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The Journal of Applied Behavioral Science
2014, Vol. 50(3) 234–260
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DOI: 10.1177/0021886314532945
jabs.sagepub.com
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Five Configurations for Scaling Up Social Innovation: Case Examples of Nonprofit Organizations From Canada

Frances Westley[1], Nino Antadze[1], Darcy J. Riddell[1], Kirsten Robinson[1], and Sean Geobey[1]

Abstract

Why do so many social innovations fail to have a broad impact? Successful social entrepreneurs and nonprofit organizations often "scale out" innovative solutions to local problems in order to affect more communities or numbers of individuals. When faced with institutional barriers, they are motivated to "scale up" their efforts to challenge the broader institutional rules that created the problem. In doing so, they must reorient their own and their organizations' strategies, becoming institutional entrepreneurs in the process. This article proposes a contextual model of pathways for system change consisting of five different configurations of key variables and informed by qualitative interview data from selected nonprofit organizations. The authors argue that the journey from social to institutional entrepreneurship takes different configurations depending on the initial conditions of the innovative initiatives. Despite an expressed desire to engage in system change, efforts are often handicapped by the variables encountered during implementation.

Keywords

social innovation, pathways to system change, complexity, social entrepreneur, institutional entrepreneur, nonprofit organization

The evident seriousness of today's most pressing social problems adds momentum to discussions around the concept of social innovation. Definitions of social innovation vary, but most include both the creation of a product, process, or idea, and its diffusion.

[1]University of Waterloo, Waterloo, Ontario, Canada

Corresponding Author:
Nino Antadze, School of Environment, Enterprise and Development, University of Waterloo, 200 University Avenue West, Environment 3 (EV3), Waterloo, Ontario, N2L 3G1, Canada.
Email: nantadze@uwaterloo.ca

Much like technical innovation, social innovation arises when an individual or group of individuals identifies a societal need and responds creatively with a novel solution. Hence, Mulgan, Ali, Halkett, and Sanders (2007, p. 9) define social innovation as "the development and implementation of new ideas (products, services and models) to meet social needs," and Mumford (2002, p. 253) claims that social innovation "refers to the generation and implementation of new ideas about how people should organize interpersonal activities, or social interactions, to meet one or more common goals." Implicit in these definitions is the idea that "going to scale" is simply a matter of diffusion, that is, of more people hearing about and adopting the idea. Success is only limited by demand.

Others, however, maintain that dynamics more complex than supply and demand are at work when a social innovation moves into the mainstream. Their definitions of social innovation stress the second aspect: the ways in which inventions, once created, spread to affect the broader problem domain. Caulier-Grice, Mugan, and Vale (2008, p. 45), for example, differentiate innovation from creativity and invention by explaining that innovation is "more than improvement (which implies only incremental change) and differs from creativity and invention (which are vital to innovation but miss out the hard work of implementation and diffusion that makes promising ideas useful)." Such "catalytic innovations" are able to address social issues with a fundamentally new approach, thus "creating scalable, sustainable, system-changing solutions" (Christensen, Baumann, Ruggles, & Sadtler, 2006, p. 96).

In line with Christensen et al. (2006), we define social innovation as

> 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. (Westley & Antadze, 2010, p. 2)

This definition clearly differentiates social innovation from social enterprise and social entrepreneurship. A social enterprise is a profit-oriented, privately owned entity that blends business interests with social ends (Westley & Antadze, 2010). Social entrepreneurship is a human-centered concept that focuses on the qualities and skills of the person who starts up a new organization or enterprise. It is a necessary but not a sufficient ingredient of social innovation. Social entrepreneurs provide the new ideas that set the process in motion, and may even be responsible for the spread of ideas throughout multiple communities. For example, if funded by government or a foundation, a program to distribute sleeping bags to the homeless may spread easily from one city to the next, but it does not address the system dynamics that create homelessness in the first place. Over time, as funds disappear, fewer sleeping bags will be distributed but the homeless will remain. Institutional change is required if ideas addressing the system dynamics that create social problems, such as homelessness, are to become mainstream. And for this to occur and be durable—that is, for innovations to move across scales and transform legal, economic, and policy regimes—it is essential to understand the complex dynamics involved in system change, particularly because failure is more common than success in these endeavors.

Our analysis of pathways to system change draws on a complexity perspective, which, we argue, may contribute to an understanding of social entrepreneurship. A complexity perspective contrasts with "linear, formulaic, and mechanical models of the world" (Patton, 2011, p. 123) and offers a paradigm characterized by notions of emergence, self-organization, nonlinearity, uncertainty, adaptation, and multiple scales. As the name indicates, a complexity perspective rests on the premise that the phenomena and processes we encounter and study are complex (Nunn, 2007). As such, they cannot be explored productively by isolating their parts, as the final outcome is not produced by linear cause-and-effect relations of different components, but rather by emergent and therefore unpredictable dynamics (Moore, Westley, & Nicholls, 2012; Pundir, Ganapathy, & Sambandam, 2007). The emergent behavior leads a system toward self-organization, that is, creation of a certain order in response to alterations in the environment (Pundir et al., 2007). Consequently, self-organizing systems have the ability to adapt to their changing landscape (Nunn, 2007). Our understanding of social innovation stems from complex systems theory, and therefore we view it as an emergent, disruptive, and largely unpredictable process.

As Nunn (2007) notes, "a large part of complexity theory can be stated in only four words: sensitivity to initial conditions. This is a compact way of saying that complex systems are nonlinear, inherently unpredictable, and dependent on history" (p. 99). The sensitivity to initial conditions is of particular importance to this article, as our studies reveal the central role of initial conditions in determining the scaling-up strategies of organizations. Yet another notion from complexity theory that is pivotal for our discussion is the notion of scale and the role of cross-scale dynamics. As an alternative to the more broadly accepted linear and equilibrium-based models of social entrepreneurship (Goldstein & Hazy, 2008), a complexity perspective offers frameworks for understanding the patterns that emerge at higher levels of scale, which are of crucial significance to the social entrepreneur, and not easy to predict (Goldstein, Hazy, & Silberstang, 2008).

The Role of Cross-Scale Interactions in Successful Social Innovation

Recent work concerning the nature and dynamics of social innovation addresses the issue of scaling up new ideas and approaches in order to make a durable and profound change (Moore & Westley, 2011; Westley & Antadze, 2010). Central to this discussion is the premise that high-impact change "demands innovation across multiple scales" (Westley et al., 2011, p. 767). At the micro scale, the invention or idea is initiated by individuals or groups; at the meso scale, the innovation or novelty is incorporated into a problem domain; at the macro scale, large institutions are transformed (Westley et al., 2011). Cross-scale processes may explain the occurrence of sudden transformations and change.

