

Making a Difference: Strategies for Scaling Social Innovation for Greater Impact

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ABSTRACT

This article explores the strategies and dynamics of scaling up social innovations. Social innovation is a complex process that profoundly changes the basic routines, resource and authority flows, or beliefs of the social system in which it occurs. Various applications of marketing and diffusion theory are helpful to some extent in understanding the trajectories or successful strategies associated with social innovation. It seems unwise, however, to rely solely on a market model to understand the dynamics of scaling social innovation, in view of the complex nature of the supply-demand relation with respect to the social innovation market. Instead, the authors propose a distinctive model of system transformation associated with a small but important group of social innovations and dependent on discontinuous and cross-scale change. This paper focuses on the challenge of scaling up social innovations in general and in particular the dynamics of going to scale.

Key Words: Social innovation, scaling-up, cross-scale interaction, market model, adaptive cycle, social entrepreneur

Defining Social Innovation

Social invention abounds. In communities across the world, individuals daily come up with new ideas, large and small, for improving their lot and the lot of those around them, in response to locally perceived problems or social needs. Such inventions may thrive locally without any attempt at scaling up or generating a broader impact. Sometimes, however, they spread to other individuals or organizations, whether as the effect of a deliberate strategy or simply through a process of diffusion. More rarely, such inventions succeed in having a lasting or revolutionary impact: they challenge and change the very institutions that created the social problem which they address. When this happens it can be argued that social innovation has occurred. Social innovations involve institutional and social system change, they contribute to overall social resilience, and they demand a complex interaction between agency and intent and emergent opportunity. Each of these three aspects will be considered in turn.

A. Social innovation is a complex process of introducing new products, processes or programs that profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which the innovation occurs. Such successful social innovations have durability and broad impact.

The terms “social enterprise,” “social entrepreneurship,” and (increasingly) “social finance” are often used interchangeably with “social innovation.” It is clear, however, that any sophisticated understanding of how novelty transforms complex systems requires great conceptual precision. A *social enterprise*, though it may respond to social needs, is a privately owned, profit-oriented venture which markets its own products and services, blending business interests with social ends. The Canadian Centre for Social Entrepreneurship (2001, p. 2)

considers social enterprises as fitting the notion of “hybrid” organizational models which “fuse innovative, entrepreneurial practices with a commitment to both social and economic return on investment.”

Whereas the concept of social enterprise is primarily focused on organizational form and mission, *social entrepreneurship* is a human-centered concept that highlights the personal qualities of a person who starts a new organization (Phills *et al.*, 2008). Martin and Osberg (2007, p. 30) note that “any definition of the term ‘social entrepreneurship’ must start with the word ‘entrepreneurship’. The word ‘social’ simply modifies entrepreneurship.”

Consequently, the emphasis on profitability is one difference between social enterprise, social entrepreneurship, and *social innovation*. Social innovation does not necessarily involve a commercial interest, though it does not preclude such interest. More definitively, social innovation is oriented towards making a change at the systemic level. As Phills *et al.* (2008, p. 37) explain, “unlike the terms social entrepreneurship and social enterprise, social innovation transcends sectors, levels of analysis, and methods to discover the processes – the strategies, tactics, and theories of change – that produce lasting impact.”

Undoubtedly these three notions are closely related to each other. For example, a social entrepreneur can be a part of a social enterprise and, at the same time, can contribute to the promotion of social innovations. As Westall (2007, p. 2) notes, “Each of these terms reflects different cuts, or perspectives, on reality.”

Figure 1 illustrates which sectors of the system are addressed by the social entrepreneur, social enterprise, and social innovation. It also explains on which scale the above-defined three concepts introduce innovation. Whereas social entrepreneurship focuses on an individual and social enterprise addresses organizations, social innovation strives to change the way a system operates. Consequently, social entrepreneurship and social enterprise operate within the larger framework of “wider trends of thought and practice” (*ibid.*). As Leadbeater (2007) suggests, the policy on social enterprise should be developed within the boundaries of a wider strategy on social innovation. Moreover, inventions will hardly achieve a significant impact unless they are supported within the frameworks in which they operate (Westall, 2007, p. 11). Similarly, Marhdon *et al.* (2010, p. 13) consider that successful innovations must be viewed within the larger setting of “industrial and national systems and structures” in which they unfold.

Of particular interest in this paper are those innovations that address seemingly intractable social problems such as homelessness, poverty, and mental illness. In these domains, the social sector struggles often with band-aid solutions which address the immediate symptoms but not the underlying causes. So, for example, social service organizations struggle to find financial support for those suffering from mental illness without addressing the economic system that excludes them from the mainstream economy. Indeed it can be argued that the “established” institutions – those taken for granted in the community – are often the source of such intractable problems. Real innovation without change in these institutions is therefore unlikely.

