”.¹

Given the importance different governments attach to social innovation in their political strategies and that substantial amounts of public money will be spent in the coming years on measures to promote social innovation, one could guess that the concept delimits policy areas with relatively clear goals in terms of expected outcomes and impact on the economy. However, as the deliberately chosen quotes above already indicate, and the review of scholarly contributions on social innovations in the next section will show, this is not the case.

There is a considerable heterogeneity in the core concepts across different analytical approaches that is characteristic for nascent fields in research and policy. In its present form social innovation is an umbrella concept that calls for analytical clarifications in order to bridge the conceptual gaps between these approaches. The principal aim of this paper is to work out a general framework for the analysis of social innovations borrowing key concepts from neo-institutional economics, evolutionary (game) theory and the capabilities approach to welfare economics. This is a necessary step in order to make progress

¹<http://www.whitehouse.gov/administration/eop/sicp/initiatives/innovation-funds>

in empirical research on social innovation but also for the design, implementation and assessment of policies to support social innovation. In the next section the paper provides a brief review of the use of the concept of social innovation in recent years both in the academic and the policy oriented literature. In Section 3 the paper sets out the elements for a general framework for the analysis of social innovations borrowing key concepts from institutional economics, evolutionary (game) theory and the capabilities approach to welfare economics. Using these approaches it specifies the elements that are core for the analysis of social innovation as well as secondary elements that are in the context of this concept and specific to particular manifestations of the phenomenon. This is the principal contribution of the paper. The final part of the paper discusses then how social innovation contributes to social and economic progress in general, and its potential to contribute to industrial change more specifically.

2 Social innovation: A short review of a fuzzy concept

Over the past years “social innovation” has become a much used buzz word both in different fields of research but also and more importantly in the context of policy making. However, despite its wide-spread use there does not exist a unique or at least widely accepted agreement among scholars on its relevance and meaning.

In the past notions of social and institutional change have been used in historical accounts of economic development to underscore the complementarity between the factors of production, available technologies, and the institutional set-up in the process of economic growth. For instance, Polanyi (1957) has argued that the adoption and diffusion of modern methods of industrial production were only made possible through changes in the system of outdoor relief to labourers as they undermined worker discipline. As a consequence production under factory conditions was not possible. Introduced in late eighteenth century Britain to mitigate rural poverty, the Speenhamland system was removed at the beginning of the first industrial revolution.² This social innovation (Polanyi does not define it as such) contributed to the development of “modern” labour market institutions and aligned the incentives of workers and the interests of factory owners. Hence, this change in the provision of social support based on paternalistic principles, was a pre-condition and hence complementary to the rise of methods of industrial production in early 19th century Britain and as a consequence the unfolding of the First Industrial Revolution.³

Kuznets has stressed the complementarity between social and institutional change and

²The Speenhamland system was an allowance scale whereby a labourer would have his income supplemented to subsistence level by the parish, according to the price of bread and the number of children in his family. This was a consequence of the rise of prices for foodstuffs from Europe, a series of poor harvests and of the French Wars (1793-1815). The magistrates of the village of Speen in Berkshire then issued this allowance scale, that diffused widely in Britain.

³A similar idea has been taken up very recently by Greif and Iyigun (2013). They argue that social institutions, such as the Speenhamland system, can influence the extend of risky experimentation in the economic sphere. Social institutions can foster economic growth by encouraging risk taking and reducing violence, but they need continuously to be adjusted as society evolves.

technological development as well. Coming from a very different intellectual tradition than Polanyi, Kuznets made this link very explicit in his Nobel Prize acceptance speech delivered in 1971 using the term social innovation. He argued that “[t]he succession of technological innovations characteristic of modern economic growth and the *social innovations* that provide the needed adjustments are major factors affecting economic and social structure. But these innovations have other effects that deserve explicit mention; and while these are discussed below in terms of effects of technological innovations, the conclusions apply *pari passu* to *innovations in legal forms, in institutional structure, and even in ideology*” (Kuznets, 1973, p.252, emphasis added). Hence, he associates “social innovation” with changes in belief systems, formal rules and norms.

A decade later Gershuny (1983) has put forward the argument that technical innovation and new products may originate in changes in consumer behavior as over time the desirability of alternative patterns of consumption may change. He referred to this change in preferences as “social innovation”, and argued that it could be observed through changes in the time use patterns of households. Gershuny also argued that social innovations could not only induce technological innovation, but also affect the overall patterns of industrial growth and technological development. Say, if preferences and time use shift away from household production towards externally provided services then this will induce also a shift in the sectoral composition of the business sector in an economy. So while Gershuny reversed the causality implicitly or explicitly assumed in earlier work linking technological and institutional development, he still viewed the two dimensions as being closely related.

Howaldt and Schwarz (2011, p.209) go so far as to claim that the linkage between social change and technological innovation has up to the very recent past been the prevailing approach in the study of social innovation. In recent contributions the perspective has changed, however, putting social innovation into the centre of the stage and viewing it as a quite autonomous phenomenon able to drive social and economic change. Social innovation and social entrepreneurship have gained importance especially in the context of economic and social policy design as a means to implement and deliver a range of government policies and services, without causing significant additional burden to public budgets. The concept of social entrepreneurship refers to a wide spectrum of activities and enterprises ranging from corporate philanthropies, over dual purpose businesses that mediate profit goals with social purposes to enterprises with social and commercial aims located in the third sector (OECD, 2010, see footnote 1). The justification for shifting the burden of social relief from the public towards the “third sector” typically is that grassroots organisations know better how to solve the problems of concerned individuals than an anonymous public bureaucracy. Hence, the role of the government can be reduced to the provision of appropriate support to third sector organisations. In Great Britain this has led to a significant expansion of the third sector (Haugh and Kitson, 2007).

With this rise in political interest in social innovation, academic work on social innovation has mushroomed and many concepts of social innovation have also gained an increasingly normative character. Today a large number of conceptions of social innovation co-exist. Pol and Ville (2009), for instance, identify four different conceptions of social innovation. The first conception equates social innovation with institutional change, where institutional change is conceived of as a “change in cultural, normative or regulative structures”. These changes turn into a social innovation if – according to the authors using this defini-

tion – they lead to an improvement of both the economic and social performance. Rightly, Pol and Ville stress that the institutional characteristics listed in this definition are too broad, and they appear also not to be mutually exclusive as culture and normative and regulative structures are partly nested into each other (e.g. normative structures in culture). In addition the definition is also very restrictive as it requires that social innovations improve both the economic and social performance, where one also wonders what social performance might actually be. So this specific attempt to link social innovation to the broader research tradition of institutionalism seems not to yield promising advances for the understanding of the phenomenon.

Two other conceptions Pol and Ville (2009) identify are very similar to one another. The first equates social innovations with “new ideas that work in meeting social goals”. Here social innovations are seen as “innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organisations whose primary purpose is social” (Mulgan, Tucker, Rushanara, and Sanders, 2007, p.8). The other conception defines social innovations as “new ideas that resolve existing social, cultural, economic and environmental challenges for the benefit of the people and the planet” or just simply “ideas that work for the public good” (Center for Social Innovation, 2013). The authors of this definition view individuals, groups or organisations as agents promoting social innovation, and argue that it can take place basically in every sector of an economy: in the for-profit, nonprofit and public sectors. On a quite similar line Phills, Deiglmeier, and Miller (2008, p.36) define social innovation as “[a] novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals”. For these authors social innovation is not even possible without the involvement of all economic sectors: “Most difficult and important social problems can’t be understood, let alone solved, without the nonprofit, public and private sectors. [...] Increasingly, innovations blossoms where sectors converge.”, (ibid., p. 43).

These definitions are ambiguous, and indeed they leave it to the reader to guess what both the ideas and the social problems they should resolve actually are. Pol and Ville (2009) rightly remark that defined in that way social innovations would encompass all forms of technological innovation: a car solves the social problem of individual transportation; and a fighter jet helps to “solve” the social problems that have led to an armed conflict. In addition, any company has primarily social purposes, as generating profits is a very important social purpose indeed. So, these conceptions do not clearly define how social innovations are distinct from technological innovation, why they matter and how the agents promoting social innovation differ from entrepreneurs.

To be fair, Mulgan, Tucker, Rushanara, and Sanders (2007) qualify their definition by claiming that the value proposition of the agents promoting social innovation differ from classical profit-maximising entrepreneurs, and Phills, Deiglmeier, and Miller (2008) add that the value generated through these innovations accrues to some social group or society, and not so much to private individuals. The Center for Social Innovation (2013) however tells us then that social innovation can actually happen in virtually every economic sector, whereas Mulgan, Tucker, Rushanara, and Sanders (2007, p.8) qualify their own qualification by acknowledging that for profit businesses sometimes indeed promote

and develop social innovations. So, the insight gained by the attempts to define social innovation is rather limited because the categories they rely on are rather indistinct.

In addition, these conceptions are saturated with implicit normative assumptions. They seem to imply that there is a commonly accepted view on what the “public good” is, or of what people commonly consider to be “sustainable” or “just”. The cited papers neither define these terms nor clarify their actual normative content. Hence, these assessment of the nature and impact of social innovations is likely to be prone to very arbitrary interpretations. Normative assumptions should therefore not be a defining element of any generalised conception of social innovation, as the notion of what is good or bad varies widely across individuals and cultures and are hence worthless to understand the phenomenon of social innovation.

These definitions appear also to come along with a Whig conception of human development. They seem to imply that social development is an inevitable progression towards an ever better world, and that social innovation is one of its prime movers. Unfortunately human history is not so generous to mankind and it happens from time to time that countries fall relatively back in their economic and social development (Abramovitz, 1986; Pomeranz, 2000, cf.). The example of the removal of the Speenhamland system introduced at the beginning of this section shows that sometimes the importance of a social change lies not so much in the direct improvement of the human lot, but in the actual worsening of the life circumstances of a concerned social group which gives way to other developments in the social sphere such as the diffusion of industrial methods of production.⁴

Finally, Pol and Ville (2009) identify a fourth conception used by the OECD (2010). This definition is in line with previously cited ones insofar as it views social innovation as an approach that seeks “new answers to social problems”, but it is also more specific as it refers to the “implementation of new labour market integration processes, new competencies, new jobs, and new forms of participation” as areas of particular concern. In addition it establishes an explicit link with local development and with the improvement of the quality of life. This is in also how the European Commission conceives of social innovation: Social innovation is “about tapping into the ingenuity of charities, associations and social entrepreneurs to find new ways of meeting social needs which are not adequately met by the market or the public sector. It can also be about tapping into this same ingenuity to bring about the behavioural changes which are needed to tackle the major societal challenges, such as climate change.” In addition, the document stresses also another dimension: “social innovations empower people and create new social relationships and models of collaboration” (European Commission, 2010b, p.21). Hence, the definitions used by the OECD and the EU add local development and empowerment as well as some specific areas of interest to a general notion of social innovation that is essentially a summary of all other definitions from which they inherit a general vagueness that leave the outside observer in bewilderment about the relevance of social innovation.