Considerable work is being done on understanding the dynamics of cross-scale interaction in complex systems and how this relates to successful innovation. A group

of scientists working in the Netherlands has produced a rich body of research focused on the capacity of that country to develop innovative solutions to climate change. Called multilevel perspective, it prompts researchers to distinguish and analyze three conceptual levels: niche innovations, sociotechnical regimes, and sociotechnical landscapes (Geels & Schot, 2007). Viewed using multilevel perspective, transitions are the result of interactions among these three levels, with change occurring through niche innovations, through pressure on the regime from changes initiated at the landscape level, or from windows of opportunity for niche innovations presented by destabilization at the regime level (Geels & Schot, 2007; Nill & Kemp, 2009).

Resilience theory is another branch of research concerned with complex social–ecological change. Gunderson and Holling (2002) describe cross-scale dynamics in ecological systems and name this dynamic panarchy. The panarchy model can be applied to social systems to explain how novelty at a lower level can result in "revolt" at higher levels, and how restrictions of novelty at a higher level may lead to the process of "remembrance" at lower levels (Westley & Antadze, 2010). With a few notable exceptions, however, neither resilience theorists nor the multilevel perspective allows for agency by individuals, organizations, or groups who act to stimulate or support cross-scale interactions. Although a broad system perspective helps us understand how change can occur without revolution or even a broad social movement, it does not provide guidance on how to design successful strategies for change.

As we define it, "scaling up" refers to identifying opportunities and barriers at broad institutional scales, with the goal of changing the system that created the social problem in the first place. Most of the relevant literature uses this term to refer to an organization's efforts to replicate and disseminate its programs, products, ideas, or innovative approaches (Dees, Anderson, & Wei-Skillern, 2004; Mulgan et al., 2007; Wei-Skillern & Anderson, 2003). We label this kind of replication "scaling out," defined as the organization attempting to affect *more* people and cover a larger geographic area; this allows us to reserve the term *scaling up* for situations where an organization aims to affect *everybody* who is in need of the social innovation they offer, or to address the larger institutional roots of a problem. This conception of scaling up is related to our definition of social innovation, mentioned above (Westley & Antadze, 2010).

Not all social innovations are intended to be scaled either out or up. Different initiatives may take different trajectories, some thriving on a local scale without any imperative to spread further. Innovative initiatives of this kind strengthen the existing system by making it more resilient; however, they do not challenge it. For example, the Working Centre (www.theworkingcentre.org) in Kitchener, Canada offers a number of services to homeless or vulnerable people living in the city. They remain quite successful on the local level by providing new products and services to their target population in a chosen locality. Another example is Santropol Roulant (http://santropolroulant.org/), a Montreal-based nonprofit organization that has built an intergenerational food security program from a successful "meals on wheels" initiative, but has declined to expand to other communities despite winning wide media attention in Canada (Westley & Antadze, 2010). Other social entrepreneurs, however, seek to meet

a broader demand by scaling out to other communities, disseminating their innovations to affect more people. Among these a further subset come to realize that without a deeper system change, their ideas and initiatives will never have the desired impact. This requires new strategies addressed to changing the system that holds the problem in place. These strategies are often emergent and path dependent—they are shaped as well as inhibited by the character of the innovation itself.

Although it may seem obvious that a high impact change requires cross-scale interactions, the practice reveals that most innovators are not able to achieve system-level transformations. Therefore, a more nuanced study is needed to explain why nonprofits and social entrepreneurs who see the need to scale up are often not successful in doing so.

We propose a model of five distinct pathways of scaling up with the goal of stimulating discussion around different strategies that social entrepreneurs and nonprofits use to deepen their impact. The proposed pathways for scaling up social innovations are shaped by, among other things, the initial conditions, the opportunities and barriers encountered, and the motivation behind the decision to scale up in the first place, and are informed by case studies of five different organizations. By arguing that there are multiple promising approaches to scaling social innovations, we hope to contribute to filling the knowledge gap that Bloom and Chatterji (2008, p. 25) describe as a lack of "conceptual clarity" about why some social enterprises are more successful in scaling than the others.

Method

To study the selected organizations we used the qualitative comparative analysis (QCA), using it as a research strategy rather than a research technique. The QCA was introduced by Charles Ragin (1987) and was largely regarded as a comparative, case-oriented approach.

The QCA aims to capture the complexity of a case while providing a certain level of generalization (Rihoux & Lobe, 2009). It enables the researcher to examine the complex causal relationships within each case, and thus to uncover its underlying patterns or configuration (Young et al., 2006). As Ragin (1990, p. 68) explains, "the logic of the case study is fundamentally configurational." In his view, the interconnections of different parts form a coherent whole within a given context. Transforming cases into configurations implies viewing them as "a set of conditions leading to a given outcome"[1] (Rihoux & Lobe, 2009, p. 228). As Byrne (2009, p. 109) explains, "multi-case comparative qualitative work is always configurational when it engages with causes."

For our case studies, we chose from among members of the Applied Dissemination Group, representing 24 nonprofit organizations funded by the J. W. McConnell Family Foundation on the basis of their initiatives to create social change (see Table 1). Since 2002, this group of Canadian organizations, led by social entrepreneurs, has been brought together periodically by the Foundation to share experiences and learn from one another and invited experts. Although many of the organizations initially were

Table 1. Participant Organizations of the Applied Dissemination Group.

Centre for Children Committing Offences	Community Health and Social Services Network	L'Abri en Ville
L'Arche Canada Foundation	Community Foundations of Canada	Sierra Youth Coalition
L'Arche Canada	Santropol Roulant	YOUCAN–National office
Tamarack–An Institute for Community Engagement	Engineers Without Borders	POWER Camp National–Filles d'Action
PLAN Institute for Citizenship & Disability	Caledon Institute of Social Policy	Framework Foundation
Roots of Empathy	Community Experience Initiative	The Stop Community Food Centre
Meal Exchange	Free the Children–Volunteer Now	ArtsSmarts
Junior Undiscovered Math Prodigies	Eva's Initiatives	Pine River Institute

interested in local impact, or in expanding the reach of their innovations in areas such as education, community development and poverty alleviation, each in its own way had come to realize that to accomplish its goals, certain barriers at the system level needed to be addressed.

We were interested in learning what triggered the momentum for system change in these organizations, and how they came to recognize the need for system change rather than for primarily local solutions. With this focus in mind, we were invited to observe three meetings of this group and engage in informal conversations, as well as conduct interviews with the Foundation program officers and review secondary website materials. As a result of these informal but intense interactions with the group's members and program representatives, we converged on five distinct configurations under which we felt the efforts of the 24 organizations could be grouped. These were the "volcano" configuration, where the momentum for system change evolved from the experiences of the organization's members; the "beanstalk" configuration, where the momentum for system change came from the frustration of the leader (and founder); the "umbrella" configuration, where system-level goals were introduced and funded from the start; the "LEGO" configuration, where the need for system change emerged from the results of previous initiatives; and finally, the "gemstone" configuration, where the awareness of the need for system change came from the outside in the form of an invitation to participate in a larger endeavor. In an effort to understand each of these configurations in greater detail, we then selected one organization from each configuration to be explored in depth. Given that many of the 24 organizations had features of more than one configuration, we used the knowledge we had gained to choose those which were most representative of the categories under study.