When a social innovation has a broad or durable impact, it will be *disruptive and catalytic* (Christensen *et al.*, 2006); it will challenge the social system and social institutions that govern people’s conduct by affecting the fundamental distribution of power and resources, and may change the basic beliefs that define the system or the laws and routines which govern it. While many smaller innovations are continually introduced at all scales, it seems most important

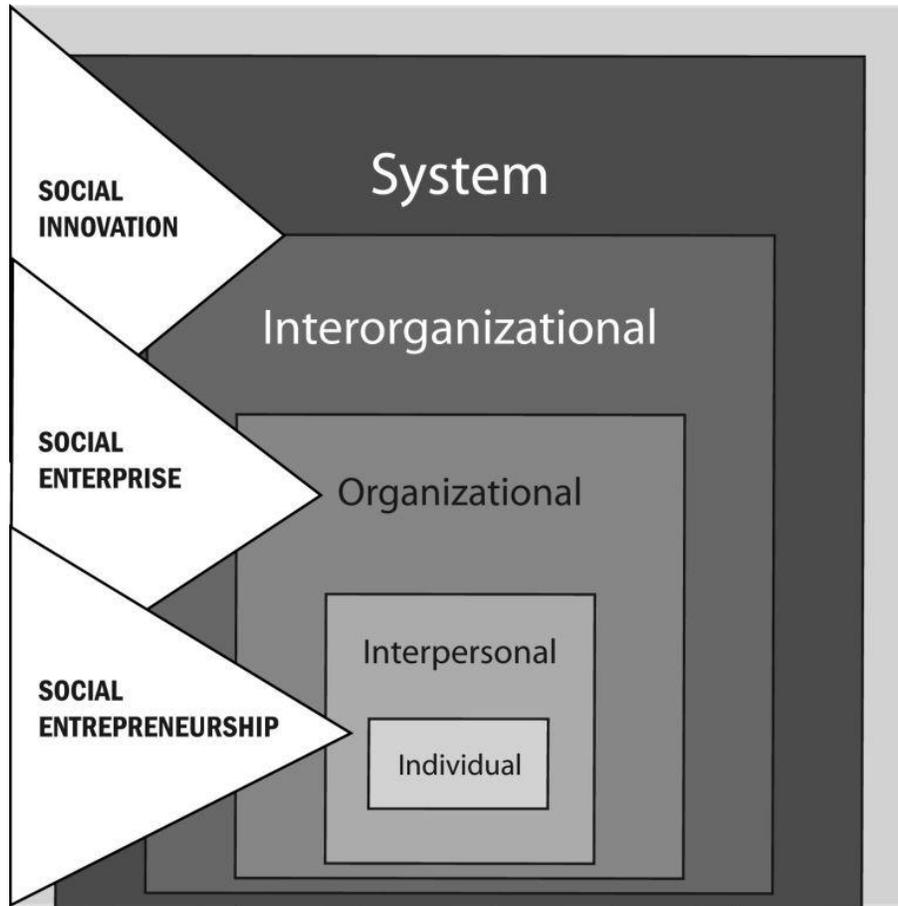


Figure 1. A systemic view of innovation.

Source: After Westall, A. 2007. *How can innovation in social enterprise be understood, encouraged and enabled?* A social enterprise think piece for the Office of the Third Sector.

Cabinet Office, Office of The Third Sector, UK, November. Available at

http://www.eura.org/pdf/westall_news.pdf (accessed 10 October 2008).

to consider those innovations that have the potential to disrupt and change the broader system. To do so, a social innovation must cross multiple social boundaries to reach more people and different people, more organizations and different organizations, organizations nested across scales (from local to regional to national to global) and linked in social networks.

B. The capacity of any society to create a steady flow of social innovations, particularly those which re-engage vulnerable populations, is an important contributor to overall social and ecological resilience.

In the broadest sense, social innovation is urgently needed to solve the complex social-ecological problems facing the world. Since the advent of the world financial crisis in the fall of 2009, commentators have spoken of the possibility of a “perfect storm”: the intersection of rapid climate change, decreasing fossil fuel supplies, food shortages, and economic collapse – and the extreme difficulty of really understanding the dynamics of these problems, due to their complexity (Carpenter *et al.*, 2009). Traditional, disciplinary-based science has done a poor job at illuminating these intersections. Thinkers about social-ecological resilience and complex systems, however, have for several decades been describing just such interconnecting systems and possibilities (Gunderson *et al.* 1995; Walker and Salt, 2006).

The exclusion of large parts of the world’s population from basic economic and ecological services increases the vulnerability of the whole to “perfect storms” and hard losses of resilience. Re-engaging vulnerable populations in our mainstream economic, social and cultural institutions, not just as recipients of services or “transfer entitlements” (Sen, 1981) but as active participants and contributors, is, therefore, intimately tied to social-ecological resilience. It is not accidental that much of social innovation addresses this kind of re-engagement; reintegrating the poor, the homeless, the mentally ill, and the lonely into community. But from another point of view, it seems clear that if the generation of novelty is largely dependent on the recombination of existing elements (Arthur, 2009), then as these groups are excluded from contribution, their viewpoints, their diversity and the potential for specific local contributions are lost as well. So social innovation not only *serves* vulnerable populations, but is *served* by them in turn. And, since resilience of linked social-ecological systems is dependent on the introduction of novelty in the back loop, resilience is also increased by that re-engagement (see Figure 2).