We can summarise, that all the conceptions of social innovation identified by Pol and Ville (2009) gravitate around the idea that social innovation is distinct from technological

⁴The account of Engels (1957) leaves hardly any doubt that the demise of the Speenhamland system was indeed a worsening of the situation of English workers, but it led also to new forms of collective organisation, and hence follow up social innovations.

innovation and that therefore it should be analysed on its own right. However, they are not able to draw a clear boundary between these notions. They all regard social innovation as a potential instrument to address social problems or grand societal challenges in part by complementing or even replacing the public sector, and empowering people to help themselves. They are also not very precise in specifying what makes the social problems social innovations are supposed to solve different from those private ventures or the public sector typically try to solve through their activities. However, they widely concord that these are problems for which only unsatisfactory public or private solutions exist. This is also the reason why most contributions consider social innovation to be an important new field of research and for policy design. Finally, they draw on normative ideas of the common good or the improvement of the quality of life more or less explicitly. So, from this one can conclude that overall these characterisations of social innovation are not very helpful, if one would need to identify a social innovation without any prior knowledge of cases or examples.

Ruede and Lurtz (2012) have come to a similar conclusion on the basis of a very comprehensive review the literature. In their systematic effort to structure the research in this field they have identified seven distinct categories or lines of research on social innovation that considerably differ in their general understanding of social innovation, the guiding research questions, their analytical focus, and also their normative assumptions and implications. In the seven categories social innovation is understood as (ibid. p. 7)...

- i. “ ... doing something good for society”;
- ii. “... changes in social practices and/or social structures”;
- iii. “... contributions to urban and community development”;
- iv. “... reorganisation of work processes within and across enterprises”;
- v. “... imbuing technological innovation with cultural meaning and relevance”;
- vi. “... making changes in the area of social work”, and
- vii. “... innovating by means of digital connectivity”.

Clearly, (i) and (vi) are very similar, even though (i) is more generic as it focuses on broader policy domains than just social policy and it is also normative insofar as it links social innovation with some generic idea of the common good. Conceptions (ii) and (iv) share some similarities as they focus on changes in social practices and social structures, but conception (iv) is more closely related to social, managerial or administrative changes within organisations, whereas (ii) refers also to processes of social change that can be observed for specific social groups or society at large. Conception (iii) shares some commonalities with (i) and (ii) but focuses more closely on community development and on the empowerment of people to change their own life (Moulaert, 2011). Category (v) instead refers to non-technological aspects of technological innovation, whereas category (vii) views changes in social and business practices induced by digital technologies as social innovation.

This considerable variation in themes and conceptions leads Ruede and Lurtz (2012) to conclude that they have “found the concept of social innovation to be a concept with no clear epistemology and where a pragmatic consensus [...] has yet to be achieved” (ibid.,

p. 29). They view social innovation as “an umbrella construct that after a phase of excitement now faces validity challenges by being at risk for having too many and various meanings for different people” (loc.cit.)

Indeed social innovation lacks a common set of analytical categories, theories and methods that can be used to acquire knowledge pertinent to the subject. However, at a closer look most definitions relate to some form of autonomous or induced institutional change that either affects (and possibly improves) the welfare of some specific social group or of society at large, or leads to the rearrangement of existing or the establishment of entirely new social relationships either in more circumscribed social or large scale social settings. So while Pol and Ville (2009) have rejected existing approaches that view social innovation as a prime mover of institutional change, the central proposition of what follows in the next section of this paper is that the economics of institutional change may actually provide an adequate analytical framework to develop a systematic understanding of the phenomenon of social innovation.

In the next section we will therefore work out the key categories that are needed to define and understand social innovation, and which aspects are of secondary importance even though they are part of the overall context of social innovation. In this attempt to make the concept of social innovation more specific we will rely on institutional economics, evolutionary (game) theory and the capabilities approach to welfare economics. The section is organised as follows: We define the key concepts underlying institutional analysis in Section 3.1. In Section 3.2 we discuss the principal focusing devices and agents involved in the process of social and institutional change. Section 3.3 discusses the important social and learning dynamics that affect the process of diffusion of social innovations. Section 3.4 discusses welfare aspects of social innovation, and Section 3.5 finally rounds up the elaborations and lists the key and secondary elements needed to analyse social innovation.

3 Social innovation and institutional change

3.1 Beliefs, mental models, institutions and social structures

Following (North, 1990, p.3) institutions are frequently defined as “the rules of the game in a society, or [...] humanly devised constraints that shape human interaction”. They include both formal rules such as laws and constitutions, and informal constraints such as conventions and norms, and they shape social arrangements such as business organizations, legal or monetary systems, or contracts.⁵ Formal rules and social norms are often complementary and constitute at the societal level the central elements of culture. As Belloc and Bowles (2013, p.93) state: “The term ‘feudal society’ [...] refers jointly to the economic relationship of lord and serf and to the norm of subordination and reciprocity that both contributed to the smooth functioning of the system and that were its cultural expression.”

⁵Social norms are rules that are based on some shared belief on how people ought to behave but are not promulgated by any official or legal source. They are sometimes self-enforcing, sometimes enforced by expressions of disapproval, ridicule, ostracism or codes of honor and related actions (Elster, 1989). See Section 3.3 on page 17 for a detailed discussion of the enforcement mechanisms.

One important reason for the existence of institutions is that people live in an uncertain world that is in constant flux. Under uncertainty it is not possible to derive probabilistic priors on the state of the world and the impact of their actions at some point in time.⁶ Indeed, most choices humans make during their lifetime take place under conditions of substantive and procedural uncertainty. Uncertainty is substantive, if the information set upon which individuals act either in an economic or social context is incomplete, and it is procedural, if agents are not able to identify, interpret and process all the information needed to maximise their pay-offs related to decisions in such contexts (Simon 1978, Dosi and Egidi 1991).

People reduce uncertainty in human interaction through the construction of mental models. These are representations of the surrounding world that are the outcome of a learning process in which people repeatedly act and interact in a specific social context and observe, assess and classify the behaviour of other actors. Individuals later rely on these representations to interpret and consider their options in similar situations. Mental models therefore inform them about the potential consequences of their actions with regard to some purpose (Denzau and North, 1994). They are therefore a means to structure the signals from a fuzzy environment and produce expectations about how this environment behaves (North, 1994).

The learning processes associated with the development of beliefs and the construction of mental models are unique to each individual and its personal history. However, as people relate to and rely on others when making their choices they share also their views of the world (cf. Schelling, 1978). This exchange induces interpersonal learning processes that lead to a convergence of perceptions across individuals and the development of shared beliefs (cf. Denzau and North, 1994). If these shared beliefs are then not only transmitted across people but also over time through the socialisation process of individuals, they turn into the cultural memory of larger social groups or entire societies (cf. Bandura 2002, Assmann 2011). Hence, “institutional constraints cumulate through time, and the culture of a society is the cumulative structure of rules and norms (and beliefs) that we inherit from the past that shape our present and influence our future.” (North, 2005, p.6).

Shared beliefs are at the heart of the institutions or normative systems societies have developed and adopted over time, because they are not just interpretations of the environment, but also prescriptions as to how an environment should be structured. They define the range of tolerable behavior and serve as a guide for the members in a social system. As they eventually translate into polity and concrete policies their existence and perpetuation leads to the emergence of specific patterns of behaviour that can be observed at the level of larger social groups or entire nations.⁷ They lead to distinct trajectories in the development of societies and affect their economic performance, and sometimes prevent the transfer of successful institutions or policies across countries (cf. North 1990, Greif 1994, David 1994).

⁶In the view of North (2005) and other authors “uncertainty” is related to a “non-ergodic” world. This means that averages calculated from past observations are persistently different from the time average of future outcomes.

⁷Formal and informal normative systems are both complements and substitutes, depending on whether they enforce or dampen their respective effect (cf. Posner, 1997).

Institutions and the underlying beliefs reduce the costs individuals have to incur to acquire and process information about specific transactions. This is of particular importance in the face of incomplete contracts. Under such circumstances, trust and fairness play an important role (see e.g. Coleman 1984; 1986, Nooteboom 1999): When it is impossible to define every contingency relevant to some economic or social exchange they give an indication on the likely action and on the reliability of contracting parties and the contract becomes less uncertain (see also Hodgson, 1988, p.123ff.). As such norms and institutions can be thought of as a behavioural public good (Fehr and Gächter, 2000b). The public good character of normative systems conveys strong incentives to reinforce and transmit these norms to others. Their generation, reproduction and enforcement happens in the context of repeated interactions in which deviant or non-cooperative behaviour is sanctioned. Institutions are therefore the result of cooperative behaviour among individuals which becomes manifest through the adherence to and respect of the related norms.

However, the individuals in a population are generally not equally likely to meet and interact. In other words, populations are typically not well-mixed but structured (cf. Nowak, Tarnita, and Antal, 2010). Geographical distance, the educational institutions one has attended, the profession, the family or membership in religious communities determine that an individual is more likely to interact with some people rather than with others. These patterned social arrangements are commonly referred to as social structures. They define specific groups of individuals sharing some traits and the interaction patterns inside each group but also between groups. Social structures can be bureaucratic organisations (private companies or public administrations) or other types of social arrangements such as social networks or policy coalitions grouping people with specific socio-economic functions, people with similar beliefs and views, or people with similar goals and desires. Social structures constrain and channel interpersonal learning processes by establishing a specific context of action leading to group specific shared beliefs and mental models and as a consequence to group specific formal and informal norms that constrain the interactions inside each group but also between the groups that are part of a social structure.

If the formal rules and informal norms that determine the interaction patterns inside and across social groups are mutual best responses, then the system can be considered to be in an institutional equilibrium. Social structures and related norms of group specific behavior are however not static. They co-evolve over time. Giddens (1984), for instance, has argued that social structures have a dual character. This “duality of structure” is given by human agency that creates and reproduces social structures through the repetition of acts, while a socially structured environment affects the behavior of human agents through formal and informal normative systems. But these can change when people start to ignore them, replace them, or reproduce them differently. Consequently, innovative action is part of a process where structures, their functions and related institutions permanently change over time.

Finally, social structures and institutions have a hierarchical and systemic character. They are the means to a purpose of the individuals or groups that have established and act in these social structures. To fulfill this purpose larger social structures, business organisations, legal systems etc., often consist of hierarchically related subparts, such as the departments of a private enterprise or a public administration, dealing with some subset of problems related to the overall purpose of the social structure making them to means

to some purposes in their own right. As purposeful action and hierarchy are the defining aspects of technologies Arthur (2009) goes so far as defining social arrangements (and by implication related institutions and social structures) as technologies. This hierarchical scaling implies that there will be some institutions that are very influential as they set the framework conditions for a larger number of social structures and institutions at a lower tier of the hierarchy that have a more limited scope and validity.

From this account we can infer some key dimensions along which it is possible to classify social innovations as institutional change:

1. Social innovation implies different interpretations of reality that are introduced into the economy by individuals or specific social groups. These lead then to new beliefs which are then exchanged with other individuals. If the new interpretations of reality are taken over by a larger number of individuals new shared beliefs and new mental models develop that lead then to the establishment of new institutions and as a next step new policies.
2. Social innovation may take place inside given social structures or may lead to the establishment of new social structures.
3. When social innovation takes place in given social structures it may imply an institutional change either within a group that is part of the social structure, or in the nature of the interaction between the groups that are part of that particular social structure.
4. Social innovations can affect either formal or informal normative systems or both.
5. Finally, social innovation can imply institutional change at different tiers in hierarchically related elements of social structures. Change in lower tier institutions and social structures is easier to achieve than change at higher level institutions and structures. Changes on the higher tiers in turn are more difficult but if they happen, they have cascading effects in terms of clustered changes at the hierarchically related lower level institutions and social structures.

How change comes about will be worked out in the following two sections discussing the development of social innovations and their diffusion.