Data collection for each case was carried out through personal, nonstructured interviews with the organization's leader (and in most cases, founder), supplemented by data from the organization's website and field data from our meetings with the Applied Dissemination Group. One or two individuals from each organization were interviewed, and most were interviewed twice, with each interview lasting an average of an hour and a half. The interviewees were selected based on the depth of their experience within the organization and their proximity to the changes that led to a scaling-up strategy. Consequently, the informants were either founders or leaders of

the organization, or both. Although other employees also contributed to the changes, leaders and founders were the primary drivers, introducing system-level goals and shifting their organizations into new trajectories. Our intention was to understand the undercurrents of these processes from the perspectives of those who envisioned and orchestrated them. The interviewees were asked to share their views about their organization's journey from its foundation to the present day (including changes in mission, structure, funders, etc.). They were asked to describe the conditions at the moment when the need or possibility of "scaling up" was recognized, how the problem was redefined, and what barriers and opportunities were encountered. Although these were the guiding themes of the interviews, the questions were not structured and largely followed on the previous responses. The interviews were mainly conducted in the offices of the organizations so that researchers could observe the atmosphere and the environment in which the interviewees worked.

Following the first round of interviews, the researchers discussed the results and identified questions aimed at further clarification of the data, or at gaining additional information about particular issues. This produced a more structured second round of interviews, focused on topics pertinent to each case study. All the interviews related to a given case study were conducted by the same person.

The data from the interviews was analyzed following these steps:

Step 1: Open Coding by Each Interviewer

Interviewers recorded and transcribed their own interviews. The interviewer then open coded their interviews, without any prior discussion with the group about possible coding categories.

Step 2: Developing General Coding Categories

After all the interviews were coded, the interviewers met to work out general coding categories. Each interviewer presented the coding categories he or she had developed. Discussion of these led to more refined coding categories, eventually totaling 19 broad categories and a number of subcategories (see Table 2).

Step 3: Recoding of Interviews by a Noninterviewer

The developed coding system was used to recode all interviews, with researchers coding their own interviews as well as one conducted by another researcher, thereby ensuring interrater reliability. The "line by line" coding helped us to detect the nuances and to "open up the text and expose the thoughts, ideas, and meanings contained therein" (Strauss & Corbin, 1998, p. 102). It deepened our understanding of the views of our interviewees and the ways in which they comprehended their realities, and thus minimized the personal biases of interviewers or the possible influence of predetermined perceptions (Charmaz, 2000).

Table 2. Coding Categories and Subcategories.

1. Calling or purpose/origin of initiative	4. Local focus	7. Applied dissemination group	11. Changing strategies
1.1 AD Intermediary role	4.1. Tension between local and national focus	7.1 Provides emergent solutions	11.1 In response to resistance in system
1.2 Visionary	4.1.1 Unified vs. diversified resource base	7.2 Critical reflections with peers	11.2 A result of learning by doing
1.3 Learning	4.1.2 Who gets credit for outcomes	7.3 Important for learning	11.2.1 Emergence
1.4 Conclusions made based on the experience	4.1.3 Trust	7.3.1 Seeking patterns	11.2.2 Working on multiple scales
1.5 Misconception	4.1.4 Tension with national focus	7.3.2 Evaluation	11.3 Driven by leader realizations
2. Relationship to McConnell	4.2 Creation of learning community	7.4 Emotionally significant	12. Positive organizational culture
2.1 Huge early funder	4.3 Whole system engagement	7.5 Disappointment that it is over/still need it	12.1 Inclusive and participatory = innovation
2.2 Funding helps relationship to other partners	4.4 Relationship to local partners	7.6 Failure to reach full potential to reflect on system/social change	12.2 Being part of a movement is motivating
2.3 Trust issues	4.4.1 Disseminating success X-partners	8. Relationship of organization to system innovation	13. Dysfunctional organizational culture
2.4 National focus	4.4.2 Perils of privileging individual partners	8.1 Adapting and disseminating	13.1 High turnover
3. Resources	4.4.3 Importance of place-based work	8.2 Feeding/animating networks	13.2 Burnout, personal cost
3.1 Constraints	5. System change	8.3 Reflecting back innovation of others	14. Charismatic leadership/social entrepreneurship = high performance
3.1.1 Drives dependence on national funder	5.1. Definition	8.4 Replication	15. Understanding/recognizing complexity
3.1.2 Drive to diversity funding base	5.2 System impact	8.4.1 Can't replicate programs	16. Failure

(continued)

Table 2. (continued)

3.1.3 Inability to respond to opportunities	5.2.1 Beliefs	8.4.2 Replicate principles and ideas	16.1 Linked to *Changing strategies from programs to principles*
3.1.3.1 Frustration/implosion	5.2.2 Framing of issue	8.5 Opening the system	16.1.1 Shifted national focus
3.1.3.2 Failure (to have system impact)	5.2.3 Engagement practices	9. Changing mission	16.1.2 From one intermediary to another
3.1.4 Limited human resources	5.2.3.1 Enhanced collaboration (linked to Broader Problem or Issue)	9.1 Linked to research	16.2 Opportunity for research and turnaround
3.2. Funding issues	5.2.4 Policy change	9.2 Funding	16.3 Of system
3.2.3. Limited funding	5.2.5 Way of thinking	9.3 External and internal crisis	16.3.1 Opportunity for innovation
3.2.3.1 Need to be financially self-sustainable	5.2.6 On different levels	9. 4 Local focus	16.4 Fear of
3.2.3.2 Risk of continuity of Mission	5.3 System Resistance	9. 5 In tension with continuity of mission	16.4.1 Personal responsibility for success
3.3 Availability	5.3.2 Drives need to be self sustaining	10. Continuity of mission	17. Success
3.3.1 Drives strategy	5.3.3. Political interests or political obstacles	10.1 Leader control	17.1 Fidelity to correct process
3.3.2 Increased human resources	5.3.4 Not an open or innovative system	10.2 Continuity of process	17.3 Changing definitions as strategies change
	5.4 Bottom-up	10.3 Maintain the movement	17.4 Success (on the ground, often tangible, measured with numbers)
	6. Organizational growth	10.4 Research to document and evaluate activities, confirm findings	18. Broader problem or issue
	6.1 Tensions		19. Maintaining general principles
	6.1.1 Linked to bureaucracy		19.1 While improving practice
	6.1.1.1 Impedes capacity to reflect		
	6.1.2 Responsibility for stability impedes innovation		