C. While social innovation has recognizable stages and phases, achieving durability and scale is a dynamic process, which requires both emergence of opportunity and deliberate agency, and a connection between the two.

Human beings are inventive. The capacity to explore new possibilities to create and to change is part of what defines our species. Humans are also a social species, highly dependent on each other for the creation and maintenance of the world in which we live. The rules and beliefs which make up cultures both define and limit people and at the same time provide the material they need to create novelty. This has been defined as the *paradox of agency* (Friedland and Alford, 1991; Powell and DiMaggio, 1991; Sewell, 1992; Holm, 1995; Seo and Creed, 2002); that as individuals, as social beings, people are both deeply conditioned by and dependent on the continuity and stability of the social systems they have invented. Additionally, they are capable of altering these through both conscious and unconscious effort.

A social system may be defined as any organized assembly of human resources, beliefs, and procedures united and regulated by interaction or interdependence so as to accomplish a set of specific functions. Social systems are complex, having multiple interacting elements, and to survive they must be adaptive, ever evolving to adjust to emerging needs of the sub-systems (organizations or individuals). Each social system is defined by its boundary and may be

The relationship between resilience, vulnerability, and social innovation

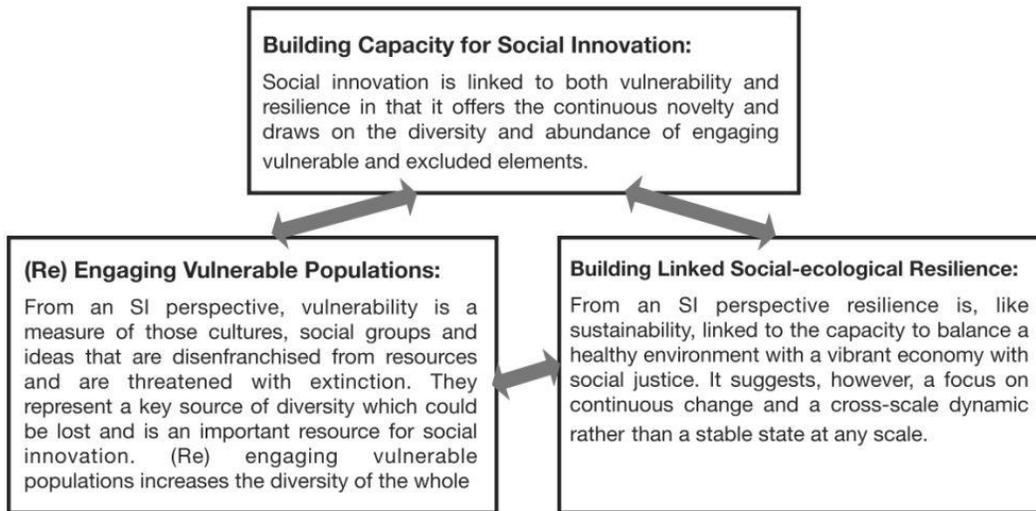


Figure 2. The relationship between resilience, re-engagement of vulnerable populations, and social innovation.

observed at various degrees of focus. An observer can “zoom in” to look at systems as small as a family, or “zoom out” to look at systems as broad as the globe. Each social system has its own character or identity, which can be analyzed in terms of its *culture* – beliefs, values, artifacts, and symbols; its *political and economic structure* – the pattern by which power and resources are distributed; and its *social interactions* – the laws, procedures, routines, and habits that govern social interaction and make it predictable. These three aspects of social systems, in their most established and taken-for-granted forms (political structure, religious or value heritage, economic markets, laws of public conduct) are often referred to as *institutions* (Giddens, 1976).

For institutions and social systems to remain resilient, therefore, a continuous integration of novelty is necessary. As Parsons (1951) indicated, healthy functioning social systems at all scales need to behave strategically, pursuing *goal-related activity*, adapting to *changing circumstances*, maintaining *integration* of the system, and ensuring continuity (*latency*) through pattern maintenance and social memory. How that novelty enters our social systems and transforms them, as well as how human agency plays a role, is key to understanding social innovation.

Innovation has been widely studied and appears to have a variety of phases and stages. This has perhaps been best described in the literature on continuously innovating firms (Kantor, 1983; Van de Ven, 1986; Dougherty, 1992; Dougherty and Hardy, 1996; Van de Ven *et al.*, 1999). Innovation can be encouraged by a design that fosters competition between multiple teams all attempting to develop the best idea or model; this been called the exploration phase (March, 1991) and is characterized by numerous experiments, some successful, others not, as an individual or team attempts to move from idea to a prototype that can be tested in production. At

some point choice favors one or several of these experiments and diverts all resources towards exploiting the possibility of these ideas in the form of new products or processes. As the product or process moves into the production or exploitation phase, the prototype is further modified and the organization gains experience at production, becoming more efficient until the product or process can be replicated with maximum efficiency and hence profitability. Its fate then rests with the market. If demand increases then more of the product is produced. Eventually, however, demand will decrease due to dynamics of the larger market, the competitive context, or changing social and economic conditions. The firm with only one product will therefore go out of business. To be resilient over long periods of time, the firm must be able to generate new products or variations of old products in response to this shifting demand context.