3.2 Inducement mechanisms and agents of social and institutional change

Change is inherent in each society. Imbalances in social relations, new information on the state of the world or new technologies can drive institutional change and the restructuring of social relationships. Social structures and the institutional set up reflect inequalities of power, status, and material privileges that give members of society widely different opportunities and behavioral alternatives and have an impact on social mobility (cf. Bourdieu, 1984). As North (2005, p.6) states:

“ Humans attempts to use their perceptions about the world to structure their environment in order to reduce uncertainty in human interaction. But whose

perceptions matter and how they get translated into transforming the human environment are consequences of the institutional structure [...] This structure of human interaction determines who are the entrepreneurs whose choices matter and how such choices get implemented by the the decision rules of that structure.”

These social inequalities may become manifest in limitations of what (Sen, 1999, p.38) has referred to as instrumental freedoms that contribute to the overall freedom people have to live the life they would like to live: political freedoms such as civil rights or voting rights, economic or social opportunities such as the access to markets, the education or health care, protective security and social safety nets or transparency guarantees preventing corruption, financial irresponsibility, or red tape.⁸ They may be a source of discontent for some members of society and induce institutional change towards alternative social arrangements.

In addition, the world changes continuously and this requires to adjust established institutions to new realities. For instance, the recent past has shown that new communication technologies can completely change the way people communicate and exchange their views and are thus able to circumnavigate mechanisms of censorship installed by public authorities. This can lead to the collapse of governments and the related institutional order. Similarly, people may start questioning existing beliefs or belief systems, when new information related to specific institutional set ups becomes available that was previously hidden or unknown. For instance, consumers may revalue their preferences and related consumption norms if they become aware that things they buy on a daily basis have a strong negative impact on their health.

Social imbalances and new information on the state of the world that are incompatible with current institutional arrangements therefore act as focusing devices for institutional change (cf. Rosenberg, 1976). Institutional arrangements are the beliefs, norms and formal rules guiding and shaping the activities and behavioural routines of individuals or organisations in specific social, political or economic domains. These focusing devices can induce social innovation by providing incentives to individuals to change their behaviour. As individuals are typically embedded in larger social networks such a process is the result of complex social dynamics that can either be driven by single individuals promoting change and trying to organise support for their ideas, or emerge in a self-organised fashion as a macro-phenomenon from the synchronised re-alignment of behaviours by individuals.

North (2005, p.106) and other economic historians have argued that institutional change happens either incrementally or in a short traumatic crisis that dislodges the old order. Exogenous factors such as wars, new technologies, scientific changes or radical economic

⁸For instance, through the attendance of specific schools social structures are created insofar as the joint attendance increases the likelihood of future interaction of two individuals attending the same school. As parents often send their children to schools they have attended themselves this reproduces the social structures in which the parents are embedded themselves. In this way specific social relationships are perpetuated that are often also associated with different social and economic opportunities and as a consequence with the perpetuation of economic and social inequality. Business entrepreneurs often use such imbalances to exploit social aspiration or distinction effects (cf. Reinstaller and Sanditov, 2005) by providing products that signal or convey social status. This can give rise to fashion cycles, and “catching up with the Joneses” effects that may negatively affect the subjective well-being of people.

change can lead to a change in the perception of reality of people and as a consequence the development of new mental models and eventually a change in behaviour of individuals, social groups they are part of, or society at large. Indeed, a new institutional order can emerge spontaneously in the presence of strong global externalities as those discussed by North (2005).

Dalle (1997), for instance, shows using a Markov-Gibbs random field model that, with a population of heterogeneous agents and the presence of local interactions or externalities among agents, there can be a shift to a new predominant institutional set when the population is relatively homogenous and local externalities are strong. However, in this context the old institutional set ups will continue to exist in small parts of the population when the population is heterogeneous in terms of the distribution of preferences across agents. However, a strong global externality can override the impact of heterogeneity on the establishment of institutional set ups. If a strong global externality dominates the local externalities all agents independently of their heterogeneity align their behaviour to the global externality. The social system will undergo a phase transition to a new institutional set-up. Hence, a new order emerges spontaneously. In reality such strong global externalities will be rare, especially if they affect society at large. Other complex dynamics of phase transition in different types of social networks are possible and have been studied in the literature.

Often, however, dynamics in networks are driven by or crucially depend on change agents that (consciously or unconsciously) rely on these mechanisms when they try to attract wide attention to new solutions and organise supporting networks. The explanations that focus on single individuals promoting change typically draw their intellectual heritage from Schumpeter (1912) defining entrepreneurs as charismatic change-agents in economic development. They cast the “Schumpeterian” (business) entrepreneur into the social and policy domains, and thereby emphasise the importance of decentralised discovery processes (Pyka and Hanusch, 2013) for social and institutional change.

Policy entrepreneurs, for instance, are individuals or special interest groups who instigate policy in order to promote their own ideas (King and Roberts, 1992). They are alert to opportunities for change, take financial and emotional risk involved in the pursuit of their actions and assemble and coordinate networks of individuals and organisations, that otherwise would not act collectively. They are also able to define policy problems, to attract the attention of decision makers and indicate appropriate policy responses. In this way they try to change commonly shared beliefs held by relevant individuals and thereby promote norms and formal rules that support their policy goal. Reinstaller (2005), for example, shows how environmental interest groups were able not only to influence emission legislation related to industry discharges in the pulp and paper industry, but also to promote new, environmentally friendly consumer norms thereby generating a demand for environmentally friendly products.

Another category of entrepreneurial change agents that has been given much attention especially in the context of work on social innovation are “social entrepreneurs”. A comprehensive review of the related literature by Mair (2011) shows that this is a very broad concept. Some studies view social entrepreneurship as entrepreneurial non-profit organisations that engage in commercial activities to create an income stream and finance the provision of public or meritorious goods that are not or only insufficiently provided by

the public sector. In other studies the concept of social entrepreneurship instead closely overlaps with that of policy entrepreneurship, where entrepreneurial activities aim at the inducement of changes in institutions and related policies, and not so much at the provision of a public good or service.⁹

Social or policy entrepreneurs are seen as pursuing trial-and-error experimentation to promote changes of institutions or the establishment of completely new ones that significantly affect the well-being of people. They share a number of key characteristics with business entrepreneurs:

- The literature tends to view them as marginal individuals with a unique experience both in their personal as well as their professional life history (cf. King and Roberts 1992, Elkington and Hartigan 2008). However, also special interest groups or new political parties that bring together individuals with specific belief systems may become active as entrepreneurial change agents (cf. Reinstaller, 2005; Mair and Martí, 2006).
- They are also perceived as being driven by a perception of urgent needs for change and a major discontent with an established social or political set-up. Their response tends to be emotional. The perception of the need for action arises directly from ongoing activities of enterprise or other organisations (cf. Martin and Osberg, 2007).
- Social and policy entrepreneurs are also charismatic personalities that have the capability to induce a reevaluation of existing shared mental models and beliefs on specific issues by concerned actors and groups. Their behaviour is guided by at least rudimentary conceptions about what social problems are and how they could be solved, i.e. by a specific “vision” showing a path into the future which they attempt to prove through persuasive demonstrations (cf. Mumford 2002, Reinstaller 2005).¹⁰
- They try and are able to capture the wider attention and to trigger learning processes in social groups and thereby influence decision and policy makers (cf. Kingdon 2002, Mumford 2002).
- They show creativity for generating adequate financing schemes for their activity (cf. Mumford, 2002).

A principal difference between change agents promoting institutional change and business entrepreneurs is their motive for acting as an innovator. Social and policy entrepreneurs do not wish to capture economic value for themselves, but aim at the creation of social value “in the form of large-scale, transformational benefit that accrues either to a significant segment of society or to society at large” (Martin and Osberg, 2007, p.34). In doing so they become active in areas where there is partial or total market failure, or where there

⁹Martin and Osberg (2007) view social entrepreneurs as being change agents that create ventures with the aim to develop a direct impact, whereas social activists try to induce policy changes and there develop an indirect impact. Social activism in this perspective would be more aligned with policy entrepreneurship. A clear cut distinction is not possible though.

¹⁰For instance, environmental groups such as Greenpeace, have shown the capability not only to promote alternative social norms but also to support the development of alternative business models providing the services and goods to accommodate the new social norms (Reinstaller, 2005).

exist substantial opportunities for the reduction of the quality of a good after it has been purchased (cf. Glaeser and Shleifer 2001, Elkington and Hartigan 2008).¹¹

How does the action of change agents now translate into institutional change? A widespread view in political science is that institutional change is an alternation of brief periods of (at times substantial) readjustment that are followed by longer periods of stability, where incremental change dominates. In line with evolutionary theory this phenomenon is referred to as punctuated equilibria (cf. Givel, 2010). Punctuated equilibria require the interplay between forces of change and forces of stabilisation. While change agents promote novel solutions advocacy coalitions (Sabatier, 1993) are generally seen as a stabilising force.

Advocacy coalitions assemble individuals or interest groups who “play important roles in the generation, dissemination, and evaluation of policy ideas as well as actors at other levels of government who play important roles in policy formation and implementation”, (Sabatier, 1988, p.139). Typically they are actively concerned with a problem in specific policy subsystems or domains. Actors in such an advocacy coalition can be elected officials, public servants, interest group leaders, researchers, journalists or other influential individuals who implicitly or explicitly coordinate their activities in a sustained effort over time on the basis of shared belief systems, while they might disagree in minor matters. They try to translate their beliefs into public policies going through cycles of formulation, implementation and reformulation of policies. In this process they act to change or align common beliefs and to establish formal rules and informal norms to shape policy over longer time spans such as decades or more. This is a major difference with regard to change agents who unfold their activities and try to achieve an impact over a relatively short period of time.

Given this persistence of advocacy coalitions they are commonly viewed as stabilising the status quo of an institutional set up. However, one can think of the labour movement in the second half of the 19th century across the industrialised world, where highly recognised intellectuals, industrialists, labour leaders, journalists and many other people worked towards the improvement of working conditions as well as an increase in wages and the standard of living for the industrial proletariat. Hence, advocacy coalitions can be a significant force of major institutional changes when many different interests and ideas must be coordinated and aligned in a sustained effort over time.

Therefore, agency coalitions and change agents fulfill complementary roles. An important aspect of the activities of social and policy entrepreneurs is to establish new social networks and to link up people who can act to support the ideas they promote. This eventually may lead to the establishment of new advocacy coalitions that at a later point in time turn into a structurally conservative force watching over the preservation and enforcement of the institutional changes originally promoted by the entrepreneur. Change agents and agency coalitions are therefore both necessary for the existence of punctuated equilibria in institutional development (Mintrom and Vergari, 2005). To put it bluntly, change agents promote novel mental models, beliefs and behaviours in the short run, and

¹¹Pyka and Hanusch (2013) also stress that social entrepreneurs typically are also the inventors of their innovations, whereas business entrepreneurs in many cases are the promoters of new products and technologies but not necessarily their inventors. Given the breadth of the definitions of social entrepreneurship encountered in the literature the last two points may however not hold true for social entrepreneurship in general and also not of policy entrepreneurship.

advocacy coalitions turn them eventually into stable institutional arrangements and preserve these over time. Short term coalitions organised by change agents emerge if the agents composing this group have similar beliefs, interact repeatedly, and have relatively low information costs. They translate into long term coalitions if the benefits of their action are visible and outweigh maintenance costs. Only in this case a social innovation is likely to persist over time even though in this process it may considerably change its nature (Sabatier and Jenkins-Smith, 1999, p.139).