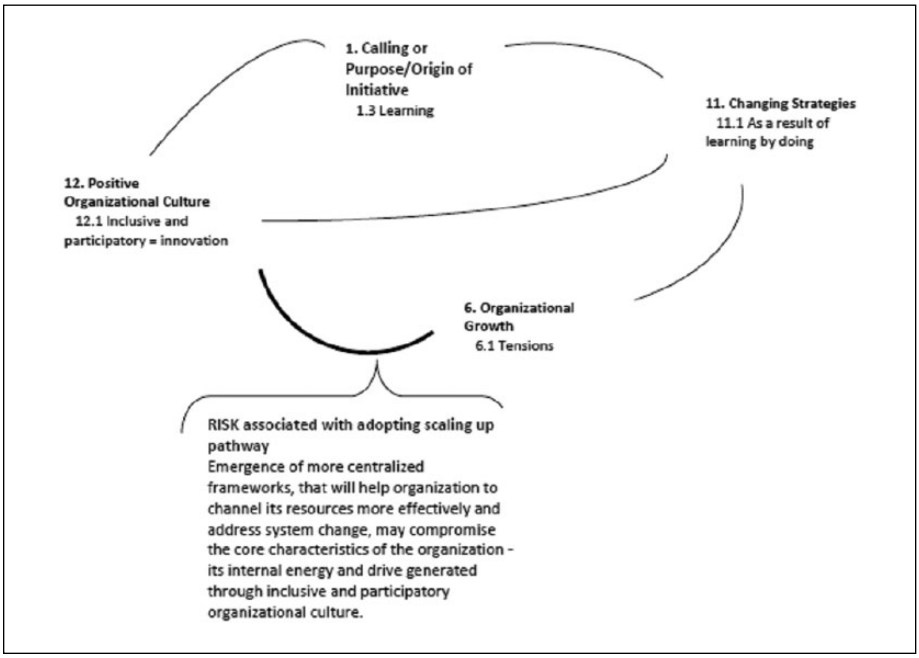

Figure 1. Sample of data analysis—connecting coding categories and interpreting the linkages for the Engineers Without Borders case study.

Step 4: Building Connections Into Configurations

After completing the open coding, we reassembled data to make more accurate connections between categories and subcategories. As Strauss (1987) explains, at this stage of data analysis "the analyst begins to build up a dense texture of relationships around the 'axis' of the category being focused upon" (p. 64). In accordance with the grounded theory approach (Corbin & Strauss, 2008), the analysis of the primary data enabled us to see the emergent patterns in terms of different pathways for scaling up. At this point, we used QCA as a meta-analysis tool to examine the selected case studies (Fiss, 2009). Comparisons of configurations among the cases helped us to identify distinct patterns for scaling up as well as the elements shaping these patterns (e.g., approach to change, sources of strength, challenges). Figure 1 presents a sample of data analysis that illustrates the working process of linking different categories and interpreting these linkages for one of the case studies (Engineers Without Borders [EWB]). The connections among the nodes revealed that internal learning and an inclusive organizational culture are the core characteristics of EWB that not only characterize its present work but also influenced the change in their strategy. More importantly, the connections between Nodes 12.1 and 11.1 revealed that moving to a more centralized framework in order to pursue system-level goals may undermine the main

asset of the organization—its participatory and inclusive organizational culture. This conclusion contributed to conceiving of the Volcano configuration, and particularly to defining the *risk* that the organization may face in undertaking this pathway to scaling up.

Thus, the delineation of distinct pathways that organizations took to scale up were "derived from empirical evidence based on distinct but comparable case studies using rigorous analytic procedures" (Young et al., 2006, p. 4). As the patterns were being identified, we revisited the interview transcripts and excerpted the quotations that best described the revealed configurations and their particular elements. Throughout the research, the data collection and data analysis phases were iterative, each informing the other.

After completing the preliminary analysis, we shared our findings with representatives of the organizations studied. They easily recognized the presented configurations and provided feedback and comments. This meeting served to confirm the accuracy of our analysis and to help us refine our findings. It completed the stage of grounded theory research, referred to as "theoretical sampling" and explained by Charmaz (2000, p. 519) as "a pivotal part of the development of formal theory."

Elements Shaping Configurations

Based on our coding of the interview data, five main elements shaping different configurations emerged, and were refined using complexity perspectives. They can be described as follows:

a. *Approach to change* is revealed in the way an organization perceives its goals for change, and its vision of how institutions and structures could be altered to respond to particular social needs. Often an organization's approach to change has been the basis of previous successful scaling-out strategies.
b. *Strength* refers to the special advantages of the organization's chosen change strategies.
c. *Challenge* refers to the difficulties inherent in the chosen change strategies that may hinder a move toward tackling system-level goals.
d. *Pathway for scaling up* describes openings perceived by the organization for moving from scaling out to scaling up, conditioned by their earlier strategies and choices.
e. *Risk* refers to the inevitable downside associated with any chosen pathway for scaling up.

These elements are present in each of the five generic configurations (Table 3) that emerged from the case studies. It should be noted that none of the organizations had arrived at transforming the system they were focused on. These are not so much examples of outcomes as descriptions of how and why innovative organizations shift their focus from scaling out to scaling up, and an appreciation of some of the obstacles and opportunities for success.

Table 3. Five Configurations for Scaling Up Social Innovation.

	Approach to change	Strength	Challenge	Pathway for scaling up	Risk
Volcano	Occurs from learning and experimentation	Inclusive and participatory organizational culture	Defining strategic focus	Centralization of the strategy	Lose ability to generate the energy and excitement within the organization
Beanstalk	Initiated by a visionary and implies implementation of their strong vision	Consistency and drive	Scarcity of resources to respond to opportunities	Finding a patron or venture social capital	Leave behind the original design and some of the energy around the movement
Umbrella	The initiating organization stimulates emergence through funding	Introduces system-level goal at an early stage	Lack of ownership, poor integration, absence of a visionary	Challenge the concept of partnership and "think like a movement"	Push partners beyond their comfort level
LEGO	System change starts with community change	The emergence of new local networks and partnerships, building on existing assets	Connecting place-based strategy to broader policy/ economic change	Creation of strategic conversations to consolidate elements at a higher level	Hinder active dissemination of principles and ideas
Polishing gemstones	Refining and selling more of a good product (controlled replication)	Gives credibility, legitimacy, and reputation to the organization	Short-term managerial thinking in a complex problem domain	Potential partnership with a system-focused movement or organization	Lead to a loss of quality control

Configurations and Their Pathways to Scaling Up

Configurations sometimes reveal the context for a scaling-up pathway, especially where the organization began with a scaling-out strategy. At other times, the configuration is equivalent to the scaling-up pathway itself, as in the cases where the organization started out with a system-level change objective. In the following descriptions, we will use the pathway terminology, as that is our ultimate interest. Selected quotations from interviewees appear in italics.

The Volcano

The organization pursuing a "Volcano" pathway is full of internal energy; internal interactions are dynamic and intense, and the learning process is ongoing. The organization needs to reach a "tipping point" to "erupt" and make a profound and system-level change. The force behind the drive to scale up comes from experiential learning that is fed back into the organization. However, the learning of individuals must converge to maintain the momentum of the change effort.