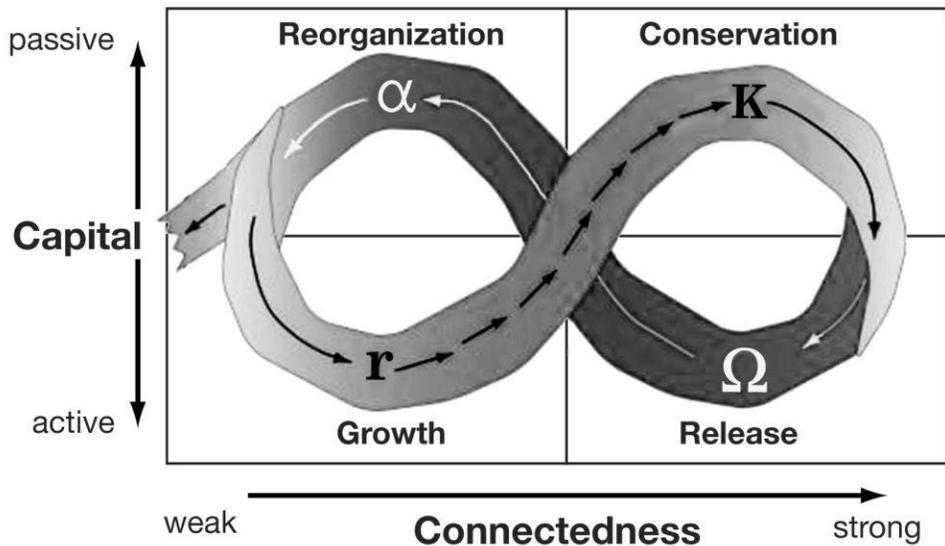


Figure 3. The Adaptive Cycle: a theory of the relationship of transformation to resilience in complex systems.

Source: Peterson, G. 2009. Ten Conclusions from the Resilience Project. The Resilience Alliance. Available at <http://www.geog.mcgill.ca/faculty/peterson/susfut/rNetFindings.html> (accessed 14 November 2009).

This model of innovation can be represented in the four-box cycle above (Figure 3). This is known as the “adaptive cycle,” and it provides a heuristic for understanding the dynamics that drive both continuity and change. It is best understood as a diagram that charts this dynamic at a single scale or in a single system. It could represent the evolution of a single innovation from idea to maturity, or the organization that designs and delivers that innovation. It is important to the idea of resilience – that capacity to adapt to shocks and changes, while preserving sufficient coherence to maintain identity – that the four phases are not represented as linear but rather as an infinity loop. Once an idea or organization reaches the maturity (conservation) stage, it needs to release resources for novelty or change and re-engage in exploration in order to retain its resilience. The release and reorganization phase is often termed the “back loop,” where non-

routine change is introduced. The exploitation and conservation phases are often termed the “front loop,” where change is slow, incremental, and more deliberate.