Following the discussion in this section, we may characterise the initial steps of a process of institutional change as follows:

1. Change agents such as social or policy entrepreneurs continuously evaluate and question common beliefs and widely shared values on the basis of personal propensities and new models of reality.
2. They try to change an established institutional order by displacing existing institutional equilibria.
3. They are aware of the fact that specific beliefs (or models of reality) people hold structure their perception and understanding of events around them and guide their actions, and that these beliefs can be changed by providing new or hidden data, by fostering intense communication and by offering alternative models of interpretation and for handling these data.
4. Change agents rely on context specific supporting networks of actors to support their activities, as individuals learn and adjust their beliefs through the intense exchange with relevant individuals in their social environment. Therefore they need such individuals to disseminate and anchor the novelty they promote in existing belief systems that find their expression amongst others in public policies or programmes.¹²
5. The context of action will affect what they do and how they do it, and this will give rise to many different manifestations of change agents.

As the discussion on this section shows the existence of change agents is neither a necessary nor a sufficient condition for social innovation and institutional change, but often they may play an important role in initiating changes. Exogenous factors or learning dynamics in social networks may lead to the transition to new equilibria in a self-organised fashion. However, independently on whether change agents operate or a new order emerges in a self organised fashion, social diffusion processes are crucial for novelty to turn into a true social innovation. Social diffusion processes are essentially social learning process in which new *shared* beliefs develop, get adopted and adapted leading eventually to new behaviours and outcomes. Specific conditions favouring or limiting such a social diffusion process of beliefs and new behavioural models are therefore a key factor determining whether a social novelty actually turns into a true innovation.

¹²Sabatier and Jenkins-Smith (1999, p.119) note: "...public policies/programs incorporate implicit theories about how to achieve their objectives [...] and thus can be conceptualized in much the same way as belief systems. They involve priorities, perceptions of important causal relationships, perceptions of world states (including the magnitude of the problem), and perceptions/assumptions concerning the efficacy of various policy instruments."

3.3 The diffusion of social innovations and institutional change

To understand the diffusion process of novel institutional arrangements it is important to recall that institutions and social structures are stable social configurations that reflect social compromises on which competing social groups have settled in a contest to influence and shape social relations, and that institutions are hierarchically scaled.

As change agents aim at shifting an existing institutional equilibrium towards an alternative set up that is better aligned with their own beliefs, they will often be at odds with the established order. On the one hand their action introduces uncertainty in the system. On the other hand, the introduction of social or political innovations may negatively affect people adhering to the established order. The introduction of social or political innovations is therefore associated with some social cost as uncertainty increases and the value of established norms gets discounted. For this reason each social system has in place mechanisms that reinforce and stabilise the established institutions exert either normative or formal pressure on individuals if they deviate from the expected patterns of behaviour or if they do not behave cooperatively (Scott, 2003). As a consequence, social innovation and institutional change is also costly to change agents as they may face social sanctions.

Hierarchical scaling implies that some institutions are deeply enshrined in the culture of a social system and insofar they set the framework conditions for a larger number of social structures and institutions at a lower tier of the hierarchy. In the context of studies on policy change Sabatier and Jenkins-Smith (1999) distinguish between the *deep core*, the *policy core* and *secondary aspects*. The deep core reflects deeply held beliefs, fundamental norms and ontological axioms, and are related to socio-cultural identity and the priorities it attaches to issues such as different types of freedoms, distributive justice and so forth. The policy core is instead related to policy subsystems or domains and comprises fundamental positions concerning basic strategies for achieving core values within the subsystem. Secondary aspects finally are concerned with instrumental decisions and routines needed to implement aspects of the policy core. These different tiers are nested and changes at lower tiers involve lower adjustment costs, but go along also with more limited, incremental change.

In addition, the existence of policy subsystems or policy domains with different actors and distinct advocacy coalitions hints not only to the fact that social systems are complex, and that as a consequence social problem solving involves breaking down large scale issues into smaller more manageable problem domains. It also indicates that society and populations are structured in the sense that people have a higher likelihood of interacting with some individuals rather than others on the basis of different criteria based on social, geographic, cultural, religious or ideological aspects. From this emerge then social groups with coherent belief systems, that pursue common purposes or common material interests. Structured populations will also emerge if specific groups have also interdependent competing interests.

The cost to benefit ratio of new vs. old norms and rules, the hierarchical tier at which social innovation happens and social structure are likely to be key elements affecting the diffusion of social novelty. They influence the likelihood that in repeated interactions individuals will show cooperative behaviour in terms of the respect and the adherence to norms and rules relevant in the particular circumstance of interaction. We will now look

at the conditions for cooperation more closely.

Nowak and Sigmund (2007) list five mechanisms through which cooperative behaviour in populations can emerge if specific conditions are fulfilled:

- Direct reciprocity: Research has shown that people tend to reciprocate the behaviour of others in direct interaction. They cooperate as long as the other person cooperates and they retaliate when the other person shows un-cooperative behaviour (cf. Fehr and Gächter, 2000a). However, this mechanism works only when the probability of an encounter between the same two individuals is high relative to the cost-benefit ratio of the cooperative behaviour.
- Reputation (indirect reciprocity): Reputation is another forceful mechanism for the enforcement and promotion of norms. The behaviour towards an individual also depends on what it has done to others. If she cooperates then outside observers can conclude that this person is a valuable member of the community and cooperate when they interact with the observed person. Indirect reciprocity therefore evolves as people who act may never be sure not to have been observed by other members of their group who might retaliate at some later point. However, also in this context the probability of somebody getting to know ones reputation has to exceed the cost-benefit ratio related to cooperative behaviour (cf. Nowak and Sigmund, 1998, 2005).
- Structure: Analytical results show that cooperation in structured populations, particularly in social networks, is easier to emerge, when each individual does interact regularly only with a few people (cf. Otsuki, Hauert, Lieberman, and Nowak, 2006, p.59). Given that cooperation at the micro-level depends on the probability of encounter of two individuals (direct reciprocity) or the probability of observation of ones action by thirds (indirect reciprocity) this implies that cooperation is more likely to occur in structured populations. Recursively the same reasoning applies also to smaller social groups that are embedded in larger structures. So, for instance, people are more likely to show cooperative behaviour towards people working in the same company, and inside this company they are more likely to be cooperative with people in their own department. To counter the erosion of cooperation with increasing number of people in a social structure, it is to allow voluntary membership in groups working for a common end (cf. Axelrod, 1997, p.59).
- Group selection: Gintis (2003) has shown that populations with an above average share of members acting to enforce cooperative norms (i.e. people punishing members deviating from cooperative behavior) are better able to survive events that threaten the existence of the whole group. Results by Bowles, Choi, and Hopfensitz (2003) instead show that group selection pressure, i.e. competition between distinct social groups, support the evolution of group-beneficial behaviors. Hence, intense competition between social groups blurs the distinction between individual and group welfare for the members of a group and this forces the inner coherence (cf. Lenski, 1966). This tendencies may be augmented if group members value losses more heavily than gains, as prospect theory maintains (cf. Kahneman, Wakker, and Sarin, 1997, for an interesting discussion). In this case if members of a group with shared beliefs perceive a very strong outside opponent that may inflict sensible losses, then the group members are more likely to engage in coordination (Sabatier and Jenkins-Smith, 1999,

p.140). Traulsen and Nowak (2006) have shown that cooperation between competing groups is likely to occur only if there is a relatively large number of them and if these are relatively small (cf. Bowles, 2004, p.442). Otherwise, it is more likely that one or a few larger groups will impose their norms through dominance (cf. Axelrod, 1997, p.55). Generally, the presence of group selection indicates that individuals will develop some shared beliefs and norms related to the specific groups to which they belong, and others related to outside groups.

- Kin selection: The bonds of family and common ancestry finally are a very strong mechanism to ensure the promotion and enforcement of norms. However, the strengths of these kin selection as a mechanism for the enforcement and promotion of norms decays as the relatedness of the interacting people decreases. Nevertheless, the persistence of blood feuds despite the existence of laws forbidding them in some countries (such as Albania) shows how strong a factor kin selection can be.

Axelrod (1997, p.55 ff.) has studied additional mechanisms through which norms are enforced and perpetuated:

- Internalisation: A mechanism that is not related to direct or delayed sanction by others is internalisation. Deviations from established social norms become psychologically painful to an individual. Internalisations happens through cultural transmission of social norms as societies and families sanction or suppress unwanted behaviours during the education process at young age. Hence, internalisation is the results of direct or indirect sanctions in the past, and especially in ones youth. Internalisation may go so far that some people feel a gain from punishing defectors from internalised norms. However, if deviation is frequent these punishers may be punished by the deviants which weakens the enforcement of these norms.
- Social proof: Social proof is a mechanism in which people decide on what is the correct behaviour under uncertainty. If people are not able to read a specific social context or situation they often opt to follow the behaviour of others. This provides information about the best course of action, the vengefulness of the population or about the proper course of action without knowing the actual reason for the observed behaviour. In this way, social proof contributes supports existing norms, and may lead to band-wagon effects and the emergence of path-dependence in the behaviour of individuals through dynamically increasing returns to adoption of a specific norm, or under the presence of preferential attachment and growth in a social network (Arthur, 1989; Barabasi and Albert, 1999).
- Meta-norms: Meta-norms are norms for punishing those who do not punish deviants in lower level social interactions where cooperation is required. Hence, metanorms are forceful mechanisms for getting new norms started and protecting them once they have been established. As Axelrod (1997, p.55) argues for this mechanisms to work sanctions against non-punishers must be explicitly linked to sanctions against defectors, as otherwise the system could fall apart.
- Law: Law consists of formal rules that are enforced by actors with specialized roles (e.g. police, courts), often through coercion (North, 2005). In this way the public good problem of enforcement encountered in informal norms is avoided, even more

so, as the resources available for enforcement are often substantial. Law is often a consequence of social norms and supplements their enforcement. However, also the reverse is true. Laws are often difficult to enforce and would be less effective if there would supporting social norms would not exist. Hence, social norms and laws complement one another. Indeed, social norms are best at in preventing non-cooperative behaviour where the costs of enforcement are low, whereas the law is best to prevent more systematic non-cooperative behaviour where the enforcement costs are high.

This brief review of the principal mechanisms ensuring cooperation in social groups indicates that cooperation and hence conformity in a social context depends on a few key factors: the ratio between the costs and the benefits of cooperation, the size of a population, the interaction structure between different parts of a population, the uncertainty on the course of action in a specific social situation, and the cultural transmission of social norms. For the diffusion of social innovations that go along with changes or displacements of given institutional equilibria this implies that:

1. Social innovations that have very high benefits for some parts of the population are more likely to diffuse.
2. Novel institutional arrangements that complement existing norms and increase the value of an existing institutional set up are not perceived as deviation, and are more easily accepted by the population. In this case social innovation will induce only incremental institutional change.
3. If social innovations are instead in contrast to existing to established belief systems and/or go along with interest opposed to the groups holding these beliefs, social innovation is more likely to diffuse only through imposition of a dominant group, coercion, or strong externalities that strongly affect the value of current institutional arrangements.
4. Generally the results indicate that the lower the pressure for conformity or the more tolerant a social system is towards deviations the more likely is the diffusion of novel institutional arrangements. Lower pressure for conformity goes along with lower social costs for deviating behaviour.