Constant internal learning was the key imperative for EWB, the organization chosen as emblematic of this configuration. EWB was founded in 2000 by engineering graduates George Roter and Parker Mitchell from the University of Waterloo. They felt that the engineering profession could do much more to help tackle one of the largest global problems—the extreme poverty in developing countries. With the energy and enthusiasm of idealistic youth, Roter and Mitchell started to recruit volunteers. They were ambitious about the size and scope of their organization—they wanted to "send more volunteers to more villages in order to help more and more people." By 2010, EWB had grown to 25 full-time staff members, 35,000 members, more than 2,500 volunteers in Canada, and more than 300 volunteers who have worked overseas (EWB, 2010). By 2011, EWB had 37 individual chapters across the country (G. Roter, personal communication, February 17, 2011).

The major strength of the organization has been its ability to build on the excitement of its young volunteers. From the start, Mitchell and Roter encouraged EWB members to solve problems and to bring the solutions back to the organization. Everybody had a voice and was able to bring their questions and suggestions to the table, creating constant internal learning:

> Everybody is an owner, everybody is a decision-maker, everybody has a stake. Every piece of information that you bring to the table is seen as very valuable. Everybody feels that.

The strength of such an organization is the ability to build on emergence: to generate energy and excitement through an inclusive and participatory organizational culture that is responsive to internal and external factors. EWB's approach to change—continuous learning and experimentation—is a direct reflection of its organizational culture.

This approach to change bore fruit locally in the intense engagement of young, busy engineering students. The opportunity EWB offered was not only for meaningful work and the chance to travel overseas but also the chance to influence a rapidly growing movement. With an already impressive number of volunteers and chapters, EWB was present in many countries and sectors.

The sheer diversity of views and information led to internal discussions about system change, as EWB members started to realize that their project-by-project approach would not be sufficient to tackle large underlying problems, such as poverty. Projects felt meaningless without understanding their contexts, or addressing the broader system that would allow project benefits to be maintained over time. The EWB team realized that in order to succeed they needed to tackle problems at much higher levels—within organizations, governments, and international aid agencies. Gradually they adopted a systems lens and were able to detect issues and problems that had not been visible to them before:

> There was a massive evolution. We incorporated this new understanding at every stage and changed the organization, rather than saying that we have this thing that works well, so let's keep it.

However, a key challenge remained: Even with so many volunteers, there were not enough resources to act on all the ideas in the system:

> Our ambitions are much larger than our resources. . . . We came to the hypothesis that other organizations have defined the problem too narrowly from having not seen the broader picture. We think all these pieces are important, why would we ignore them? Well, we would ignore them because it deflects resources.

By 2010, it was obvious there was a need to build strategic focus at the system level and to devote resources to that. Over the course of the year, EWB shifted to concentrate on five core areas (water sector in Malawi, Ministry of Food and Agriculture in Ghana, Rural Planning Offices in Ghana, farmers unions in Burkina Faso, agricultural sector between Malawi and Zambia) in order to channel their resources toward influencing system change:

> We need to narrow down to five projects, where we can reach the tipping point in terms of the people and resources that we put against it. . . . It's very complex.

The risk remains, however, that in choosing this pathway, EWB leaders may compromise the key competence and resource of the organization—its excited and engaged volunteers:

> So there will be a change in the culture of the organization that will come with these changes. If we want to have an impact, this is probably what we need to do, but that undermines some of the traditional values of the organization where everything was created at the bottom and came up to the top and then got sent back again.

EWB will need to find ways to allow significant input as more centralized frameworks emerge.

The Beanstalk

We have labeled this pathway "Beanstalk" as it is about "climbing" up to the system level without compromising the initially chosen vision and priorities. This pathway is adopted by organizations with a history of persisting in their efforts despite all the difficulties faced along the way. Consistency and drive are strengths of this pathway. A strong visionary sets the priorities and the direction, and continues to lead the organization throughout its journey. Therefore, a leader is a central figure in this configuration.

The organization Junior Undiscovered Math Prodigies (JUMP Math) was chosen as representative of this configuration. A nonprofit group dedicated to helping children excel in math, JUMP Math was founded by Canadian mathematician, author, and playwright, John Mighton, whose own struggles with math at school made him wonder if his ability was simply limited. In university, Mighton came across the story of Sylvia Plath, who taught herself to write poetry. Inspired by her example, he came to believe

that anyone can learn math, and realized this belief himself by earning a PhD in mathematics. Over the years, Mighton volunteered in math programs to help students, with very positive results, confirming his belief that kids have much larger potential than they are given credit for. John Mighton's commitment to this strong personal vision was at the core of JUMP Math's approach to change:

> I actually believe that the root cause of many of our problems is in education. . . . I believe that if we fixed that, it would change many of our problems with the environment, with poverty, and so on.

As an organization, JUMP Math's major strength was consistency and drive toward attaining its goals and vision:

> The general principles have remained relatively consistent.

As part of putting into action his belief in the importance and need to help students excel in math, John decided to train some of his friends to be tutors. Soon JUMP Math moved from offering a tutoring program to being invited into the classrooms. The evidence poured in: Children learned better when they were together in a noncompetitive and supportive environment. JUMP Math began to focus its energy on teaching teachers and providing resources for them. Gradually a network of teachers who could support, inform, and mentor other teachers was created. Teachers became the primary base for the dissemination of JUMP Math's ideas, actively volunteering to make a contribution. The teachers' network served as a forum for discussions and the exchange of information and experience. Teachers were seen as major agents for change who were able to reach out to the students and to other teachers. By 2010, at least 50,000 schoolchildren were served by the JUMP Math program, with about 50% growth per year (J. Mighton, personal communication, January 13, 2010).

The outcomes of the JUMP Math program are also very positive. For example, the results from Lambeth School in the United Kingdom show that for the group of students who used the JUMP Math approach for 2 years, 60% performed at or above their grade level, whereas before JUMP Math instruction began only 12% of the group performed at or above their grade level (JUMP Math, 2009).

Initially, the idea was to help those children who were marginalized and often struggled at school. Over time, Mighton and his colleagues realized that by reaching out to more and more schoolchildren, they could raise the average standard in math. However, it was not only about math. John believed that the academic success of the kids and their future contributions to society were linked. By being better educated and aware of their own potential, they were more likely to become active citizens able to make informed decisions. He believed that academic success in math could "spill over everywhere in their lives."

However, in order to realize this system-level intention, JUMP Math had to tackle significant challenges. Its dependence on funders for resources made the organization vulnerable, and eventually it had insufficient financial and human resources to respond

to new opportunities. This was often named as a source of frustration in the organization:

> . . . the main barrier is money, because we are always struggling to get resources.

Finding a patron or a source of social venture capital may be a response to this challenge, but risks leaving behind the original design and some of the energy around the movement:

> They [teachers] don't feel it is the same old business as usual. I would hate to lose that. Also we gain a lot by being a movement and not just a business.