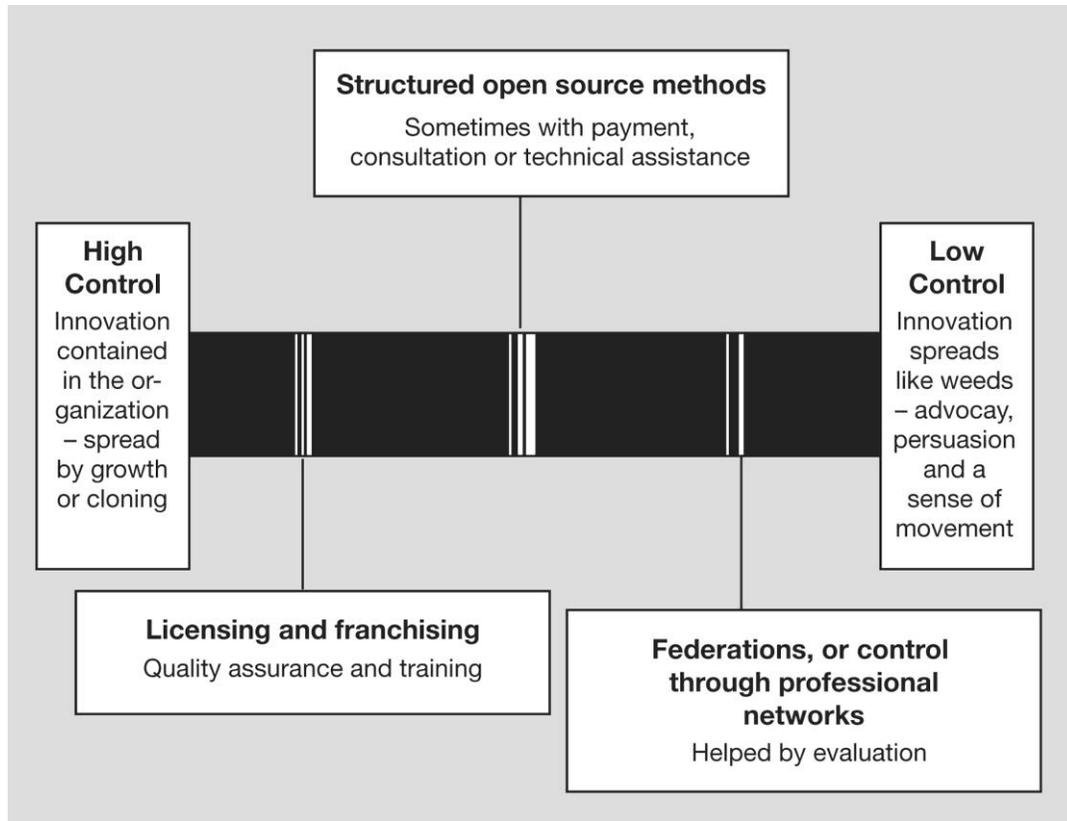


Figure 4. A spectrum of models of social innovation growth.

Source: After Mulgan, G., Ali, R., Halkett, R. and Sanders, B. 2007. *In and Out of Sync: The Challenge of Growing Social Innovations* (London: NESTA). Available at <http://www.socialinnovationexchange.org/node/238> (accessed 30 November 2009).

Making a Bigger Difference: Strategies for Scaling Out and Up

A. Market Mechanisms and Scaling Out

One model of how social innovations increase their impact is closely tied to the idea of social markets. As Mulgan *et al.* (2007, p. 11) explain, successful social innovation is not only a result of a brilliant idea or hard work of an individual. Successful social innovations are achieved through the interplay of “effective demand” (the “pull” factor) and “effective supply” (the “push” factor). Demand becomes effective when it is backed with purchasing power – when

those who recognize the need to address a given problem are willing and able to pay for it. These may be direct customers (members of the public who are prepared to pay for certain products or services) and indirect customers (organizations which pay on behalf of those members of the public who are not able to pay themselves). On the other hand, effective supply refers to the innovations that are “made workable and useful.” Such innovations should fit well within the scope of the existing demand and demonstrate their effectiveness and ability to be applied and implemented (Mulgan *et al.*, 2007, p. 11). “The combination of ‘effective supply’ and ‘effective demand’ results in innovations that achieve social impact and, at the same time, prove to be financially sustainable.” (ibid.).

Aside from being directly related to the supply-demand relation, the growth of innovation can be viewed from the perspective of the organizational form that it adopts. Mulgan *et al.* (2007) propose a spectrum of models of innovation growth that are spread between low control and high control. Between the extremes of the spectrum, three different models of growth are placed: uncontrolled diffusion, more directed diffusion by a “parent” organization (e.g. promotion through formal networks, licensing, franchising, multiplication including federations), and organizational growth (see Figure 4).

The above categorization of scaling up strategies assumes that the organization that is fostering and attempting to scale the innovation will continue to propagate a single innovation or group of innovations for the same market. One example of such an organization is L’Abri en Ville (www.labrienville.org), an innovative initiative based in Montreal, which creates co-operative living arrangements for persons suffering from long-term mental health challenges and seeks to increase its impact by helping other communities adopt the model. Similarly, Roots of Empathy (www.rootsofempathy.org), a Toronto organization dedicated to reducing bullying in elementary schools, has not only achieved dramatic results locally but has also spread its school program around the globe. This kind of growth might be called *expansionary innovation* (see Figure 5).

Other organizations follow different trajectories. In Kitchener, Ontario, The Working Centre (www.theworkingcentre.org) has developed a series of products for homeless or vulnerable people living in the inner city core. They began with an employment centre and drop-in centre, then expanded to a café, a soup kitchen, a craft co-op, a bicycle repair shop, an organic garden and transition housing, as the need arose. This could be termed *evolutionary innovation*. An innovative organization such as Santropol Roulant (www.santropolroulant.org/2006/E-home.htm), an award-winning meals on wheels program in Montreal that also builds intergenerational partnerships, has such a demand for its services that it continues to expand to meet those needs. This might be called *incremental growth*. Ultimately, there are organizations that increase the impact of their innovations by changing both the product and the market. These are *total innovators*. This final approach will be discussed in more detail below.

B. Beyond the Market Model for Social Innovation: Institutional Change through Scaling Up

Despite the appeal of a market model to explain how social innovations go to scale, there are limitations to the application of a straightforward supply-demand dynamic to a social innovation context. There are at least three interlocking dynamics that affect the relationship between the supply and demand for social innovation (see Figure 6). The first, labeled Dynamic A, is the

hypothetical notion that a vulnerable group or intractable social issue “demands” social innovation for its breakthrough. In response to this “demand,” the social-entrepreneurial

		MARKET	
		<i>Same</i>	<i>Different</i>
PRODUCT	<i>Same</i>	Incremental Growth	Expansionary Innovation
	<i>Different</i>	Evolutionary Growth	Total Innovation

Figure 5. Different trajectories of growth.