To sum up, the costs and benefits of adhering to a given institutional set-up determine the strengths of norms and the pressure for conformity in society or in a social group. If the costs relative to the benefits of deviation are low, then an institutional set-up is more likely to undergo change. If in turn the pressure for conformity, say through meta-norms and stringent sanctions are high relative to the benefits of non-cooperation, then the diffusion of social innovations and institutional change are more difficult to achieve, and may even require external imposition.

In addition, the mechanisms for cooperation related to structured populations and group selection indicate that:

5. Novel institutional arrangements are more likely to diffuse in more heterogeneous or larger unstructured populations.

6. Novel institutional arrangements are in turn less likely to diffuse when change agents try to set up individual sections of the population against each other.

The pressure for conformity and the enforcement of social norms is weaker in more heterogeneous or larger populations. In larger populations the likelihood to encounter the same individuals or that somebody gets to know ones reputation decreases. Similarly, the pressure for conformity is also lower in less structured, more heterogeneous populations, i.e. populations where the likelihood to interact regularly with the same individuals is lower. In less structured and larger population the diffusion of novelty is therefore easier and one will encounter higher behavioural variation in such populations.¹³ Hence, the structural properties of populations largely determine also the dominant norms of consensus and compromise.

On the other hand, under group selection the situation changes. The capacity to absorb new norms decreases inside groups and if the challenged group is strong enough to impose its norms on other groups the behavioural heterogeneity in the population is even likely to drop. Hence, situations in which different social groups compete against each other are less prone to the diffusion of novelty and behavioural variety at the population level may even decrease.¹⁴ This implies that not only the structural properties of a population but also its relationship to other populations affect the dominant norms of consensus and compromise. However, as North, Summerhill, and Weingast (2000, p. 15) work out, conformity can fade also in a situation where social groups compete with each other if the opponents of change agents “act in ways that make [their ideas] appear to be true, thus ‘confirming’ (in a Bayesian sense) the revolutionary beliefs [of the change agents] in the eyes of pivotal players.” The result can then be that the institutional equilibrium shifts radically to a new set-up.

Looking at the mechanisms ensuring cooperation on the basis of poor information or uncertainty on the course of action in specific social situations the following conclusions can be drawn with regard to the diffusion of social innovations:

7. Novel institutional arrangements are more likely to diffuse if change agents are able to articulate a new set of beliefs that rely on data and information that is unambiguous to potential adopters, but that is in contrast to established wisdom.
8. Successful social innovation implies also that change agents engage into educational activities. This is especially important if they face deep seated beliefs people hold because of cultural transmission.

In an environment in which people have poor information on the proper course of action there is a tendency to imitate the behaviour of others acting and therefore to enforce the predominant institutions in any particular social context. Such a set up would be

¹³Reinstaller and Sanditov (2005) show for a conspicuous consumption game that the behavioural variety and the likelihood of diffusion of novel consumption norms is highest in unstructured populations with low pressure for conformity.

¹⁴In politics populist politicians sometimes try to establish a fictitious threat coming from a foreign nation or entity (for instance the EU). By doing so they are able to distract attention from internal problems and ensure that people “rally behind the flag”. This behaviour is an expression of group selection mechanisms. It inhibits change as people become less concerned by group internal conflicts.

generally unfavourable to the diffusion of novelty. However, if the introduction of social innovations goes along with the provision of well defined data the likelihood for the diffusion of the novelty is likely to increase, as people no longer need to rely on the observation of the behaviour of others, but can act on the basis of the new data relying on their own or acquired mental models. In a similar vein the provision of information, and the demonstration of alternative behavioural models may play an important role for overcoming institutional inertia related to cultural transmission.

From the discussion in this section and Section 3.2 emerges a perspective that conceives of social innovation, as a process that shifts established institutional equilibria towards alternative stable institutional set-ups. This is a two way process: from bottom up change agents try to change and structure established or new institutions, whereas from top down agents enforcing established institutions constrain, tame or suppress change. This view is in line with Giddens (1984). Hence, social innovation is a co-evolutionary process that either reproduces established institutions without change (failed social innovation), that reproduces them differently (gradual or incremental social innovation), or that replaces them altogether (radical social innovation).

To conclude, the discussion in this section indicates that major social innovations are more likely to diffuse in social systems that do not have very strong norms of consensus and compromise. If these are high, then actors will seek compromise, and as a consequence institutional changes will be more gradual. We have highlighted that more homogeneous and smaller social groups where reciprocity and reputation are more easily observable or social groups that experience considerable competition with outside groups will be typically more consensus oriented. Social innovations are also more likely to diffuse in social systems that allow for more variety in terms of competing belief systems, behaviours and so forth, and in which individuals are well informed. In such systems novelty will diffuse also faster, as resistance to novelty will be more limited due to a generally weaker pressure on individuals to conform with established norms or to a lack of information on alternatives.

3.4 Social innovation and welfare outcomes

The diffusion of social innovation depends crucially on the benefits novel institutional arrangements have for the concerned individuals. Hence, in order to be able to define social innovation it is important to qualify the nature of these benefits, and how they affect general welfare. It is a common (implicit) proposition in many especially policy related publications on “social innovation” that it has a positive impact on general, economy wide welfare. The belief advanced in these documents is that social innovation is better able to solve existing social and environmental challenges modern societies face than public organisations because it is a decentralised search process that more heavily involves and hence takes into account the needs and views of the world of concerned persons (cf. OECD, 2010; BEPA, 2011).

This rhetoric is somewhat detached from evidence. Indeed, some recent econometric studies on the economic and social impact of micro-finance in developing countries show no or very limited effects on consumption, average business profitability, health, education or women’s empowerment (cf. Duflo, Banerjee, Glennerster, and Kinnan, 2013). Given

that micro-finance is often hailed as an important example for how social innovation can empower people to improve their lives, these results should give reason to tame unwarranted claims on the welfare effects of social innovation. In addition, it is very difficult to measure – beyond the few quantifiable economic and social indicators used in econometric evaluation studies – the value social innovations are supposed to create for society. The term “social value” which is frequently used in policy documents is ambiguous, subjective and therefore likely to change over time and vary across people, places and situations (Mulgan, 2010, p.41). It is therefore not possible to make any general statement on the aggregate impact of social innovation on aggregate welfare relying on a measure based on “social value”. More tangible and stable criteria are needed to evaluate the impact of social innovation.

Such statements are also prone to imply a fallacy of composition. As the review of the determinants of the diffusion of social innovations and institutional change in the previous section suggests there is no guarantee that changes in institutional arrangements will have a beneficial effect in the aggregate. Social innovation implies that it is likely that when a new social arrangement is put in place there will be winners and losers. Even if the effects of such an institutional change were quantifiable it would be necessary to trade off social gains against social losses to judge whether social innovation are a vehicle to foster economic and social welfare or not. Indeed, it is also possible that social innovation induces a shift towards institutional equilibria that are economically or socially inferior to an existing set-up in which the economy may remain locked-in (cf. Belloc and Bowles, 2013). It may also negatively affect the welfare of social groups that have not the power to react to curtailments of their welfare.

Hence, in order to assess the social and economic impact of social innovation on the development of an economy it is necessary to understand how it affects the members of the society. We have characterised social innovation so far as a process that leads to the rearrangement of existing or the establishment of entirely new institutional arrangements. As any institutional arrangement goes along with sometimes considerable differences in social and economic opportunity across individuals or social groups in an economy, and because these differences play an important role as inducement mechanisms and focusing devices for change agents, the proposition of this paper is that the impact of social innovation should be assessed on the basis of how it affects the achievements and opportunities of individuals and as a consequence their well-being.

In recent times a growing number of publications in the fields of economic psychology have put human well-being on the agenda of theoretical and applied welfare analysis. There are two principal lines of research that have addressed this issue. On the one hand, objective well-being approaches try to identify universal human needs and to recognise cultural varieties in meeting them without subordinating the former to the latter. In this view well-being is the result of achievements in satisfying these needs, and these achievements are in turn closely to the real opportunities a person has especially if compared to others (cf. Sen, 1985). The subjective well-being approach on the other hand, focuses on the subjective evaluation of well-being in terms of what makes life pleasant or unpleasant and therefore contributes to the happiness of people (cf. Kahneman, 1999). With their wider perspective on human welfare these two research trajectories are of potential interest for the assessment of the welfare impacts of social innovation. However, the two approaches

differ also in important aspects and we will thus briefly assess their potential for the study of welfare effects of social innovation.

An important contribution of the the subjective well-being approach (SWB) is that it puts income as an indicator for human welfare into perspective. Indeed, early work on SWB has argued that the per-capita income in wealthy countries and the reported life satisfaction of people do no longer correlate with one another (cf. Easterlin, 1974, 1995). However, if one distinguishes between the emotional quality of daily experiences (happiness) and overall life evaluation (life satisfaction) the latter increases linearly with the log GDP per capita across countries (Deaton, 2008, p.57 ff.), whereas the former does so only up to some maximum annual income of about 75000US\$ (Kahneman and Deaton, 2010). Hence, “high income buys life satisfaction but not happiness” whereas low income goes along with both low happiness and low life satisfaction as it exacerbates the negative emotional impact of adverse life conditions. Income is therefore an important but not the only factor to explain human welfare.

Other contributions to the SWB approach have therefore examined extensively the emotional impact of other cultural, institutional and personal factors on life satisfaction. For instance, Frey and Stutzer (2002) and Veenhoven (2000), have shown that at the aggregate level life-satisfaction correlates positively with political institutions, direct democracy and political freedom. Di Tella, MacCulloch, and Oswald (2001) have presented evidence that macroeconomic factors such as inflation or unemployment have also an impact on the reported average life satisfaction in a country. Others again have looked at more intangible factors such as the materialist attitude of people (Sirgy, 1998) or individualism in society (Veenhoven, 1999) showing that materialist attitudes correlate negatively whereas individualism correlates positively with the average life satisfaction observed in a country. Oswald (1997) instead has related the life satisfaction of single individuals to their personal circumstances of life such as employment status, marital status and age. Married and employed people feel greater satisfaction with life, while there is a U-shaped relationship with age, where people feel least happy in their thirties and happier before and after that period in their life. Van Praag, Frijters, and Ferrer-i-Carbonell (2003) in turn have shown that the general level of satisfaction of an individual can be explained by a number of subdomains, such as satisfaction with the job, with finances, health, leisure and the environment.

As social innovations typically target various cultural, institutional or personal factors that seem also to affect life satisfaction these results provide an important lead on how to assess the impact of social innovations on human welfare. The downside of the concept of SWB is that it comes with some serious problems of interpersonal and intertemporal comparability of its results. For instance, peak-end effects have a very high impact on the evaluation of well-being . This means that overall evaluations of SWB are heavily influenced by extreme values of good or bad affect over a period of time. Kahneman (1999, p.20) remarks that “the sovereign masters that determine what people will do are not pleasure or pain, but fallible memories of pleasure and pain”. Loss aversion is another strong phenomenon where individuals weigh negative events more heavily than positive events when they assess their happiness or life-satisfaction. These and other aspects of the concept of SWB prevent any simple aggregation. All these aspects seriously limit its use as a yardstick to evaluate the impact on human welfare of social innovation.