The Umbrella

In organizations that follow the "Umbrella" pathway, the "initiating" organization stimulates emergence of an innovation by providing overarching funding. The strength of the Umbrella pathway is that a system-level goal is introduced at an early stage, and coordinated local work emerges from that (i.e., the initiative operates as an experiment in system change). The early funding creates a protected space in which the initiative or organization can grow and develop, allowing for the introduction of novel approaches and the development of significant challenges to existing systems. However, as the "umbrella" is pulled away and the relationships with local partners come to dominate, the organization may have to reinvent itself (perhaps even shrinking and reformulating its purpose) to ensure that system-change goals can be maintained and advanced.

ArtsSmarts was founded by the J. W. McConnell Family Foundation in 1998 with the initial idea of "arts becom[ing] part of the curriculum and the system," and with the goal of achieving system change in education. The approach to change for ArtsSmarts was the stimulation of emergence through funding by the initiating organization:

> I think it [approach to change] is driven by high-level goals that are then implemented differently in different places and by different partners.

Over a period of 10 years, through its local projects, ArtsSmarts reached more than 350,000 young people in 2,500 schools, involving 5,000 artists, 14,000 educators, and thousands of community volunteers (ArtsSmarts, 2010).

The major strength of the organization was that it introduced system-level goals for change at a very early stage. Equipped with these goals, Artsmarts drew insights about its work from numerous local partner organizations, most of which engaged students in arts-based work inside and outside the classroom. ArtsSmarts' decentralized program delivery model meant that they did not have direct control over the work of partners, but also that they could learn from the many experiments in different contexts. Over time what they learned pointed to "certain key aspects that should be implemented for all programs across the country." As they developed a clearer concept about what was successful, they developed metrics for evaluation:

> If the arts became part of the curriculum and the education system, it would be taken on and absorbed. . . . If all school systems were to adopt it . . . that would determine a success at the provincial level.

However, as ArtsSmarts—the founding organization—began to withdraw from its coordinating role to let the initiative stand on its own, significant challenges emerged. Among these were the lack of ownership of the initiatives, poor integration, and the absence of a visionary leader to synthesize and drive the overall strategy:

> . . . so somebody else took ownership of this because it wasn't really anyone's. Nobody owned it. The partners owned their own thing, but they certainly didn't feel any ownership of the national piece.

A possible alternative pathway for addressing the challenges of scaling up would be to build on the strength of the organization, not through the concept of partnership, but by exploring the power of "thinking like a movement":

> Local organizations involved from the beginning [needed] to change their concept of their role from funding recipient to "community . . . developer." My role needed to change from (intermediary) funder to being a catalyst for change. Those are pretty key, those are key relationship changing concepts that had to be put into place.

However, the organization may run the risk of pushing partners beyond their comfort levels, as some partners do not have the capacity to move from funder to program developer:

> . . . from being a recipient to being a program developer, a lot of them are not developing their own programs, they've actually just taken over our role as a funder. And they're still just a funder as opposed to a program developer, they don't do the detail work, they just fund it.

The LEGO

We named this pathway "LEGO" as it focuses on the bottom-up emergence of local networks, partnerships, and collaborations to build on existing assets. A LEGO pathway is inspired by the belief that system change starts with community change; therefore, connecting the different "pieces" at the community level is crucial for creating the momentum for system change.

Communities are the major focus for Tamarack, An Institute for Community Engagement, in Waterloo, Ontario. Tamarack works toward building vibrant and engaged communities to solve major community challenges such as poverty. Tamarack's approach to change builds on community change to create broader system change:

> We started at the community level, addressing issues and problems.

The major strength of the organization is that it facilitates the emergence of new local networks and partnerships, building on existing community assets:

> . . . we had an effect at a place-based level by affirming those who were already doing it and encourage those who weren't to do a comprehensive approach.

Currently Tamarack engages 100 communities in pan-Canadian learning communities (Vibrant Communities Canada, 2014). Compared with Tamarack's initial goal of moving 5,000 people out of poverty, by 2010 number of people whose lives have been improved has reached 147,000 (P. Born, personal communication, January 7, 2010). In this process, Tamarack's president, Paul Born, plays a central role as an inspiring speaker, visionary, and leader.

Although being successful at the community level, Tamarack experiences the challenge of connecting place-based strategies to their aspirations for broader policy and economic change. The organization admits that it had not been able to succeed in making changes at the national policy level. In addition, some areas of the country have benefited more from Tamarack's ideas and efforts than others:

> It was in our minds that to be successful we wanted to change the world—and this went beyond our contribution locally to how can what we do work elsewhere and what could have bigger impact.

In an effort to overcome this challenge and realize the potential of the LEGO pathway to scaling up, Tamarack may consider creating strategic conversations at a higher level in order to consolidate and bring together the necessary elements to influence policy. However, this runs the risk of diluting Tamarack's active dissemination of its core principles and ideas at the community level:

> We decided that our model was to disseminate ideas, concepts and core principles rather than programs. There are organizations that replicated by packaging and disseminating their programs, but we did not do this. I call it "maple syruping" work—finding the essence, the sweetness of this, and that is what you disseminate.

Polishing Gemstones

We labeled this pathway "Polishing Gemstones" as it emphasizes the refinement of an innovative program or product focused on scaling out—replicating the program in different contexts. In order to do this well, great care is taken to ensure that the program is systematized and can be replicated successfully. Quality is a primary focus for this pathway, and sustained effort is directed at turning the program into a product that can be marketed, supported by efficient business systems.

The Centre for Children Committing Offences (CCCO) was founded in 2001 in Toronto to replicate and disseminate a program called Stop Now and Plan (SNAP). SNAP was designed to help child offenders younger than 12 years stay in school, and to change the way communities engage with high risk and behaviorally disruptive

children. The program was developed and refined over a decade, gaining international attention for its evidence-based approach and positive impact. The approach to change for CCCO was to broaden this impact by refining and selling more of this good product (controlled replication):

> In ten years it went from development, to licensing and then creating training modules. . . . We started to look at what was our product. It was about getting the language, talking about products, talking about dollars. . . . We needed to think long term about being sustainable.

CCCO collaborated with communities, schools, and mental health agencies, focusing on teaching self-control and problem solving to young offenders. As they worked to build this into a successful enterprise model, CCCO focused on finding new markets and building business systems, and at the same time refining the model for reliable replication in different contexts and communities. The development of a strong business model enabled the product to reach more communities, and the program impact was ensured through attention to faithful implementation and quality control:

> Product development is a huge challenge. I think how we were able to scale up though . . . having a product that was scalable had to do with the fact that we were heavily engaged in research.

SNAP's effectiveness has been widely recognized, and to date, SNAP® licenses have been issued to children's mental health agencies, educational facilities, and other community and social service organizations across Canada, United States, and Europe (Child Development Institute, 2010). Consequently, the major strength of the organization is that the demonstrated success and rate of adoption of its product gives CCCO credibility, legitimacy, and reputation.