Source: Walker, R. M., Jeanes, E. and Rowlands, R. 2002. “Measuring innovation: Applying the literature-based innovation output indicator to public services”. *Public Administration*, 80(1), 201–214.

organization produces a “supply of social innovation,” which attenuates the needs of the vulnerable groups. Dynamic B, on the other hand, suggests that this supply, since it cannot be financed by the users themselves, needs sources of financing which come from governments or charitable foundations (or both). This funding is triggered by grant applications or proposals, the success of which depends not only on the evident needs of the vulnerable client group, but also on the skills of the grant writers in mediating such needs so as to fit the priorities of the government programs or the sponsoring foundations’ strategies. This perception of priorities is in turn affected by Dynamic C, the capacity of news media or research unit to set the agenda for the government and foundations with respect to a particular vulnerable group or issue. At times, governments and foundations will fund research specifically to assess such needs, but again, the “feedback” is mediated by the capacities of the researcher.

All the mediators identified in Figure 6 – governments, foundations, media and think tanks – introduce distortions into the market relationship as they act as proxy “buyers” for the vulnerable populations who are the identified end users of a social innovation.

Marhdon *et al.* (2010, p. 17) note that government policy makers pay more attention to the factors associated with the supply, rather than to the demand-oriented policies (see also Georgiou, 2007, p. 4). Governments are often in the position to “purchase” innovative programs

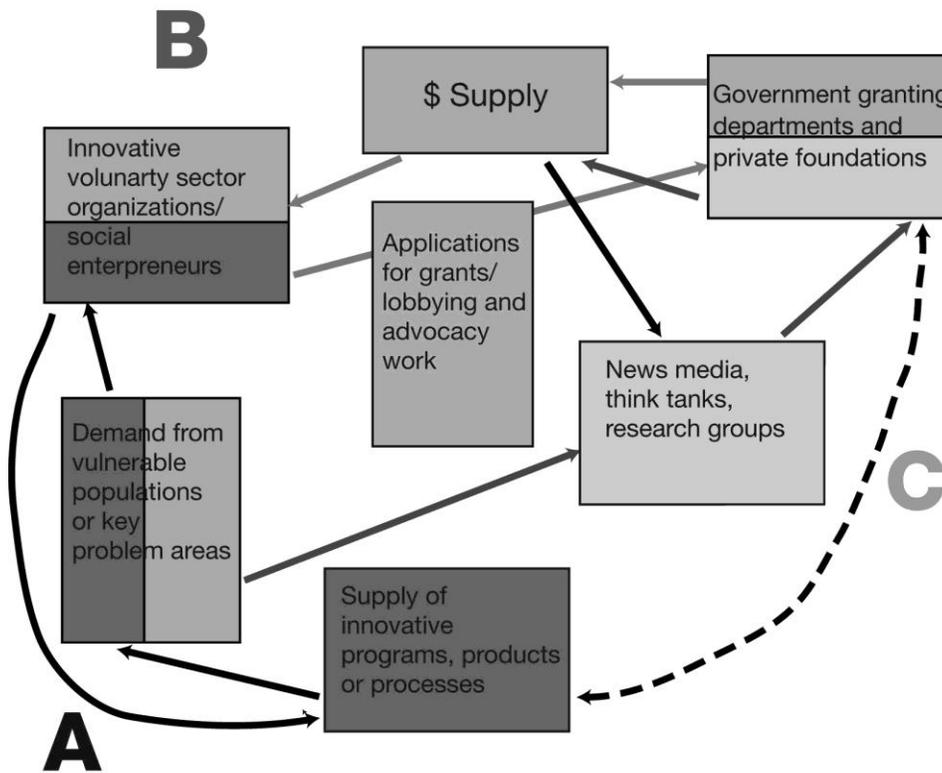


Figure 6. **Three interactive dynamics affecting the relationship between supply and demand for social innovations.**

or products on behalf of the populations they represent but do not always see themselves as in the market for innovations. Governments are generally constituted as the “guardians” of the public good (Jacobs, 1992), leaving the private sector to respond to the demand for product and process innovation (Fontana and Guerzoni, 2008). Governments are also prone to more stringent requirements for accountability, and are uncomfortable with the uncertainty associated with radically innovative ideas. At best, therefore, governments are likely to fund incremental innovations, thus reducing the uncertainty associated with any novel product or process. This does not mean that governments, which are major purchasers as well as the primary regulators in the market, cannot significantly influence “the possibilities for innovation” (Georghiou, 2007, p. 14); however, they are unlikely to reflect existing demand for the innovation through their purchasing or funding programs. Although the reasoning behind the market model is clear and logical, it cannot be seen as an accurate representation of the real-life market.