The objective well-being approach (OWB) considers well-being more broadly as being determined by happiness and overall life evaluation. It was pioneered by Sen (1985) and views well-being as the achievement of personal needs and wants through the actualisation of human potentials. Sen has developed the concepts of “functionings” which reflects the various things a person may value doing or being, and “capabilities” which refers to the alternative combinations of functionings that are feasible for an individual given its income. The amount or extent of each functioning a person enjoys can then be represented by a functionings vector. The capability set instead consists of the alternative functioning vectors a person can choose from. Hence, the vector of functionings represents the actual achievement of a person, and the capability set captures the freedom a person has to achieve various lifestyles, i.e. its life chances. The freedom of human beings to choose the life they want to live is therefore the ultimate determinant of well-being, and income is not an end in itself but a means to expand a person’s freedom.

This freedom depends also on various other determinants that are related to the institutional structure of a country. Different institutional arrangements go along with differences in what Sen (1999, p.38) has referred to as instrumental freedoms, i.e. freedoms that contribute to the general capability of a person to live a good life. These instrumental freedoms comprise

- *political freedoms* such as voting rights, opportunities for political dialogue and dissent, or the participatory selection of legislators and executives;
- *economic potentials* related to the use of economic resources for consumption, production or exchange;
- *social opportunities* that go along with specific arrangements a society makes with regard to education or health care;
- *transparency guarantees* that refer to a set of formal rules and social norms that support trust and sanction corruption, red tape or underhand dealings, and
- *protective security* which refers to the arrangements a society makes to establish social safety nets.

If we link this to the elaborations in the previous sections one can say that institutions (or the social values and mores they enforce and reproduce) mediate the overall freedom of people to choose the life they want by conveying or limiting their instrumental freedoms. However, the institutions are also “influenced by public discussion and social interactions which are themselves influenced by participatory freedoms” (Sen, 1999, p.9). This points at the link between social innovation and the capabilities approach. As change agents try to influence what specific groups of persons are able to do (i.e. their realised functionings or achievements), or the real opportunities these groups have (i.e. their capability sets of alternatives), social innovation will either change the realised functionings or the capability sets of people over some specific period of time. Social innovation therefore changes the freedom of human beings to live alternative lifestyles and thereby affects their well-being. The extent to which this is possible depends on the strength of the enforcement of existing norms and to what extent these allow for behavioural variations and changes.

As institutions have a systemic and hierarchical character, and because social innovations can take place at different levels of the hierarchically related institutions of a society their

impact will vary, both in the nature of the changes in capabilities as well as in their extent. The instrumental freedoms mediated by institutions of general validity such as the constitution or the general level of trust in a society constitute a general frame of reference for lower level institutions. Changes in capabilities and achievements at these lower levels will happen in reference to and be constrained by freedoms established at higher levels. Hence, social innovations at these lower levels will generally induce changes in the realised functionings or extend the capabilities set with regard to the specific context, but not override the limits set by high level freedoms. These changes may also be limited to specific collectives such as single companies or regional communities such as neighbourhoods in a city. In these more limited social spaces they may induce important changes in the achievements and opportunities people enjoy there, but they may not necessarily have an impact on the wider society. However, if these innovations diffuse and become a wider social phenomenon they may trickle up and induce more fundamental changes in freedoms.

Next to the institutional arrangements that define the extent of the instrumental freedoms people have their well-being depends crucially also on a number of contingent circumstances such as personal heterogeneities (e.g. age, illness, gender), environmental diversities (e.g. climate, pollution, environmental handicaps) or differences in relational perspectives (e.g. variations in income needed to obtain some functionings considered to be elementary to be part of a community). This implies that the degree to which individuals are able to translate the command over income and commodities into achievements and opportunities varies considerably across persons (or groups of persons with similar talents or impediments). Hence, if one accepts the proposition of this section that social innovation is about changing life chances, the heterogeneity of the factors affecting well-being explains also the many different manifestations of social innovation and social entrepreneurship as discussed in Section 3.2.

Finally, in order to assess the impact of social innovation on well-being a generally valid normative conception of what makes a good life is needed. The capabilities approach contends that there are significant aspects of life in which there is a general agreement from philosophical, humanitarian or medical points of view on the nature of well-being. For instance, the ability of people to live a life of normal length and of not dying prematurely or the ability to acquire a certain level of educational attainment that enables people to make informed choices and have a greater degree of control over one's life are two important general capabilities that have a significant impact on life-satisfaction.¹⁵ However, as Anand, Hunter, Carter, Dowding, Guala, and van Hees (2009, p.128) or Skidelsky and Skidelsky (2012, p. 148) rightly stress, the capabilities approach provides little systematic or comprehensive guidance on components of functionings or well-being in general.

Nussbaum (2001, 2011) has tried to overcome the weakness of Sen's approach by embracing a much wider range of human activities and providing a comprehensive list of capabilities (see Appendix A). However, also this approach has its weaknesses as there is little evidence for their cross-cultural validity. Despite these weaknesses the work on objective well-being in general and Nussbaum's contributions as well as subsequent efforts to

¹⁵In the literature on economic development this has led to the creation of indicators that add measures of life-expectancy and education attainment to income to assess the economic and social progress of countries (UNDP, 1997).

quantify the capabilities she lists by Anand and his co-authors (Anand, Hunter, Carter, Dowding, Guala, and van Hees, 2009; Anand, Hunter, and Smith, 2005) represents an important point of departure for the development of indicators that are able to assess the impact of institutional change on well-being. However, considerable efforts with regards to measurement and impact assessment of social innovation needs are still necessary.¹⁶

To summarise, in this section we have established the following link between social innovation and welfare outcomes:

1. Social innovation affects the achievements and opportunities of individuals and as a consequence their well-being; it changes the freedom of human beings to live alternative lifestyles. The extent to which this is possible depends on the institutional framework conditions.
2. The freedoms people enjoy depend on a number of contingent circumstances such as personal heterogeneities or environmental diversities. This explains the many different manifestations of social innovation.
3. To assess the impact of social innovation a generally valid normative conception of what makes a good life is needed. The capabilities approach is an potentially interesting starting point for the assessment of the welfare impact of social innovation, even though this approach has some important shortcomings.

With this we have now all elements to reassess the concept of social innovation.

3.5 Summing up: Social innovation re-examined

From the previous sections social innovation comes out as a social process in which new institutional arrangements that have an significant impact on the well-being of specific social groups or society at large get introduced and diffuse. Over the course of this development search and learning processes by concerned individuals lead to the establishment of a new set of beliefs, norms and formal rules and as a consequence new policies that adapt or completely replace an established institutional set up. Social innovation is therefore a social process leading to institutional change. It can take place at different tiers of the social hierarchy and inside or across different social structures.

Entrepreneurial change agents play an important role in the initial phases of this process. These are individuals or groups of individuals that have accumulated considerable experience in a specific social, economic or political domain, and who reframe aspects of this domain on the basis of new information on the state of the world or knowledge obtained from other domains. They spring into action out of a deeply felt sense of dissatisfaction they feel with regard to the outcomes and impacts activities taking place in these domains have on the well-being of other individuals. Generally, opportunities to change the freedoms and achievements people enjoy are necessary for social innovation to take place.

Entrepreneurial change agents develop new approaches to solve problems that lead to the unwanted outcomes in a domain. These new approaches are based on new mental models on the nature of problems underlying these outcomes, and on how they can be

¹⁶For some further discussion of this material see Appendix A.

solved. This implies that they promote new beliefs related to the issues they take on, and seek to establish new institutional arrangements. Entrepreneurial change agents therefore promote institutional change. In doing so they rely on experiences they have accumulated in the domain in which they have been active in the past, ideas and views from other domains, but also their own valuation of the issues at hand. Hence, the process of social innovation induced by change agents has an inherently normative character.

Change agents differ from economic entrepreneurs insofar as their prime motive is the improvement of the capabilities and achievements of others and not their own. It is not clear from the literature whether this behaviour follows from selfish motives by change agents to promote their own well-being through mechanisms of indirect reciprocity or status seeking, or whether it follows true altruistic, self-less motives. Both motives are psychologically possible, and are likely to vary across individuals or groups.¹⁷

The instrumental approaches change agents typically rely on are contingent to the domain in which they seek change, their past experiences, as well as to the solutions they try to promote. Hence, sometimes they rely on a more business oriented (direct) approach in which they set up ventures and develop solutions and provide themselves products or services that are supposed to have an impact on the achievements or opportunities of a specific targeted social group. In other circumstances they will promote changes in policies related to the provision of goods and services, or pursue either the removal or the establishment of legal constraints that have an impact on the well-being of people. In this case their activities will affect the targeted population indirectly. Thus, a specific instrumental approach is not a necessary condition neither for the existence and diffusion of social innovations, nor for the existence of change agents.

It is important to note that despite their potential importance the existence of change agents is neither a necessary nor a sufficient condition for social innovation and institutional change. Indeed, social innovation and institutional change can happen independently of change agents when exogenous factors such as new technologies lead to a gradual change in the perception of reality of larger groups people and thus changes in their behaviour in a self-organised fashion. However, what seems to be a general feature is the presence of search processes for novel solutions to deal with unwanted outcomes, overcome social constraints or fetch opportunities to change freedoms in a specific social domain.

Whether novel institutional arrangements are likely to turn into social innovations depends largely also on their diffusion across individuals in a specific domain. This is a social learning process in which agents exchange beliefs in repeated interactions, and in which two highly complementary meta norms of a social system, namely its pluralism and its norms of consensus and compromise play an important role. Pluralism is a norm determining to what extent the system is open to variety in beliefs and behaviours, whereas norms of consensus and compromise determine how cooperation in a system is achieved. Whereas more open systems favour social innovation, more consensus oriented ones are more likely to have a lower rate of social innovation. In more pluralistic systems novelty is less likely to be restrained, whilst in consensus oriented ones the need to compromise

¹⁷Moll and Grafman (2006) suggest from a neurobiological point of view that selfish and altruistic are basic hard-wired characteristics of the brain that are managed by distinct parts brain circuits and are therefore distinct biological urges.

will limit both the magnitude of social innovations and the frequency with which novel institutional arrangements turn into social innovations.

Entrepreneurial change agents are aware of the social nature of institutional change and that in this social learning process some individuals are more important than others. Therefore they establish networks of actors that can provide relevant support inside specific policy domains to promote their beliefs. Information multipliers, i.e. people who have a high public visibility and whose opinion is influential, are particularly important in these networks. This hints also at the overall importance of the level and quality of information concerning novel beliefs, institutions and policies. High levels of information and low levels of informational ambiguity reduce uncertainty and avoid social proof type adherence to established norms by concerned agents. In addition, given the importance of interactions among agents in the diffusion process also the reach of the information and valuations across the concerned population is important. The wider the reach the more likely are also transitions to new institutional equilibria.

The existence of such supporting networks that provide and value information related to a novel institutional arrangement is a necessary condition for the development of shared mental models and new beliefs and as a consequence for institutional change, because they help to direct or overcome pressure for conformity in social groups. The organisation and establishment of such networks is therefore a substantial contribution of change agents, and a key characteristic to single out entrepreneurial change agents. As the diffusion process is also a social learning process over time the instrumental approach, but also the outcomes and impacts of a novel arrangement may change or get adjusted due to the influence of these networks. Hence, as time goes by the importance of the initial beliefs promoted by a change agent get superimposed by specific interests promoted by the agents that have a stake in the support network and the relative influence of some agents over others therein.