As its enterprise approach met with success, CCCO members began to reflect on how to extend their innovation beyond simply controlled dissemination of a positive product. At this point the organization faced the dilemma of having emphasized short-term managerial thinking in a complex problem domain. Emphasis on the product and on its replicability and scalability made it hard to imagine scaling-up possibilities:

> We were so busy just making sure that this program was right, and working and not causing more harm than good. We wanted to ensure we were developing it in the right way. So we focused our attention on seeing that it is replicable, scaleable, however there is this whole other world at that other level.

In order to overcome this challenge and find a pathway for scaling up, CCCO may now need to partner with more system-focused movements or organizations:

> I know that if I am going to impact this higher world here, I have to pull away. . . . I would love to do that, but I don't know if I have the expertise to do that. I have the passion for it. I think I could help. But that is not my area of expertise, my language, my world. For me, to be able to do that, I would almost need someone to help me.

Navigating the divide between an enterprise and a system innovation requires new skills (political, mobilization of partnerships and resources). A related risk for CCCO in adopting systemic change goals is the possibility of losing focus on the quality control of its product.

Discussion

To achieve larger impact in a complex environment, the organizations described here create new pathways through combining different elements that are influenced by the initial conditions. In doing so, they shift the boundaries of what Stuart Kauffman (2008) refers to as "the adjacent possible." In other words, it can be argued that social entrepreneurs and nonprofit organizations use different pathways to diversify future possibilities, by undertaking particular actions and making certain choices. Therefore, the pathways they choose to achieve system change vary, as a particular pathway or combination of elements may be more effective to shift the boundaries of the adjacent possible for a given organization and their context.

It is helpful to look at an example of an organization that successfully made the transition from scaling out to scaling up. Planned Lifetime Advocacy Network (PLAN) was founded in Vancouver two decades ago by the parents of children with disabilities. Under the inspired leadership of Al Etmanski and Vickie Cammack, PLAN worked to develop a different concept of disability, focusing on the gifts that people with disabilities have rather than on their deficits. The group's initial goal was a secure future for their own children, both financially and socially. This was achieved by creating a lifelong social network around each person with a disability. The results were very positive and as the demand for PLAN services grew, Al and Vickie worked to disseminate the model to communities across Canada. But even as their success grew, so did their dissatisfaction.

Even though PLAN's concept of creating a network of friends around individuals with a disability proved very popular, Al and Vickie decided to step back from this publicly lauded replication initiative to focus on altering the larger system that contributed to excluding those with disability from mainstream society. They recognized that being safe and secure was not enough. Individuals with disabilities and their families wanted a good life, one that involved contribution and participation. To have this would require breaking out of the straitjacket of conventional conceptions of the disabled, on one hand, and of the financially restrictive approach to disability pensions on the other. In 1999, they decided to start a new organization, Philia, devoted to creating a national dialogue between leading thinkers and individuals with disabilities. They also developed and actively advocated for nation-wide changes that would mean long-term financial security for people with disabilities. This strategy resulted in a breakthrough: the establishment of the first Registered Disability Savings Plan, which makes it possible for people with disabilities to accumulate savings without losing their disability payments. Thus PLAN, beyond serving individuals and families through networks of support, was able to change the life conditions for all Canadians with disabilities.

As the PLAN case reveals, succeeding in moving from scaling out to scaling up demands reframing of the problem to focus on system change, and developing a tailored strategy to achieve it. To scale up, organizations need more than a good idea, adequate resources, and leadership capacity and drive; they must also be able to recognize and seize an opportunity without the ability to control it directly (Westley, Patton, & Zimmerman, 2006). Critical to this process are the institutional entrepreneurs—individuals or networks of individuals committed to and skilled in changing broader systems and helping social innovations scale up (Dorado, 2005). As institutional entrepreneurs, Al Etmanski and Vickie Cammack shifted their focus to the larger system and were able to address the very core of the problem. With the aim of influencing the broader cultural context, their new organization, Philia, provided a venue for discussions about how to include the marginalized people in our society by appreciating their gifts and diversity, and how to create a greater societal capacity to care.

Unlike social entrepreneurs who create a new idea or product to satisfy unmet needs (Leadbeater, 1997), institutional entrepreneurs not only introduce an innovation, but also manage the broader context "in such a way that the innovation has a chance to flourish, widening the circle of its impact" (Moore & Westley, 2011, p. 4). In seeking broader institutional change, institutional entrepreneurs aspire to cross scales and move social innovation from one level to another, in contrast to social entrepreneurs whose efforts are mainly contained within one scale (e.g., transform neighborhood or community). To do this effectively, institutional entrepreneurs require a broad range of capabilities such as cultural and social skills (cognitive, knowledge management, sense making, convening), political skills (networking, advocacy, lobbying, coalition building), and resource mobilization skills (financial, social, intellectual, cultural, and political capital (Moore & Westley, 2011; Westley & Antadze, 2010). Cultural and social skills enable institutional entrepreneurs to recognize emerging patterns and sense the moment when change is possible, as well as to discern which innovations have the potential for institutional change. Political skills help institutional entrepreneurs to recognize and mobilize relationships that could help advance social innovation to the upper scales. These relationships are strategically built in order to communicate social innovation in an accessible and engaging manner and be ready to shift it to a higher scale when an opportunity emerges. Last, resource mobilization skills enable institutional entrepreneurs to seek and leverage needed resources (Moore & Westley, 2011).

The case studies described above highlight the skills needed by entrepreneurs who aim to scale up their social innovations. However, different configurations will be best served by different subsets of these skills. For the LEGO and Polishing Gemstones configurations, political skills are key to building strategic relationships and to convening conversations with high-level policy makers about the social innovation. Organizations pursuing the Umbrella pathway may need to use cultural and social skills as they reconsider their role and competence to address system-level challenges, and the adequacy of their current relationships with their partners. In contrast, organizations adopting the Volcano and Beanstalk configurations may find that resource mobilization skills are central. Institutional entrepreneurs in these organizations will be challenged to mobilize and leverage the resources needed to drive innovation to