The media, and to some extent think tanks, act as a proxy for advertising in the sense that they stimulate “buyers” (government, foundations) to purchase social innovations on behalf of

the poor, the homeless, the disabled, the mentally ill, or some other identified user group. However, they publicize the demand, not the solutions (supply). One of the challenges of social innovation is that many innovative solutions never come to the attention of the “big buyers” (i.e., the funders), but rather languish at a local level. Some think tanks such as Stanford Center for Social Innovation and Skoll Forum have attempted to redress this problem by creating forums to publicize the inventions of social entrepreneurs. The question remains however, whether the funders are using this publicity as a means of identifying solutions to the problems with which they are concerned.

In some documented cases, the government can intervene directly to raise awareness of solutions, using social marketing strategies (Weinreich, 1999, p. 3). Some well-known examples of social marketing campaigns are the campaigns for energy conservation and health promotion (e.g., drug abuse, physical activity), largely government-sponsored exercises (Health Canada, 2005). But this begs the question of the government’s desire to truly support social innovations, particularly those radical enough to challenge current institutional arrangements.

Lastly, the supply of social innovation is not only dependent on mediated demand but on continuous support from funders, who are not the end users. An innovation may be successful insofar as it is in demand by its end users or consumers; but success of this sort does not automatically translate into additional income for further production or product development. That comes in the forms of grants, subsidies, and awards, the availability of which is not necessarily governed by end-user demand, but often by other concerns such as political stability, foundation strategy, or internal changes in programs or priorities.

In sum, the amount of mediation involved in the complex contexts where social innovation is needed means that demand is a “very vague” notion (Mowery and Rosenberg, 1979, p. 104) and is therefore “not necessarily the sole, or even the principal, determinant of the scale and direction of inventive and innovative activity” (Freeman, 1979, p. 206). The sheer complexity of these dynamics suggests that a strategy of supply and demand needs to be elaborated with other perspectives. In particular, we suggest the importance of models that incorporate discontinuous and emergent properties of innovation. Why do some innovations have an impact which far outreaches the numbers of people involved and which seems to depend on a “tipping point” dynamic (Gladwell, 2002) rather than a diffusion pattern?

C. Institutional Entrepreneurship: Scaling Up through Institutional Transformation

It is in the nature of the social innovation market, as a complex system, to be highly dependent upon place and time. “Timing can be all-important, and many innovators consciously ‘park’ their ideas for years until the time is right” (Mulgan *et al.*, 2007, p. 12). Social innovations do not necessarily generate the sorts of products or services that are always of interest to the market; they are born in a certain context, under certain circumstances, and in response to certain needs or problems. Although a social innovation in the later stages of its diffusion may be spread on a larger scale (in terms both of geography and of the numbers of actors involved), its emergence and diffusion are dependent on existing frameworks and opportunities. Whether or not the innovation has a broader social impact, however, is dependent on the interplay of political, social, economic, and cultural factors. The synergy of these factors results in the growth of certain innovations when the “efforts and interest of several actors ... coincide” to achieve a

desired effect (Dalhammar *et al.*, 2003, p. 9, Marhdon *et al.*, 2010). Others, equally deserving, may fall by the wayside.

This, in part, is a symptom of the inherent complexity of the social innovation process. One example of a simple process is baking a cake. A recipe is used that identifies the components of the system (flour, milk, eggs) and a set of steps for relating these components in time and space so as to produce the desired product (the cake). Carefully following the steps of a good recipe will produce a good result nearly every time. A good analogy of *complicated* processes is sending a rocket to the moon. Much more expertise is required and much more coordination to connect the various experts into a unified design team. Still, once that is accomplished and a set of designs is in place, many rocket ships can be produced and the risk of failure is reduced. Achieving *complex* processes is more like raising children: success with one is not a guarantee of success with another, and recipes or blueprints are of limited value. Managing an ever-evolving and emerging relationship between parent, child, and the broader social context lies at the heart of this process. Unforeseen shocks or discontinuities can derail the relationship, changing the rules at any point. Outcomes remain uncertain (Westley *et al.*, 2006).

Action and impact in complex processes are not governed by straightforward cause-and-effect relationships. A good idea, the resources to develop it, leadership capacity, and drive – all must be combined with *opportunity*, which can be recognized and seized but not directly controlled (Westley *et al.*, 2006). Moreover, as the innovation changes and evolves through its development, other kinds of opportunity become necessary (Bacon *et al.*, 2008). Durability, scale, and impact depend not only on the degree of engagement with the broader social context but upon engagement of a *different kind*. Eventually, there must be a disruptive encounter with power, routine, and beliefs, though this may be subversive as opposed to revolutionary (Mumford, 2002). The transformation and action leading up to this disruptive encounter may be termed “scaling up.” How does such transformation unfold?

If the adaptive cycle can be used to understand phases and stages of developing a social innovation, the *panarchy* model can be used to understand how sudden transformations and disruptions occur. Panarchy draws attention to the dynamics of such cross-scale strategies and processes (Gunderson and Holling, 2001) and the possibility of sudden cascades of change.