With its focus on institutional change social innovation is distinct but also complementary to technological innovation. The latter may often go along with institutional change and it may also be instrumental in promoting institutional change, but it can also exist without it. Similarly, social innovations may sometimes rely on technologies, but they are not necessarily the consequence of new technologies. Social innovations and technological innovation may also have diverging impacts on the well-being of individuals. For instance, some recent contributions argue that technological and organisational innovations often limit the control of employees over their work process which has a negative impact on life-satisfaction as it reduces the individual freedoms people have at work, whereas it has a positive impact on the productivity of companies (cf. Hölzl and Reinstaller, 2003; Reinstaller, 2007; Brown, Lauder, and Ashton, 2011). The development of life satisfaction and income may therefore drift apart.

Finally, a key characteristic of social innovation is that it affects the achievements and opportunities of individuals and as a consequence their well-being through development of new institutional arrangements in specific social, economic or political domain or in society at large. These institutional arrangements affect freedoms people have to organise and live their life. However, these freedoms are also contingent on many other circumstances such as personal heterogeneities or environmental diversities. For this reason the institutional arrangements that get established to achieve specific outcomes will considerably differ

across policy domains, geographical units or within different segments of a population. Therefore, the outcomes and impacts of social innovation are necessarily heterogenous and the institutional arrangements not easily transferable across these different domains.

We can conclude that the following elements are necessary for social innovation to emerge in any social subsystem:

1. Pursuit and exploitation of opportunities to change the freedoms and achievements of people in specific social domains through new institutional arrangements.
2. Search process(es) for new institutional arrangements and provision of information on their characteristics and the expected benefits over the current set-up.
3. Social framework conditions that allow for a minimum degree of pluralism and a not too high degree of consensus for the establishment of new institutional arrangements.
4. Networks of key individuals in a domain supporting novel institutional arrangements.
5. Social learning processes leading to the adoption and modification of new institutional arrangements modifying and displacing the established order; or that reinforce the established order.
6. In case of success: The stabilisation of a new order through support networks.
7. Tangible impact on capabilities and achievements for the individuals in a target group, but not necessarily an improvement for overall society.

Social innovations will differ along the following dimensions:

1. The scope: Social innovations may differ in their geographical scope, in the targeted policy domain, in the type of social structures, the tier in the social hierarchy, the targeted social group and so forth.
2. The drivers of the search process for new institutional arrangements: Often entrepreneurial change agents will be the prime drivers of the search for new institutional arrangements; however, new institutional arrangements can be an emergent property of a social system, or get promoted by governmental or private organisations.
3. The learning process underlying the development of new institutional arrangements: Social innovations may differ in terms of the choices the promoters of institutional change make to achieve their goals, how they interact with the targeted individuals and how the feedback they gain in this way changes affects their choices.
4. Targeted freedoms: Social innovations differ in terms of specific capabilities and functionings they target.

The listed elements should now help us to identify, study and classify social innovations as we happen to stumble over them, and to discuss if and how policy should intervene if its goal is to foster social innovation.

Social innovation will often happen without and especially in contrast to official policy or public sector activities. Governments are likely to resist social innovations if they are in contrast to own policy, and as a consequence public funding for social innovation is likely

to support measures that improve or complement established institutional arrangements rather than radical departures from it. This implies the danger that public support for social innovation may contribute to institutional rigidity rather than an institutional renewal. However, as we have already discussed in Sections 1 and 2 governments and public agencies have increasingly come to believe that social innovation may unfold substantial effects on both the economic performance of a country and on the efficiency of provision of public goods and services of a country, and at the same time allow the state retreating from specific policy areas. They are therefore keen on providing public support for it.

The rationale for public intervention in support of social innovation one finds in the literature is similar to that of technological innovation. The question is whether there will be an “under-investment” in social innovation and institutional change relative to some socially optimal level. Pol and Ville (2009) argue that this is likely as social innovators have no material incentives to create social innovations as these will typically have the character of a public good. Similarly Mulgan (2006) presents an account of the process of social innovation that shares many characteristics with the technological innovation process, even though in his account focuses on social innovations that can take the form of replicable programmes or organisations that provide public goods and therefore is narrower than how we have defined social innovations in this paper. He argues that social innovations require experimentation involving trial and error and are also plagued by problems to put in place sufficient and adequate resources (such as support, voluntary labour, philanthropic commitments) in the different phases of the social innovation process. This will also cause under-investment into social innovations.

Our discussion of social innovation provides some additional leads as to the costs and benefits that affect the development of new institutional arrangements in the early phases, and as consequence on potential public measures to support social innovation. The openness of a social system to varieties in beliefs and behaviours significantly and the ways how cooperation is achieved in a society significantly affect the creation and diffusion of novel institutional arrangements. The costs of identifying opportunities and developing alternatives will be higher in social systems that allow for less variety, or in systems in which there is a higher pressure for conformity or high levels of consensus are required to implement new institutional arrangements. These costs consist on the one hand of search costs, costs related to the establishment of supporting networks, opportunity costs related to foregone rewards from engaging into alternative activities generating some form of reward, and personal costs related to psychological and emotional stress when the pressure for conformity and social sanctions put on people deviating from the established order are significant. The benefits on the other hand are also not so much a matter of money but one of social recognition and related status seeking, and intrinsic motivation of the individuals promoting institutional change. From this perspective one could argue that there is a case for public support of social innovation.

If we take a more critical stance however, there are a number of arguments to qualify the justifications for public support of social innovation. One has to consider that social innovations come also at a social cost. The replacement of established institutional arrangements destroys behavioural public goods and increases uncertainty for some period of time for some concerned social groups. In addition, as we have argued earlier, there may be winners and losers from the replacement of established institutional arrangements

such that social costs eventually may outweigh social benefits. The costs and benefits of social innovation should be traded-off against one another on a broad basis encompassing all social groups that are directly or indirectly concerned by the social innovation.

However, these effects are difficult to quantify and as a consequence, classical cost-benefit reasoning is not feasible. Furthermore, the general arguments in favour or against social innovation as outlined above are not sufficiently compelling to justify a sweeping support for social innovation, especially in the form of public funding of social innovation programmes. Hence the case for public support of social innovation is generally very weak. If social innovation is conceived widely as done in this paper then a more important and more fundamental support for social innovation happens through measures to strengthen political freedoms (e.g. direct democracy, opportunities of political dialogue, dissent and critique) or transparency to ensure a high variety of beliefs and open discourse. These are preconditions for the development of new beliefs and new shared mental models which are at the basis of any social innovation process.

This section has tried to work out a general framework for the analysis of social innovations borrowing key concepts from institutional economics, evolutionary (game) theory and the capabilities approach to welfare economics. This attempt is necessarily incomplete, but it should help to overcome the vagueness attached to different lines of research on social innovation. Looking at the key categories that are needed to understand social innovation and institutional change and the secondary aspects, it becomes apparent that a considerable amount of the heterogeneity of the current research on social innovation stems from a focus on secondary aspects while often neglecting to present systematic accounts of the primary aspects of social innovation.

4 Discussion: The potentials of social innovation as a driver of economic and industrial progress

Social innovation is a process in which beliefs and as a consequence institutions undergo change. Institutions on the other hand shape the behaviour of organisations across the economy, the policies they pursue and as a consequence the economic and social outcomes of their activities. It is well known from research in economic growth that economic performance is a function of the stock of knowledge and technology. However, a growing body of research shows that what matters for economic performance is also a combination of institutions that transform dispersed information and knowledge into effective economic activity. They can have an impact on economic performance by lowering both production and transaction costs. Hence, they play an important role for the set up and the smooth operation of product and factor markets, but also for good governance or the rule of law. However, institutions are also interdependent, and this interplay is poorly understood.

Poor economic performance is often related to inefficient institutions (cf. Greif, 1994; Belloc and Bowles, 2013). Countries and at lower tiers organisations or communities inherit beliefs, institutions and behavioural routines from the past. The forces to preserve and enforce institutions discussed earlier in this paper ensure that these factors are difficult to change in the short run. The consequence is a considerable path dependence, which can

be overcome through social innovation. As social innovation is a decentralised discovery process in which change agents search and potentially find superior institutional arrangements, it can potentially have a positive impact on economic performance. However, all the qualifications discussed earlier apply. We will now discuss the potential impact of social innovation on economic performance by looking more specifically at industrial progress and industrial policy.

A central proposition of what nowadays is conceived as “new” industrial policy is that industrial policy should provide adequate framework conditions to ensure that companies are able to generate new sources of value, and that this creation of new sources of value should ensure that all participants in an enterprise (employees, creditors, shareholders, government, firm, consumers) gain (Aiginger, 2012). Hence, industrial policy is viewed as a means to achieve equitable and sustainable growth. A central part of this creation of new sources of value is industrial innovation.

To assess the potential impact social innovation can have on the innovation performance of firms it is important to conceive of industrial innovation as process, in which strategic choices on the allocation of resources have to be made under conditions of uncertainty (and thus beliefs and mental models of managers play an important role in decision making). Innovation is also a collective, social process in which it is necessary to integrate people with different functional specialities and hierarchical responsibilities into a process of organisational learning. Finally, it is a process in which financial models have to be developed and deployed to sustain innovation from the time research and development investments are made until higher quality products yield financial returns. Companies are nested in a specific socio-economic context, and they are social structures themselves. Thus the failure of companies to generate innovations and being competitive is an institutional and organisational and not so much a market failure (Lazonick, 2013).

These failures arise as the management, the organisational memory of companies, financing institutions rely on inadequate beliefs and mental models in their decision making. Social innovation can play four roles in such failures:

1. The first role can be conceived as the inside-out function of social innovation: As innovation is a social and organisational process organisational mechanisms that support experimentation, the development of new interpretations of reality (aka new mental models and belief systems) and their integration into the organisational set up are crucial to escape organisational myopia. Social innovation is therefore an important means for experimentation inside business organisations.
2. The second role may be conceived as an outside-in function of social innovation. Strategic choices about resource allocation are based on beliefs (“gut feelings” - Gigerenzer, 2007) about how markets and competitors and relevant institutions work, and what consumers need. Often these beliefs turn out to be wrong, as the management is not aware of significant changes in consumer preferences or other relevant institutional factors. The monitoring and close interaction and exchange of companies with change agents can break this type of institutional myopia.
3. Another role for social innovation is that companies turn themselves into change agents in order to change institutional framework conditions that are unfavourable for their activities. Recent attempts to bypass traditional banking finance and engage

into crowd funding schemes are an example of the third role social innovation can play in overcoming institutional failures in the context of industrial innovation.

4. The final role is that specific types of social entrepreneurship involve the creation of new businesses and hence the development of new markets.

The inside-out and outside in functions of social innovation can support the development of specific capabilities related to the particular social and economic context in which companies operate and thereby contribute to the performance of companies and industries. Virtually every activity in the value chain of a company has an impact on the well-being of communities in which the firm operates with positive or negative consequences. Companies are not self-contained. Hence, they may either face support or resistance to their own operations along the value chain. Companies need first to consider what impact such developments have on their own activities and how their own activities relate to them. By supporting learning processes to channel external beliefs and mental models into the organisation companies can create specific competencies that may turn into a competitive advantage that is difficult to imitate for competitors that are not embedded in this social context. These learning processes have to take place across the company boundaries but also inside the company, and are therefore an important part of the dynamic capabilities of a company (Teece and Pisano, 1994). The creation of these specific capabilities may enable companies to providing products and services to satisfy a demand that unfolds as a consequence of social innovation processes and institutional change.