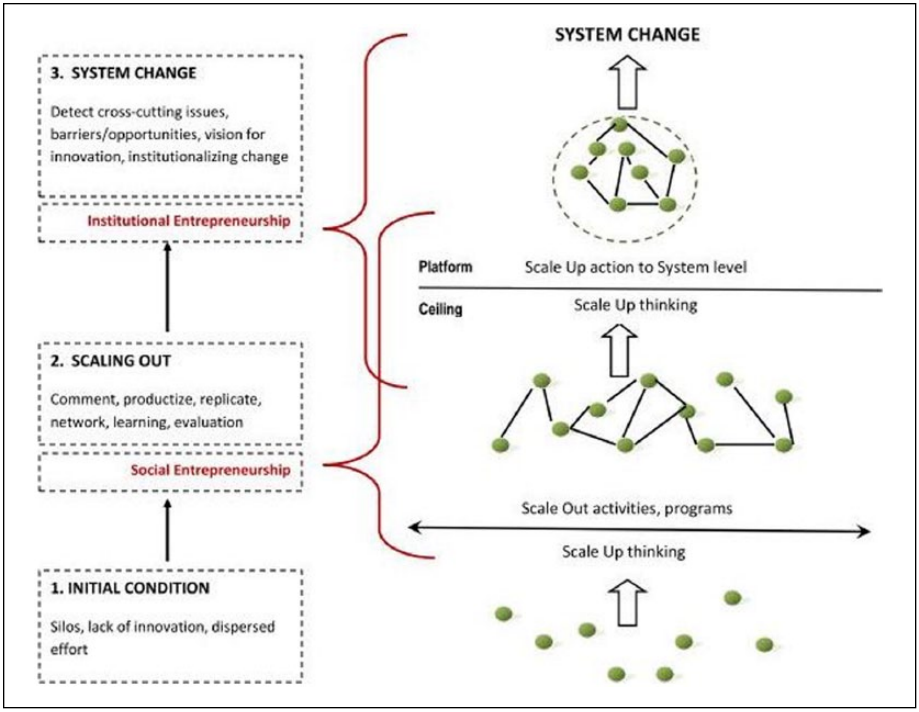

Figure 2. Platforms and ceilings in the process of scaling up.

higher scales, and may need to build strategic relationships to assure needed resources for the future (Moore & Westley, 2011).

Conclusions

An overview of the case studies profiled here shows that the notions of scaling out and scaling up are often linked (see Figure 2). Most of the organizations studied started their diffusion efforts on a local scale (*Initial Conditions*). Gradually they pursued scaling-out strategies by replicating and disseminating their innovation (*Scaling Out*). At this stage, they expanded their activities by creating networks and building up knowledge, experience, and reputation. If they are successful, however, organizations sometimes reach a "glass ceiling" of diminishing returns. As one social innovator put it, "I realized that no matter how many local organizations I began, the root problem remained the same." This realization becomes a threshold of decision. The organizations that were content with their existing activities and results saw the threshold as a "ceiling"; those interested in pursuing system change saw their existing capacities, experience, and activities as a "platform" from which to launch into a larger sphere of activity (*System Change*). These organizations started to develop strategies to influence the systems or institutional practices that were generating problems in the first

place, and began using a scaling up pathway to extend their impact. However, at the time of writing, all these pathways encountered barriers. Among these was the capacity to switch roles from social entrepreneur to institutional entrepreneur focused on changing the broader social system to enable a social innovation to flourish.

The cases studies presented in this article illustrate that prior to moving into the domain of system change, organizations need to build a certain "platform" through successful dissemination of their ideas or products. Without this platform of experience, in-depth knowledge of the field, and established reputation, it would be practically impossible to make a difference on a larger scale. In addition, being successful in scaling out enables an organization to discern problems and issues that were not visible before, and therefore, to identify new ways and approaches to changing the system.

Each organization found its own pathway for scaling up. The choice of the pathway was determined by a number of factors, such as initial starting conditions, existing competencies and resources, obstacles and opportunities faced by the organization. The most important barrier was the internal one: All of them realized that pursuing a scaling up pathway might mean having to leave behind something that was very integral to their organization. For example, EWB pursuing a Volcano pathway risked diluting the energy and excitement within the organization; Tamarack, characterized by a LEGO pathway, feared that the active dissemination of its principles and ideas would be undermined.

No general conclusions emerge which would suggest which pathway to recommend; however, being able to distinguish the elements of a particular configuration allows us to dissect the impetus for and success of efforts to scale up. Our cases also offer some insight into why so many organizations fail to "scale up" and why, therefore, there is so little successful social innovation of the kind that changes the institutional landscape. Similar to technical innovation, it would appear that social innovation in complex domains is path dependent (Arthur, 2009), and that the starting conditions are therefore both constraining and enabling. The desire to shift gears, to move from being social entrepreneurs to institutional entrepreneurs, is not trivial. It involves reframing the problem, adopting a mind-set of system change, and reevaluating the organization's role in addressing the identified social problem. Insights gained in this process can lead to a reorientation of the organization's strategy and to mobilizing the resources needed to pursue a scaling-up pathway. Finally, the institutional entrepreneur's new long-term vision must inform the operation and day-to-day activities of the organization. Undoubtedly, such profound organizational changes are difficult to undertake. In addition, as the skills of social and institutional entrepreneurs are quite different, a leadership transition may be required, even though such a transition could mean the loss of the original momentum grounded in the charisma of a founder.

The model of pathways to system change presented in this article is informed by selected case studies. Therefore, more research is warranted to test the model on a larger set of cases, including in organizations that did succeed in scaling up their efforts. Further research may also help clarify the similarities and differences in the skills that characterize social and institutional entrepreneurs. It might also test the analytic power of these configurations for explaining the limiting force of initial

conditions. Conversely, it could be illuminating to use the approach presented here to reanalyze historical cases of social innovation. The interplay between individual agency and moments of opportunity, and the skills required to connect the two, as well as the element of serendipity, could be fruitful territory for both research and practice (Westley et al., 2006). Finally, we expect that some elements may turn out to be more important than others in particular configurations—we could refer to them as "core" and "peripheral" elements (Fiss, 2009).

We hope that the discussion of configurations and their elements may be useful to practitioners as they seek their own, unique pathway. Box 1 presents some implications for practitioners drawn from the above cases and conceptual frameworks. Pursuing a scaling up strategy is a challenging and demanding task. In fact, the number of organizations that have successfully scaled up their social innovations is quite rare, which may simply confirm the need for new ways to understand the prerequisites and strategic pathways for achieving system change. Even though similarities may be found among the challenges that organizations face and the ways in which they address these difficulties, it is important to remember, that each organization is unique and therefore, must determine its unique pathway to achieving system change.

Box 1. Some Implications for Practitioners.

1. Scaling up is a difficult and time-consuming process. However, organizations do not need to embark on it right away. Before attempting to scale up, organizations need to build a certain "platform" of experience, reputation, and in-depth knowledge of the field.
2. Scaling up implies viewing problems and their solutions through a systems perspective.
3. As organizations try to pursue a scaling up strategy, they realize the need for new resources.
4. While pursuing a scaling up pathway, organizations may need to let go of something that was very integral to their organization.
5. Organizations need to find their **unique** pathway for scaling up.
6. A complex set of skills is required to undertake a scaling up strategy, including
   a. cultural/social skills (cognitive, knowledge management, sense making, convening)
   b. political skills (networking, advocacy, lobbying, coalition formation)
   c. resource mobilization skills (financial, social, intellectual, cultural, and political capital)
7. The choice of pathway to scale up may be determined by the following factors:
   a. initial starting conditions
   b. existing competencies and resources
   c. obstacles and opportunities that the organization faces

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Note

1. Using complexity theory terminology, Byrne (2009, p. 102) calls outcome an "attractor state."

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