Cross-scale dynamics in ecological systems are a key component of resilience. From the microscopic level of bacteria to the life and death of whole forests, systems existing at separate scales do not cycle together. The same may be said of social systems. Individuals, groups, organizations, institutions (such as economies, cultural systems and legal systems) go through cycles at different rhythms. Much deep novelty or transformations, therefore comes from “cross-scale” interactions, which Holling terms “panarchy”, named after the Greek god Pan, god of chaos and play. Under certain circumstances, novelty at lower levels can create a revolt at higher levels, pushing the broader system into release (Westley, 2001). Cross-scale interactions can operate in an opposite fashion as well, however, restricting novelty by a process of remembrance (Figure 7).

Agency, as mentioned earlier, clearly plays a role. Social innovation requires a variety of actors, working in concert or separately, if it is to have the kind of impact suggested above. Among these are the inventors, sometimes called *social entrepreneurs*: the individuals who initiate or create innovative programs, products, or processes and seek to build an initial organization that can bring that innovation to market. Increasingly research has indicated that

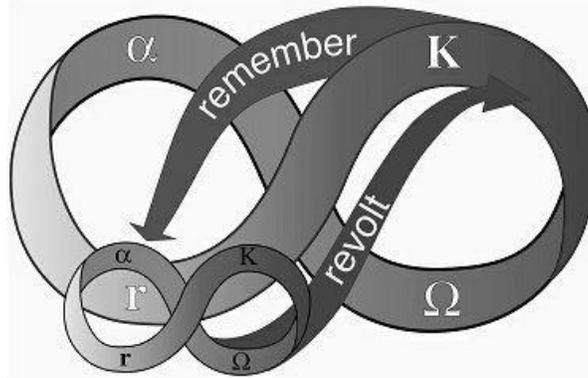


Figure 7. Cross-scale interaction.

Source: Peterson, G. 2009. Ten Conclusions from the Resilience Project. The Resilience Alliance. Available at <http://www.geog.mcgill.ca/faculty/peterson/susfut/rNetFindings.html> (accessed 14 November 2009).

among their key characteristics is their capacity to work in highly complex conditions (Goldstein *et al.* 2008). However, equally important to social innovations that have the broad impact described above are the *institutional entrepreneurs*: those individuals or networks of individuals who actively seek to change the broader social system through changing the political, economic, legal, or cultural institutions, in order that the social innovation can flourish (Dorado, 2005). Occasionally, individuals have the skills of both the social and institutional entrepreneurs, but generally it is wiser to think of actor nets or groups behind successful social innovation.

However, in complex systems, no change can be accounted for by agency alone. Agency must coincide with *opportunity* that is a feature of the broader social and institutional context (Westley *et al.*, 2006; Rhodes and Donnelley-Cox, 2008). Social innovation can be aided by *market demand*, which is one form of such opportunity we have explored at length above. It can also be aided by *political demand*, another form of opportunity, and by *cultural demand* in the form of a breakdown in sense making or meaning. These dynamics are complex and difficult if not impossible to manipulate directly. However, if the focus is on disrupting the larger institutional context, it appears that this can occur by connecting the innovation to political, cultural or economic opportunities that exist irrespective of the volume of adoption. Sudden tipping points or cascades of change that are discontinuous, i.e. not the result of an incremental model of adoption or diffusion of innovation can then occur (Gladwell, 2002).

Strategies for connecting innovation to these other opportunity contexts defines institutional entrepreneurship. This role involves a set of skills including pattern recognition, resource mobilization, sense making, and connecting (Dorado 2005). It involves a deliberate focus on “*up-down*” strategies of *reflecting on* and *connecting to* decision makers and opinion leaders in policy, economic, and cultural arenas, engaging and questioning the strategic context of their decisions. It also involves recognizing local and “front line” innovations that promise institutional disruption, and selling these to the decision makers/opinion leaders when windows of opportunity open (Burgelman, 1983). Institutional entrepreneurs therefore need to master a

complex set of cultural/social skills (cognitive, knowledge management, sense making, convening), political skills (coalition formation, networking, advocacy, lobbying) and resource mobilization skills (financial, social, intellectual, cultural and political capital). Building capacity for social innovation in part involves increasing the representation of these skills among those interested in fostering broad-based change.

Summary and Conclusions

In the foregoing pages, the authors have explored a variety of aspects of social innovations in complex systems. “Social innovation” was defined as those processes, products, and initiatives which profoundly challenge the system that created the problem that they seek to address. For this category of innovation, the market model has some implications; but it does not provide an exhaustive explanation. Numerous intermediaries who distort direct supply-and-demand relationships confound market dynamics. Moreover, as complex dynamics, they demand models that account for fast and slow variables, discontinuities, relationships, and non-linear change. Models of resilience in linked social-ecological systems offer such a framework, which calls for close attention both to the institutional entrepreneur and to the strategies employed to link local innovation to global or national policies and economic structures.

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