Having ascertained the potential importance of social innovation for industrial performance, the question is if social innovation has any role to play in the context of a “new industrial policy”. It seems there is little scope for public policy intervention as the minimisation of institutional and organisational failures inside a company falls into the realm of entrepreneurial risk taking. The third role is one in which companies turning into change agents may face considerable resistance both from inside the business sector, e.g. by competitors or chambers of commerce, as well as from the public sector, e.g. by the institutions they try to change. Hence, there may be some “underinvestment” in such change activities, and as a consequence public action may be required that balances the need for institutional stability and certainty and the need for change in the existing institutional set up.

Measures that increase the public awareness and mechanisms that ensure a certain degree of leniency and that balance potentially strong suppressive public sector reaction could ensure that the novel ideas get a better chance for being carefully assessed with regard to their potential effects on different parts of society. For the final role social innovation can play in the context of industrial policy the literature shows that the problems social entrepreneurs that engage into the creation of businesses face are rather similar to business entrepreneurs engaging into industrial innovation activities. Hence, existing mechanisms to minimise the risk for underinvestment in industrial innovation should be adapted to take into account some peculiar needs of social entrepreneurs.

5 Conclusions

The central contribution of this paper is a comprehensive attempt to clarify the concept of social innovation by identifying elements that are core for the analysis of social innovation as well as secondary elements that are in the context of this concept and specific to particular manifestations of the phenomenon. This is a first necessary step to make them more operational for empirical research in social sciences but also for the design, implementation and assessment of policies to support social innovation.

The paper argues that there is some scope for public intervention to support different types of change agents as considerable social pressure to conform to existing social norms and formal rules will deter potential change agents from becoming active. This problem is likely to be more accentuated in more conservative, conformist societies. The findings also show that social innovation and social entrepreneurship may not generally be thought of as being a “positive” force for change. On the one hand, social innovation may lead to the diffusion of norms and behaviours that are inferior from a social or economic point of view. On the other hand, social innovation may also increase transaction costs in an economy. The public sector faces generally a trade-off in supporting social innovation: on the one hand it has to act as a structurally conservative force to ensure social and economic stability. On the other hand, it should allow for enough social variety in order to ensure social and economic progress. With regard to a potential role social innovation can play in the context of a new industrial policy the paper shows that while social innovation may play an important role to foster the competitiveness of companies there is a limited role for public intervention.

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A Appendix to Section 3.4: Capabilities and some thoughts on the difficulties to measure social innovation and its impact on well-being.

We have argued in Section 3.4 that the capabilities approach offers some important leads for the measurement of the impact of social innovations, as the literature on social innovation and social entrepreneurs shows that social innovation seems to have an impact on the achievements (realised functionings) and especially the opportunities (capabilities) some social groups or society at large have. Nussbaum (2001) has advanced a list of ten central human capabilities she argues define the dimensions along which the quality of life should be assessed. She argues that these criteria represent separate, orthogonal dimensions of the capability vector that cannot be compensated for one another. Implicitly she therefore assumes a lexicographic ordering to the capability set. Nussbaum's list (loc. cit. p.87-88) consists of the following items:

- Life. Being able to live to the end of a human life of normal length; not dying prematurely, or before one's life is so reduced as to be not worth living.
- Bodily health. Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
- Bodily integrity. Being able to move freely from place to place; to be secure against violent assault, including sexual assault and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
- Senses, imagination, and thought. Being able to use the senses, to imagine, think and reason and to do these things in a way informed and cultivated by an adequate education, including literacy and basic mathematical and scientific training. Being able to use imagination and thought in connection with experiencing and producing works and events of one's own choice, religious, literary, musical and so forth. Being able to use one's mind in ways protected by guarantees of freedom of expression with respect to both political and artistic speech, and freedom of religious exercise, and so forth.
- Emotions. Being able to have attachments to things and people outside ourselves. In general to love, to grieve, to experience longing, gratitude and justified anger. Not having one's emotional development blighted by fear and anxiety.
- Practical reason. Being able to form a conception of the good and engage into critical reflection about the planning of one's life. This entails protection for the liberty of conscience and religious observance.
- Affiliation. Being able to live with and toward others, to recognise and show concern for other human beings, to engage in various forms of social interaction. Having the social bases for self-respect and non-humiliation; being able to be treated as a dignified being whose worth is equal to that of others. This entails provisions of non-discrimination on the basis of race, sex, sexual orientations, ethnicity, caste, religion, and national origin.
- Other species. Being able to live with concern for and in relation to animals, plants, and the world of nature.

- Play. Being able to laugh, to play, and to enjoy recreational activities.
- Control over one's environment. Political: Being able to participate effectively in political choices that govern one's life; having the right of political participation, protection of free speech and association; Material: Being able to hold property, and having the right to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure. In work, being able to work as a human being, exercise practical reason and entering into meaningful relationships of mutual recognition with other workers.

While this list is possibly not free of a specific "Western" cultural bias in the conception of the good, it can serve as a potential guide to develop indicators to assess both the local but also the aggregate impact of social innovation. Nevertheless, one should be aware that a number of aspects of the capabilities approach have been criticised by various authors. Some authors, for instance, take issue with the fact that its focus seems to lie exclusively on capabilities and not on the realised functionings. This is particularly evident in Nussbaum's work. Skidelsky and Skidelsky (2012, p. 148) ask: "Why should we care whether individuals are capable of health, education and so forth? Surely what matters it is that they are actually healthy and educated". They conclude that capabilities are useful to assess the level of economic development of poor countries, but in affluent societies they are hardly informative. Hence, they claim that eventually the ends rather than the means (or capabilities) should be a goal of policy. For this reason they seek to produce a list of basic goods that affect the good life.¹⁸ Their list (loc. cit, p. 154 ff) comprises:

- Health: Health implies the full functioning of the body. It includes all things needed to sustain life, or a reasonable span of life. It implies vitality, energy and alertness. Above all it means a happy obliviousness of one's own body, as of a tool perfectly fitted to its tasks.
- Security: Security relates to an individual's justified expectations that his life will continue more or less its accustomed course undisturbed by war, crime, revolution, or major social or economic upheavals. It is a necessary condition for the realization of other basic goods such as personality, friendship and leisure.
- Respect: Respect is to indicate that one regards his views and interests as worthy of consideration, as things not to be ignored or trampled on. It implies a certain recognition of the other's point of view. Respect is a necessary condition for other basic goods, especially for friendship.
- Personality: Personality implies the ability to frame and execute a plan of life reflective of one's tastes, temperament and conception of the good. Personality goes along with a private space, in which the individual is at liberty to unfurl, to be himself. It denotes the inward aspect of freedom, that which resists the claims of public reason and duty. Personality implies also ownership and private property.
- Harmony with nature: It implies a sense of kinship with plants, animals and landscapes.

¹⁸Other authors instead criticise the capabilities approach as a conceptually weak and empirically unsound concept as capabilities are subjective and individually based (see the discussion in Anand, Hunter, and Smith, 2005, p.11 ff).

- Friendship: Friendship encompasses all robust, affectionate relationships. Friendship exists when each party embraces the other's good as his own, thereby bringing into being a new common good.
- Leisure: Leisure implies doing things for their own sake, not as a means to something else. It is characterised by a lack of external compulsion. All recreations involving active, skilled participation are leisure.

Skidelsky and Skidelsky (2012, p. 151-152) claim that these basic goods are universal, final, sui generis and indispensable. They are universal in the sense that they are bound to the good life as such and no particular local conception of it. They are final in the sense that they are good in themselves and not means to other goods (by asking "What for?"). They are sui generis in the sense that they are not part of some other good. Finally, they are indispensable as anyone who lacks them is likely to have suffered serious loss or harm.

This alternative list of basic goods (rather than capabilities) provides an alternative evaluative basis to assess the impact of social innovation. However, Sen (1999, p.75) argues that the evaluative focus of the capability approach "can be either on the realized functionings (what a person is actually able to do) or the capability set of alternatives she has (her real opportunities)". The critique by Skidelsky and Skidelsky (2012) is therefore partly misplaced, even though their argument that realised functionings are likely to be more important to assess well-being in affluent societies whereas capabilities are more important in developing countries is certainly important.

While these debates are important, for now, a few implications for the measurement of the impact of social innovation on well-being follow. For micro-level assessments of social innovations at relatively small scope, and especially for evaluations of public programmes to support social innovation as outlined for instance by Mulgan, Tucker, Rushanara, and Sanders (2007) or Mulgan (2010) it will be necessary to identify first and foremost a social innovation and clarify which individuals or social groups they have affected (and possibly identify some control groups). The evaluator will then have to decide on the relevant aspects of well-being targeted by social innovations. These can be the capabilities (for instance in terms of realised items in Nussbaum's list) of some relevant social group or achievements (functionings or basic goods listed by the Skidelskys) of its members. Anand, Hunter, and Smith (2005) show how such indicators can be constructed from existing household panels (the British Household Panel survey – BHPS – in their case) for the measurement of capabilities at the individual level. The advantage of the capabilities approach here is that it offers some more general normative framework to assess the impact of social innovation. However, also for micro-level assessments it is necessary to identify and take into account the complex interactions and feedbacks improvements in the life-chances for one social group may have on other social groups or individuals.

For the measurement of social innovation at higher levels of aggregation and the assessment of its impact on well-being the difficulties abound however. The principal difficulties that come to mind are:

1. Identification and quantification of social innovation: While social innovation is likely to go along with some costs social entrepreneurs and supporting individuals have to incur, these costs may not be quantifiable as they are spread out over many

individuals and imply volunteer work. Very detailed time use accounts and adequate cost measures for the time individuals use in these activities would be needed to attach monetary value to social innovation, and hence develop an “input” measure for social innovation. However, the matter is complicated by the fact that social innovations can take place at different levels of hierarchically related institutions in a society and are the result of a complex interplay of different interdependent social units. As a consequence their impact will vary in the nature of the changes in capabilities and functionings and in their extent. More importantly the identification of all inputs leading to social innovation will in most cases not be possible.

2. Identification of the impact of social innovation on well-being: Even if social innovation would be measurable in some way, it would be difficult to disentangle the effect of public sector activity from changes induced by change agents. It would also be difficult to disentangle the impact of social innovation from the impact of income and technology, as on the one hand we have seen that income and life satisfaction are closely related. On the other hand, technologies are important means to change people’s freedoms, hence social innovation may be a consequence of changes in income or technology. Therefore the difficulties to detect causal relationships at the aggregate level are significant.

While – as outlined in Section 3.4 and in this appendix – (imperfect) measures to assess the outcomes of social innovation exist, the identification and measurement of social innovation is – apart from public or private support programmes for social innovation – very difficult. Given these limitations considerable circumspection is recommended when discussing the potential impact of social innovation on aggregate welfare.



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Project Information

Welfare, Wealth and Work for Europe

A European research consortium is working on the analytical foundations for a socio-ecological transition

Abstract

Europe needs change. The financial crisis has exposed long neglected deficiencies in the present growth path, most visibly in the areas of unemployment and public debt. At the same time, Europe has to cope with new challenges ranging from globalisation and demographic shifts to new technologies and ecological issues. Under the title of Welfare, Wealth and Work for Europe – WWWforEurope – a European research consortium is laying the analytical foundations for a new development strategy that enables a socio-ecological transition to high levels of employment, social inclusion, gender equity and environmental sustainability. The four year research project within the 7th Framework Programme funded by the European Commission was launched in April 2012. The consortium brings together researchers from 33 scientific institutions in 12 European countries and is coordinated by the Austrian Institute of Economic Research (WIFO). The project coordinator is Karl Aiginger, director of WIFO.

For details on WWWforEurope see: www.foreurope.eu

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